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Thaddeus Griebel

B.S. in psychology, earned an honors degree with distinction from Dominican University upon completing the current study and presently works as an English as a Foreign Language teacher in Italy. He plans to continue conducting computer game research within the field of psychology in a graduate university setting in the near future.

Contact Information

tgriebel83@hotmail.com

Self-Portrayal in a Simulated Life: Projecting Personality and Values in The Sims 2

by Thaddeus Griebel

Abstract

Ever since the release of The Sims in 2000, there has been talk in the media that people who play the game project aspects of their lives into their Sim character. To date, there have been no empirical studies that test whether or not this is true. The goal of this study was to scientifically measure players' personalities and values and find how these characteristics relate to gameplay in The Sims 2. Two hypotheses were developed. Hypothesis 1: Personality characteristics will relate to gameplay; for example, participants who are organized will manage their Sims' time more efficiently, and participants who are extroverted will make their Sims more socially oriented. Hypothesis 2: Participants will pass their personal values to their Sims; for example, participants who place high value on wealth in their own lives will create Sims who earn high incomes. Apart from these two hypotheses, other exploratory investigations regarding participants' characteristics and gameplay behaviour were conducted in post hoc analyses. Thirty undergraduate university students volunteered to participate in the study, and they were administered a personality test, a values survey and a background information questionnaire before playing The Sims 2 for a total of 10 hours over a six-week span. Afterwards, participants completed a questionnaire that asked detailed questions on how they played the game. Results indicate personality traits such as neuroticism, openness to experience and conscientiousness, values such as wealth and creativity and other characteristics correlated with specific gameplay behaviours. The implications of these results for the use of The Sims 2 as a projective test in clinical psychology settings are discussed.

Introduction: Psychology and The Sims

When the videogame Mortal Kombat was released in 1993, a massive debate erupted over videogame violence. Since then, most psychological research on videogames has focused only on negative aspects of this relatively new form of entertainment (Anderson, Funk, & Griffiths, 2004). Not until recently have

psychologists and sociologists begun studying other aspects of videogames, besides violence and aggression. For instance, the National Aeronautics and Space Administration (NASA) incorporated biofeedback technology with videogames in order to help increase attention abilities in children with Attention Deficit Hyperactivity Disorder (ADHD) (Braukus, Henry & Gardner, 2000). Also, a study at Loyola University found that certain online computer games, such as Counter-Strike, foster complex social interactions, which help remove the stigma that videogame players are socially isolated (Wright, Boria, Breidenbach, 2002).

Recently, both the media and psychologists have shifted attention to a growing phenomenon in the gaming industry: The Sims. First released in 2000, The Sims is a unique computer game that allows players to create and control their own virtual household of people, known as Sims. Players control everything from their Sims's career choices to their eating habits. Unlike most videogames, The Sims is open-ended: there is no "right" way to play the game. For example, players can direct their Sims to pursue a prestigious career in medicine or can make their Sims spend all their time bickering with the neighbours. The Sims is the number one selling computer game in North America, and it has been translated into 17 different languages and has sold over 52 million units worldwide (Rothfeder, 2004).

Sims do not speak English; instead, they speak gibberish with pictures displayed above their heads acting as subtitles to the players. According to Popular Science's consulting editor, Jeffrey Rothfeder, the Sims "speak in a shorthand of pictures and pidgin language that prompts players to unconsciously fill in the missing details in character interaction" (Rothfeder, 2004, p. 84). Will Wright, the creator of the game, believes that this approach of social interaction among Sims forces players to imagine what is not stated. According to Wright, much of the story is "completed by the players' personal experiences and aesthetics" (Rothfeder, 2004, p. 84).

Other discourses in the media have suggested that not only do people's experiences influence their perceptions of their Sims, but that people actually project aspects of their own lives into their creations as well. Wright asserts, "You can look at somebody's [Sim] house and get a good sense of their personality. What a lot of people do right off the bat is they'll put themselves, their family, their house and their neighbors in the game" (Breznican, 2004). Wright provided an example of how the game is often used for self-expression: he once received a letter from a family that had just adopted a boy from Romania who would not talk about his previous family; only after the boy created his previous family in The Sims, did his foster parents understand how his family had functioned (Thompson, 2003). John Suler, a psychology professor at Rider University who is considered an expert on the psychology of cyberculture, explains the nature of The Sims, "Everyone gets the opportunity to create characters that reflect who we are, what we hope and dream, what we fear. It's a very empowering experience" (Kampert, 2002).



Figure 1. In The Sims 2 players create and control a household of virtual people and decide the direction their Sims' lives will take, often projecting aspects themselves into their creation.

If most people do indeed project aspects of their lives into The Sims, the game may prove useful in the field of clinical psychology. As Dr. Suler observed, "When The Sims works well, it's kind of a projective test. You can really see a lot of [players'] psyche spilling out into their games" (Thompson, 2003, p. 38). Although there has been some talk in the media about self-portrayal through one's Sim characters, to date there has been no published empirical research which tests whether or not this is really the case. If The Sims is indeed a valid projective instrument, a psychologist might find it helpful to use the game as a tool to understand a client's inner world, perhaps more effectively than using older projective tests such as doll play or the Thematic Apperception Test.

Understanding Personality through Projective Tests

In a clinical setting, psychologists generally rely on standardized measures such as the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) to assess a client's mental status and personality characteristics. However, some psychologists prefer to use more subjective methods of assessment, such as projective tests. Generally, a projective test uses unstructured stimuli, and clients are asked to describe or tell a story about what they see. Because projective tests are not as direct as traditional personality inventories, the intent of the test is not as clear to clients; therefore, they are less likely to fake their responses. And because the stimuli presented are ambiguous, it is assumed that reports that clients give are reflections, or projections, of their own perceptions of themselves and the world (Aiken, 2003).

There are many forms of projective tests, such as the Rorschach Inkblot Test (Klopfer & Kelley, 1942), the Draw-a-Person Test (Machover, 1971, as cited in Aiken, 2003), Sentence-completion tests (Payne, 1928, as cited in Aiken, 2003), the Thematic Apperception Test (Murray, 1943) and doll play (Phillips, 1945). The Rorschach Inkblot Test is the oldest projective measure and involves a psychologist instructing his or her clients to report what they see when looking at cards displaying ambiguous inkblot images (Klopfer & Kelley, 1942). In the Draw-a-Person Test, the client draws people of the same and opposite sex; it is believed that personality aspects like aggression and impulsivity are reflected in the client's drawing style (Machover, 1971, as cited in Aiken, 2003). In

sentence-completion tests a psychologist states the first half of a phrase and then prompts the client to complete the sentence. The client's response may indicate particular emotional conflicts (Payne, 1928, as cited in Aiken, 2003). The Thematic Apperception Test (TAT) consists of drawings depicting ambiguous situations, and clients are asked to "make up as dramatic a story" as they can for each picture (Murray, 1943, p. 3). Clients are instructed to give background to the story, what is currently happening in the picture, what the characters are feeling and thinking and how the story ends. The intent of the test is usually disguised as "a test of imagination, one form of intelligence," presumably so that clients do not become defensive in their responses (Murray, 1943, p. 3).



Figure 2. Some psychologists use projective tests such as the Rorschach Inkblot Test or the Thematic Apperception Test to understand a client's personality.

Another projective test is doll play, which involves clients manipulating two or more dolls and making them interact to tell a story (Phillips, 1945). A psychologist observes the client play in order to gain a better understanding of the client's inner world. Of all various projective measures, I believe that doll play is the most similar to The Sims; however, it is possible that The Sims can be used as a much more effective projective test because it allows people to create more realistic and complex interactions and lifestyles than those possible in doll play. The interactions between two dolls may seem vague or abstract to an observing psychologist, while interactions between Sims is less cryptic because players' interactions are represented by a rich graphical presentation of Sims' behaviour, and the game uses an objective point system to report the quality of Sims' relationships and skills, giving an observer much clearer insight into how a person chooses to manage his or her make-believe family. Using a computer game for clinical applications is not entirely unheard of; for example two family therapists designed an interactive game entitled Earthquake in Zipland to help children cope with emotional conflicts resulting from divorce. In adopting a more modern approach to therapy, a psychologist may uncover knowledge about a client that would be difficult to reveal using older projective measures.

The game developers of The Sims have applied several changes to the game since its original release, adding features to better imitate the real world. There have been a total of seven expansion packs released for The Sims, which added features such as more career tracks and more options for social interaction. In September 2004, instead of releasing another expansion pack, Maxis released a full-blown sequel, The Sims 2, which reworked the original design of The Sims. The sequel incorporates more depth and freedom for players, allowing them to fully customize their Sims' appearance and to choose their Sims' lifetime "Aspirations," and Sims now grow older and eventually die. Because the

sequel adds more realism, and therefore has more potential for a player's self-portrayal in the game, I used The Sims 2 in this study, instead of its predecessor. The three expansion packs for The Sims 2 (University, Nightlife, and Open for Business) were not used in this research, as the study was conducted before these expansion packs were released.

Purpose of the Current Study

The intent of this study was to empirically study how people play The Sims 2, and because this is the first study of its kind, the observations were more exploratory in nature, instead of developing an exhaustive list of testable theories. I explored the extent to which people project aspects of themselves into the game, running statistical analyses to find patterns between gameplay behaviours and personality and values. Specific hypotheses could not be developed based on past research because there has been no empirical research conducted on either The Sims or The Sims 2; however, I examined the data for support for the following hypotheses:

Hypothesis 1: Personality characteristics will relate to gameplay; for example, participants who score high on conscientiousness will organize their Sims' time more efficiently, which will be reflected by the Sims' job promotion level, and participants who score high on extraversion will make their Sims more socially oriented.

Hypothesis 2: Participants will pass their personal values to their Sims; for example, participants who place high value on wealth will create Sims who earn high incomes.

Because this study was exploratory, the analyses were not restricted merely to the above hypotheses; other characteristics such as participants' gender, race, age, parents' marital status, need for cognition and number of enemies in real life were also examined in relation to gameplay. I also explored whether there was typically a single Sim within a household with which each participant particularly identified and the extent to which this "self-reflecting" Sim represented the participant. While my focus for this study was to measure similarities between the real and virtual life, I also examined how players' gameplay deviated from their own lives by studying the fantasies enacted through their Sim characters.

Method

Participants

Participants were 30 undergraduate students from Dominican University (Riv Forest, Illinois, USA). There were 9 males and 21 females, and ages ranged from 18 to 24 with a mean age of 19.6. The sample consisted of 67% Caucasian, 20% Hispanic, 7% Asian, 3% African American and 3% Other. The sample originally consisted of 36 participants, but 6 did not complete the study and therefore were not included in the above description. The sample was generally representative of the Dominican University population (See Table 1). Participants were recruited by posting fliers around campus, and by sending out invitations through campus email. The first 25 participants to sign up were given a gift card to Blockbuster Video, and participants who completed the study were entered in a raffle to win cash or a copy of The Sims 2 software.

Table 1

Demographic Comparison between the Sample and the Dominican University Population

Sample		Dominican University Population	
Male 30%, Female 70%		Male 30%, Female 70%	
Average Age: 19.6		Average Age: 22.3	
Caucasian	67%	Caucasian	70%
Hispanic	20%	Hispanic	16%
Asian	7%	Asian	2%
African American	3%	African American	6%
Other	3%	Other	6%

Materials

In order to formally examine various personality characteristics, participants were instructed to complete the Neuroticism Extraversion Openness Five-Factor Inventory (NEO-FFI) (McCrae & Costa, 1987). The NEO-FFI is a widely used measure, and has been found to yield accurate and consistent personality assessments (McCrae & Costa, 1987). It measures five dimensions of personality: neuroticism, extraversion, openness, agreeableness and conscientiousness. Neuroticism measures how anxious, insecure and depressed a person is; Extraversion measures how sociable and fun-loving a person is; Openness measures curiosity and whether a person enjoys new ideas and experiences; Agreeableness measures how helpful, trusting, flexible and straightforward a person is; and Conscientiousness measures how organized, hard-working and reliable a person is.

The Values Survey (Schwartz, 1992) measures 56 values such as wealth, creativity, independence, friendship, having an exciting life, power and self-discipline, and participants were asked to rate each item "As a guiding principle in my life" on a 9-point importance scale. Participants also completed two questionnaires that I designed: Background Information and The Sims 2 Survey. Background Information measured demographic information as well as values and personality traits not measured by the NEO-FFI or the Values Survey, such as need for cognition (desire to learn new things), seriousness and values such as flirting and fidelity to one's partner. The Sims 2 Survey asked participants to report detailed information about how they played The Sims 2, such as what sort of behaviours they liked to make their Sims engage in, how much money their Sims earned, the number of friends their Sims had and the values that participants held for their Sims' lives.

Procedure

In the first session, participants were given an informed consent form and a set of written instructions before they were administered the NEO-FFI, the Values Survey and Background Information. This session lasted about an hour and was conducted in the psychology lab of Dominican University. Participants were then instructed to play The Sims 2 for 30 Sims' days (approximately 10 real time hours). Eleven participants played The Sims 2 on their home personal computers, and 19 participants played on computers located on campus. Participants were responsible for scheduling time to play in their spare time and were given six weeks to complete. Participants were instructed not to use any cheat codes, and were allowed to have only one household composed of one to four Sims in order to keep gameplay simple enough to be studied objectively. Participants were told to play the game how they normally would if they were not being studied, with the exception of the rules listed above. After participant

played the game for the required amount of time, they were administered The Sims 2 Survey, which took approximately 30 to 60 minutes to complete in front of the computer on which they played, so that they could access the information from The Sims 2 program required to complete the survey. Once participants completed all four measures and played The Sims 2 for the required amount of time, they were given a debriefing sheet describing the purpose of the research and their names were entered in a raffle to win cash prizes and copies of The Sims 2.

Results

Analyses of the data were conducted using the Statistical Package for the Social Sciences (SPSS) computer program. All reported correlations are statistically reliable at least at the .05 level of significance, meaning that there is only a 5% possibility that the correlations are due to chance. Most correlations were calculated using the Pearson r coefficient, in which $r = 0$ indicates no correlation, and $r = 1$ indicates a perfect correlation; the following reports range from $r = .33$ to $r = .76$.

Typical Gameplay Characteristics

On The Sims 2 Survey participants rated the importance of various Sims™ characteristics and behaviours on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree). Means and standard deviations for behaviours and values are summarized in Table 2. On average, participants placed highest importance on items such as "It is important that my Sims find love" and "I work hard at achieving my goals for my Sims." The lowest importance ratings were given to "It's fun to make my Sims tease or insult other Sims" and "I like to make my Sims cheat on their partners."

Table 2

Means and Standard Deviations for Typical Gameplay Characteristics		
Characteristics	M	SD
It is important that my Sims find love	4.13	.63
I like to keep my Sims™ house clean	4.13	.86
I work hard at achieving my goals for my Sims	4.07	.69
I like to make my Sims flirt	3.97	.72
I want my Sims to have exciting lives	3.87	.73
Sims should be polite to one another	3.83	.79
I like my Sims™ lives to be filled with variety	3.79	.86
I enjoy choosing my Sims™ paths in their lives	3.77	1.04
I like to make my Sims kiss other Sims	3.70	1.02
It is important for my Sims to have many friendships	3.67	1.09
I like to make my Sims engage in creative activities	3.53	1.14
It is important that my Sims live in a nice house	3.50	1.20
I was effective at accomplishing my goals for my Sims	3.43	1.14
It is important that my Sims have an interesting job	3.37	.96
I like to make my Sims have sex	3.33	1.15
It is important for my Sims to date	3.17	.91
I like to make my Sims take risks	3.03	1.03
It is important for my Sims to be wealthy	3.00	1.11

It is important that my Sims have a lot of expensive possessions	2.87	1.04
It is important that my Sims have children	2.67	1.24
I like to make my Sims gossip	2.30	1.09
My Sims frequently skip work or school	2.00	1.02
I like to make my Sims brag to other Sims	1.97	1.00
It's fun to make my Sims tease or insult other Sims	1.93	1.11
I like to make my Sims cheat on their partners	1.93	1.05

Personality

The average scores of the participants for the five dimensions of the NEO-FFI are reported in Table 3. Scores from the sample were similar to the national norms as reported by the NEO-FFI. Neuroticism, Extraversion and Agreeableness all fell within the normal range; however, scores for Openness fell in the high range, and scores for Conscientiousness fell in the low range compared to the national norm values.

Table 3

Dimension	M (Sample)	SD	M (National)	Comparison
Neuroticism	22	8.6	19	Average
Extraversion	28	6.8	28	Average
Openness	32	5.1	27	High
Agreeableness	33	5.9	33	Average
Conscientiousness	31	6.4	35	Low

Bivariate correlation tests were performed between participants' scores on the NEO-FFI and selected items from The Sims 2 Survey. Participants who scored high on Neuroticism were more likely to frequently change their Sims' careers ($r = .38$), were less likely to accomplish their goals for their Sims ($r = -.50$) were more likely to allow their Sims to miss payments on their bills, resulting in their Sims' items being repossessed ($r = .40$) and were more likely to enjoy making their Sims tease or insult other Sims ($r = .45$). Participants who scored high on Openness were more likely to report that it was important for their Sim to live exciting lives ($r = .38$), worked hard at achieving their goals for their Sims ($r = .44$), spent their Sims' money impulsively ($r = .38$), liked to make their Sim engage in sex ($r = .41$) and reported that it was not important for their Sims to have children ($r = -.47$). Participants who scored high on Conscientiousness were more likely to report that it was important to keep their Sims' house clean ($r = .42$), and they were more likely to feel in complete control of their Sims' lives ($r = .41$).

Values

Bivariate correlation tests were performed between participants' responses to the Values Survey and The Sims 2 Survey. Participants who placed high importance on wealth were more likely to report that it was important for their Sims to be wealthy ($r = .57$), enjoyed choosing their Sims' paths in their lives ($r = .49$) and reported that it was unimportant for their Sims to have interesting jobs ($r = -.44$). Participants who placed high value on creativity were more likely to have Sims who earned more creativity skill points ($r = .44$), which are earned by engaging in activities such as playing the piano or painting. Participants wh

established more friendships for their Sims placed high value on independence ($r = .46$) and having an exciting life ($r = .42$).

Comparing responses from the Background Information questionnaire and The Sims 2 Survey revealed that participants' self-reported values of flirting and fidelity transferred to their Sims. Participants who liked to flirt in real life also liked to make their Sims flirt ($r = .37$), and participants who believed that it is wrong for someone to cheat on his or her partner were less likely to make their Sims cheat on their partners ($r = -.64$).

Self Reflection

On The Sims 2 Survey, 27 out of the 30 participants identified one of their Sims as most closely reflecting themselves. For these 27 participants, the gender of this "self-reflecting" Sim was strongly correlated to their own gender ($r = .76$, $p < .001$), and participants typically identified their reflective Sims as having the same race as themselves (see Table 4). Participants who described themselves as being more serious than playful on a five-point scale from the Background Information questionnaire were more likely to assign their self-reflective Sim more "Serious" than "Playful" personality points, while those who were self-described as more playful assigned a more playful personality to their Sim ($r = .66$).

Table 4

Race of Participants Compared to Reflective Sim's Race				
Participant Race	White Sim	Hispanic Sim	Black Sim	Asian Sim
White	18	0	0	0
Hispanic	3	2	0	0
Black	0	0	1	0
Asian	0	0	0	1
Mixed	2	0	0	0



Figure 3. Players design their Sims' appearance and assign personality

points to create virtual characters that tend to portray certain characteristics of the players themselves.

Correlations were found between participants'™ responses from the Values Survey and the personality points participants allocated to their self-reflecting Sim. There are five categories of personality points that players assign to a Sim Sloppy/ Neat, Shy/ Outgoing, Lazy/ Active, Serious/ Playful and Grouchy/ Nice. Participants who assigned more "Nice" personality points than "Grouchy" to their self-reflecting Sim were more likely to value politeness ($r = .39$), peace ($r = .43$), love ($r = .45$), detachment from worldly concerns ($r = .64$), friendship ($r = .60$), moderation ($r = .41$) and belonging ($r = .56$). Participants who made their self-reflecting Sim more "Sloppy" than "Neat" were more likely to value social order ($r = .39$), having an exciting life ($r = .53$), having a varied life ($r = .49$) and justice ($r = .44$). Participants who assigned more "Outgoing" points than "Shy" points were more likely to value power ($r = .46$) and being successful ($r = .41$). Participants who assigned more "Lazy" points than "Active" points to their self-reflecting Sim were likely to value belonging ($r = .41$), wealth ($r = .42$), peace ($r = .60$), recognition ($r = .39$) and friendship ($r = .45$), but put less value on being influential ($r = -.40$). Participants who assigned more "Playful" points than "Serious" points to their self-reflecting Sim were more likely to value moderation ($r = .48$) and enjoying life ($r = .46$) but placed less value on wisdom ($r = -.47$) and self-discipline ($r = -.55$).

Although most participants reported one Sim as being most closely reflective of themselves, it may be possible that all the Sims a player creates are an extension of the self. As one participant reported, "[My Sims] each had a different aspect of myself; each one would have goals I could relate to."

Other Variables Related to Gameplay

Gender: An independent groups t-test revealed a marginally significant gender difference in that male participants were somewhat more likely than female participants to enjoy making their Sims brag to other Sims ($t(28) = 1.78, p < .10$). Female participants were more likely to make their Sims have a baby: 57% of the female participants had Sims with babies; whereas only 11% of the male participants had Sims with babies (see Figure 4).

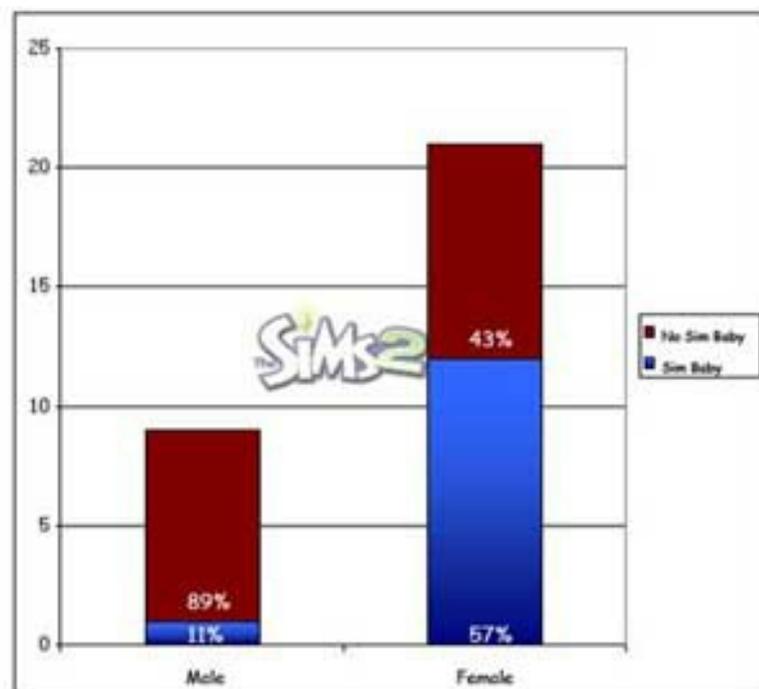


Figure 4. Percentage of males and females whose Sims had a baby.

Age: Although there was a relatively small range of ages among my participants (18 to 24), I found several differences between younger and older participants. Younger participants were more likely to accomplish their goals for their Sims (r = .35), placed more importance on their Sims living exciting lives (r = .43), spent their Simsâ™ money impulsively (r = .37) and their Sims gained more "Aspiration" points (r = .36), which are acquired by fulfilling Simsâ™ wants and avoiding fears. Older participants were more likely to change their Simsâ™ career paths (r = .50), placed more importance on Sims having children (r = .36) and their Sims earned more skill points (r = .39), which are gained through activities such as cooking, playing chess or exercising.

Divorce: Twenty-six participants reported that their parents were married, while four participants reported that their parents were divorced. The number of participants who came from divorced households was too small to allow for reliable inferential statistics to be calculated; however, I report the following descriptive statistics because this is an important variable for future research.

Participants who came from divorced households were more likely to make the Sims experience a divorce; 50% of participants from divorced households chose to make their Sims get divorced, while 0% of participants who came from married households made their Sims get divorced (see Figure 5).

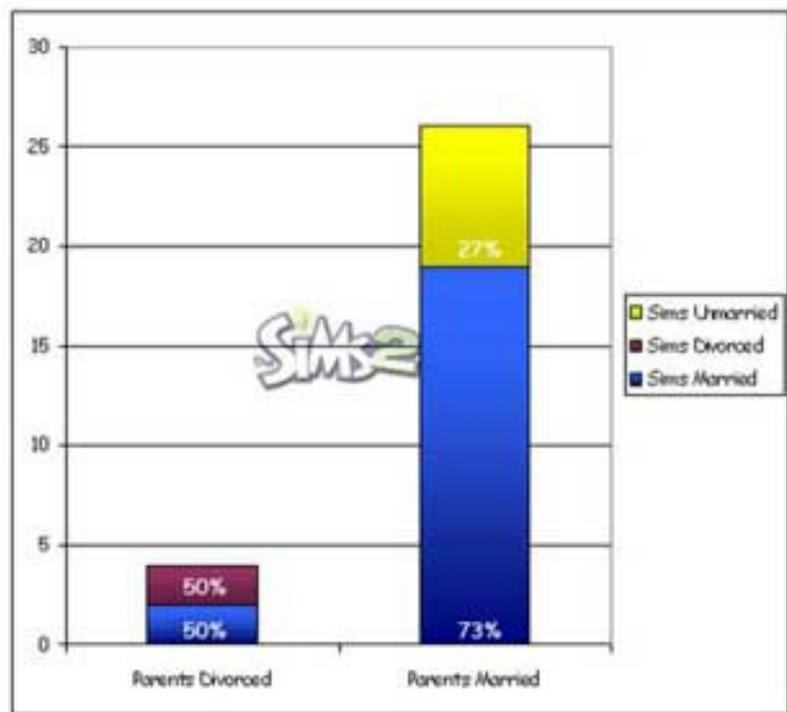


Figure 5. Parentsâ™ marital status related to Simsâ™ marital status.

Participants whose parents were divorced were more likely to have Sims with babies; 100% of the participants who came from divorced households decided to make their Sims have a baby, whereas only 35% of participants from married households decided to make their Sims have a baby (see Figure 6).

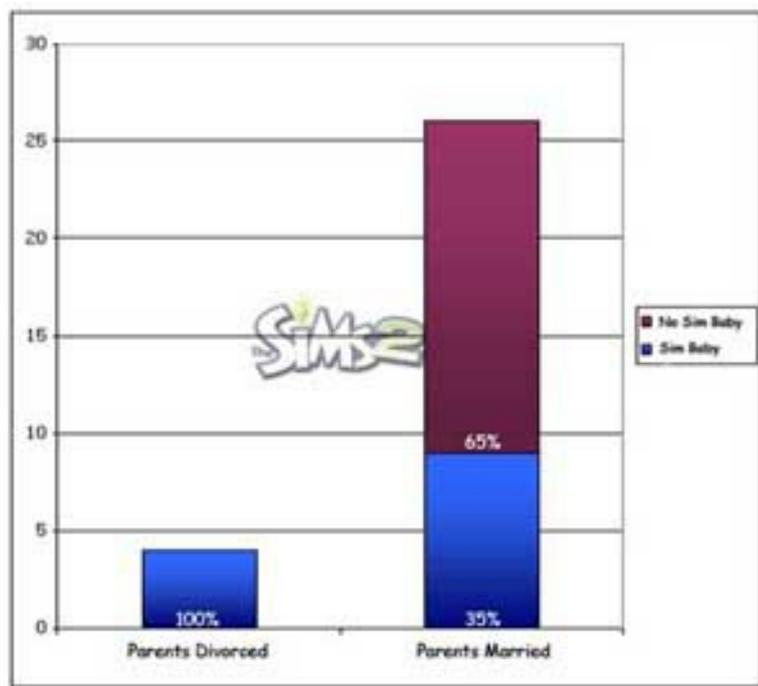


Figure 6. Parents' marital status related to percentage of Sims with a baby.

Participants from divorced households placed more importance for their Sims find love. Participants responded to the following statement on a 5-point scale (1 = strongly disagree, 5 = strongly agree): "It is important that my Sims find love." The average response from participants from married households was 4.04, whereas the average response from participants from divorced households was 4.75, almost an entire point higher (see Figure 7).

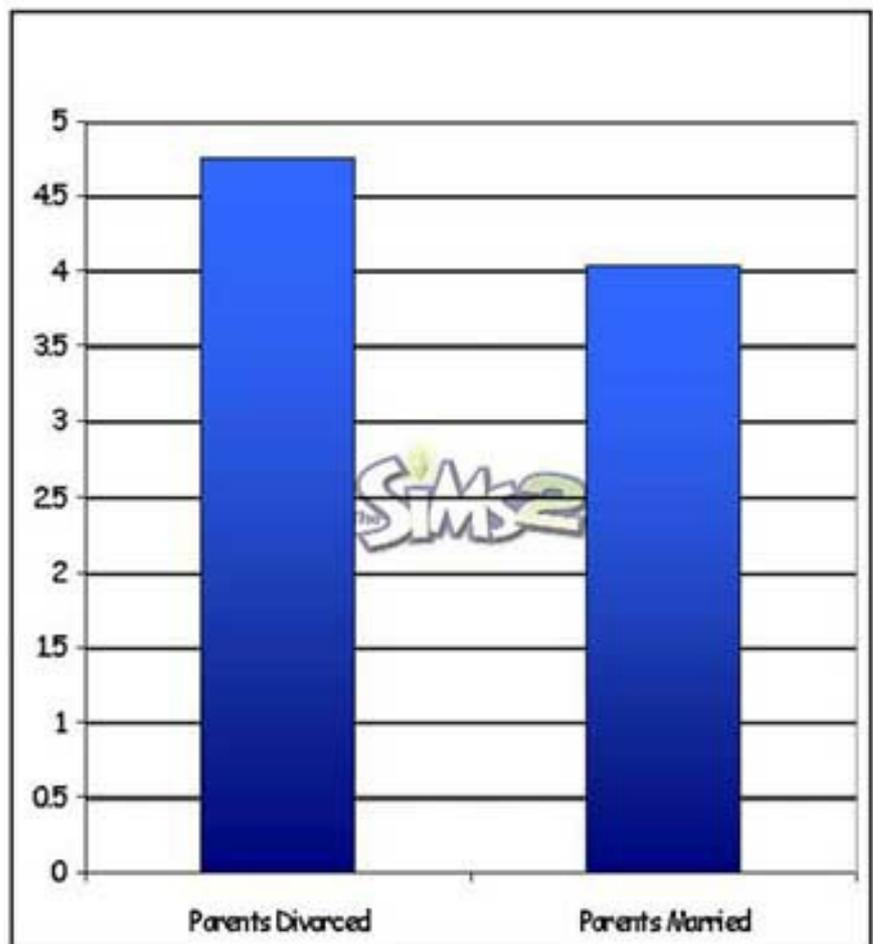


Figure 7. Parents' marital status related to importance for Sims to find love.

Need for Cognition: Participants who reported that they like to learn new things placed less importance on Sims having expensive possessions ($r = -.53$) and on

Sims being wealthy ($r = -.41$). These participants agreed more strongly that Sims should be polite to one another ($r = .61$), and they tended to have more Sims living in their household ($r = .38$).

Number of Enemies: Participants who reported having more enemies in real life were more likely to make their Sims skip work ($r = .68$), placed less importance on keeping their Sims' house clean ($r = -.33$), worked less at trying to get their Sims promoted ($r = -.39$), were less effective at accomplishing their goals for the Sims ($r = -.38$) and placed less importance for their Sims to find love ($r = -.46$). Because this study was exploratory in nature, I found these correlations without developing a specific hypothesis; therefore, I cannot draw conclusions as to why these patterns emerged. It may be possible, for example, that a third variable was influencing both the number of enemies participants reported and the behaviours they enacted through their Sims.

Qualitative Analysis

Because of the subjective nature of most projective measures, many of the ways in which participants projected themselves into *The Sims 2* may not have been measured in the analyses summarized above from the more structured survey items. Therefore, I felt it was necessary to perform a qualitative analysis of data obtained from open-ended questions that were included in *The Sims 2* Survey to acquire a broader understanding of how participants' lives affected their Sims.

Lifestyle: The open-ended question, "In what ways is your own life portrayed in *The Sims 2*?" elicited responses from participants that followed a pattern. Most participants described their Sims' lives as reflecting aspects of their current life, their childhood or the life they would like to live in the future. Seventy percent of participants ($n = 21$) reported that they recreated aspects of their present life in their Sims' lives. For example, 10 participants reported that they created their Sim families to resemble either the structure or functioning of their own families, nine participants created Sims with the same interests, hobbies and aspirations as themselves, and nine participants reported that their Sims mimicked their own dating behaviors. Many of the 21 participants who portrayed their present life into their Sims reported more than one of the above mentioned characteristics. As for the participants who portrayed either their life in the past or the life they envision having in the future, two participants recreated aspects of family life as it was in their childhood by creating similar family structure and dynamics within their Sim household, and five participants reported that they created what they imagined their lives would like be in the near future after graduating from college, such as pursuing their desired career path and getting married. Only one participant did not answer the question, and another participant reported that no aspect of his life was portrayed in *The Sims 2*.

Fantasies: Besides examining how participants' lives were similar to their Sims' lives, I also included an open-ended question in *The Sims 2* Survey to explore how players experimented in their virtual lives by enacting fantasies through the game. When asked, "Do you ever enact experiences in the game that you may want to experience in real life?" seven participants responded that they made their Sims live out their own dreams by getting engaged or married. Three participants reported that they enacted flirting or dating fantasies that they wanted to experience in real life, three participants enacted a fantasy of having children, and two participants reported that they created their ideal partner as a Sim. One participant explained, "I played out my ideal life

scenario through The Sims. I think that it is only natural for people to [project] aspects of their lives into any situation, real or make believe." Seven participants reported that they made their Sims acquire wealth, expensive possessions or a nice house, as they would like to have in real life; interestingly, one participant stated that his Sims did not own a TV or computer and that he would have liked to experience a similar simplicity in his own life with respect to material goods. Another participant explained that The Sims 2 allowed her to make her Sims experiment with behaviours that contradicted her personal beliefs and values. She stated, "The Sims 2 really started to break down the boundaries between good and bad, right and wrong." Only three participants did not report any fantasies.

Discussion

From the results given above, it can be seen that participants did indeed project certain aspects of their personalities, values and characteristics into their Sims. The data suggest that personality traits such as neuroticism, openness and conscientiousness, values such as wealth, creativity, flirting and fidelity, and personal characteristics such as race, gender, age, need for cognition, perceived number of enemies and parental marital status all relate to different ways in which people play The Sims 2. In Hypothesis 1, I suggested that gameplay would be related to personality traits such as extraversion and conscientiousness. Although the data did not provide much support for these two personality traits, other traits showed significant correlations in support of the hypothesis. For example, participants who were highly neurotic tended to miss payments on their Sims' bills, changed careers more often and enjoyed making their Sims insult other Sims, and participants who were open to new experiences tended to make their Sims' lives full of excitement, spending money impulsively and frequently engaging in sex. Hypothesis 2 predicted that participants would transfer their personal values to their Sims; for example, those who valued wealth would make their Sims earn higher incomes. I found that participants who valued wealth were more likely to report that it was important for their Sims to be wealthy; however, their Sims were no more likely to actually earn higher incomes than participants who did not place a great importance on wealth. As was mentioned earlier, this study was exploratory in nature; therefore, many other correlations were found that were not predicted. For example, it was unexpected that younger participants were more likely to spend their Sims' money impulsively, but this finding (as well as many others) is intuitively appealing in post hoc analyses, and therefore must be considered with interest, yet caution, in terms of interpreting these findings.

Implications

Because the results of this study yielded significant correlations between participants' personal characteristics and the style in which they played The Sims 2, these findings may potentially open new doors in the field of clinical psychology. For instance, if a child psychologist is working with a client who is resistant to disclosing information about his or herself during an initial clinical interview, the psychologist may find that asking the client to play The Sims 2 and to then describe the gameplay behaviour may provide some insight into the client's inner world. Instead of using older projective measures, such as telling stories from ambiguous pictures or completing unfinished sentences, clients may express aspects of their personalities more clearly by creating and controlling a household of Sims. By doing so, a clinical psychologist may learn, for instance, how the client's family functions, what kind of values the client

possesses, or how neurotic, open to experience, or conscientious the client may be. For example, if a client creates Sims who frequently paint and play the piano often tease or insult each other and recurrently change career paths, the psychologist may uncover a creative yet neurotic disposition in the client. However, analyses of clients'™ gameplay should not be restricted merely to the results uncovered in this study, especially because this research is the first of its kind. A psychologist may also find it helpful to observe other gameplay elements, such as Sim family dynamics. For example, if a client creates a family of Sims in which the parents often fight while his or her self-reflective Sim usually spends time alone watching television, the psychologist may derive clues about the client's™ home life which are not easily uncovered through objective measures or other projective tests. Of course, there will be limitations of using The Sims 2 as a projective measure, but it may prove to be a more effective instrument than other projective tests, especially doll play. While doll play involves simple interactions between two or more dolls, The Sims 2 allows for much more detail by documenting the quality of multiple relationships, money management, career choices, social interactions and time management.

There may be other applications of The Sims 2 in a clinical setting besides using it as a projective measure of personality. The game might be a useful instrument to provide a sense of empowerment to people with an external locus of control, that is, people who feel that they have little or no control over their lives and believe that fate or other people have complete control over the direction their lives take. By playing The Sims 2, in which the very nature of the game is to control people, it may be possible that people with an external locus of control will become more aware of how much influence they really do have on their own lives. The Sims 2 may also be useful in training people to develop skills such as organization, time management, responsibility, and planning. People who play the game have to organize their Sims'™ daily activities, manage their Sims'™ household expenses and find balance among work, family, and fulfilling personal needs; therefore, it seems only natural that these skills used in a virtual household would translate into players'™ real lives. Further research should be conducted to find support for these proposals.

Limitations

There were several limitations in this study. First of all, there was a risk of demand characteristics in which participants may have guessed what my hypotheses were and therefore catered their manner of playing to match my expectations. Participants were given general clues about what I was studying because I administered the NEO-FFI and the Values Survey before they were allowed to play The Sims 2. However, I am not highly concerned that participants greatly altered how they played because 73% of the participants reported in The Sims 2 Survey that they did not change how they would normally play the game, and most of the remaining 27% of the participants reported that they only made minor changes such as not using cheat codes. Even if my participants had guessed that I was interested in how their personalities and values were projected in their Sims, they did not know the exact dimensions of personality or values in which I was interested; furthermore, because this study was exploratory, many of my results were not based on specific hypotheses developed before the data were collected.

There was also a risk of gameplay being altered due to social desirability. Participants were aware that they were being studied and therefore may have played in more socially acceptable ways. For instance, four participants stated

that they were slightly apprehensive about how they played because they were either afraid of making a mistake or they did not want to seem strange.

Another potential limitation is sample size and representativeness. Although a sample size of 30 participants was adequate for statistical power, as evidenced by the large number of statistically significant correlations in the dataset, a larger sample size would have been ideal. The demographic characteristics of my sample were very similar to the population of Dominican University undergraduate students, which suggests it is a representative sample of this population; however, Dominican University students may not be typical of all college-aged adults. As discussed below, future research will need to replicate and extend these findings with other populations.

One final limitation is that *The Sims 2* was primarily designed as a game, not as a projective measure, and it contains some limits in fully simulating reality. Therefore, players may have simply treated it as a game, playing in a way that reflected basic fulfillment of goals set by the game programmers, instead of freely projecting aspects of their own lives into their Sims.

Future Research

The results yielded from the current study open up many possibilities for future research on *The Sims 2*. First of all, research should continue to explore how personality characteristics relate to gameplay, particularly conscientiousness and extraversion. Although the data from this study did not provide much evidence for the importance of these two personality dimensions in *The Sims 2*, a larger sample size might yield supportive findings. In addition, other personality traits could be studied, especially characteristics related to control. For example, people who have a strong need for control over their lives and social decisions (e.g. choosing which restaurant to go to with a group of friends) may play differently than those who do not have a strong need for control, and locus of control should also be studied, as described earlier. It would be interesting to explore how age groups other than college students play *The Sims 2*, especially children and adolescents as they go through periods of identity formation and striving for control. The ways in which participants project their family life could be explored in more depth, and divorce should continue to be explored with a larger sample size. Abnormal gameplay, such as torturing Sims by intentionally withholding their needs, could also be explored to see if any personality traits might predict its occurrence.

Future research could also examine the effect transient mood has on players' experience with the game. One participant reported that he changed how he played depending on the mood he was in on each particular day. For example, he said that on days when he was feeling socially withdrawn, he would make his Sims avoid other Sims and they would engage in solo activities such as reading a book instead. Unlike personality characteristics, transient mood states can be manipulated by the researcher which would allow the use of an experimental design to study the effects of mood on gameplay.

Finally, fantasies should be explored in further detail, particularly negative fantasies, such as getting Sims fired or getting caught cheating on their partner. As Will Wright said, "People really love to explore failure states" (Thompson, 2003, p. 38) and it would be interesting to explore how players' personalities influence the sort of trouble they get their Sims into.

Conclusion

Media coverage of The Sims and The Sims 2 in publications ranging from Psychology Today to the Chicago Tribune since the game's release has prompted people to wonder, "Do Sims really reflect the lives of the players who created them?" Finally, after conducting this empirical study on The Sims there is supportive evidence to show that, yes, people do indeed project some aspects of themselves into their Sims. From the results of this study, we have seen that personality traits such as neuroticism, openness to experience and conscientiousness, values such as flirting, fidelity to one's partner, wealth and creativity and other characteristics such as gender, race, age, need for cognition, number of enemies and parent's marital status all relate to the different ways people play The Sims 2. However, this study is only the first of its kind. It is important that the results discovered in this study are replicated in future research and that other factors of the game are explored as well, especially if the game is to be used in a clinical setting. This project only marks the beginning of understanding self-projection in The Sims 2; much research has yet to be done.

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