Exploration of Visual Self-presentation and Friendship Networking on Facebook from the
Perspective of Life History Theory

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Abstract

Life History Theory (LHT) is a mid-level theory derived from a general evolutionary theory. According to this theory, an individual's life experiences influence individuals to adopt certain behavioural and relational strategies that govern the allocation of energy and resources. Those that invest in longevity and parenting are considered slow Life History (LH) strategists, while those that invest in obtaining many sexual partners are considered fast LH strategists. In order to test this theory in modern societies, LH theorists have relied on self-reports. Therefore, research into the relationship between LH strategy and human behaviour is limited. Facebook provides a new way to test real world behaviour. This study specifically looks at self-presentation through the use of profile pictures, and patterns of friendship networks. Profile pictures were analysed using a LH strategy variable. This variable, as well as mating effort, was used when analysing aspects of friendship networks. Findings suggest that LH strategy is a significant predictor of the content of a person's profile picture, as well as the success of the picture. It was also found that an interaction between LH strategy and mating effort significantly predicts number of friends. By analysing two new phenomena, this study has added to previous knowledge on LH strategy.

Keywords: Life History Theory; Life History strategy; visual self-presentation; friendship networks; Facebook.

Over the last two decades, the study of individual differences in Life History (LH) strategy in humans has gained much attention (Figueredo et al., Under Review). This has contributed to an enhanced understanding of human behaviour. Life History Theory (LHT) states that individuals will allocate their energy and material resources differentially toward either somatic effort, or reproductive effort (Figueredo et al., 2005). Individuals who allocate resources toward somatic effort are considered slow LH strategists, while those that allocate resources toward reproductive effort are considered fast LH strategists. This trade-off in allocation of resources is the result of an adaptation to one's environment. Individuals that are slow LH strategists are better adapted to environments that signal a high intrinsic (within control of the individual) mortality, while fast LH strategists are better suited to environments that are more unpredictable (Ellis, Figueredo, Brumbach, & Schlomer, 2009). This theory has become increasingly important to evolutionary explanations of human behaviour (Figueredo et al., Under Review).

In order to validate this theory, two general methods have been employed. Firstly, demographers assess real behaviour by following a traditional pastoralist society for a certain period of time. During this time, researchers measure the amount of food gathered and shared, and the amount of time spent on fitness enhancing activities (Mace, 1998). In such ancestral environments, data can be quantified and related to the theory, however, in modern societies, such a method proves problematic. Modern conditions make testing LH predictions relating to fitness problematic. For example, number of offspring is no longer a sufficient indicator of one's LH strategy due to the invention of birth control pills.

Due to these difficulties, psychologists have taken a psychometric approach in order to test LH hypotheses in modern societies. In general, they measure psychological constructs that are theoretically related to LHT and use correlational techniques to test the theoretically specified relations (Wolf & Jacobs, 2010; Wolf, 2011). However, these studies rely entirely on self-report and do not measure non-verbal behaviour. This omission is likely due to the expense and difficulty of such a task. Therefore, in modern societies, studies of LHT have been limited to the analysis of aspects of human behaviour that can reliably be tested using self-report measures. However, due to advances in technology, is has become possible for LH theorists to analyse behavioural phenomena using different methods. One such method may be the use of online social networking sites such as Facebook.

Online Social Networking Sites

Online social networking sites have become a virtually unavoidable medium for social interaction (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011). Social networking sites are web-based services that allow individuals to construct a profile of themselves, create a list of friends, and browse the profiles of those with whom they are connected (Boyd & Ellison, 2007). Over the last few years, these sites have become spaces in which young adults engage with one another, develop friendships, and meet prospective partners (Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Many of today's young adults have grown up with social networking forming a natural part of their everyday lives. Therefore, these individuals are comfortable with the idea of online identity and see it as a natural way of expressing themselves (Hunt, Atkin, & Krishnan, 2012).

The popularity of online social networking sites continues to grow (Strano, 2008). Facebook is the most used social networking site worldwide. Since its creation in February 2004, Facebook has become a successful online social network in which millions of individuals interact every day. Facebook has over 845 million users who spend more than 9.7 billion minutes per day on the site (Wilson, Gosling, & Graham, 2012).

Making use of Facebook to test Behavioural Phenomena

Studies on aspects of Facebook can be divided into six categories. The first category is the descriptive analysis of users. Studies in this category seek to examine who uses Facebook and what these users do while on Facebook (Wilson et al., 2012). The second category is motivations for Facebook use which answers why people use Facebook (Wilson et al., 2012). The third category is impression management, which examines how people present themselves and behave on Facebook, depending on their personality traits (Rosenberg & Egbert, 2011; Walther, Van Der Heide, Kim, Westerman, & Tong, 2008). The fourth category examines the role of Facebook in social interactions and seeks to explain how Facebook affects relationships among groups and individuals (Thompson & Lougheed, 2012). The fifth category examines the concept of privacy (Lewis, Kaufman, & Christakis, 2008) and seeks to explain why people disclose personal information on Facebook despite potential risks (Wilson et al., 2012). The final category includes studies which examine attributes of friendship networks (Wimmer & Lewis, 2010). From these categories, it is evident that Facebook provides fertile ground for the understanding of many different aspects of human behaviour.

Importantly, research has shown that Facebook behaviour is not detached from offline behaviour. Instead, offline identities and subsequent behaviours are carried into the online

domain (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011). Therefore, Facebook behaviour is not superficial, but is driven by the same psychological mechanisms that underlie offline behaviour (Piazza & Bering). Thus, Facebook gives us the opportunity to capture real world behaviour. This enables LH theorists to explore the relationship between various Facebook behaviours and the different LH strategies, and in so doing, expand the theory.

A further strength of using Facebook as a research tool is that it is a non-reactive measure. This means that it cannot be manipulated or affected by the researchers during the research process (Webb, Donald, Campbell, Schwartz, & Seacrest, 1966). By analysing Facebook behaviour after it has already been performed, researchers are able to measure behavioural constructs more accurately. However, to date LH theorists have not made use of Facebook as a research tool. Since Facebook allows individuals to perform many tasks such as post status updates, upload pictures, add friends, and communicate with others, it is possible to study many different behavioural phenomena. This study specifically focuses on two such phenomena, namely: visual self-presentation and friendship networking.

Visual Self-presentation on Facebook

Visual self-presentation refers to the way individuals manage the impressions they make on other people using visual aids (Zarghooni, 2007). It is used to convey to others what kind of person you are. Facebook allows users to do this through the use of profile pictures. The profile picture is a prominent aspect of an individual's profile. It is displayed whenever anyone searches for, or communicates with the user. Although many other photos of the user may be posted, these are not always posted by the user. The profile picture is, however, uploaded by the user. Therefore, the profile picture is argued to be the best reflection of how the user choses to portray himself/herself (Strano, 2008).

The importance of the profile picture as a form of self-presentation is heightened by the development of technology which has allowed people to easily manipulate their own pictures (Strano, 2008). Previously, only professional photographers were able to edit photographs. However, it is now possible for anyone to alter their own pictures, and thus individuals have more choice in how they are visually presented.

Although profile pictures have been studied in relation to personality (Kramer & Winter, 2008), age and gender (Strano, 2008), and cultural differences (Zhoa &Jiang, 2011), they have not yet been used by LH theorists. Therefore, there is no previous research demonstrating the relationship between LH strategy and profile pictures. However, from what is known about LH strategy, it is possible to formulate expectations as to the nature of this

relationship. There are two things to consider when analysing profile pictures from a LHT perspective. Firstly, it is important to look at the relationship between LH strategy and the content of profile pictures. In other words, it is important to know whether LH strategists put up photos that reflect their LH strategy or not. Secondly, it is important to understand why individuals choose the pictures that they do. More specifically, it is important to understand why it is beneficial for individuals to visually portray themselves in a manner that is cosistent with their LH strategy.

Both these aspects of the profile picture (content and choice) can be explained by two things that have been tested by LH theorists. Firstly, we know that individuals are attracted to others with the same LH strategy (Figueredo & Wolf, 2009). Secondly, we know that individuals who behave in an inconsistent manner are less 'favoured' by the sex that they are attracted to (Swanepoel, Ferreira, Wolf, Jacobs, & Thomas, in preperation). From this, we would expect individuals to visually portray themselves in a manner that reflects their LH strategy. This is because, by doing so, you are more likely to attract those that you wish to attract.

Unfortunately, due to the nature of this study, I was not able to test whether posting profile pictures that are reflective of ones LH strategy is associated with greater attraction from others with the same LH strategy. It was, however, possible to test whether posting a picture that is true to your LH strategy leads to greater recognition from those to whom you are attracted. Facebook allows individuals to 'like' a person's profile picture and also provides the opportunity for individuals to comment on the profile picture that is posted. Therefore, by looking at the number of Likes and Comments profile pictures receive from the sex to which the user is attracted, one is able to judge the 'success' of the picture. Successful pictures are those that gain much recognition from the sex to which one is attracted (many Likes and Comments) while unsuccessful pictures are those that gain little recognition from the sex to which one is attracted (few Likes and Comments).

Friendship networks on Facebook

Due to the invention of computer programs which can extract an individual's social network from online platforms such as Facebook, it has become possible to analyse patterns of a person's social network. Researchers have made use of this in order to test a variety of things such as racial homophily (Wimmer & Lewis, 2010), density of networks (Hampton, Goulet, Marlow, & Rainie, 2012) effects of age and nationality on friendship structure (Ugander, Karrer, Backstrom, Marlow, 2010) and effects of gender (Traud, Mucha, & Porter, 2011). However, these friendship networks have not been studied by LH theorists. By

extracting individuals' Facebook friendship networks, it is possible to test whether LH strategy has an influence on patterns of friendship.

From what is already known by LH theorists, it is possible to predict what the friendship patterns of different LH strategists might look like. Since fast LH strategists invest more in reproductive effort than in somatic effort (Figueredo et al., 2005), finding prospective mates is more important than finding long lasting, quality friendships (Figueredo & Wolf, 2009). Slow LH strategists, on the other hand, invest more in somatic effort and therefore are more interested in quality friendships (Figueredo & Wolf, 2009). Fast LH strategists are more interested in benefitting from the friendship; hence, these friendships are weak, while slow LH strategists make strong, mutually beneficial friendships (Figueredo & Wolf, 2009). It is therefore reasonable to expect that fast LH strategists will have sparsely connected friends, while slow LH strategists will have very interconnected friendship networks. A sparsely related friendship group would be beneficial to fast LH strategists because their prospective mates would not know each other. A cohesive friendship group is beneficial to slow LH strategists because they then have a great amount of social support.

How many friends an individual makes may be linked to their LH strategy, but may also be dependent on their mating effort. Mating effort refers to the time, energy and resources put into attracting or retaining a mate (Kirsner, Figueredo, Jacobs, 2009). Therefore, both fast and slow LH strategists may have varying amounts of mating effort. Although studies have not linked mating effort to number of friends, it is reasonable to assume that an individual's number of friends will be influenced by their LH strategy and mating effort.

Following from an analysis of number of friends, it would be interesting to explore the link between LH strategy and the number of friends of the sex to which one is attracted. Due to fast LH strategists investing more highly in reproductive effort, it can be predicted that they would have more friends of the sex to which they are attracted than slow LH strategists.

Accounting for alternative explanations

LH strategy has been linked to personality traits through a higher order factor called the general factor of personality (Figueredo, Vásquez, Brumbach, & Schneider, 2007). This is derived from the lower-order Big Five characteristics: extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. It has been shown that a certain combination of personality traits are associated with certain LH strategies (Linden, Figueredo, de Leeuw, Scholte, & Engels, 2012). Therefore, social psychologists may argue

that if a relationship is found between LH strategy and visual self-presentation and friendship networks it may in fact be due to the influence of personality traits.

Therefore, in order to test whether LHT predicts visual self-presentation and friendship networking patterns beyond what may be accounted for by personality variables, this study controlled for the Big Five personality characteristics. It is important to note, however, that the focus is on LH strategy variables and not on personality.

Summary and Rationale

LHT is an evolutionary theory which states that individuals, influenced by their environment, are located on a continuum between fast LH strategy and slow LH strategy (Figueredo et al., 2005). Many studies have linked LH strategy to many different aspects of human behaviour; however, this is limited by the reliance on self-report measures (Sherman, Figueredo, & Funder, In Press). Due to advances in technology, there is the opportunity to study human behaviours and traits via new methods. One such method is through the analysis of Facebook behaviour. Facebook behaviour has been shown to be driven by the same psychological mechanisms as offline behaviour (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011), therefore, it provides the opportunity for a real world behaviour to be analysed.

This study explores the relationship between Facebook behaviours – specifically visual self-presentation and friendship networking – and LH strategy. Therefore, by analysing behaviours which cannot be tested using self-report, this study may give further insight into the functioning of the different LH strategists.

Aims and Hypotheses

The primary objective of this study was to analyse visual self-presentation and friendship network patterns using a LHT perspective. These two outcomes may be linked to personality traits, which in turn are theoretically and empirically linked to LHT. Thus, it is important to control for these variables in order to show that LHT significantly predicts visual self-presentation and friendship networking beyond what is accounted for by social psychological variables. Therefore, the primary research question was: Might broad patterns of visual self-presentation and friendship networks, as they are displayed on Facebook, be predicted using LHT after statistically controlling for personality variables? In order to answer the research question, the following hypotheses were tested:

1. Individuals will post profile pictures that reflect their LH strategy.

2. Individuals that post profile pictures reflective of their LH strategy will receive more Likes and Comments from the sex to which they are attracted than those who post profile pictures that are not reflective of their LH strategy.

3. Slow LH strategists will have densely connected friendship networks, while fast LH strategists will have sparsely connected friendship networks.

4. LH strategy and mating effort will interact to predict number of friends.

5. Fast LH strategists will have a higher proportion of friends of the sex to which they are attracted than slow LH strategists.

Method

Design and Setting

This study used a correlational design to test whether a relationship exists between LH strategy and both visual self-presentation and friendship networks on Facebook. All Data were collected from Undergraduate Psychology students at the University of Cape Town and all data analyses took place in the Psychology department at UCT.

Participants

Participants were recruited using the Student Research Participation (SRPP) program at UCT. Within this program Undergraduate University students are required to take part in a certain number of studies as part of their courses. Initially, 445 participants completed an online survey. Of these, 123 participants agreed to continue with the study. Most participants were White heterosexual females, aged between 18 and 25. The Results section provides further details of the sample characteristics.

For Hypothesis 2, which looked at the number of Likes and Comments on profile pictures, participants were excluded who had had their profile picture uploaded for less than a month. This was done in order to eliminate the possibility of a picture having fewer Likes and Comments just because it had only been up for a few hours or days. This sub-sample consisted of 85 participants. Hypothesis 3 required data to be extracted from participant's Facebook pages. The program that did this was not compatible with all participants' Facebook pages. Therefore, of the original 123, 100 participants were used to test this Hypothesis. These sub-samples were comparable to the overall sample in that they were also aged between 18 and 25 and were mostly White heterosexual females. Finally, Hypothesis 5 looks at the proportion of friends of the sex to which one is attracted. Three additional participants were excluded from the 100 referred to above. This is because two participants were bisexual and one did not specify their sexual orientation; therefore, a sex of attraction could not be determined.

Eligibility criteria. In order to participate in Phase 1 of the study, participants had to be registered as Undergraduate Psychology students at the University of Cape Town. Questionnaires were only provided in English, therefore participants had to be able to read and write in English. In order to be accepted for Phase 2 of the study, participants had to have completed Phase 1 and had to have a Facebook account.

Materials

In Phase 1 of the study, data were collected using ten online questionnaires: One assessed demographic information; the NEO-FFI, MVI and MES measured control variables; and one was used to measure the predictor variable of interest. This is the Mini-K short form. These measures are provided in Appendices A – D. All measures display good psychometric properties.

NEO Five-Factor Inventory (NEO-FFI). The NEO-FFI is a personality inventory that measures five personality traits; extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. There are many forms of this questionnaire. The one used in this study was a 55 item version. Many studies have been conducted on the reliability and validity of the NEO-FFI, and have found that the measure is both reliable and valid (Aluja, Garcia, Rossier, & Garcia, 2005).

Mate Value Inventory (MVI). This inventory is one of few that tests self-perceived mate value. It is a 17 item scale that askes individuals how well they think certain attributes describe them. Scores range from -3 (*extremely low on this trait*) to +3 (*extremely high on this trait*). Therefore, scores may range from -51 to +51. High total scores indicate a high self-perceived mate value while low total scores indicate low self-perceived mate value. This measure has again been shown to be reliable and valid (Fisher, Cox, Bennett, Gavric, 2008).

Mating Effort Scale. The MES is a 10-item questionnaire which assesses an individual's mating effort. Individuals can either agree or disagree with statements. Possible answers range from -3 (*strongly disagree*) to +3 (*strongly agree*), therefore, possible scores range from -30 to +30. High total scores indicate high mate value, while low total scores indicate low mate value. This assessment scale has been shown to have high reliability and good validity (Rowe, Vazsonyi & Figueredo, 1997).

Mini-K Short Form. This questionnaire is designed to measure the behavioural and cognitive aspects of an individual's LH strategy (Dunkel et al., 2010). This questionnaire consists of 20 items which are scored according to a Likert-like scale, ranging from -3 (*strongly disagree)* to +3 (*strongly agree*). Therefore, the possible score range is from -60 to +60. Those that have a high total score are considered slow LH strategists, while those that

score low have a fast LH strategy. This questionnaire has been shown to be internally consistent, with alpha values ranging from .70 to.77 (Gladden et al., 2010; Olderbak & Figueredo, 2012). Therefore, it is a reliable measure. It has also shown to be a valid measure since it can be used interchangeably with other measures of LH strategy (Figueredo et al., Under Review).

Procedure

   Phase 1. An announcement detailing the study and inviting students to participant was placed on the UCT students' SRPP website. Participants had to click on the link given in order to be directed to the online surveys. Before being able to fill out the surveys, participants had to agree to a consent form. After completion of the online surveys, participants were asked whether they would like to, and agree to, participate in Phase 2 of the study. Those that said "yes" were asked to meet with the researcher for 30 minutes so that their Facebook data could be extracted. Participants were assured that their information would remain anonymous and confidential. Only those that completed the online surveys were asked to participate in Phase 2.

   Phase 2. When meeting with the researcher, participants' Facebook information was extracted using a computer program called NodeXL, downloadable at http://nodexl.codeplex.com/. Participants had to log on to NodeXL using their Facebook username and password. The specific information which was extracted by this program was the participants name, birth date, and sex, as well as the number of friends a user has, and details of the connections between these friends. Participants were also asked to log on to their actual Facebook profile page so that their current profile picture could be obtained, and so that the number of Likes and Comments on the profile picture could be counted.

Ethical considerations

   Participants were required to give consent to both Phase 1 and Phase 2 by completing an online consent form before participating in the relevant phases. In the consent document, participants were assured that all information would be anonymous and would be kept confidential. Only researchers involved in the study had access to the data. Before participating in the study, students were given a detailed description of the study and were thus not miss-led in any way. Participants were also informed that they were entitled to withdraw from the study at any time and that participation was voluntary. When using the NodeXL program, participants were able to see exactly what information was extracted. Once information had been extracted and participants had logged off of their Facebook account, no further access to the participants Facebook page was possible. In order to minimise any harm

to participants, debriefing was offered to participants post-study should they feel it necessary. In keeping with the participants' rights to access of information, the final results will be made available to participants should they be interested.

Statistical analysis

   Q-sort. This technique was used in order to analyse participants profile pictures. Males and Females were analysed separately. Four raters, each of whom are knowledgeable about LHT, arranged each profile image from fastest to slowest LH strategy according to 7 categories, ranging from -3 (extremely characteristic of a fast LH strategy) to 3 (extremely characteristic of a slow LH strategy), with a neutral category at 0. This forced choice method ensured a normal distribution. The average rating of each individual across the four raters was used as the participants profile picture score. Inter-rater reliability was assessed using intra-class correlations to determine whether the results obtained from the Q-sort were reliable. Results can be seen in Table 1.

   Scoring of questionnaires. In order to score the NEO-FFI 55-item inventory, all negatively-keyed items were first reversed scored. Thereafter, scores for each personality characteristic were averaged in order to produce an individual score for each of the five characteristics. Scores for mate value were calculated by adding all scores for individual items. This was the same procedure used to calculate final mating effort scores and LH strategy scores.

   Predictor and outcome variables. For all analyses, predictor variables included sex, extroversion, agreeableness, conscientiousness, neuroticism, openness to experience, mate value, and LH strategy. For Hypothesis 2 additional predictor variables included profile picture score and an interaction between profile picture score and LH strategy. For Hypotheses 3, 4, and 5, mating effort was also included as a predictor variable. Additionally for Hypothesis 4, an interaction between mating effort and LH strategy was included.

   Outcome variables were (1) the profile picture score, which was the average score each participant obtained from the four raters after the profile pictures were q-sorted, (2) the number of Likes and Comments profile pictures received from the sex to which the participant is attracted, (3) the average number of connections between friends, (4) total number of friends and, (5) the proportion of friends of the sex to which one is attracted. These outcome variables relate to Hypotheses 1 – 5 respectively.

   The average number of connections between friends was calculated by making use of two Nodexl matrixes: edges and nodes. Nodes refer to the people in the network while edges refer to connections between these people. Therefore, one node is one person, and one edge is

one connection. In order to get the average number of connections between friends, the total number of edges was divided by the total number of nodes. The proportion of friends of the sex to which one is attracted was calculated by dividing the number of friends to which one is attracted by the total number of friends. Homosexuals were included in this analysis, however, as previously mentioned, bisexuals and those who selected the option of 'other' were excluded.

Descriptive statistics. All analyses were conducted using the statistical program SPSS, version 21. Descriptive statistics for all predictor and outcome variables were computed in order to describe the characteristics of the sample.

Inferential statistics. For all analyses a General Linear Model (GLM) was used. When running the GLM regression, the Type I error rate (α) was set at .05. For all analyses sex was entered first, followed by the personality variables, and then by mate value .

For Hypothesis 1, the mate value was followed by LH strategy. For Hypothesis 2, profile picture score, and the interaction between LH strategy and profile picture score were further added. For Hypotheses 3, 4, and 5, MVI was followed by mating effort and then LH strategy. Additionally for Hypothesis 4, an interaction between mating effort and LH strategy was entered last. Due to LH strategy being of most importance to this study, the LH strategy variable was entered after the personality variables to see whether it accounted for additional variance, over and above the personality variables. Also important to note is that all variables involved in interactions were centered so as to reduce multicolinearity.

Due to the nature of this model, variables which explain non-significant portions of the variance in the outcome variable were eliminated. Of these, those with the least effect (in terms of the smallest partial eta^2) were removed first and one at a time. In this way, the final model meets two of the assumptions of the GLM: (1) all relevant predictor variables are included and (2) all irrelevant predictor variables are excluded.

Model Diagnostics. Assumptions were checked by computing residual plots, tolerance values, Cook's distances, and Durbin-Watson tests. Non-normality of residuals were present in models testing Hypothesis 2 and Hypothesis 3. Square root transformations were conducted to correct for these issues (see Appendix E). No problems with scedasticity were detected. All tolerance values were above .70, therefore multicollinearity was not a problem. All Cook's values were below 1, therefore no data points were cause for concern. Finally, all errors were independent, as evidenced by all Durbin-Watson test scores which were close to or higher than 2.

Results

Inter-Rater Reliability

The results of the Q-sort inter-rater reliability assessment showed a high significant correlation between average measures (see Table 1), therefore data analysis was performed on Hypotheses 1 and 2.

Table 1

Intraclass Correlation of Q-sort Raters

	Intraclass Correlation	95% C.I		*F*	*df1*	*df2*	*p*
		Lower	Upper				
Single Measures	.58	.50	.66	6.59	122	366	<.001
Average measures	.85	.80	.89	6.59	122	366	<.001

Note: number of raters = 4

Descriptive Statistics

    Sample characteristics. Table 2 shows the number of individuals of each sex, as well as the number of males and females of each race and sexual orientation, for the overall sample. There were substantially more females (80.49%) than males (19.51%). The sample consisted mainly of White females (54.47%). There were very few Asian (1.63%) and Indian (2.44%) participants, and a moderate number of Coloured (16.26%) and Black (13.82%) participants. In terms of sexual orientation, the majority of the sample was heterosexual (94.31%).

Table 2
Sex, Race and Sexual Orientation of the Sample (N = 123)

	N	White	Asian	Indian	Coloured	Black	Other	Hetero-sexual	Homo-sexual	Bisexual	Other
Male	24	12	1	0	5	5	1	23	1	0	0
Female	99	67	1	3	15	12	1	93	2	3	1

Table 3 shows descriptive statistics, including age, the five personality characteristics, mate value, mating effort, and LH strategy for the overall sample. From this table it can be seen that on average participants were on the slower side of the LH strategy continuum. From

Figure F1 in Appendix F it is evident that LH strategy scores were normally distributed in the sample.

The sample also consisted of individuals who were on the higher side of the mate value continuum (continuum ranges from -51 which is low to 51 which is high). On average, individuals had slightly low mating effort (-20 is the lowest, 20 is the highest).

Table 3
Descriptive statistics of Age, Personality Characteristics, Mate Value, Mating
Effort and Life History Strategy (N = 123)

	Min	Max	Mean	SD
Age	18.00	25.00	20.15	1.40
Extraversion	1.38	4.88	3.25	0.77
Agreeableness	2.56	5.00	3.81	0.56
Conscientiousness	2.11	5.00	3.62	0.64
Neuroticism	1.00	4.75	3.07	0.80
Openness	1.90	4.80	3.61	0.57
MVI	-5.00	51.00	27.97	10.16
MES	-20.00	16.00	-5.11	6.33
LHS	-5.00	50.00	27.63	11.76

Tables 4 illustrates the correlations between predictor variables and the two visual self-presentation outcome variables; profile picture score and number of likes and comments from the sex to which one is attracted. None of the predictor variables were significantly correlated with profile picture score. Profile picture score was significantly negatively correlated with number of likes and comments. Extraversion and openness were significantly positively correlated with number of likes and comments. . Mate value and LH strategy are both significantly positively correlated with extraversion, agreeableness, conscientiousness and openness to experience, but negatively correlated with neuroticism. Mate value and LH strategy are significantly positively correlated. All significantly correlated values are moderately correlated, except for mate value and conscientiousness, and mate value and LH strategy, which are more highly correlated (< .5). No multicollinearity was detected in the data.

Table 5 illustrates the correlations between predictor values and three outcome variables for friendship networks: average number of connection, number of friends, number of friends of the sex to which one is attracted. No predictor variables were significantly correlated with

average number of connections. Sex was significantly negatively correlated with mating effort, but was not significantly correlated with any other variables. This means that males have higher mating effort than females. Extraversion was significantly positively correlated with number of friends. No predictor variables were correlated with the number of friends of the sex to which one is attracted. Mate value was significantly positively correlated with extroversion, agreeableness, conscientiousness and openness to experience, but significantly negatively correlated to neuroticism. LH strategy was significantly positively correlated with extroversion, agreeableness, conscientiousness and openness to experience, but was not significantly correlated with neuroticism. LH strategy and mate value were significantly positively correlated. Mating effort was only significantly correlated with sex. Again, the highest correlations were between mate value and conscientiousness, and mate value and LH strategy, and there were no problems of multicollinearity (all tolerance values were greater than .7).

Table 4

Bivariate Correlations Between all Predictor and Outcome Variables for Visual Self-Presentation (116 ≤ N ≤ 123)

	1	2	3	4	5	6	7	8	9	10
1. Profile picture score	-									
2. Number of Likes and Comments	-.20*	-								
3. Sex[a]	.00	-.09	-							
4. Extraversion	-.04	.19*	.06	-						
5. Agreeableness	-.05	.02	.11	.18*	-					
6. Conscientiousness	-.01	-.03	-.03	.24**	.23**	-				
7. Neuroticism	.09	-.06	.02	-.32***	-.39***	-.29**	-			
8. Openness to experience	-.07	.22*	-.01	.25**	.17	.13	-.21*	-		
9. MVI	-.10	.10	.05	.38***	.29**	.51***	-.35***	.27**	-	
10. LHS	.15	.04	.10	.25**	.30**	.35***	-.22*	.22*	.54***	-

a. 0 = male, 1 = female
*p < .05. **p < .01. ***p < .001

Table 5

Bivariate Correlations Between all Predictor and Outcome Variables for Friendship Networks (97 ≤ N ≤ 100)

	1	2	3	4	5	6	7	8	9	10	11	12
1. Average number of connections	-											
2. Number of friends	-	-										
3. Number of friends of sex attracted to	-	-	-									
4. Sex[a]	.14	.10	.08	-								
5. Extraversion	.01	.23*	.18	.11	-							
6. Agreeableness	.02	.17	.16	.14	.20	-						
7. Conscientiousness	.02	.09	.05	.06	.20	.24*	-					
8. Neuroticism	.07	-.01	.05	-.03	-.33**	-.35***	-.30**	-				
9. Openness to experience	-.07	.12	.15	-.01	.31**	.27**	.20*	-.23*	-			
10. MVI	.07	.16	.12	.13	.38***	.31**	.50***	-.31**	.30**	-		
11. MES	.00	.08	.04	-.25*	-.04	-.06	-.05	.09	.04	-.15	-	
12. LHS	.11	.06	.02	.13	.22*	.31**	.33**	-.17	.25*	.49***	-.11	-

a. 0 = male, 1 = female

p < .05. **p* < .01. ***p* < .001

Inferential Statistics

Hypothesis 1 stated that individuals would post profile pictures that reflect their LH strategy. In support of Hypothesis 1, LH strategy was significantly positively correlated with profile picture score (see Table 6 and 7). Therefore, individuals with a higher LH strategy score (indicating a slower LH strategy) had a higher profile picture score (indicating a slower LH strategy). In addition, profile picture scores did not depend on sex or any of the five personality characteristics; however, there was a suppression effect of mate value. Therefore, without mate value, the effects of LH strategy are underestimated. When the two predictor variables are entered simultaneously, mate value is significantly negatively correlated with profile picture score meaning that higher mate value was associated with a lower profile picture score. Although significant results were found, the overall effect size was small.

Table 6
Final Model of the Test of Between Subjects Effects on Profile Picture Score (N = 123)

Variable	Type I Sum of Squares	df	Mean Square	F	p	Partial eta squared
Intercept	0.00	1	0.00	.000	1.000	.00
MVI	1.75	1	1.75	1.23	.270	.01
LHS	10.83	1	10.83	7.57	.007	.06

Note. Overall R^2 = .07; overall adjusted R^2 = .05; F (2, 120) = 4.40, p =.014

Table 7
Parameter Estimates for Variables Predicting Profile Picture Score (N = 123)

Variable	B	S.E.	β	t	p	95% C.I Lower	95% C.I Upper	Partial eta squared
Intercept	.03	.34		.09	.928	-.63	.69	.00
MVI	-.03	.01	-.26	-2.43	.016	-.06	-.01	.05
LHS	.03	.01	.29	2.75	.007	.01	.05	.06

Hypothesis 2 stated that individuals that post profile pictures reflective of their LH strategy will receive more Likes and Comments than those who post profile pictures that are incompatible with their LH strategy. Table 8 and 9 provide the results of the analysis of success of the chosen profile picture. Again, the success of the profile picture did not depend on sex or four of the five personality characteristics (extroversion, agreeableness, conscientiousness and neuroticism). Openness to experience was, however, significantly positively correlated with number of Likes and Comments and was thus retained in the final model. The main effects of LH strategy and profile picture score were not significant. However, in support of Hypothesis

2, the interaction between LH strategy and profile picture score was significantly correlated with number of Likes and Comments above and beyond what was accounted for by openness to experience. Figure 1 shows that for individuals with a low profile picture score, a faster LH strategy was associated with a higher number of Likes and Comments. In contrast, for individuals with a high profile picture score, a slower LH strategy was associated with a higher number of Likes and Comments. Therefore, when profiles pictures where reflective of an individual's LH strategy (ie. Fast LH strategy and low profile picture score, or slow LH strategy and high profile picture score), profile pictures received more Likes and Comments than when profile pictures where incompatible with an individual's LH strategy. Again, although the final model is significant, it only explains a small amount of the variance in number of Likes and Comments.

Table 8
Final Model of the Test of Between Subjects Effects on the Success of the Chosen Profile Picture (N =85)

| Variable	Type I Sum of Squares	df	Mean Square	F	p	Partial eta squared
Intercept	140.55	1	140.55	115.50	.000	.60
Openness to experience	10.33	1	10.33	8.50	.005	.10
LHS	.004	1	.004	.003	.955	<.001
Profile picture score	2.27	1	2.27	1.87	.176	.02
LHS * Profile picture score	8.14	1	8.14	6.67	.012	.08

Note. Outcome variable: number of Likes and Comments from sex to which one is attracted.
Overall $R^2 = .18$; overall adjusted $R^2 = .14$; $F(4, 77) = 4.26$, $p = .004$

Table 9
Parameter Estimates of Variables Predicting Success of the Chosen Profile Picture (N = 85)

Variable	B	S.E.	β	t	p	95% C.I Lower	Upper	Partial eta squared
Intercept	-.79	.78		-1.00	.318	-2.34	.77	.01
Openness to experience	.56	.21	.28	2.61	.011	.13	.98	.08
LHS	.01	.01	.06	.51	.616	-.02	.03	.003
Profile Picture score	-.13	.10	-.14	-1.31	.173	-.33	.07	.02
LHS*Profile Picture score	.02	.01	.27	2.59	.012	.01	.04	.08

Figure 1

Effects of interaction between LH strategy and profile picture score on the number of Likes and Comments received from those of the sex to which one is attracted
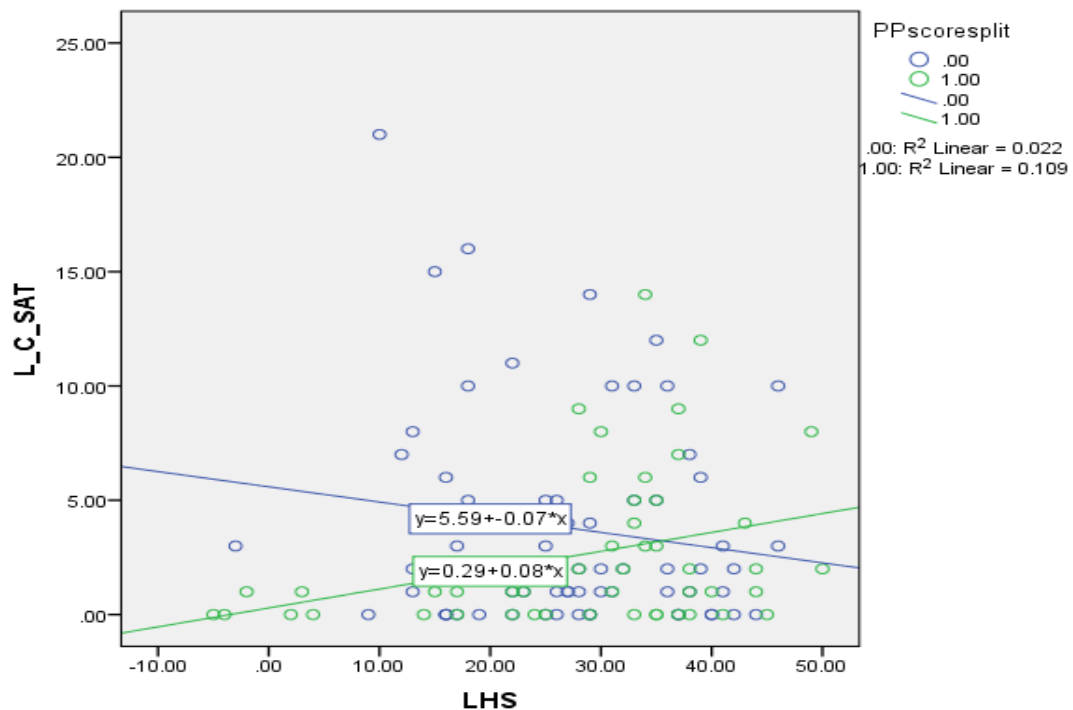
Note: low profile picture score = .00, high profile picture score = 1.00

Hypothesis 3 stated that slow LH strategists will have more densely connected friendship networks than fast LH strategists. None of the variables entered into the model significantly predicted the outcome variable, average number of connections (see Table 10 and 11). Therefore, LH strategy does not influence the average number of connections between friends.

Table 10
Final Model of the Test of Between Subjects Effects on Number of Average Connections Between Friends (N =100)

Variable	Type I Sum of Squares	df	Mean Square	F	p	Partial eta squared
Intercept	2556.05	1	2556.05	1003.71	.000	.918

Sex	4.73	1	4.73	1.86	.176	.02
Extraversion	.08	1	.08	.03	.861	<.001
Agreeableness	.02	1	.02	.006	.936	<.001
Conscientiousness	.001	1	.001	.001	.982	<.001
Neuroticism	1.62	1	1.62	.64	.427	.007
Openness to experience	.69	1	.69	.27	.604	.003
MVI	3.42	1	3.42	1.34	.250	.02
MES	.59	1	.59	.23	.631	.003
LHS	.34	1	.34	.13	.716	.001

Note. Overall R^2 = .05; overall adjusted R^2 =.-.05; F (9, 90) = 0.501, p = .870

Table 11
Parameter Estimates of the Variables Predicting Average Number of Connections Between Friends (N = 100)

						95% C.I		Partial eta squared
Variable	B	*S.E.*	β	t	p	Lower	Upper	
Intercept	4.92	2.16		2.28	.025	.63	9.22	.054
Sex	.49	.41	.13	1.21	.230	-.32	1.30	.02
Extraversion	.04	.24	.02	.18	.859	-.43	.52	.00
Agreeableness	.01	.33	.002	.02	.985	-.64	.65	.00
Conscientiousness	-.11	.31	-.04	-.36	.721	-.74	.51	.001
Neuroticism	.18	.23	.09	.77	.446	-.28	.64	.01
Openness to experience	-.23	.31	-.08	-.73	.465	-.84	.39	.01
MVI	.02	.02	.14	1.03	.307	-.02	.07	.01
MES	.01	.03	.05	.50	.620	-.04	.07	.003
LHS	.01	.02	.05	.37	.716	-.03	.04	.001

Hypothesis 4 stated that the interaction between LH strategy and mating effort would significantly predict the number of friends a person has on Facebook. This was confirmed as can be seen from Tables 12 and 13, and Figure 2. The outcome variable was again not effected by sex or four of the five personality variables. The average number of connections was predicted by extroversion. Extroversion has a positive relationship with this outcome variable. Although main effects of mating effort and LH strategy were not significant, the interaction between them was. The relationship between the interaction and the number of friends is illustrated in Figure 2. From this we can see that fast LH strategists with high mating effort have the highest number of friends while fast LH strategists with low mating effort have the lowest. Slow LH strategists have an average number of friends; however those

with high mating effort seem to have a few more friends. This difference however is not great. Although the interaction between LH strategy and mating effort does significantly influence number of friends, the effect size is small.

Table 12
Final Model of the Test of Between Subjects Effects on Number of Friends (N =100)

Variable	Type I Sum of Squares	df	Mean Square	F	p	Partial eta squared
Intercept	27592958.41	1	27592958.41	314.71	.000	.77
Extraversion	477809.95	1	477809.95	5.45	.022	.05
MES	68317.68	1	68317.68	.78	.380	.01
LHS	3086.04	1	3086.04	.04	.852	<.001
MES*LHS	448582.02	1	448582.02	5.12	.026	.05

Note. Overall R^2 = .11; overall adjusted R^2 = .07; F (4, 95) = 2.845, p = .028

Table 13
Parameter Estimates of the Variables Predicting Number of Friends (N = 100)

Variable	B	S.E.	β	t	p	95% C.I Lower	Upper	Partial eta squared
Intercept	298.77	136.78		2.18	.031	27.22	570.32	.05
Extroversion	67.07	41.03	.17	1.64	.105	-14.38	148.51	.03
MES	5.83	4.96	.12	1.18	.243	-4.02	15.68	.01
LHS	1.20	2.62	.05	.46	.649	-4.01	6.41	.002
MES*LHS	-.90	.40	-.23	-2.26	.026	-1.69	-.11	.05

Figure 2

Effects of the interaction between mating effort and LH strategy on number of friends.
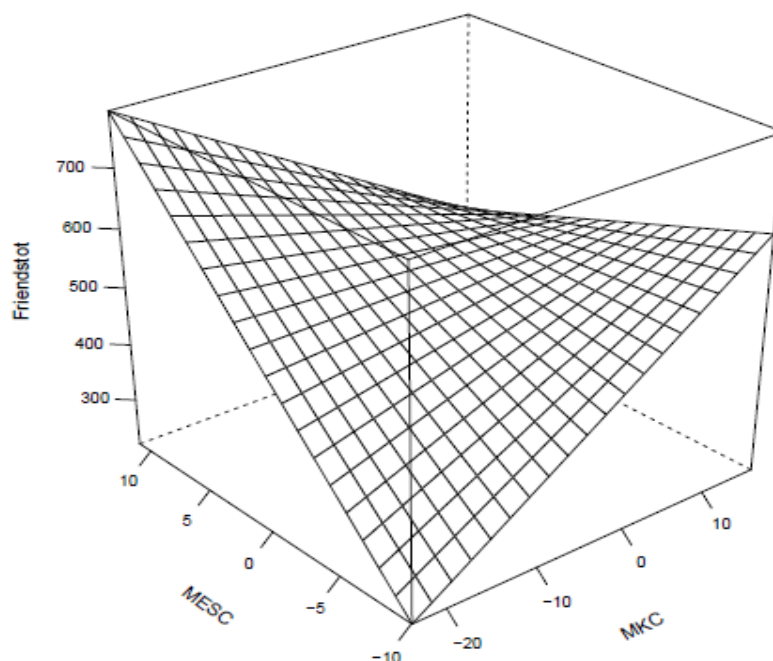
Hypothesis 5 stated that fast LH strategists will have more friends of the sex to which they are attracted than slow LH strategists. This was not confirmed as can be seen in Tables 14 – 17. Variables that were significantly related to outcome variable dependent on extroversion and sex. When extroversion and sex were included in the model, mating effort significantly predicted the outcome variable. When extroversion was taken out of the model, no variables significantly predict the outcome variable at the 5% level. When sex was removed from the model, the model was no longer significant. Therefore, although extroversion and sex are not significantly related to the proportion of friends of the sex to which one is attracted (see Table 14), they are still important variables. When extroversion and sex were included in the model, neuroticism was significantly positively related to the outcome variable, while mating effort was negatively related. For every one unit increase in neuroticism, there are approximately 2 more friends of the sex to which one is attracted. For a unit increase in mating effort, there is approximately 2 fewer friends of the sex to which one is attracted. The variable of interest – LH strategy – was not significant.

Table 14
Final Model of the Test of Between Subjects Effects on Proportion of Friends of the Sex to Which one is Attracted (N =97)

Variable	Type I Sum of Squares	df	*Mean Square*	F	p	Partial eta squared
Intercept	196125.41	1	196125.41	1844.03	.000	.95
Sex	311.44	1	311.44	2.93	.090	.03
Extraversion	65.18	1	65.18	.61	.436	.01
Neuroticism	367.59	1	367.59	3.46	.066	.04
MES	424.17	1	424.17	3.99	.049	.04

Note: Male = 0, Female = 1. Overall R^2 = .11; overall adjusted R^2 = .07; F (4, 92) = 2.747, p = .033

Table 15
Parameter Estimates of the Variables Predicting Proportion of Friends of the Sex to Which one is Attracted, Including Extroversion (N = 97)

Variable	B	*S.E.*	B	t	p	95% C.I Lower	95% C.I Upper	Partial eta squared
Intercept	26.76	7.60		3.52	.001	11.67	41.84	.12
Sex	- 5.75	2.60	-.23	2.21	.029	.59	10.90	.05
Extraversion	1.97	1.45	.14	1.36	.178	-.91	4.84	.02
Neuroticism	2.86	1.41	.21	2.04	.045	.07	5.66	.04
MES	-.35	.18	-.20	-2.00	.049	-.71	-.002	.04

Table 16
Final Model of the Test of Between Subjects Effects on Proportion of Friends of the Sex to Which one is Attracted (N =97)

Variable	Type I Sum of Squares	df	Mean Square	F	p	Partial eta squared
Intercept	196125.41	1	196125.41	1827.50	.000	.95
Sex	311.44	1	311.44	2.90	.092	.03
Neuroticism	245.19	1	245.19	2.29	.134	.02
MES	415.92	1	415.92	3.88	.052	.04

Note: Male = 0, female = 1. Overall R^2 = .09; overall adjusted R^2 = .06; F (3, 93) = 3.021, p = .034

Table 17
Parameter Estimates of the Variables Predicting the Proportions of Friends of the Sex to Which one is Attracted, Excluding Extroversion (N = 97)

Variable	B	S.E.	B	t	p	95% C.I Lower	Upper	Partial eta squared
Intercept	35.13	4.45		7.90	.000	26.30	43.96	.40
Sex	- 5.36	2.59	-.21	2.06	.041	.21	10.51	.04
Neuroticism	2.26	1.34	.17	1.69	.095	-.40	4.93	.03
MES	-.35	.18	-.20	-1.97	.052	-.71	.003	.04

Discussion

The aim of the present study was to explore the relationship between LH strategy and two new variables – visual self-presentation and friendship networking – in order to expand on previous knowledge. The specific relationships explored were 1) the effects of LH strategy on profile picture content; 2) the relationship between LH strategy, profile picture score, and the number of likes and comments on the current profile picture received from individuals of the sex to which one is attracted; 3) the effects of LH strategy on average number of connections between friends; 4) the effects of LH strategy and mating effort on the number of friends; and 5) the effect of LH strategy on the proportion of friends of the sex to which one is attracted to.

Hypothesis 1 stated that individuals would post profile pictures that reflect their LH strategy. This hypothesis was supported. Individuals with a fast LH strategy posted pictures which were indicative of a fast LH strategy, while slow LH strategists posted profile pictures which were indicative of a slow LH strategy. This supports previous research showing that people present online versions of themselves that are congruent to their offline identity (Gosling et al., 2011).

Results also showed that mate value predicted individuals' profile picture scores. One interpretation is that more attractive individuals post profile pictures that indicate a fast LH strategy. However, it is more probable that this effect was caused by the perceptions of the raters. The raters may have been influenced by the attractiveness of an individual, and thus subconsciously decided that a more attractive individual has a faster LH strategy. Therefore, although individuals might have had very similar profile pictures, their scores may have been different due to the difference in perceived attractiveness.

According to the first hypothesis, most individuals post profile pictures that reflect their LH strategy. However, it is important to understand why individuals decide to visually portray themselves in a way that is consistent with their LH strategy. A possible reason for this is that individuals who are consistent receive more favourable responses from the sex to which they are attracted than those that are inconsistent (Swanepoel et al., Under Preperation).

This was shown to be a plausible explanation by the results obtained in this study. Results showed that participants whose profile pictures reflect their LH strategy were more successful than those whose profile pictures are not congruent with their LH strategy. Success was measured by the number of Likes and Comments the profile picture received from individuals of the sex to which one is attracted. This result therefore supports previous findings which show that individuals are more favourably received by people of the sex to which one is attracted to if they behave in a consistent manner.

Hypothesis 3 stated that fast LH strategists would have sparsely connected friendship networks while slow LH strategists would have densely connected friendship networks. This was not supported as results showed that LH strategy was not predictive of the number of average connections between friends. Therefore, fast and slow LH strategists have a similar number of average connections, on average. It is unclear as to whether they both have high connections or both have low connections, or neither. Number of average connections may simply vary randomly across levels of LH strategy.

If both slow and fast LH strategists have few connections, then the prediction for fast LH stands, but that for slow LH strategists does not. However, when looking at the raw data, it is more probable that both slow and fast LH strategists have dense networks. In this case, the prediction for slow LH strategists' stands, but the one for fast LH strategists is not supported. It may be that fast LH strategists have high connections because they are capitalising on friendships, meaning that once they meet one person, they get to know all their friends, and then all those friends' friends etc. This would be another way of meeting as

many mates as possible which is what fast LH strategists aim to do by investing in reproductive effort (Figueredo et al., 2005).

Hypothesis 4 stated that LH strategy and mating effort would interact to predict an individual's number of friends. This was supported by the results. Specifically, it was shown that 1) fast LH strategists with high mating effort have a large number of friends; 2) fast LH strategists with low mating effort have few friends; and 3) slow LH strategists have an average number of friends, regardless of their mating effort. These specific relationships may be explained using previous research which has been conducted on the differential investment trade-off made by slow and fast LH strategists.

While slow LH strategists invest highly in somatic effort, fast LH strategists invest highly in reproductive effort (Figueredo et al., 2005). A key element of somatic effort is the investment in family relationships and friendships. Therefore, as previous research has shown, slow LH strategists have strong, mutually supportive friendships (Figueredo, de Beca, & Woodley, 2012). Fast LH strategists on the other hand invest more time and effort into having many sexual encounters, hence, the presence of a strong friendship group is less important (Figueredo, de Beca, & Woodley, 2012).

Mating effort refers to the amount of effort an individual puts in to meeting potential mates or maintaining a relationship with a mate. As applied to specific LH strategists, fast LH strategists – due to their preference for short term investment in relationships (Figueredo & Wolf, 2009) – would direct their mating effort toward meeting as many potential mates as possible, whereas slow LH strategists – due to their preference for long term investment in relationships (Figueredo & Wolf, 2009) – would direct their mating effort toward either finding a stable partner, or maintaining a pre-existing relationship.

Therefore, fast LH strategists with high mating effort (investing a significant amount of energy into finding mates) are trying to find as many people as possible to be potential mates and therefore, they have many 'friends'. These people may not even know their Facebook friends very well. They may be the type of people that accept friendship requests even if they do not know the person. Fast LH strategists with low mating effort are not investing in finding mates, and also do not invest in strong friendships, therefore, they have a very low number of friends. Slow LH strategists will have as many friends as they feel they have the time to invest enough quality energy in. Therefore, if a slow LH strategist has more energy to invest in friends, then they would have more friends, if they have less energy, then they would have fewer friends. The number of friends should not be affected by mating effort because mating effort is not directed toward finding many partners, but instead is directed

toward finding or maintaining a stable, long term relationship. Therefore, slow LH individuals with high mating effort would probably prefer to direct their efforts toward someone that is already in their friendship group, therefore the number of friends should not necessarily increase.

Following from this is the idea that fast LH strategists should have a higher proportion of friends of the sex to which they are attracted than slow LH strategists. However, this hypothesis was not supported. Results show that the number of friends of the sex to which one is attracted is associated with sex, neuroticism and mating effort, but is not associated with LH strategy. Due to the focus on LH strategy variables, the relationship of interest is that of mating effort and the proportion of friends to which one is attracted. It would be expected that higher mating effort is associated with a larger proportion of such friends, however, the opposite relationship was found. This relationship cannot be explained by what is previously known about LH strategy and therefore needs to be investigated further in future research.

Overall, the results of this study have shown that LH strategy is associated with visual self-presentation and number of friends on Facebook. It has also shown that LH strategy is not associated with the number of average connections between users or the number of friends of the sex to which one is attracted to. Explanations as to why such results were found are limited by the fact that this study was the first of its kind.

Limitations and Recommendations for Future Research. Although a significant relationship was found between profile picture score and an individual's LH strategy, the effect of LH strategy was small. This may be due to the fact that a single item measure was used. Only one profile picture was used per participant. In order to increase the effect size, more profile pictures per participant should be used. By looking at more than one profile picture, a truer reflection of the participants LH strategy would be obtained.

When rating the profile pictures according to LH strategy, four raters were used, of which only one was unaware of the studies objectives. This may have biased the results of the scores given to individual's profile pictures. Therefore, future research should make use of more raters that are unaware of the aims of the study.

Previous research has shown that individuals are attracted to others with the same LH strategy (Figueredo & Wolf, 2009), however, data on the participants' friends was not collected therefore this was not able to be tested. In future, researchers interested in the reasons why individuals visually portray themselves in a manner that is congruent to their LH strategy should take this into consideration. For example, it would be useful to be able to separate the Likes and Comments into those received from fast and slow LH strategists.

Future research may also benefit from looking at the content of comments in order to further understand this finding.

Finally, when looking at friendship patterns, it is clear that more is needed to be understood about the quality of friendships rather than just the general friendship network formations. For example, accompanying the extracted networks could be survey or interview questions asking participants how well they know their Facebook friends. They could also be asked about the meaning of the friendships. This would provide a more meaningful way from LH strategy to be linked to friendship networks.

Summary and Conclusion

Studies of LH strategy have been limited by the reliance on self-report measures. Online social networking sites such as Facebook allow for new behaviours such as visual self-presentation and friendship networking to be tested. Studies which have been conducted on these two aspects of Facebook have linked them to age, sex, culture and personality. However, these phenomena have not been studied from a LHT perspective. This study therefore was the first to do so.

LHT states that individuals, depending on their environmental influences, allocate resources such as time and energy differentially. People have to make trade-off between either somatic effort or reproductive effort. Those that grow up in stable environments devote more energy to somatic effort, while those in unpredictable environments invest more heavily in reproductive effort. Individuals who invest highly in reproductive effort are interested in finding many sexual partners. Those that invest in somatic effort invest in maintenance and enhancement of body and mind. Associated with this is the investment in reciprocal friendships. Through this understanding of human behaviour, visual self-presentation and friendship networking as displayed on Facebook is able to be linked to LH strategy.

This study found that individuals select profile images that reflect their LH strategy, therefore supporting the fact that online identities are an extension of offline identities. It was also found that selecting a profile image congruent to ones LH strategy is associated with greater 'success' measured in terms of number of likes and comments received from the opposite sex. Those that posted profile images that did not reflect their LH strategy received fewer likes and comments.

When associated with friendship networks, LH strategy and mating effort was found to influence number of friends. Those with a fast LH strategy and high mating effort had the highest number of friends, while those with a fast life history strategy had the fewest number of friends. Slow LH strategists, regardless of mating effort had a mid-level range of friends. It

was also found that LH strategy was not associated with average number of connections between friends or the number of friends of the sex one is attracted to.

This research has made a unique contribution to the field of LHT by examining two new phenomena. It has also shown that human characteristics need not only be tested using self-report. Although what has been shown in this study is an adequate first step into linking LH strategy to visual self-presentation and friendship networks, it is clear than these phenomena are both highly complex and therefore require further and deeper investigation.

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Appendix A: NEO-FFI

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who <u>likes to spend time with others</u>? Please write a number next to each statement to indicate the extent to which <u>you agree or disagree with that statement</u>.

Disagree Strongly	Disagree Moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree Moderately	Agree Stronly
1	2	3	4	5	6	7

<u>*I See Myself as Someone Who*</u> . . .

_____1. Is talkative

_____2. Tends to find fault with others

_____3. Does a thorough job

_____4. Is depressed, blue

_____5. Is original, comes up with new ideas

_____6. Is reserved

_____7. Is helpful and unselfish with others

_____8. Can be somewhat careless

_____9. Is relaxed, handles stress well

_____10. Is curious about many different things

_____11. Is full of energy

_____12. Starts quarrels with others

_____13. Is a reliable worker

_____14. Can be tense

_____15. Is ingenious, a deep thinker

_____16. Generates a lot of enthusiasm

_____17. Has a forgiving nature

_____18. Tends to be disorganized

_____19. Worries a lot

_____20. Has an active imagination

_____21. Tends to be quiet

_____22. Is generally trusting

_____23. Tends to be lazy

_____24. Is emotionally stable, not easily upset

_____25. Is inventive

_____26. Has an assertive personality

_____27. Can be cold and aloof

_____28. Perseveres until the task is finished

_____29. Can be moody

_____30. Values artistic, aesthetic experiences

_____31. Is sometimes shy, inhibited

_____32. Is considerate and kind to almost everyone

_____33. Does things efficiently

_____34. Remains calm in tense situations

_____35. Prefers work that is routine

_____36. Is outgoing, sociable

_____37. Is sometimes rude to others

_____38. Makes plans and follows through with them

_____39. Gets nervous easily

_____40. Likes to reflect, play with ideas

_____41. Has few artistic interests

_____42. Likes to cooperate with others

_____43. Is easily distracted

_____44. Is sophisticated in art, music, or literature

_____45. Is Politically Liberal

_____46. Is Happy, satisfied with life

_____47. Is Athletic

_____48. Is Wealthy

_____49. Is Likable

_____50. Is Intelligent

_____51. Is Physically attractive

_____52. Is Unconventional, informal

_____53. Has high self-esteem

_____54. Is Creative

_____55. Is Lonely

Appendix B: MVI

Please indicate how you would rate yourself on each of the following characteristics:

	-3	-2	-1	0 +1	+2	+3
	Extremely Low on this characteristic			Don't Care/ Average on this characteristic		Extremely High on this characteristic

	-3	-2	-1	0	1	2	3
1. Ambitious	-3	-2	-1	0	1	2	3
2. Attractive body	-3	-2	-1	0	1	2	3
3. Attractive face	-3	-2	-1	0	1	2	3
4. Desires children	-3	-2	-1	0	1	2	3
5. Emotionally stable	-3	-2	-1	0	1	2	3
6. Enthusiastic about sex	-3	-2	-1	0	1	2	3
7. Faithful to partner	-3	-2	-1	0	1	2	3
8. Financially secure	-3	-2	-1	0	1	2	3
9. Generous	-3	-2	-1	0	1	2	3
10. Good sense of humor	-3	-2	-1	0	1	2	3
11. Healthy	-3	-2	-1	0	1	2	3
12. Independent	-3	-2	-1	0	1	2	3
13. Intelligent	-3	-2	-1	0	1	2	3
14. Kind and understanding	-3	-2	-1	0	1	2	3
15. Loyal	-3	-2	-1	0	1	2	3
16. Responsible	-3	-2	-1	0	1	2	3
17. Sociable	-3	-2	-1	0	1	2	3

Appendix C: MES

Under each question you will see five response categories, circle the response that best fits you. Use the key below as a guide. Be sure to answer the question appropriate for the gender that you date.

Strongly Disagree -2	Disagree -1	Neither Agree or Disagree 0	Agree +1	Strongly Agree +2

1. FEMALE: When I see an attractive boy with his girlfriend, I might try to get his attention.
   MALE: When I see an attractive girl with her boyfriend, I might try to get her attention.

   -2   -1   0   +1   +2

2. FEMALE: I would rather date several boys at once than just one boy.
   MALE: I would rather date several girls at once than just one girl.

   -2   -1   0   +1   +2

3. FEMALE: I think boys find me naturally attractive.
   MALE: I think girls find me naturally attractive.

   -2   -1   0   +1   +2

4. FEMALE: I like boys more for their good looks than for their companionship.

   MALE: I like girls more for their good looks than for their companionship.

   -2   -1   0   +1   +2

5. FEMALE: I would get back at someone who looked at my boyfriend in the wrong way.
   MALE: I would get back at someone who looked at my girlfriend in the wrong way.

   -2   -1   0   +1   +2

6. FEMALE: I would start a relationship with another boy before ending one with my current boyfriend.

   MALE: I would start a relationship with another girl before ending one with my current girlfriend.

-2	-1	0	+1	+2

7. FEMALE: My friends respect me because they know I'm a little wild and crazy.

   MALE: My friends respect me because they know I'm a little wild and crazy.

-2	-1	0	+1	+2

8. FEMALE: If other girls think I am attractive to boys, they will stay away from my boyfriend.

   MALE: If other boys think I am attractive to girls, they will stay away from my girlfriend.

-2	-1	0	+1	+2

9. FEMALE: Other girls respect me because they know I have a lot of friends who would support me.

   MALE: Other boys respect me because they know I have a lot of friends who would support me.

-2	-1	0	+1	+2

10. FEMALE: If other girls think I am "tough," they will stay away from my boyfriend.

    MALE: If other boys think I am "tough," they will stay away from my girlfriend.

| -2	-1	0	+1	+2

Appendix D: MES

Please indicate how strongly you agree or disagree with the following statements. Use the scale below and write your answers in the spaces provided. For any item that does not apply to you, please enter "0".

| Disagree Strongly	Disagree Somewhat	Disagree Slightly	Don't Know/ Not Applicable	Agree Slightly	Agree Somewhat	Agree Strongly
-3	-2	-1	0	+1	+2	+3

|	
	1. I can often tell how things will turn out.
	2. I try to understand how I got into a situation to figure out how to handle it.
	3. I often find the bright side to a bad situation.
	4. I don't give up until I solve my problems.
	5. I often make plans in advance.
	6. I avoid taking risks.
	7. While growing up, I had a close and warm relationship with my biological mother.
	8. While growing up, I had a close and warm relationship with my biological father.
	9. I have a close and warm relationship with my own children.
	10. I have a close and warm romantic relationship with my sexual partner.
	11. I would rather have one than several sexual relationships at a time.
	12. I have to be closely attached to someone before I am comfortable having sex with them.
	13. I am often in social contact with my blood relatives.
	14. I often get emotional support and practical help from my blood relatives.
	15. I often give emotional support and practical help to my blood relatives.
	16. I am often in social contact with my friends.
	17. I often get emotional support and practical help from my friends.
	18. I often give emotional support and practical help to my friends.
	19. I am closely connected to and involved in my community.
	20. I am closely connected to and involved in my religion.

Appendix E

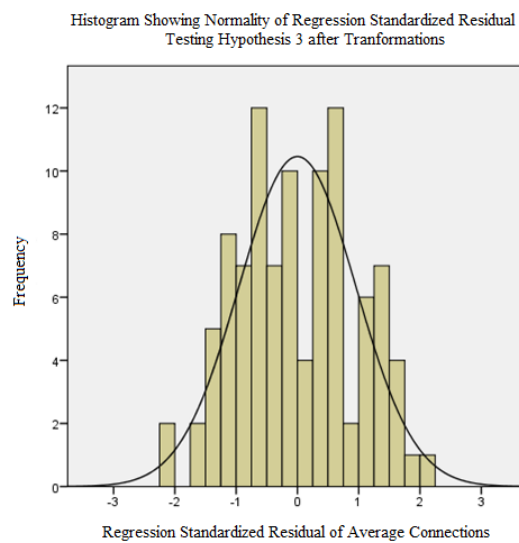Corrections of Non-Normal Distributions
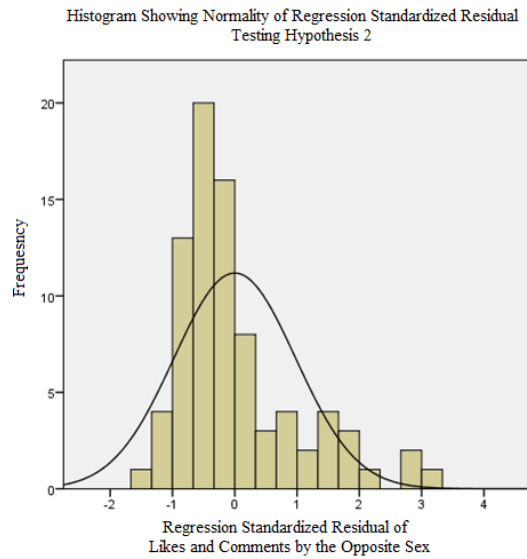
Figure E1. Normality of the Like and Comments variable testing Hypothesis 2.
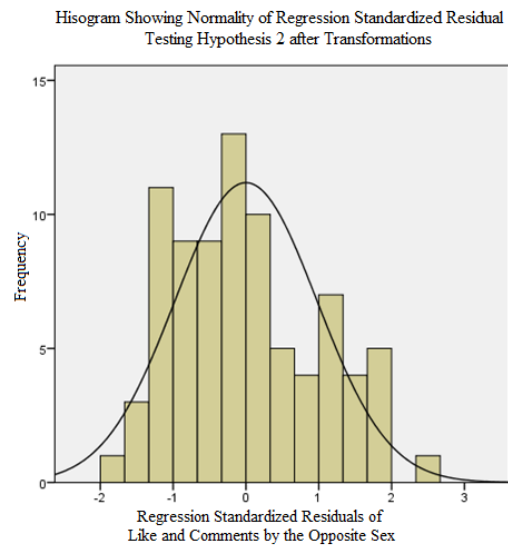
Figure E2. Normality of the Like and Comments variable testing Hypothesis 2 after using a square root transformation.
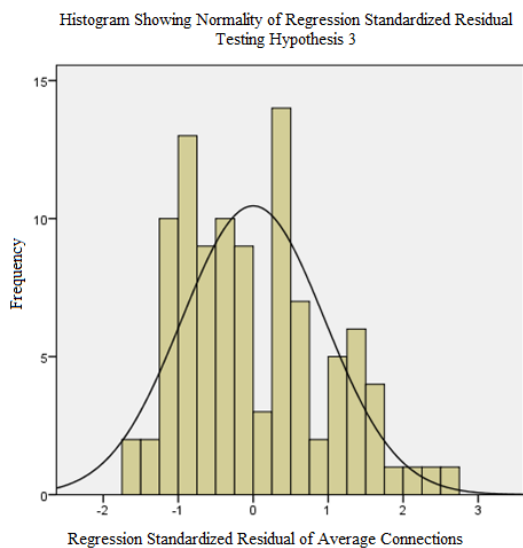
Figure E3. Normality of the Average Connections variable testing Hypothesis 3.

Figure E4. Normality of the Average Connections variable testing Hypothesis 3 after using a square root transformation.
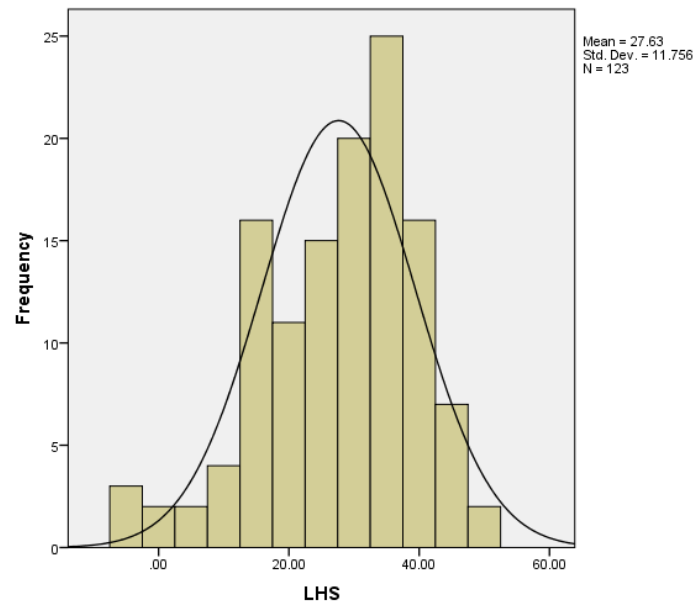
Appendix F

Figure F1. Normality of the LH strategy scores