
**A cross-cultural analysis of personality traits
in Irish and American online dating profiles.**

Nicola Fox Hamilton
N00093795

**Dissertation submitted as a requirement for the degree of MSc in Cyberpsychology,
Dun Laoghaire Institute of Art, Design and Technology, 2011.**

I declare that this thesis was composed by myself, that the work contained herein is my own except where explicitly stated otherwise in the text.

Nicola Fox Hamilton

Total word count 14,997

Acknowledgements

The excellent lecturers and staff at IADT have provided immense support and learning throughout this programme for which I am very grateful. I would particularly like to thank my wonderful supervisor Dr. Gráinne Kirwan for her enthusiasm for her subject which is contagious, and for her encouragement, insight and calm, all of which contributed extensively to realising this thesis.

My classmates and good friends, in particular Jillian Egan, Mary Aiken and Kostas Mavropalias, provided invaluable debate, enthusiasm, encouragement, understanding and humour at appropriate moments along the journey.

Thanks are also due to my good friend Loren Duffy, who sparked my interest in psychology many years ago, and has since contributed a steady stream of valuable and fascinating information, and who has additionally always been supportive and encouraging to me.

My family, and particularly my parents Donal and Bernadette Fox deserve a great deal of gratitude - this research could not have been accomplished without their support and encouragement and I am immensely thankful for all they have given me. My two brothers Ian and David also made excellent proof readers and I am very grateful for their help.

This thesis is dedicated to my husband Ron, who not only gave up his new wife for a year to this study, but who also, with grace and good humour, sustained me with all the patience, insight, encouragement, proof reading, inspiration and love that I needed to be successful in my endeavour. For all of that and so much more I will be forever grateful.

Table of Contents

List of Tables and Figures	V
List of Appendices	VI
Abstract	1
Introduction	2
Online Dating	3
Social Information Processing Theory (SIP) and Self-Presentation Online	4
Homophily	6
Cultural and Personality Differences Between Ireland and America	6
Cultural Differences in Self-Presentation and Language	8
Language Analysis	9
Language Markers for Personality Traits	9
Language Analysis in Online Dating Profiles	11
Research Questions and Hypotheses	13
Study One: Method	16
Design	16
Participants	16
Materials	16
Procedure	17
Content Analysis - Themes	17
Ethics	18
Study One: Results	19
Quantitative Data from LIWC Analysis of Profiles	19
Examination of Neuroticism Related Word Categories	19
Examination of Extraversion Related Word Categories	22
Examination of Openness to Experience Related Word Categories	24
Examination of Agreeableness Related Word Categories	26
Examination of Conscientiousness Related Word Categories	27
Examination of Psychoticism Related Word Categories	28
Examination of Deception Related Word Categories	29
Qualitative Content Analysis	30
Study One: Discussion	38
Support for Language Indicators of Personality Differences	38
Limitations of the Study	41
Future Research and Implications	41
Study Two: Method	43
Design	43
Participants	43
Materials	43
Procedure	44
Ethics	45
Study Two: Results	46
Profile Ranking Across Irish and American Participants	46
Study Two: Discussion	51
Limitations of the Study	52
Future Research and Implications	52
General Discussion	53
Other Factors Affecting Profile Attractiveness	53
Implications	53
Conclusion	55
References	56
Appendices	60

List of Tables and Figures

Table 1	Findings for LIWC Word Categories with a Relationship to Neuroticism	21
Table 2	Findings for LIWC Word Categories with a Relationship to Extraversion	23
Table 3	Findings for LIWC Word Categories with a Relationship to Openness	25
Table 4	Findings for LIWC Word Categories with a Relationship to Agreeableness	26
Table 5	Findings for LIWC Word Categories with a Relationship to Conscientiousness	27
Table 6	Findings for LIWC Word Categories with a Relationship to Psychoticism	29
Table 7	Findings for LIWC Word Categories with a Relationship to Deception	30
Table 8	Results of Chi-square Test for the Theme of Honesty	31
Table 9	Results of Chi-square Test for the Theme of Positive Personality Attributes	32
Table 10	Results of Chi-square Test for the Theme of Sport and Fitness	33
Table 11	Results of Chi-square Test for the Theme of Work	34
Table 12	Results of Chi-square Test for the Theme of No Games	35
Table 13	Results of Chi-square Test for the Theme of Importance of Friends or Family	36
Table 14	Ranking of Profiles A to E by Irish and American Participants	46
Table 15	Table of Probabilities in Scoring of Profiles	47
Table 16	Results of Chi-square Test for a Yes or No Answer to Question Two Profile B	48
Table 17	Results of Chi-square Test for a Yes or No Answer to Question Two Profile D	49
<hr/>		
Figure 1	Irish and American cross cultural comparison of the use of honesty as a self-description in online dating profiles.	32
Figure 2	Irish and American cross cultural comparison of the use of positive personality attributes as self-description in online dating profiles.	33
Figure 3	Irish and American cross cultural comparison of the use of fitness and sport playing terms in online dating profiles.	34
Figure 4	Irish and American cross cultural comparison of the frequency of discussion of work in online dating profiles.	35
Figure 5	Irish and American cross cultural comparison of the frequency of mention of no games in online dating profiles.	36
Figure 6	Irish and American cross cultural comparison of the frequency with which the importance of friends or family is mentioned in online dating profiles.	37
Figure 7	Illustration of the overall findings for personality trait variables	37
Figure 8	Profile B: Participant Yes or No answers to the question “Would you respond to a communication from the author of this profile?”.	48
Figure 9	Profile D: Participant Yes or No answers to the question “Would you respond to a communication from the author of this profile?”.	49

List of Appendices

Appendix A	Chung and Pennebaker (2008) Custom Dictionaries	60
Appendix B	LIWC 2007 Dictionary	61
Appendix C	LIWC Preparation of Written Text Guidelines	63
Appendix D	Profile Coding and Samples	65
Appendix E	Experimental Profile Texts	67
Appendix F	Online Experiment	69

Abstract

A cross-cultural analysis of personality traits in Irish and American online dating profiles.

This research used language analysis to determine personality traits from written text, in the profiles of Irish and American online daters. The free text element of 150 Irish and 150 American Caucasian, male, online daters' profiles were analysed for differences in personality traits. The results found that both nationalities were similar in neuroticism, that the Irish were considerably higher in psychoticism and openness, and that Americans were higher in conscientiousness, agreeableness and slightly higher in extraversion. Additionally, the concept of homophily was investigated using culturally typical experimental profile texts, and it was determined that profiles were more successful within their own culture. Applications include online dating matching, social networking profile analysis, adaptive interface designs, and responsive language for artificial intelligence.

“Words, like Nature, half reveal And half conceal the Soul within”
(Tennyson, 1850).

Introduction

Online dating is an increasingly popular and accepted way for people to meet and form relationships. As more people utilise this service it is important to understand how people present themselves and perceive each other through their online profiles. Past research has shown that the free text component of a dating profile is the second most important element, after the profile photograph, in determining attractiveness and trustworthiness (Fiore, Taylor, Mendelsohn, & Hearst, 2008; Toma, 2010). The tendency for people to bond with others like themselves has been shown to occur in online dating across a variety of demographic and other lifestyle categories (Fiore & Donath, 2005; Fiore, Shaw Taylor, Zhong, Mendelsohn, & Cheshire, 2010; Hitsch, Hortaçsu, & Ariely, 2010).

Personality traits have been found to have different mean levels across countries, and differences have been found in the levels of extraversion, psychoticism and the lie-scale between Ireland and America (Lester, 2000; van Hemert, van de Vijver, Poortinga, & Georgas, 2002). As culture and personality interplay to create differences between nations, language as the expression of how people think and feel could be expected to have differences across nationalities (Kirby, Dowman, & Griffiths, 2007).

Little research has been done into the attractiveness of the free-text component of online dating profiles. This research will seek to further study into the analysis of dating profiles and cross cultural comparisons, and will analyse self-descriptive text in the online dating profiles of two cultures, America and Ireland, to determine if there are indicators of personality traits in the language used. It will analyse whether or not these personality traits are different between cultures, and whether the self-presentation style or personality indicators in use in that culture are more successful within the culture than outside of it.

Online Dating

PEW Internet and Life Project (Madden & Lenhart, 2006) found that 11% of all American internet-using adults, approximately 16 million people, said that they had visited an online dating website. Match.com alone has 5.8 million unique monthly users as of May 2009 (www.iac.com, 2010) and the Irish Times dating site (dating.irishtimes.com, 2011) which claims to be Ireland's most popular, has approximately half a million members. Rosen, Cheever, Cummings and Felt (2008) found that online dating was increasing at an exponential rate, and that online daters had similarly positive experiences as offline daters, however it was also found that many of them were reluctant to tell others that they were dating online. This study also found that, in contrast to offline daters, online daters valued communication skills highly, reflecting the fact that they intend on forming relationships through computer mediated communication (CMC) initially. Rosenfeld (2010) found that from a rate of zero percent in 1990 and before, online dating moved to being the third most likely way for heterosexual couples to meet in 2009. Approximately 22% of couples had met through online means, slightly less than meeting through friends or meeting in a pub or restaurant. Online dating is a particularly attractive avenue for those with a lean dating market where exposure to eligible partners is low, particularly for homosexuals who comprise a small percentage of the population, and for heterosexual singles in their thirties and beyond, as less than 20% of that population are single and potentially available for dating (Rosenfeld, 2010).

Dating profiles are a unique resource in which it is possible to observe and analyse natural written self-descriptions of individuals without any researcher effect or interview bias. Online dating profiles usually consist of a photograph, open descriptive text about the dater, multiple choice questions and the ability to communicate with other daters. Research has shown that in online dating profiles, a photograph is the most important feature in predicting attractiveness of the whole profile (Fiore et al., 2008). A photograph can produce a halo effect, where an attractive photograph produces the finding of attractiveness for the whole profile, or an unattractive photograph a finding of unattractiveness, despite individual ratings for other elements of the same profile (Fiore et al., 2008). All daters prefer attractive photographs regardless of their own attractiveness, though attractive people had a stronger preference for them. However the photograph in a male profile was important not just in the level of physical attractiveness it was accorded, but additionally by the amount which participants rated the photograph positively for genuineness, trustworthiness, extraversion, and femininity, along with a rating of not too much warmth or kindness (Fiore et al., 2008). Fiore, Taylor, Mendelsohn and Hearst (2008) found that the free text self-description element of a dating profile played an important role in determining attractiveness of the whole.

Interestingly in male profiles, while the free text element and photograph were judged more attractive when rated as more feminine, whole profile attractiveness was higher when rated as masculine (Fiore et al., 2008). Whitty (2008) also found that participants were more attracted to profiles that they considered genuine and honest. Trust is important as it is required in the presence of risk, which online dating presents. Toma (2010) showed that when presented alone, the free text element in dating profiles was perceived as most trustworthy. However, participants were highly inaccurate in judging trustworthiness because of a truth bias in the absence of visual or other information. The introduction of a photograph in addition to profile text decreased the perception of trustworthiness in the profiles. It has also been found that static profile descriptors have no relation to attractiveness (Fiore, et al., 2008) or trustworthiness (Toma, 2010), but can be used as “deal breakers” on categories that a dater may feel strongly about, for example smoking.

Social Information Processing Theory (SIP) and Self-Presentation Online

A central area of discussion in CMC is the lack of non-verbal cues when communicating online by text only. Researchers hold two positions in response to this reduced cues communication. The first is that CMC is an impoverished form of communication which denies users important information (Toma, 2010). The second is the SIP Theory (Walther & Parks, 2002) where people adapt to the medium and imbue textual communication with information about characteristics, attitudes, and emotions. Information is also extrapolated from interpreting contextual and stylistic cues. This allows for a normal or enhanced relational communication to occur. Ellison, Heino and Gibbs (2006) found support for the SIP theory in a naturalistic setting in studying online dating profiles. In initial interactions on a dating site, stylistic elements of the communication such as message length, timing and grammar appear to be as important as the message content itself, indicating that when non-verbal cues are reduced, remaining cues become more salient.

In the Ellison et al. (2006) and Whitty (2008) studies it was found that most of the online dating participants self-presentation strategy revolved around their profile, and participants strove to present a positive but accurate representation of themselves. They balanced their desire to self-market with accurate self-presentation, prompted by their desired outcome of a face to face meeting (Ellison, Heino, & Gibbs, 2006). Fiore and Donath (2005) found that when daters had a perception that others on the dating site were being deceptive about information such as age, they felt that they also had to be deceptive or they would feel at a disadvantage. However the amount by which they changed their age was small and was designed to get around constraints of the site rather than to intentionally misrepresent themselves, and they tended to inform

partners with whom they entered into conversation early in the exchange (Ellison et al., 2006). Whitty (2008) found that 51% of participants had misrepresented themselves in some way in their profiles, with men more likely to lie about their relationship status or having children. Toma, Hancock and Ellison (2008) found that while deception was rife in dating profiles, the amounts by which people lied were very small. They found that men were more likely to intentionally lie about their height and women about their weight. Gibbs, Ellison and Heino (2006) found that those who anticipated greater face to face interaction, were motivated to present themselves authentically, and as such were more likely to disclose both the positive and negative aspects of themselves to potential dates, and the majority claimed to be truthful in their profiles. Thus it can be extrapolated from this research that the dating profiles studied here will also be positive but relatively truthful. However Gibbs et al. (2006) found that honesty actually had a negative effect on successful self-presentation. Norton, Frost and Ariely (2007) found that online daters believe that they will like people better the more they know about them. However, the opposite proves to be the case, and low disclosing emails between daters are preferred (Rosen, Cheever, Cummings, & Felt, 2008). With the exception of the relatively rare occasion where the additional information actually confirms similarity or compatibility, most often additional information actually confirms dissimilarity and so reduces liking. Therefore, it is possible that profiles which reveal more information may receive fewer but more compatible suitors.

Ellison et al. (2006) found that many participants carefully managed subtle cues in their own profiles, some of which were salient as a result of looking through potential mates profiles. Where they found an unattractive or suspicious element in someone else's profile, they were careful to edit it out of their own. Cues in others profiles were interpreted to hold considerable meaning, supporting the SIP theory. For example incorrect spelling in a profile text was interpreted as lack of interest or lack of education. Whitty (2008) found that participants created numerous iterations of their profiles to attract partners. Many participants describe their ideal self rather than their actual self in their profiles – and this actually encouraged some to change their behaviour before meeting face to face, for example by losing weight so as to match their profile description (Ellison et al., 2006). However Norton et al. (2007) found that daters who encountered profiles that appeared “too good”, whose profiles more closely resembled their ideal self than real self, were liked less.

Homophily

Homophily is the tendency of individuals to bond and associate with others similar to themselves. Fiore and Donath (2005), Fiore, Shaw Taylor, Zhong, Mendelsohn and Cheshire (2010) and Hitsch, Hortaçsu, and Ariely (2010), found that users of an online dating site showed strong preferences in mate selection towards those similar to themselves. Across areas of attractiveness, socioeconomic status, ethnicity, religion, marital status, smoking, occupation and education users consistently chose others with similar views or characteristics, more often in their actions in contact and response to others than in their stated preferences. Fiore and Donath (2005) found that life course characteristics such as marital status, children or religion were more bounding than other characteristics. Norton et al. (2007) found that initial positive impressions of a profile were made because of an erroneous perception of similarity with an ambiguous profile. The acquirement of additional information results in the resolution of ambiguity and the revealing of dissimilarity, hence reduced liking. Research in online dating has been conducted into homophily in demographic categories, but there is limited research into factors such as personality. Fiore et al. (2010) found that there was significant mate preference across attachment style and Norton et al. (2007) found that shared traits was related to liking, with more shared traits increasing liking. However, there was evidence of cascading dissimilarity leading to less liking, where a dissimilar trait was encountered early in the list of traits, it led to less liking of the overall list of traits than if it was encountered later in the list.

Cultural and Personality Differences Between Ireland and America

“The idea that a population or part thereof possesses collective mental characteristics is probably as old as populations themselves” (Hofstede & McCrae, 2004, p. 53). The statistical analysis of traits, individual level differences in enduring dispositions such as anxiety, warmth, fantasy, trust and competence to name just a few, has allowed the study of personality in culture to move from simplistic stereotyping to more complex and nuanced analysis. Hofstede and McCrae (2004) contend that personality traits and culture interact in a manner that shapes both the behaviour of individuals and social groups. At an individual level this means that the set of characteristic adaptations (McCrae & Costa, 1999) that a person develops is reflective of both individual and culturally contextual contributions. Hofstede and McCrae (2004) found that mean personality scores of cultures correlated strongly and significantly with dimensions of culture and proposed that environmental and temperamental variations may provide an explanation for these variances. Their research found a number of correlations between cultural context and traits, including strong correlations between individualism and extraversion, uncertainty avoidance and neuroticism, and power distance with

conscientiousness. They also found associations between individualism and gross domestic product (GDP), uncertainty avoidance and Roman Catholicism, and power distance and the use of violence in domestic politics. Lynn and Martin (1995) found that there were positive relationships between neuroticism and alcoholism and suicide rates, and a negative relationship between psychoticism and work ethic which may be explained by low socialisation skills of those high in psychoticism. These results all point to an interplay between culture and personality where differing cultures will have differing mean levels on trait scores.

A study by Lester (2000) analysed the rates of cultural variables such as murder, crime, divorce, smoking, suicide and cirrhosis mortality that have been clearly and consistently identified from past research as being correlated with either extraversion or neuroticism. For example it has been found that extraverts are more likely to smoke than introverts and therefore high levels of smokers in a population was considered one sign of an extraverted population. This study found differences in the levels of extraversion between Ireland and America, and found similar levels of neuroticism, showing that Ireland had an overall score as “stable introvert” and America as “stable extravert”. Lester’s (2000) study also demonstrates that cultural variables and personality traits are interlinked.

Van Hemert, van de Vijver, Poortinga and Georgas (2002) measured personality traits across different countries using the Eysenck Personality Questionnaire (EPQ) and Ireland was found to have a higher score on psychoticism ($n = 2804$, $M = 4.65$) than America ($n = 4153$, $M = 3.67$), Ireland had a lower level of extraversion ($M = 18.85$) than America ($M = 20.83$), and Ireland had a lower level on the lie scale ($M = 9.72$) than America ($M = 11.54$). The mean across all 26 countries for psychoticism was 4.96 meaning that Ireland’s score was slightly lower than average and America considerably lower than average. The mean for extraversion over all countries was 18.63 placing Ireland close to average and America above average. The mean for the Lie Scale across all countries was 13.23 with Ireland falling quite an amount below the average, and America below but closer to the average. The mean age across all populations was 27.46 ($SD = 9.30$; van Hemert et al., 2002).

Higher psychoticism scores have also been shown to have a significant relationship with lower scores on conscientiousness and agreeableness on the Big Five Factors of personality (Avia, Sanz, Sánchez-Bernardos, Martínez-Arias, Silva, & Graña, 1995; Draycott & Kline, 1995; Saggino, 2000).

Cultural Differences in Self-Presentation and Language

Language has been described by Edward Sapir (1949) as a system of phonetic symbols designed with the purpose of expressing communicable thoughts and feelings, and which reflects the physical and social background in which a group is placed. Hence, if the social culture and the personalities of two cultures are different, it is possible that the thoughts and feelings of that culture will be different and that this might express itself through language. Sapir (1949) suggests that although language is used to describe or refer to direct experience, it is in fact completely interpenetrated with experience and every experience is “saturated with verbalism” (p. 8). Kirby, Dowman and Griffiths (2007) argue that language differences partly arise from cultural transmission, alongside biological evolution and individual learning. They suggest that interactions between the three adaptive systems, learning, culture and evolution combine to create language. Christiansen, Chater and Reali (2009) also argue the point that the processes of cultural evolution are the principle factor affecting the evolution of linguistic structure.

Research has found significant differences between East Asian culture and Western culture in their use of language. Maass, Karasawa, Politi and Suga (2006) investigated the differences in how Italians and Japanese use adjectives or verbs to describe individuals and groups. The results of their research indicated that Italians use more trait adjectives, and Japanese use more verbs, and this illustrates their different styles of thinking. Nisbett, Peng, Choi and Norenzayan (2001) describe how the use of trait adjectives reflects a way of observing the world through placing attention on objects, and the categories, rules and formal logic through which those objects are understood. The use of verbs reflects a holistic way of observing where the attention is on the whole field and assigns causality to the field rather than using categories or formal logic. These differences show the effect of language on culturally bound social cognition (Maass, Karasawa, Politi, & Suga, 2006) and can be traced to greatly different social systems (Nisbett, Peng, Choi, & Norenzayan, 2001). Jiang, de Bruijn and de Angeli (2009) conducted a study of perception of cultural differences in online self-presentation. Manipulating English and Chinese verbiage to contain typical language cues and content for western or eastern blogs, resulted in an effect in participant impression formation.

Although the differences in language may not be as pronounced between Irish and Americans as Western and Eastern cultures there could still be evidence of cultural and personality trait differences in their use of English. Research into the spread of English as a global language has shown that there is significant cultural and linguistic nativisation of the language as it moves into new countries (Kachru, 1992). American English

rose from the status of “colonial substandard” to that of “prestige language” and was modified through many innovations, which could also be described as errors, as the language came into contact with different dialects and with waves of immigrants. This social context has left its mark on the culture and on the language (Kachru, 1992).

Language Analysis

There is a long history of a lexical approach to examining personality traits in individuals, with the idea that patterns of words used might reveal dimensions of the self. Text analysis has been used to distinguish somatisation disorders, schizophrenia, suicidal tendencies and depression (Pennebaker & King, 1999). Research has also been conducted into language use that would indicate personality cues specifically. Recent research has found relationships between textual self-descriptions in online dating profiles and personality traits such as neuroticism (Fiore et al., 2010), and has found that personality is projected linguistically and can be discerned through language (Gill, 2003). Relationships have been found between language and personality traits from both the NEO-PI and EPQ scales.

Language Markers for Personality Traits

Linguistic Inquiry and Word Count (LIWC; Pennebaker, Francis, & Booth, 2001) is a language analysis programme designed specifically to look at how language provides insight into the emotional and cognitive worlds of individuals. Pennebaker and King (1999), Mairesse, Walker, Mehl and Moore (2007) and Gill (2003) used LIWC to analyse text samples from a number of studies including diary entries, writing assignments, both stream of consciousness and self-descriptive essays, and journal abstracts from both large and small cohorts, and found modest but reliable correlations between language markers and both the Big Five Factors of personality and Eysenck’s EPQ.

Neuroticism has been found to be positively correlated with greater use of the first person singular (Gill, 2003; Mairesse, Walker, Mehl, & Moore, 2007; Pennebaker & King, 1999; Rude, Gortner, & Pennebaker, 2004), negative emotions (Mairesse et al., 2007; Pennebaker & King, 1999), affect, anger, anxiety, dictionary words, family, friends, negations, references to physicality, present tense, pronouns, sadness, and higher word count (Mairesse et al., 2007). Neuroticism has been negatively related to articles, positive emotions (Mairesse et al., 2007; Pennebaker & King, 1999), six letter words, numbers, work related words, prepositions, seeing, space, sports, and the use of we (Mairesse et al., 2007).

Extraversion has been positively correlated with greater use of positive emotion, social, inclusive words, (Gill & Oberlander, 2002; Mairesse et al., 2007; Pennebaker

& King, 1999), higher word count (Gill, 2003; Gill & Oberlander, 2002), certainty, percentage of dictionary words, references to family and friends, first person singular, pronouns, sexual words, and references to we (Mairesse et al., 2007). Extraversion has been negatively correlated with the use of articles, negations, tentative language, negative emotions, numbers (Gill & Oberlander, 2002; Mairesse et al., 2007; Pennebaker & King, 1999) exclusions, causation (Pennebaker & King, 1999), quantifiers (Gill & Oberlander, 2002), six letter words, words concerning the body, and fillers (Mairesse et al., 2007). Using general semantic analysis Gill (2003) also found that extraverts were more likely to refer to friends than introverts.

Openness to experience has been positively correlated to articles, six letter words, exclusions, insight, tentative language, (Mairesse et al., 2007; Pennebaker & King, 1999), affect words, punctuation, anger words, death, hearing, inhibitions, religious words, seeing, sexual words, swearing, use of second person singular, words per sentence and higher word count (Mairesse et al., 2007). Openness has been negatively correlated with first person singular, causation, present tense (Mairesse et al., 2007; Pennebaker & King, 1999), achievement words, dictionary words, family, friends, future, home, job or occupation, motion, numbers, pronouns, sport, and time (Mairesse et al., 2007).

Agreeableness was found to have a positive correlation with greater use of first person singular and positive emotions (Mairesse et al., 2007; Pennebaker & King, 1999), dictionary words, family, motion, pronouns, time, and use of we (Mairesse et al., 2007), and a negative correlation with negative emotions, six letter words (Mairesse et al., 2007; Pennebaker & King, 1999), anger, body related words, negations swearing, and use of second person singular (Mairesse et al., 2007).

Conscientiousness was found to be positively correlated with anxiety, certainty, dictionary words, family, future, inclusions, job and occupation words, prepositions, time (Mairesse et al., 2007) and positive emotions (Pennebaker & King, 1999). Conscientiousness was negatively correlated with negative emotions, negations (Mairesse et al., 2007; Pennebaker & King, 1999), affect, anger, body, cognitive mechanisms, death, hearing, human, non-fluencies, religion, swearing, tentative language and use of second person singular (Mairesse et al., 2007), discrepancies, exclusions, causation (Pennebaker & King, 1999).

Gill (2003) found correlations between psychoticism and limited use of first person singular, motion words, total first person, total pronouns, and increased use of anger words, negative emotion, money related words, cognitive mechanisms, certainty, sadness and death words. Using qualitative analysis Gill (2003) also found that those high in psychoticism referred less to intimate relationships. In the use of deception in

text it has been found that deceptive statements used less first person singular (Newman, Pennebaker, Berry, & Richards, 2003; Toma & Hancock, 2010), third person, exclusions (Newman et al., 2003), negative emotions and smaller word count (Toma & Hancock, 2010). Deceptive texts had more negations and motion words than truthful statements (Newman et al., 2003; Toma & Hancock, 2010).

Chung and Pennebaker's (2008) study of a sample of 1165 students using self-descriptive and stream of consciousness essays and questionnaires used LIWC to create a custom dictionary based on a qualitative analysis of the data. Eighty eight adjectives were identified in the texts, and were divided into custom categories including evaluation, relationships and sociability (Appendix A). There were a number of correlations found between these word categories and personality traits. High evaluation was positively correlated with neuroticism and negatively correlated with conscientiousness. High relationship and sociability words were positively correlated with extraversion.

The use of a word count approach to language analysis has problems, namely difficulty with context, sarcasm, irony or multiple meanings of words. However where it is particularly useful is in analysing the stylistic element, or the functional language of text rather than the content words. This is more difficult for a human rater to accomplish as it is difficult for a person to ignore what is being said and look at how it is being said (Pennebaker & King, 1999). The discussed studies have found that personality can be detected through analysis of text, and that LIWC as a programme for doing so is successful.

Language Analysis in Online Dating Profiles

There has not been a large amount of research into the free text element of online dating profiles specifically or of other online self-descriptions. Rosen et al. (2008) found that in online dating the amount of emotionality and self-disclosure in initial emails affected perception of a potential partner. Emails with strong emotive words such as excited and wonderful, led to more positive impression formation. In general higher self-disclosing emails were seen to reflect positive and open people, however the results were mixed across other personality attributes. There was a slight tendency for online daters to prefer low self disclosing emails, supporting SIP theory.

Fiore et al. (2010) conducted a large scale study with a total cohort of 11,160 complete dating profiles from one mainstream dating site, with a smaller sample ($n = 1,100$) of those participants also completing a number of questionnaires including the Ten-Item Personality Inventory, the Experiences in Close Relationships-Revisited instrument and Yamagishi's general trust and caution scale. The LIWC word categories related to home, work, money, sex, emotions and tentative language were used to analyse the

self descriptive text in the profiles. Women were found to use significantly more words related to home, sex, affect language in general and in particular more positive emotion than men, while men mentioned work significantly more often. It was also found that women who used more negative emotion words were lower in trust, higher in caution and higher in attachment anxiety. Men who used more positive emotion words had higher levels of general caution and attachment anxiety and men who used more tentative language had lower levels of general trust and higher attachment anxiety. Both women and men who were higher in general caution or neuroticism contacted others more, possibly as a way of controlling their anxiety around communicating on the dating site. Men who were higher in general caution were contacted less frequently – though it was unclear whether the greater use of positive emotion words was picked up as a cue – this could indicate that individuals can unconsciously pick up personality cues from written self-descriptions. The main limitation of this study is that the LIWC word categories chosen to study were primarily content rather than functional language categories. As functional language has been shown to have the strongest relationship to psychological and interior processes these may have added to the study.

Fiore and colleagues (2008) conducted a study designed to determine the attractiveness of the different elements of online dating profiles. Each element, the photograph, free text self-description and the fixed choice questions were presented separately, or as a whole profile to participants who rated them for levels of attractiveness, genuineness and trustworthiness, masculinity, femininity, warmth and kindness, self-esteem, extraversion and self-centredness. The photograph was found to be the single most important element, however the free text element was also important. For men the free text element was perceived as more attractive when it was rated by participants as genuine, trustworthy, extraverted and more feminine, which is similar to how photographs were judged as attractive for men. While the free text element was a significant predictor of the attractiveness of the whole profile for women, it was only of marginal significance for men. LIWC analysis of the text element found that profiles in general contained considerably more positive emotion words than negative, with women having greater numbers of positive emotion words and self references than men. However, it was found that the attractiveness of the free text element of a dating profile was not linked to the use of positive or negative emotion words, the length of the text in words or to the number of self references. Although the design and statistical analysis of this study were considered and thorough, there was an imbalance in the participant age and ethnicity and those of the profiles. While the dating profiles were largely Caucasian, had an average age of 25.7 and were half male and half female, the participants who judged them for attractiveness were primarily of Asian background, were on average 21 years old, and also had a larger percentage of females than males participating.

These differences, and the fact that the participants were not actively seeking a partner online could have caused an effect in the ratings of attractiveness of the profiles.

Toma and Hancock (2010) and Toma and colleagues (2008) found that in the free text “About Me” element in online dating profiles, liars unconsciously produced different word patterns to those being truthful. The act of lying is more cognitively difficult than truth telling and results in the use of more concrete and simple language. Liars also psychologically distance themselves from their writing by using less references to themselves and more negations. They also on average write fewer words than truth tellers, possibly in order to avoid contradicting themselves. The linguistic variables identified by Toma et al. (2008) accounted for 23% of the variance in the deception index that they had devised, and had a very large effect size. It was possible to significantly accurately identify 63% of profiles using these variables.

Research Questions and Hypotheses

In light of research which shows that there are differences in mean personality traits across cultures (Lester, 2000; Van Hemert et al., 2002), and that personality is expressed (Gill, 2003) and can be identified in language (Chung & Pennebaker, 2008; Fiore et al. 2010; Gill, 2003; Gill & Oberlander, 2002; Mairesse et al., 2007; Newman et al., 2003; Pennebaker & King, 1999; Rude et al., 2004; Toma & Hancock, 2010; Tauczik & Pennebaker, 2010), it is expected that differences in language will be found between Irish and American free text elements of online dating profiles. Thus,

Research Question One: Is there a difference in the language used by Irish and Americans in their online dating profiles, particularly in relation to known signifiers of personality factors?

Hypothesis 1: Analysing the free text component “About Me” of online dating profiles for language signifiers of neuroticism will find Irish and American profiles have similar levels of neuroticism.

Hypothesis 2: Analysing the free text component “About Me” of online dating profiles for language signifiers of extraversion will find that American profiles are higher in extraversion than Irish profiles.

Hypothesis 3: Analysing the free text component “About Me” of online dating profiles for language signifiers of openness will find that Irish and Americans will have differences in openness in their profiles.

As higher psychoticism scores have been shown to have a significant relationship with lower scores on conscientiousness and agreeableness (Avia et al., 1995; Draycott & Kline, 1995; Saggino, 2000), and that Irish people have been found to be higher in psychoticism than Americans (Van Hemert et al., 2002) it would be expected that Irish daters would score lower on conscientiousness and agreeableness.

Hypothesis 4: Analysing the free text component “About Me” of online dating profiles for language signifiers of agreeableness will find that Irish profiles are lower in agreeableness than American profiles.

Hypothesis 5: Analysing the free text component “About Me” of online dating profiles for language signifiers of conscientiousness will find that Irish profiles are lower in conscientiousness than American profiles.

Hypothesis 6: Analysing the free text component “About Me” of online dating profiles for language signifiers of psychoticism will find that Irish profiles are higher in psychoticism than American profiles.

No LIWC categories or other means of identifying language markers of the Lie-Scale have been found in research and so the Lie-Scale will not be addressed in this research. However, an interesting result of research into language analysis is the identification of markers for deception in written text. This research will look at the language markers of deception across both cultures dating profiles.

Hypothesis 7: Analysing the free text component “About Me” of online dating profiles for language signifiers of deception will find that Irish and Americans have differences in deception in their profiles.

Online daters have been shown in research to conform to the theory of homophily (Fiore & Donath, 2005; Fiore et al., 2010; Hitsch et al., 2010), and in CMC reduced cues lead to the remaining cues attaining higher salience to the communicator (Ellison et al., 2006; Walther & Parks, 2002), thus it could be possible that subtle cues regarding personality communicated through language may be used by daters in deciding the attractiveness of a profile. This possibility emerged from the research of Fiore and colleagues (2010) where it was found that men higher in general caution were contacted less often, and it was unclear what cues daters were picking up on. It would be expected as per homophily, that Irish daters would prefer Irish profiles, and American daters would prefer American profiles.

Research Question 2: Assuming an embedded cultural and personality difference in the language used by Irish and American daters, is that language more attractive to people within that culture than outside of it?

Hypothesis 8: American people will find American profiles more attractive than Irish profiles.

Hypothesis 9: Irish people will find Irish profiles more attractive than American profiles.

Study One: Method

Design

This research was undertaken to determine if there is a cultural difference in the language used in self presentation by Irish and Americans in their online dating profiles, particularly relating to signifiers of the Five Factor Model of personality traits and Eysenck's psychoticism scales. The dependant variables were the LIWC word categories as language signifiers for personality traits, and the independent variables were the Irish and American online dating profiles. A mixed method quantitative and qualitative content analysis of the data in the online dating profiles was completed.

Participants

This research was a between-participants design in which a stratified, random sample of 300 profiles was selected from online dating websites in Ireland and America. One hundred and fifty profiles from Ireland and 150 from America were chosen, taking a spread from across urban and rural areas of the two countries. In America four zip codes were chosen from major urban areas, Austin, Los Angeles, Brooklyn and Billings, and daters were chosen from within a 200 mile radius of those zip codes. This allowed for a mix of urban and rural daters to be chosen to represent different areas of the country. In Ireland the search for profiles included all counties in the Republic and profiles were chosen to reflect a spread across the country. Caucasian, heterosexual, male adults over the age of 18, born in America or Ireland, who gave no indication that they were born or had lived for a large proportion of their lives outside of America for American daters, or Ireland for Irish daters, were chosen for the study to ensure that ethnicity, sexual orientation and gender did not provide confounding variables. The Irish profile authors ranged in age from 23 to 71 with a mean age of 40.1 ($SD = 10.208$), and the American authors ranged in age from 19 to 74 with a mean age of 37.99 ($SD = 12.461$).

Materials

The data collected from each profile consisted of the free text component "About me" describing the dater and the age of each profile author.

LIWC contains a dictionary (Appendix B) consisting of approximately 80 output variables including standard linguistic dimensions, word categories that mine psychological constructs and personal concern categories. There are two types of words, function words – which are used in how something is said, and content words, the topic of what is said. There are 80 word categories comprised of over 4,500 words and word stems. Results are reported as percentage of the total words in the sample. LIWC also provides the user with the option of creating custom dictionaries for specific terms (Pennebaker et al., 2001). LIWC has shown good reliability across topics and testing occasions (Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007).

The free text content of the “About Me” section of the dating profiles was analysed for language signifiers identified in the previous research indicating neuroticism, extraversion, openness, agreeableness, conscientiousness, psychoticism, and deception using the LIWC 2007 standard dictionary categories (Appendix B). Additionally the profile texts were analysed using three of the categories identified in the Chung and Pennebaker (2008) study - relationships, sociability and evaluation (Appendix A).

Procedure

The text content of the “About me” section of the profiles was prepared according to the directions in the LIWC user manual and included spell checks, removal of extra punctuation, removal of abbreviations or text speak and removal of numerals where a word was intended. Full details are included in Appendix C.

There was a significant difference in the average length of the Irish and American profiles, with Americans writing considerably more than Irish authors. This may have been partly due to the fact that the American dating site had one text box labelled “About Me” but no box in which to describe the ideal date. The Irish site had both “About Me” and “My Ideal Date” boxes. In a number of profiles American authors used this “About Me” section to describe aspects of their ideal date. Thus in the process of cleaning up the profile text data, direct references in American profiles to their ideal date were removed from the “About Me” text box. All profiles texts were placed into individual text documents and LIWC was used to analyse them.

Content Analysis - Themes

In addition to the analysis of the data using LIWC, the profiles were analysed to identify and compare themes across the two cultures, and to identify any categories that LIWC may have miscounted due to issues of context - for example Irish people talk about liking sport but not specifically about playing sport, Americans talk about playing sport or working out - LIWC counts the sport related words as equal, but the context and

meaning is not. Siedel (1998) proposed a three stage process of noticing, collecting and thinking, that is iterative, progressive, recursive and holographic in nature and this process was followed (Appendix D).

Ethics

The dating sites used in this research were both open access to content with no login required, therefore it was not required for ethics to contact the profile owners for permission to use their data as it was in the public domain. All of the data has been anonymised for the purposes of this study. There were no other ethical issues, and ethical approval was granted for this research.

Study One: Results

The results of the profile text analysis using LIWC word categories related to personality traits were compared using independent samples t-tests and a number of significant findings were made. Differences were found between American and Irish dating profiles in the use of language associated with the personality traits neuroticism, extraversion, openness, agreeableness, conscientiousness and psychoticism, and also in markers of deception. In addition to the LIWC word count analysis, the profile texts were subject to content analysis for major themes, and a number of themes emerged. These themes were analysed using chi-square tests and were found to have significant differences between cultures.

Quantitative Data from LIWC Analysis of Profiles

The profile text for each participant was transcribed into a word document and analysed with the LIWC programme. LIWC captured over 91% of the words in daters' textual self-descriptions. On average Irish daters' profile texts were 41.99 words long, ($SD = 40.857$) and American profile texts were 149.03 words long ($SD = 104.328$). The Irish and American results for each LIWC word category were compared using independent samples t-tests.

Examination of Neuroticism Related Word Categories

The LIWC word categories associated with neuroticism, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 1. Highly significant results are detailed below.

Affect was significantly higher ($t = 8.653$, $df = 298$, $p < .000$) in Irish profile texts ($M = 24.0153$, $SD = 20.1606$) than American profile texts ($M = 9.4820$, $SD = 4.0813$). The mean difference between conditions was 14.5333 and the 95% confidence interval for the estimated population mean difference is between 11.2282 and 17.8351 with a large effect size ($d = 1.199$).

Irish daters used more anxiety words ($M = 0.7313$, $SD = 2.3314$) than Americans ($M = 0.1644$, $SD = 0.3622$) at a significant level ($t = 2.943$, $df = 298$, $p = .004$). The mean difference between conditions was 0.5669 and the 95% confidence interval for the

estimated population mean difference is between 0.1878 and 0.9461 with a moderate effect size ($d = 0.4209$).

Americans used the first person singular ($M = 9.7944$, $SD = 3.3334$) significantly more ($t = -8.844$, $df = 298$, $p < .000$) than Irish daters ($M = 5.4087$, $SD = 5.0770$). The mean difference between conditions was -4.3857 and the 95% confidence interval for the estimated population mean difference is between -5.3616 and -3.4098 with a large effect size ($d = 1.0429$).

Irish daters scored higher on negative emotion words ($M = 1.9319$, $SD = 3.9325$) than American daters ($M = 0.8970$, $SD = 1.0257$). The mean difference between conditions was 1.03487 and the 95% confidence interval for the estimated population mean difference is between 0.3818 and 1.6879 with a small to medium effect size ($d = 0.4174$). An independent t-test showed that the difference between use of negative emotion words by the two nationalities was significant ($t = 3.119$, $df = 298$, $p = .002$).

Total pronoun usage was higher in American profiles ($M = 16.0635$, $SD = 4.1654$) than Irish profiles ($M = 9.4651$, $SD = 7.8516$) at a significant level ($t = -9.092$, $df = 298$, $p < .000$). The mean difference between conditions was -6.5894 and the 95% confidence interval for the estimated population mean difference is between -8.0266 and -5.1702 with a large effect size ($d = 1.098$).

Americans had considerably higher word count than Irish daters, with Americans writing on average 149.02 words ($SD = 104.328$) in their profiles and Irish daters writing only 41.99 on average ($SD = 40.857$). Use of an independent t-test showed that the difference between the nationalities' word count was significant ($t = -11.699$, $df = 298$, $p < .000$) with a large effect size ($d = 1.4743$). The mean difference between conditions was -107.027 and the 95% confidence interval for the estimated population mean difference is between -125.03 and -89.023 .

The use of evaluation words was significantly higher ($t = 2.962$, $df = 298$, $p = .003$) in Irish profile texts ($M = 5.3691$, $SD = 5.8578$) than American profile texts ($M = 3.7962$, $SD = 2.826$). The mean difference between conditions was 1.5729 and the 95% confidence interval for the estimated population mean difference is between 0.5279 and 2.618 with a small effect size ($d = 0.3623$).

The results of this study found that a higher percentage of positive emotion words per profile were used by Irish daters ($M = 22.0735$, $SD = 20.0470$) than American daters ($M = 8.5541$, $SD = 4.1780$) at a significant level ($t = 8.086$, $df = 298$, $p < .000$). The mean difference between conditions was 13.5194 and the 95% confidence interval for the estimated population mean difference is between 10.2290 and 16.8093 with a large effect size ($d = 1.1162$).

It was found that prepositions were used more frequently by American ($M = 12.7616$, $SD = 3.2112$) than Irish profile texts ($M = 10.8605$, $SD = 6.6713$) at a significant level ($t = -3.145$, $df = 298$, $p = .002$). The mean difference between conditions was -1.9012 and the 95% confidence interval for the estimated population mean difference is between -3.0908 and -0.7114 with a small effect size ($d = 0.3847$).

Words related to seeing were used more frequently by American ($M = 1.2346$, $SD = 1.1938$) than Irish profile texts ($M = 0.7221$, $SD = 1.5367$) at a significant level ($t = -3.226$, $df = 280.835$, $p = .001$, equal variances not assumed). The mean difference between conditions was -0.5125 and the 95% confidence interval for the estimated population mean difference is between -0.8252 and -0.1997 with a small effect size ($d = 0.3754$).

Words of six letters or more were used more frequently by Irish ($M = 19.0210$, $SD = 17.0108$) than American profile texts ($M = 14.1550$, $SD = 4.9704$) at a significant level ($t = 3.363$, $df = 298$, $p = .001$). The mean difference between conditions was 4.8660 and the 95% confidence interval for the estimated population mean difference is between 2.0183 and 7.7136 with a medium effect size ($d = 0.4427$).

Table 1
Findings for LIWC Word Categories with a Relationship to Neuroticism

Categories with a Positive Relationship to Neuroticism							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Affect	24.0153 ^a	20.1606	9.4820	4.0813	8.653	298	.000
Anger	0.6979 ^a	2.8164	0.2972	0.5201	1.713	298	.088
Anxiety	0.7313 ^a	2.3314	0.1644	0.3622	2.943	298	.004
Dictionary	91.4355	8.7347	91.0299	5.0974	0.491	298	.624
Family	0.1020	0.6010	0.3070 ^a	0.6234	-2.900	298	.004
Friends	0.9068	4.0469	0.5331	0.7952	1.022	298	.308
1st person singular	5.4087	5.0770	9.7944 ^a	3.3334	-8.844	298	.000
Inclusions	6.8781	5.7912	6.9127	2.9384	-0.064	298	.949
Negations	1.3544	2.6078	1.6242	1.6970	-1.062	298	.289
Negative emotion	1.9319 ^a	3.9325	0.8970	1.0257	3.119	298	.002
Present	7.9477	6.1856	11.1185 ^a	3.6342	-5.413	298	.000
Total pronoun	9.4651	7.8516	16.0635 ^a	4.1654	-9.092	298	.000
Sadness	0.0840	0.4473	0.1279	0.3221	-0.976	270.786 ^b	.330
Word count	41.9900	40.8570	149.02 ^a	104.3280	-11.699	298	.000
Evaluation	5.3691 ^a	5.8578	3.7962	2.8260	2.962	298	.003

Categories with a Negative Relationship to Neuroticism							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Articles	6.1451	5.1117	5.5287	2.2988	1.347	298	.179
Numbers	0.3544	1.7087	0.5750	0.8323	-1.422	215.943 ^b	.157
Positive emotion	22.0735	20.0470	8.5541 ^a	4.1780	8.086	298	.000
Prepositions	10.8605 ^a	6.6713	12.7616	3.2112	-3.145	298	.002
Seeing	0.7221	1.5366	1.2346 ^a	1.1938	-3.226	280.835 ^b	.001
>6 letter words	19.0210	17.0108	14.155 ^a	4.9704	3.363	298	.001
Space	5.0884 ^a	4.7404	6.0289	2.5787	-2.135	298	.034
We	0.1562	0.9107	0.3357	0.7747	-1.839	298	.067
Work	1.6781	2.8297	1.8664	1.9687	-0.669	298	.504

Note: ^a significant results. ^b Equal variances not assumed.

Examination of Extraversion Related Word Categories

The LIWC word categories associated with extraversion, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 2. Highly significant results are detailed below.

As previously noted on page 19, affect was used significantly more frequently in Irish profiles than American profiles and as shown on page 20 Americans had significantly higher use of first person singular, higher use of positive emotion, total pronoun use and higher word count than Irish daters. As on page 20 Irish daters used negative emotions significantly more than American daters. Irish daters scored significantly higher in the use of words greater than six letters than American daters as previously noted on page 21.

The use of sociability words was significantly higher ($t = 3.798$, $df = 298$, $p < .000$) in Irish profile texts ($M = 4.5864$, $SD = 5.7460$) than America profile texts ($M = 2.6981$, $SD = 2.0154$). The mean difference between conditions was 1.8883 and the 95% confidence interval for the estimated population mean difference is between 0.9099 and 2.8667 with a small effect size ($d = 0.2160$).

There was a significant difference between the nationalities' use of exclusions ($t = 0.041$, $df = 298$, $p = .0015$, one-tailed) with Americans scoring higher ($M = 3.5274$, $SD = 2.5869$) than Irish daters ($M = 2.411$, $SD = 3.7470$). The mean difference between conditions was -1.1164 and the 95% confidence interval for the estimated population mean difference is between -1.8480 and -0.3848 with a small effect size ($d = 0.35$).

The use of tentative language was significantly higher ($t = -4.409$, $df = 298$, $p < .000$, one tailed) in American profile texts ($M = 3.9289$, $SD = 2.6507$) than Irish profile texts ($M = 2.4717$, $SD = 3.0586$). The mean difference between conditions was -1.4572 and the 95% confidence interval for the estimated population mean difference is between -2.1076 and -0.8069 with a medium effect size ($d = 0.5105$).

Table 2
Findings for LIWC Word Categories with a Relationship to Extraversion

Categories with a Positive Relationship to Extraversion							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Affect	24.0153 ^a	20.1606	9.4820	4.0813	8.653	298	.000
Certainty	1.3480	4.5478	1.3063	1.1570	0.109	298	.913
Dictionary	91.4355	8.7347	91.0299	5.0974	0.491	298	.624
Family	0.1020	0.6010	0.3070 ^a	0.6234	-2.900	298	.002
Friends	0.9068	4.0469	0.5331	0.7952	1.022	298	.308
1st person singular	5.4087	5.0770	9.7944 ^a	3.3334	-8.844	298	.000
Inclusions	6.8781	5.7912	6.9127	2.9384	-0.064	298	.475
Positive emotion	22.0735 ^a	20.0470	8.5541	4.1780	8.086	298	.000
Total pronoun	9.4651	7.8516	16.0635 ^a	4.1654	-9.092	298	.000
Sexual	1.2214	2.2953	1.1291	1.4900	0.413	298	.680
Social	8.3199	7.8426	8.5577	4.1273	-0.329	298	.372
We	0.1562	0.9107	0.3357	0.7747	-1.839	298	.033
Word count	41.9900	40.8570	149.02 ^a	104.3280	-11.699	298	.000
Relationships	2.2115	3.4421	1.8751	1.8215	1.058	298	.291
Sociability	4.5864 ^a	5.7460	2.6981	2.0154	3.798	298	.000
Categories with a Negative Relationship to Extraversion							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Articles	6.1451	5.1117	5.5287 ^a	2.2988	1.347	298	.045
Body	0.3879	1.3013	0.4073	0.7333	-0.160	234.961 ^b	.873
Causation	0.7031	1.9056	0.7281	0.8545	-0.147	298	.884
Exclusions	2.411 ^a	3.7470	3.5274	2.5869	-3.003	298	.003
Fillers	0.5980	1.3516	0.5141	1.0167	0.608	298	.544
Negations	1.3544	2.6078	1.6242	1.6970	-1.062	298	.145
Negative emotion	1.9319	3.9325	0.897 ^a	1.0257	3.119	298	.001
Numbers	0.3544	1.7087	0.5750	0.8323	-1.422	215.943 ^b	.157
Quantifier	2.5909 ^a	2.9676	3.3301	2.0430	-2.513	298	.013
>6 letter words	19.0210	17.0108	14.155 ^a	4.9704	3.363	298	.000
Tentative	2.4717 ^a	3.0586	3.9289	2.6507	-4.409	298	.000

Note: ^a significant results aligned with hypothesis. ^b Equal variances not assumed.

Examination of Openness Related Word Categories

The LIWC word categories associated with openness, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 3. Highly significant results are detailed below.

Affect was significantly higher in Irish than American profile texts as noted on page 19, and as shown on page 22 the use of exclusions was higher in Irish profiles. The use of seeing related words was higher in American profiles as on page 21, and the use of words of greater than six letters was significantly greater in Irish than American profiles as shown on page 21. As previously reported on page 23 tentative language was greater in American profiles, and as on page 20 word count was higher in American profiles. As shown on page 20 the use of the first person singular was significantly higher in American profiles than Irish profiles. Total pronoun use was significantly higher in Irish profiles as noted on page 20.

There was a significant difference between the nationalities use of present tense words ($t = -5.413$, $df = 298$, $p < .000$) with Americans scoring higher ($M = 11.1185$, $SD = 3.6342$) than Irish daters ($M = 7.9477$, $SD = 6.1856$). The mean difference between conditions was -3.1707 and the 95% confidence interval for the estimated population mean difference is between -4.3235 and -2.0180 with a medium effect size ($d = 0.6458$).

There was a significant difference between the nationalities' use of the second person ($t = -3.912$, $df = 297.921$, $p < .000$, equal variances not assumed) with Americans scoring higher ($M = 1.0706$, $SD = 1.2133$) than Irish daters ($M = 0.5270$, $SD = 1.1937$). The mean difference between conditions was -5.436 and the 95% confidence interval for the estimated population mean difference is between -0.8171 and -0.2701 with a medium effect size ($d = 0.4517$).

Words per sentence were significantly higher ($t = -3.514$, $df = 292.473$, $p = .001$) in American profile texts ($M = 17.9081$, $SD = 10.8764$) than Irish profile texts ($M = 13.7706$, $SD = 9.4712$). The mean difference between conditions was -4.1375 and the 95% confidence interval for the estimated population mean difference is between -6.4551 and -1.8200 with a moderate effect size ($d = 0.4000$).

Table 3
Findings for LIWC Word Categories with a Relationship to Openness

Categories with a Positive Relationship to Openness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Affect	24.0153 ^a	20.1606	9.4820	4.0813	8.653	298	.000
Articles	6.1451	5.1117	5.5287	2.2988	1.347	298	.179
Death	0.0126	0.1163	0.0394	0.1540	-1.701	298	.090
Exclusions	2.411	3.7470	3.5274 ^a	2.5869	-3.003	298	.003
Hearing	1.2222	2.5462	0.8969	1.0243	1.452	298	.148
Inhibition	0.3847	1.3586	0.2845	0.4960	0.848	298	.397
Insight	2.2289 ^a	3.8117	1.5952	1.2617	1.933	298	.054
Religion	0.5807	1.7360	0.6760	0.8846	-0.599	298	.549
Seeing	0.7221	1.5366	1.2346 ^a	1.1938	-3.226	280.835 ^b	.001
Sexual	1.2214	2.2953	1.1291	1.4900	0.413	298	.680
>6 letter words	19.021 ^a	17.0108	14.1550	4.9704	3.363	298	.001
Swearing	0.0751	0.4993	0.0771	0.2876	-0.041	238.078 ^b	.967
Tentative	2.4717	3.0586	3.9289 ^a	2.6507	-4.409	298	.000
Word count	41.9900	40.8570	149.02 ^a	104.3280	-11.699	298	.000
WPS	13.7706	9.4712	17.9081 ^a	10.8764	-3.514	292.473 ^b	.001
You	0.5270	1.1937	1.0706 ^a	1.2133	-3.912	297.921 ^b	.000
Categories with a Negative Relationship to Openness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Achieve	2.1024	5.1148	1.6095	1.3000	1.144	298	.254
Causation	0.7031	1.9056	0.7281	0.8545	-0.147	298	.884
Dictionary	91.4355	8.7347	91.0299	5.0974	0.491	298	.624
Family	0.1020 ^a	0.6010	0.3070	0.6234	-2.900	298	.004
Friends	0.9068	4.0469	0.5331	0.7952	1.022	298	.308
Future	0.5135 ^a	1.3111	0.8393	0.9470	-2.467	271.199 ^b	.014
1st person singular	5.4087 ^a	5.0770	9.7944	3.3334	-8.844	298	.000
Home	0.1634 ^a	0.5761	0.4931	0.7250	-4.361	298	.000
Motion	1.9328	3.1465	2.0698	1.4371	-0.485	298	.628
Numbers	0.3544	1.7087	0.5750	0.8323	-1.422	215.943 ^b	.157
Present	7.9477 ^a	6.1856	11.1185	3.6342	-5.413	298	.000
Total pronoun	9.4651 ^a	7.8516	16.0635	4.1654	-9.092	298	.000
Time	4.4133 ^a	4.8177	5.4821	3.0338	-2.229	298	.022
Work	1.6781	2.8297	1.8664	1.9687	-0.669	298	.504

Note: ^a significant results. ^b Equal variances not assumed.

Examination of Agreeableness Related Word Categories

The LIWC word categories associated with agreeableness, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 4. Highly significant results are detailed below.

As shown on page 20 Americans had significantly higher use of first person singular, the Irish had higher use of positive emotion, total pronoun use and used negative emotions significantly more than American daters as per page 20. Irish daters scored significantly higher in the use of words greater than six letters than American daters as previously noted on page 21, and Americans used the second person singular more than Irish daters are shown on page 24.

Table 4
Findings for LIWC Word Categories with a Relationship to Agreeableness

Categories with a Positive Relationship to Agreeableness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Dictionary	91.4355	8.7347	91.0299	5.0974	0.491	298	.624
Family	0.1020	0.6010	0.3070 ^a	0.6234	-2.900	298	.002
1st person singular	5.4087	5.0770	9.7944 ^a	3.3334	-8.844	298	.000
Home	0.1634	0.5761	0.4931 ^a	0.7250	-4.361	298	.000
Motion	1.9328	3.1465	2.0698	1.4371	-0.485	298	.314
Positive Emotion	22.0735 ^a	20.0470	8.5541	4.1780	8.086	298	.000
Total pronoun	9.4651	7.8516	16.0635 ^a	4.1654	-9.092	298	.000
Time	4.4133	4.8177	5.4821 ^a	3.0338	-2.229	298	.011
We	0.1562	0.9107	0.3357 ^a	0.7747	-1.839	298	.033
Categories with a Negative Relationship to Agreeableness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Anger	0.6979	2.8164	0.2972 ^a	0.5201	1.713	298	.044
Body							
Negations	1.3544	2.6078	1.6242	1.6970	-1.062	298	.289
Negative emotion	1.9319	3.9325	0.897 ^a	1.0257	3.119	298	.001
>6 letter words	19.021	17.0108	14.1550 ^a	4.9704	3.363	298	.000
Swearing	0.0751	0.4993	0.0771	0.2876	-0.041	238.078 ^b	.967
You	0.5270 ^a	1.1937	1.0706	1.2133	-3.912	297.921 ^b	.000

Note: ^a significant results. ^b Equal variances not assumed.

Examination of Conscientiousness Related Word Categories

The LIWC word categories associated with conscientiousness, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 5. Highly significant results are detailed below.

It was found that a significantly greater number of anxiety words per profile were used by Irish daters than American daters as previously noted on page 19, and a significantly greater percentage of positive emotion words per profile were used by Irish daters than American daters as noted on page 20. Prepositions were used more frequently by American daters as on page 21, and in the use of negative emotion words Irish daters scored significantly higher than American daters as noted on page 20. The Irish daters used considerably higher amounts of affective language as noted on page 19, and there was a significant difference in the nationalities use of exclusions with Americans scoring higher than the Irish as noted on page 22. The use of tentative language was significantly higher in American profile texts than Irish texts as noted on page 23. The use of second person singular was higher in Irish profiles than Americans as on page 24.

The use of evaluation words was significantly ($t = 2.962, df = 298, p = .0015$, one tailed) higher in Irish profile texts ($M = 5.3691, SD = 5.8578$) than American profile texts ($M = 3.7962, SD = 2.826$). The mean difference between conditions was 1.5729 and the 95% confidence interval for the estimated population mean difference is between 0.5279 and 2.618 with a small effect size ($d = 0.3623$).

Table 5

Findings for LIWC Word Categories with a Relationship to Conscientiousness

Categories with a Positive Relationship to Conscientiousness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Anxiety	0.7313 ^a	2.3314	0.1644	0.3622	2.943	298	.004
Certainty	1.3480	4.5478	1.3063	1.1570	0.109	298	.913
Dictionary	91.4355	8.7347	91.0299	5.0974	0.491	298	.624
Family	0.1020	0.6010	0.3070 ^a	0.6234	-2.900	298	.002
Future	0.5135	1.3111	0.8393 ^a	0.9470	-2.467	271.199 ^b	.007
Home	0.1634	0.5761	0.4931 ^a	0.7250	-4.361	298	.000
Inclusions	6.8781	5.7912	6.9127	2.9384	-0.064	298	.475
Positive Emotion	22.0735 ^a	20.0470	8.5541	4.1780	8.086	298	.000
Prepositions	10.8605	6.6713	12.7616 ^a	3.2112	-3.145	298	.001
Time	4.4133	4.8177	5.4821 ^a	3.0338	-2.229	298	.011
Work	1.6781	2.8297	1.8664	1.9687	-0.669	298	.252

Categories with a Negative Relationship to Conscientiousness							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (<i>p</i>)
Affect	24.0153	20.1606	9.4820 ^a	4.0813	8.653	298	.000
Anger	0.6979	2.8164	0.2972 ^a	0.5201	1.713	298	.044
Body	0.3879	1.3013	0.4073	0.7333	-0.160	234.961 ^b	.873
Causation	0.7031	1.9056	0.7281	0.8545	-0.147	298	.884
Cognitive mechanisms	17.0953	9.5558	18.1159	4.8127	-1.168	298	.244
Death	0.0126	0.1163	0.0394	0.1540	-1.701	298	.090
Discrepancies	1.2998	2.2764	1.6575	1.6998	-1.542	298	.124
Exclusions	2.411 ^a	3.7470	3.5274	2.5869	-3.003	298	.003
Hearing	1.2222	2.5462	0.8969	1.0243	1.452	298	.074
Humans	1.9067	3.7992	1.4776	1.3766	1.300	298	.097
Negations	1.3544	2.6078	1.6242	1.6970	-1.062	298	.289
Negative emotion	1.9319	3.9325	0.897 ^a	1.0257	3.119	298	.001
Non-fluencies	0.3508	1.1770	0.2029	0.4767	1.427	298	.078
Religion	0.5807	1.7360	0.6760	0.8846	-0.599	298	.549
Swearing	0.0751	0.4993	0.0771	0.2876	-0.041	238.078 ^b	.967
Tentative	2.4717 ^a	3.0586	3.9289	2.6507	-4.409	298	.000
You	0.5270 ^a	1.1937	1.0706	1.2133	-3.912	297.921 ^b	.000
Evaluation	5.3691	5.8578	3.7962 ^a	2.8260	2.962	298	.003

Note: ^a significant results. ^b Equal variances not assumed.

Examination of Psychoticism Related Word Categories

The LIWC word categories associated with psychoticism, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 6. Highly significant results are detailed below.

As noted on page 20, this study found that there was a significant difference in the use of negative emotion words between the two nationalities with Irish daters scoring higher than American daters. As shown on page 20 the use of the first person singular was significantly higher in American profiles than Irish profiles and as noted on page 20 total pronoun use was significantly higher in Irish profiles.

Irish daters used more anger words ($M = 0.6979$, $SD = 2.8164$) than Americans ($M = 0.2972$, $SD = 0.5201$) at a significant level ($t = 1.713$, $df = 298$, $p = .044$, one-tailed). The mean difference between conditions was 0.4007 and the 95% confidence interval for the estimated population mean difference is between -0.0595 and 0.8609 with a small effect size ($d = 0.237$).

Americans used total first person words more ($M = 11.6485$, $SD = 3.5957$) than Irish daters ($M = 6.2469$, $SD = 5.7379$) with a large effect size ($d = 1.157$) at a significant level ($t = -9.770$, $df = 298$, $p < .000$, one-tailed). The mean difference between conditions was -5.4016 and the 95% confidence interval for the estimated population mean difference is between -6.4897 and -4.3135 with a large effect size ($d = 1.157$).

Table 6

Findings for LIWC Word Categories with a Relationship to Psychoticism

Categories with a Positive Relationship to Psychoticism							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Anger	0.6979 ^a	2.8164	0.2972	0.5201	1.713	298	.044
Certainty	1.3480	4.5478	1.3063	1.1570	0.109	298	.457
Cognitive mechanisms	17.0953	9.5558	18.1159	4.8127	-1.168	298	.244
Death	0.0126	0.1163	0.0394	0.1540	-1.701	298	.090
Money	0.2467	0.7745	0.6179 ^a	0.8884	-3.857	298	.000
Negative Emotion	1.9319 ^a	3.9325	0.8970	1.0257	3.119	298	.001
Sadness	0.0840	0.4473	0.1279	0.3221	-0.976	270.786 ^b	.330
Categories with a Negative Relationship to Psychoticism							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig one-tailed (p)
Total 1st person	6.2469 ^a	5.7379	11.6485	3.5957	-9.770	298	.000
1st person singular	5.4087 ^a	5.0770	9.7944	3.3334	-8.844	298	.000
Total pronoun	9.4651 ^a	7.8516	16.0635	4.1654	-9.092	298	.000
Motion	1.9328	3.1465	2.0698	1.4371	-0.485	298	.314

Note: ^a significant results aligned with hypothesis. ^bEqual variances not assumed.

Examination of Deception Related Word Categories

The LIWC word categories associated with deception, and the results of the independent t-test comparison between Ireland and America for these categories can be seen in Table 7. Highly significant results are detailed below.

As noted on page 22 use of exclusions was significantly higher in Irish profiles. This study found that there was a significant difference in the use of negative emotion words between the two nationalities with Irish daters scoring higher than American daters as shown on page 20. As reported on page 20 the use of the first person singular was significantly higher in American profiles than Irish profiles, and word count was significantly higher in American profiles as shown on page 20.

Americans used the third person plural more ($M = 0.2309$, $SD = 0.5113$) than Irish daters ($M = 0.0799$, $SD = 0.3431$) at a significant level ($t = -3.004$, $df = 298$, $p = .003$). The mean difference between conditions was -5.4016 and the 95% confidence interval for the estimated population mean difference is between -6.4897 and -4.3135 with a small effect size ($d = 0.3535$).

Table 7

Findings for LIWC Word Categories with a Relationship to Deception

Categories with a Positive Relationship to Deception							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Motion	1.9328	3.1465	2.0698	1.4371	-0.485	298	.628
Negations	1.3544	2.6078	1.6242	1.6970	-1.062	298	.289
Categories with a Negative Relationship to Deception							
Category	Mean IRE	SD	Mean USA	SD	t	df	sig two-tailed (p)
Exclusions	2.411 ^a	3.7470	3.5274	2.5869	-3.003	298	.003
1st Person Singular	5.4087 ^a	5.0770	9.7944	3.3334	-8.844	298	.000
Negative Emotion	1.9319	3.9325	0.8970 ^a	1.0257	3.119	298	.002
She/He	0.0752 ^a	0.4482	0.2156	0.5554	-2.409	298	.017
They	0.0799 ^a	0.3431	0.2309	0.5113	-3.004	298	.003
Word Count	41.99 ^a	40.8570	149.0200	104.3280	-11.699	298	.000

Note: ^a significant results.

Qualitative Content Analysis

Additional qualitative analysis of the American and Irish profile texts was undertaken to uncover major themes that may have been missed by the LIWC software, and to check several LIWC content word categories for context within the profiles to ensure that the LIWC reading of the text in terms of content words was accurate. This analysis revealed several major themes that were not revealed by the LIWC analysis, and several that may have been counted differently by LIWC due to the context and emphasis of the words in the profile texts. The first theme was honesty, which included the profile author describing themselves as honest or trustworthy. The second was positive personality attributes and included the descriptive terms, loyal, kind, sincere, genuine, friendly, warm, caring, loving, nice, considerate, understanding, and having a big or huge heart. The third theme was sport and fitness and included references to being active, energetic, keeping or getting fit, being athletic or sporty, playing sports, going to

the gym, working out, being in shape. The fifth theme of working refers to being a hard worker, working hard, being a workaholic, or discussing a profession or occupation. The sixth theme is no game playing, and includes all mentions of not wanting a game player or to play games, not wanting cheaters or liars, not liking bitchiness or drama, good girls or women being hard to find and not wanting to be messed around. The seventh and final theme is friends and family being very important to the author, this specifically indicates references to the importance of friends or family rather than just mentioning them.

Content themes were identified as categories and the profiles were coded nominally (Appendix D). The coded data was analysed using Chi-square tests and all categories were found to have differences between nationalities' at a significant level. As can be seen in Table 8 and Figure 1, Irish daters described themselves as honest or trustworthy significantly more frequently with 35 doing so (23.3% of Irish profiles) than American daters who stated this in only 20 cases (13.3% of American profiles). The relationship between being Irish and describing the self as honest was significant: $\chi^2(1, N = 300) = 5.009, p < .025$. The association was of small strength: $\Phi = 0.129$ and thus being Irish accounted for 1.6641% of the variance in honesty as a description.

Table 8

Results of Chi-square Test for the Theme of Honesty

Honesty IRE/USA Crosstabulation					
			Ireland	USA	Total
Honesty	Yes	Count	35	20	55
		Expected Count	27.5	27.5	55.0
		% within Honesty	63.6%	36.4%	100.0%
		% within IRE/USA	23.3%	13.3%	18.3%
		% of Total	11.7%	6.7%	18.3%
	No	Count	115	130	245
		Expected Count	122.5	122.5	245.0
		% within Honesty	46.9%	53.1%	100.0%
		% within IRE/USA	76.7%	86.7%	81.7%
		% of Total	38.3%	43.3%	81.7%
Total		Count	150	150	300
		Expected Count	150.0	150.0	300.0
		% within Honesty	50.0%	50.0%	100.0%
		% within IRE/USA	100.0%	100.0%	100.0%
		% of Total	50.0%	50.0%	100.0%

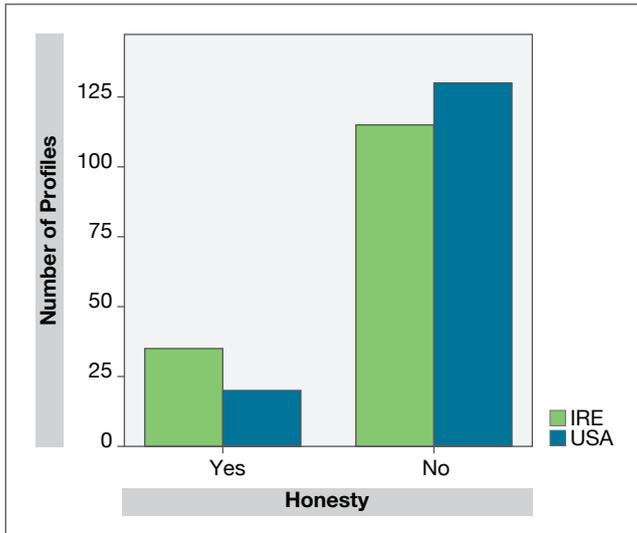


Figure 1. Irish and American cross cultural comparison of the use of honesty as a self-description in online dating profiles.

As can be seen in Table 9 and Figure 2, 54 Irish daters described themselves using positive personality attributes (36% of Irish profiles), this was significantly more frequently than American daters who only described themselves as having these attributes in 29 cases (19.3% of American profiles). The relationship between being Irish and describing the self using positive words was significant: $\chi^2(1, N = 300) = 10.410, p < .001$. The association was of small strength: $\Phi = 0.186$ and thus being Irish accounted for 3.4596% of the variance in positive personality attributes as a description.

Table 9

Results of Chi-square Test for the Theme of Positive Personality Attributes

Positive Personality Attributes IRE/USA Crosstabulation					
			Ireland	USA	Total
Positive Personality Attributes	Yes	Count	54	29	83
		Expected Count	41.5	41.5	83.0
		% within Pos Personality	65.1%	34.9%	100.0%
		% within IRE/USA	36.0%	19.3%	27.7%
		% of Total	18.0%	9.7%	27.7%
	No	Count	96	121	217
		Expected Count	108.5	108.5	217.0
		% within Pos Personality	44.2%	55.8%	100.0%
		% within IRE/USA	64.0%	80.7%	72.3%
		% of Total	32.0%	40.3%	72.3%
Total	Count	150	150	300	
	Expected Count	150.0	150.0	300.0	
	% within Pos Personality	50.0%	50.0%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.0%	50.0%	100.0%	

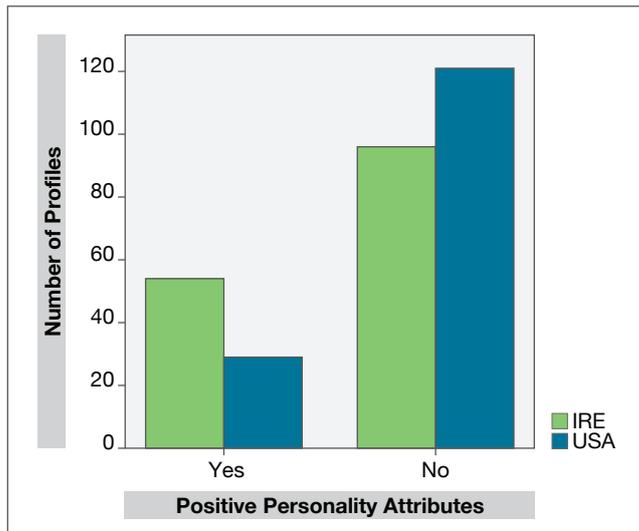


Figure 2. Irish and American cross cultural comparison of the use of positive personality attributes as self-description in online dating profiles.

American daters described themselves being fit, working out or playing sport in 64 cases (42.7% of American profiles) which is significantly more frequently than Irish daters who only stated this in 37 cases (24.7% of Irish profiles) as can be seen in Table 10 and Figure 3. The relationship between being American and being fit or playing sport was significant: $\chi^2(1, N = 300) = 10.881, p < .001$. The association was of small strength: $\Phi = 0.190$ and thus being American accounted for 3.61% of the variance in mentions of sports and fitness in profiles.

Table 10

Results of Chi-square Test for the Theme of Sport and Fitness

Sport/Fitness IRE/USA Crosstabulation					
			Ireland	USA	Total
Sport/Fit	Yes	Count	37	64	101
		Expected Count	50.5	50.5	101.0
		% within Sport/Fit	36.6%	63.4%	100.0%
		% within IRE/USA	24.7%	42.7%	33.7%
		% of Total	12.3%	21.3%	33.7%
	No	Count	113	86	199
		Expected Count	99.5	99.5	199.0
		% within Sport/Fit	56.8%	43.2%	100.0%
		% within IRE/USA	75.3%	57.3%	66.3%
		% of Total	37.7%	28.7%	66.3%
Total	Count	150	150	300	
	Expected Count	150.0	150.0	300.0	
	% within Sport/Fit	50.0%	50.0%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.0%	50.0%	100.0%	

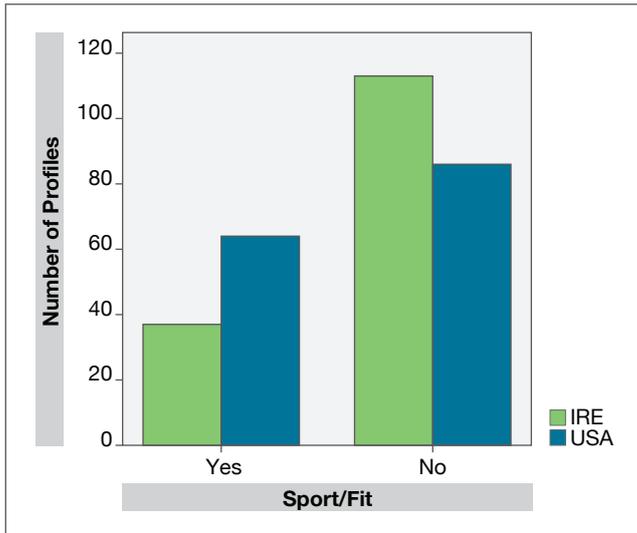


Figure 3. Irish and American cross cultural comparison of the use of fitness and sport playing terms in online dating profiles.

American daters talked about work and working hard in 70 cases (46.7% of American profiles), which was significantly more frequently than Irish daters who only mention this in 23 cases (15.3% of Irish profiles) as shown in Table 11 and Figure 4. The relationship between being American and talking about work was significant: $\chi^2(1, N = 300) = 34.424, p < .0005$. The association was of moderate strength: $\Phi = -0.339$ and thus being American accounted for 11.4921% of the variance in mentioning work.

Table 11

Results of Chi-square Test for the Theme of Work

Work IRE/USA Crosstabulation					
			Ireland	USA	Total
Work	Yes	Count	23	70	93
		Expected Count	46.5	46.5	93.0
		% within Work	24.7%	75.3%	100.0%
		% within IRE/USA	15.3%	46.7%	31.0%
		% of Total	7.7%	23.3%	31.0%
	No	Count	127	80	207
		Expected Count	103.5	103.5	207.0
		% within Work	61.4%	38.6%	100.0%
		% within IRE/USA	84.7%	53.3%	69.0%
		% of Total	42.3%	26.7%	69.0%
Total	Count	150	150	300	
	Expected Count	150.0	150.0	300.0	
	% within Work	50.0%	50.0%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.0%	50.0%	100.0%	

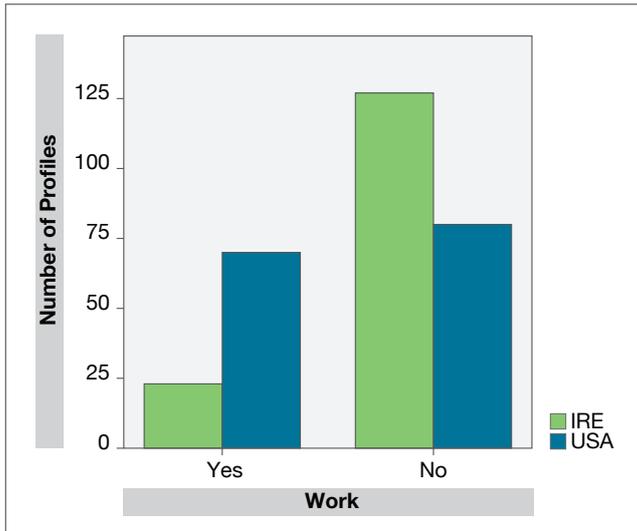


Figure 4. Irish and American cross cultural comparison of the frequency of discussion of work in online dating profiles.

As shown in Table 12 and Figure 5, 32 American daters talked about not liking game playing (21.3% of American profiles) which was significantly more frequently than Irish daters who only mention this in three cases (2% of Irish profiles). The relationship between being American and talking about no games was significant: $\chi^2(1, N = 300) = 27.202, p < .0005$. The association was of moderate strength: $\Phi = -0.301$ and thus being American accounted for 9.0601% of the variance in mentioning no games.

Table 12

Results of Chi-square Test for the Theme of No Games

No Games IRE/USA Crosstabulation					
			Ireland	USA	Total
No games	Yes	Count	3	32	35
		Expected Count	17.5	17.5	35.0
		% within No Games	8.6%	91.4%	100.0%
		% within IRE/USA	2.0%	21.3%	11.7%
		% of Total	1.0%	10.7%	11.7%
	No	Count	147	118	265
		Expected Count	132.5	132.5	265.0
		% within No Games	55.5%	44.5%	100.0%
		% within IRE/USA	98.0%	78.7%	88.3%
		% of Total	49.0%	39.3%	88.3%
Total	Count	150	150	300	
	Expected Count	150.0	150.0	300.0	
	% within No Games	50.0%	50.0%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.0%	50.0%	100.0%	

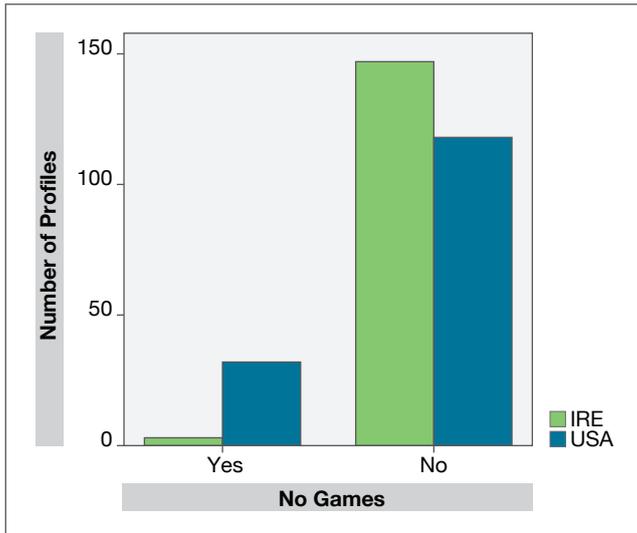


Figure 5. Irish and American cross cultural comparison of the frequency of mention of no games in online dating profiles.

As shown in Table 13 and Figure 6, American daters talked about the importance of friends and family frequently with 30 daters expressing this theme (20% of American profiles) compared with only nine Irish daters (6% of Irish profiles). The relationship between being American and talking about friends or family being particularly important was significant: $\chi^2(1, N = 300) = 12.997, p < .0005$. The association was of small strength: $\Phi = -0.208$ and thus being American accounted for 4.3264% of the variance in mentioning importance of friends or family.

Table 13

Results of Chi-square Test for the Theme of Importance of Friends or Family

Family Friends IRE/USA Crosstabulation					
			Ireland	USA	Total
Family Friends	Yes	Count	9	30	39
		Expected Count	19.5	19.5	39.0
		% within Family Friends	23.1%	76.9%	100.0%
		% within IRE/USA	6.0%	20.0%	13.0%
		% of Total	3.0%	10.0%	13.0%
	No	Count	141	120	261
		Expected Count	130.5	130.5	261.0
		% within Family Friends	54.0%	46.0%	100.0%
		% within IRE/USA	94.0%	80.0%	87.0%
		% of Total	47.0%	40.0%	87.0%
Total		Count	150	150	300
		Expected Count	150.0	150.0	300.0
		% within Family Friends	50.0%	50.0%	100.0%
		% within IRE/USA	100.0%	100.0%	100.0%
		% of Total	50.0%	50.0%	100.0%

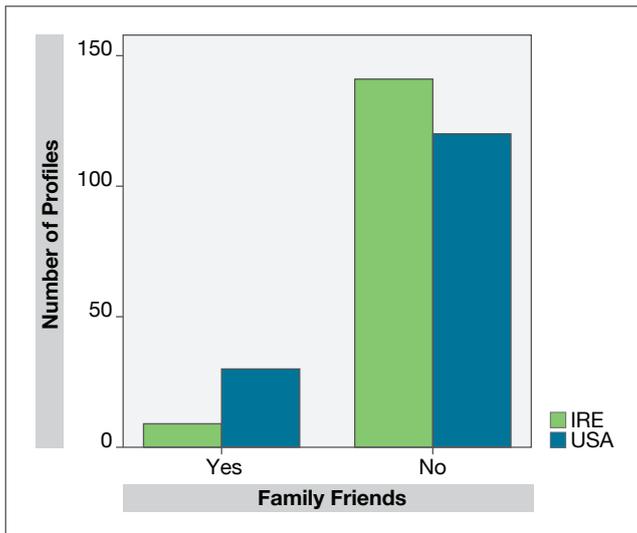


Figure 6. Irish and American cross cultural comparison of the frequency with which importance of friends or family is mentioned in online dating profiles.

Figure 7 provides an overview and summary of the results presented for this study. LIWC word categories and qualitative data categories which attained a level of significance for either nationality, or which are similar for both, are each counted as one variable and are displayed in a bar chart.

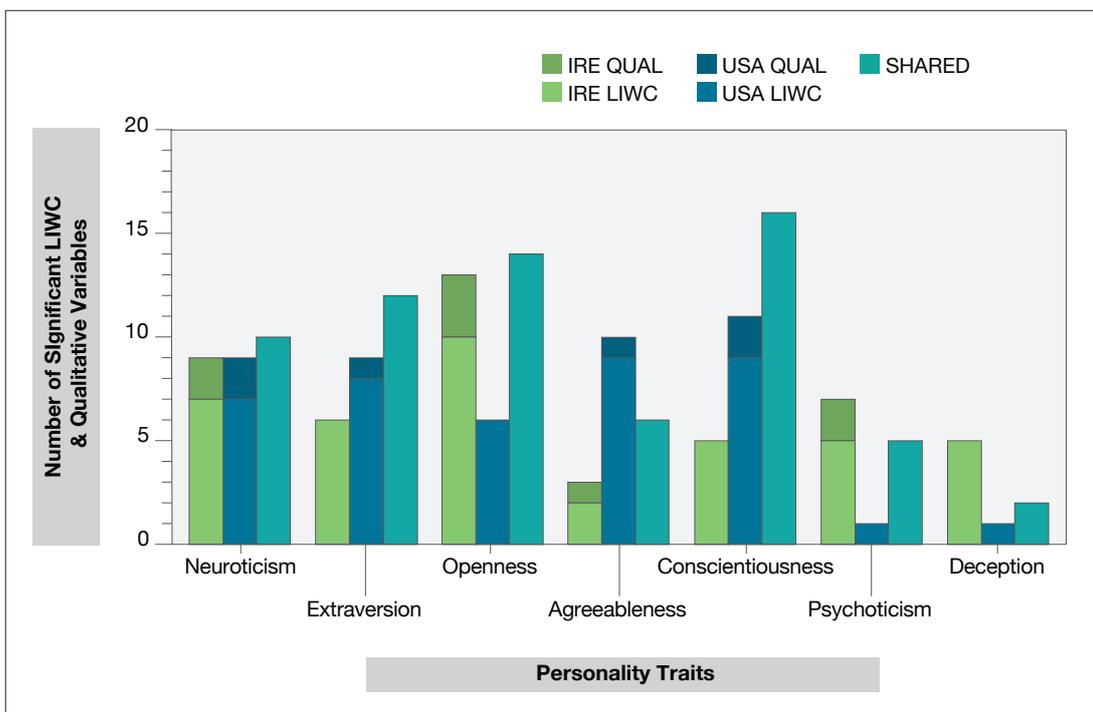


Figure 7. Illustrates the overall findings for personality trait variables.

Study One: Discussion

In summary, support was found for differences between the two cultures in many personality traits expressed and identified through language. Irish and American daters were found to have similar numbers of significant variables indicating neuroticism, Americans were found to have slightly more variables indicating extraversion, more variables indicating agreeableness and conscientiousness, and Irish online daters have considerably more categories indicating that they are higher in openness to experience, psychoticism and are more deceptive in their profiles.

Irish and Americans scored significantly higher or lower on many individual variables across all personality traits and additionally had many variables in common. This study has surmised that when one nationality had a considerably higher number of significant categories that point towards a particular trait, it was an indication that the nationality could be higher in that trait. This reasoning has been applied across the following discussion of results. A summary of these overall results is illustrated in Figure 7.

Support for Language Indicators of Personality Differences

In previous research Ireland and America have been found to have similar levels of neuroticism (Lester, 2000), and so it was expected that similar levels would be found between the two cultures dating profiles. Irish and Americans were found to each have seven significant results in LIWC word categories for neuroticism with ten shared categories. In the qualitative data categories Ireland scores lower for the work and the sport and fitness categories which are negatively correlated to neuroticism (Mairesse et al., 2007), while America scores higher in the importance of family which is positively related to neuroticism (Mairesse et al., 2007). America also scores higher in the no games category, which could possibly be linked to neuroticism as it appears to be based on anger or anxiety around interaction with other daters. Thus hypothesis one is supported by the LIWC and qualitative data.

As Americans have been found to be more extrovert (Lester, 2000), it was expected that American daters would be more extrovert than Irish daters. However this study has found that on LIWC word categories both nationalities had similar results. Irish

daters were found to be significant on six and American daters on eight LIWC categories, with twelve shared categories. Only on one additional qualitative category related to extraversion were they significantly different, that being the importance of friends and family on which Americans scored higher. These results do not fully support the hypothesis. A possible explanation for this result is that those individuals attracted to online dating may, as a sub-section of the general population, be higher in extraversion as a group. This area is worth further research.

It was expected that differences in openness to experience would be found between Irish and American daters, and this research suggests that Irish daters had a higher level of openness to experience. On LIWC word categories the Irish had ten significant variables, versus six American variables, with fourteen shared. In the qualitative data Ireland scored lower on mentioning the importance of friendship, work, and sport and fitness, all of which are in line with a high score in openness. Thus hypothesis three found that Irish and American daters had different levels of openness, with the Irish being considerably more open to experience.

Hypothesis four expected that lower levels of agreeableness would be found in Irish dating profiles and in this research there was support for the hypothesis. American daters had significant results in nine LIWC categories in comparison to the Irish who scored significantly in only two, with six shared variables. The qualitative data found that Irish daters referred to the no games category less often which could be related to higher agreeableness, and American daters referred to the importance of friends and family more often, also positively related to agreeableness. Thus overall it appears that American online daters may be higher in agreeableness and hypothesis four is supported.

It was expected that Americans would also be higher in conscientiousness than Irish daters, and in general there was more data in favour of American daters scoring higher in conscientiousness than Irish daters. Across the LIWC categories there were more significant results in the direction of Americans being higher in conscientiousness, with Americans scoring significantly on nine variables compared to the Irish five variables, with 16 shared variables. This data was supported by the qualitative data where Americans were more likely to mention work and family, both positively related to conscientiousness. Overall the data was in support of hypothesis five with a finding of higher conscientiousness for American daters.

Irish people have been shown to have a higher mean score for psychoticism than Americans (van Hemert et al., 2002), and hypothesis six thus expected to find that Irish daters would score higher than Americans in signifiers of psychoticism. This

hypothesis was well supported by the data, with Irish daters scoring significantly in five LIWC categories related to psychoticism, American daters with only one significant result in LIWC categories, and five shared categories. The qualitative data also supports this hypothesis with Ireland scoring lower on mentions of work, where work ethic is negatively related to psychoticism and lower on the importance of friends and family, consistent with higher psychoticism.

For hypothesis seven, Ireland scored significantly higher than America on many of the markers of deception. In the LIWC categories Ireland was positive for five of the relevant categories, American daters for one, and only two categories were shared. This suggests that Irish daters may be more deceptive in their online profiles than American daters. Additionally, if deception is a component of psychoticism, then this result could also support the findings of hypothesis six that Irish daters are higher in psychoticism than American daters.

A number of the Five Factors of personality have been correlated with EPQ factors. Higher psychoticism scores have been shown to have a significant relationship with lower scores on conscientiousness and agreeableness (Avia et al., 1995; Draycott & Kline, 1995; Saggino, 2000). This provides some validity for the method of testing personality traits employed in this study. Irish daters were found to be higher in markers of psychoticism, and lower in agreeableness and conscientiousness, as would be expected. Openness to experience has also been found to be negatively related to agreeableness and conscientiousness, and again Irish daters scored higher on openness.

The free text element of male dating profiles has been rated more attractive when the language used is rated higher for appearing genuine, trustworthy, extraverted and feminine (Fiore et al., 2008). Irish daters have higher results for deception in this study, and yet the qualitative data found that they were significantly more likely to describe themselves as trustworthy or honest, and with positive personality attributes, including genuine. This dichotomy between what they are expressing, and their underlying process is an interesting one, and is worthy of further study to discover if they are attempting to cover their deception by stating their honesty, or if indeed they are being consciously deceptive at all. It would also be interesting to discover if stating these attributes actually contributes to the rating of attractiveness of the textual element, or if the rating is attributed to more subtle cues. Considering that being honest about both the positive and negative attributes of the self in a dating profile has been shown to be an unsuccessful strategy (Gibbs et al., 2006), Irish daters may be balancing the tension of conveying their honesty, and not being completely honest in their profiles in order to be more successful.

Limitations of the Study

There are a number of limitations to this study including the fact that the data gathered from the free text element of the dating profiles was collected from a small sample of 300 heterosexual, Caucasian, male, online daters. This research would benefit from greatly expanded study involving considerably more profiles across both genders, and across also sexual orientation.

The results of the study cannot be generalised outside of online dating participants, as this cohort may constitute a unique sub-group of the population with different means in personality to the population in general.

In many of the traits studied, there were a number of variables that the two nationalities differed in significantly and a number of variables where there was no significant difference. In this research, where the same quantity of significantly different variables were found for each culture, an assumption was made that the cultures were approximately equal in this trait. It is possible that this may show that although a trait was found in similar levels in the two cultures, it was expressed through language in a slightly different way in each culture, however more research is needed to support this theory. Where different numbers of significant variables were found it was suggested that the nationality with the higher number of significant variables was higher in that trait. In general the results of this research mirrored previous research into the mean levels of traits in the two cultures, suggesting that it may be a valid method of measuring personality across cultures. Further research using personality inventories to measure against the profile text findings would be a useful extension of this study.

Future Research and Implications

This research is also important outside of online dating. If language carries markers of personality that can be tested, it provides a naturalistic way of measuring personality without resorting to tests and inventories. Free descriptions are a more natural way of assessing personality than formal personality questionnaires, as descriptions carry more meaning in our lives than numerical responses (Chung & Pennebaker, 2008). One limitation of self-reported inventories measuring mean personality traits across cultures is the fact that cultural norms may effect the reporting of a trait. For example, where high standards of conscientiousness is the cultural norm, members of that culture may perceive themselves lower in conscientiousness according to that standard. However, the use of language analysis to determine levels of traits could remove that limitation as participants are not being asked to self-report.

Additionally, as many social networking profiles are composed of similar elements to online dating profiles, including self-descriptive text, language analysis could be used to determine personality characteristics from the textual elements of those profiles, and also in other areas such as curriculum vitae and application letters for employment. This could be useful for employers, team builders, educators working with student learning styles and creating adaptive learning, and in many other areas.

As it has been found that people tend to create numerous iterations of their profile in order to attract a mate (Whitty, 2008), and also that poor grammar and spelling are frequently interpreted as lack of interest or education (Ellison et al., 2006), it would be interesting to conduct research into the authors of the profiles and determine the reasons for the poor grammar and spelling found in a great number of the profiles studied here (see Appendix D for examples), and into the amount of time and effort spent crafting the profiles in general in order to determine if there are differences between cultures.

Study Two: Method

Design

This study was a between-participants, independent-samples design in which 121 Irish and American participants were recruited using both convenience and snowball sampling. A quantitative experiment was chosen to test whether culturally specific language use, indicating self-presentation of personality traits within Ireland or the USA, is successful within that cultural context. The independent variable was a set of five manipulated experimental profile texts, and the dependent variable was the response to the profiles from the Irish and American participants.

Participants

The participants were 61 Irish and 60 American females over the age of 18, of straight sexual orientation. The Irish participants were aged between 19 and 57 with a mean age of 35.36 ($SD = 7.243$). The American participants were aged between 18 and 63 with a mean age of 31.08 ($SD = 12.057$).

Materials

From the results of the LIWC and content analysis on the 300 Irish and American profiles, five profiles were created and manipulated to contain culturally typical language for the Irish and American profiles. Typical language was created from analysing the mean results of Irish and American texts in the LIWC categories and matching the profiles to these styles. Additionally, commonly used words or themes derived from the content analysis were used in the relevant profiles. Two profile texts were created with a typically Irish style of profile, with one using more positive language and one with some negative language. These orientations were created based on content themes noticed in the content analysis of the Irish profiles and were designed to reflect typical Irish profiles from the study. Two American profiles were created with one with positive language and one with some negative language. One profile was created, designed to be halfway between an American and Irish profile text with positive language. A full set of profiles was created specifically for the American and for the Irish participants, with specific English spelling relevant to their country so as not to create any confounding variables.

In study one it was found that Americans wrote, on average, three times more than Irish daters. Bearing in mind the findings of Norton et al. (2007) that less information equals more liking, the Irish and American experimental profiles in study two were all created to be of similar length so as to avoid the confounding variable of more information leading to less liking. The profiles were created to be approximately halfway between the Irish and American mean lengths. Also, in order not to distract from the content of the profiles, spelling and grammar mistakes were corrected. The experimental profiles are available in Appendix E.

An online survey was created for the experiment. The participants were requested to confirm they were over 18 and to confirm consent to participate. Detailed instructions were given on how to undertake the experiment (Appendix F). They were given the opportunity to ask questions through email before commencing, and to stop participating at any time. They were asked to input their age, and they were asked to answer in the positive three questions, first that they were female, second that they were from either Ireland or the United States, and thirdly that they were of straight sexual orientation. If they answered no to any of the questions they were redirected to a page thanking them and informing them that they were not eligible to participate in the study.

The experimental profiles were labelled alphabetically A to E rather than numerically to avoid any participants reading the numbers as a rank, and the experimental profile texts were presented alone with no photograph or other information from the dating profiles. Each experimental profile was presented on a page with a scale for ranking the level of attractiveness below it. The participants were instructed to read each profile and rate the author of the profile on a five point scale of attractiveness from unattractive to attractive. Additionally below the scale they were asked to answer yes or no to the question, "Would you respond to a communication from the author of this profile on a dating site?" The final page of the survey included the option to enter an email address to receive results of the study, and debriefed the participants (Appendix F). A pilot study was undertaken before the experiment commenced.

Procedure

The survey was activated online and was sent out to an set of initial participants recruited using social networking sites such as Facebook, Twitter and Linked In and who were known to the researcher. They were encouraged to send it on to eligible acquaintances. The research was also posted on the website of Hanover College Psychology Department, where many of the American participants were recruited from.

Ethics

All participants were adults, gave informed consent to take part in the study, were debriefed, all data was anonymised and participants could stop taking part at any time and as such the study had no ethical problems and was approved.

Study Two: Results

Each experimental profile text required two separate answers from the participants of the experiment. The first question asked the participant to rate the attractiveness of the profile text on a five point scale from unattractive to attractive. The results of these questions were compared using independent samples t-tests. The second question asked the participants to answer yes or no to the question “Would you respond to a communication from the author of this profile?”. These answers were compared using chi-square tests.

Profile Ranking Across Irish and American Participants

The results of how the participants ranked the profiles are displayed in Table 14. American and Irish daters both ranked profiles C (Mix of typically Irish and American profiles), D (Irish profile with some negative language) and E (American profile with some negative language) in places two, four and five respectively. The difference in ranking between the two cultures was the placing of the profiles in first and third places, with Irish daters ranking profile A (Irish profile with positive language) in first place and B (American profile with positive language) profile in third place, and American daters ranking profile B in first place, and profile A in third place.

Table 14

Ranking of Profiles A to E by Irish and American Participants.

Irish Ranking of Profiles						
Rank	Profile	Profile type	N	Mean	SD	Std. Error Mean
1	A	Irish – positive	61	4.0328	.91227	.11680
2	C	Mix Irish/USA	61	3.8525	1.07759	.13797
3	B	USA – positive	60	3.7500	1.00212	.12937
4	D	Irish – negative	61	3.5410	.97594	.12496
5	E	USA – negative	59	2.7288	1.22939	.16005

American Ranking of Profiles						
Rank	Profile	Profile type	N	Mean	SD	Std. Error Mean
1	B	USA – positive	59	4.2542	.97544	.12699
2	C	Mix Irish/USA	57	4.0702	.90356	.11968
3	A	Irish – positive	59	3.9322	.94439	.12295
4	D	Irish – negative	58	3.3103	1.28701	.16899
5	E	USA – negative	58	2.4655	1.14272	.15005

An independent samples t-test showed a significant difference ($t = -2.781$, $df = 116.988$, $p = .006$, two tailed, equal variances not assumed) between the nationalities rating of profile B, with American participants ($M = 4.2542$, $SD = 0.9754$) rating profile B higher than Irish participants ($M = 3.75$, $SD = 1.0021$). The mean difference between conditions was -0.5042 and the 95% confidence interval for the estimated population mean difference is between $-.08632$ and -0.1452 with a medium effect size ($d = 0.5099$). All other profiles had no significant differences between Irish and American participant mean ratings. These results are shown in Table 15.

Table 15

Table of Probabilities in Scoring of Profiles.

				t-test for Equality of Means					
Profile	Participant Nationality	M	SD	t	df	Sig. (two-tailed)	M Diff	95% CI	
								LL	UL
A	IRE	4.0328	.91227	.593	117.454 ^a	.554	.10058	-.23526	.43643
	USA	3.9322	.94439						
B	IRE	3.7500	1.00212	-2.781	116.988 ^a	.006	-.50424	-.86326	-.14521
	USA	4.2542	.97544						
C	IRE	3.8525	1.07759	-1.192	114.690 ^a	.236	-.21772	-.57951	.14408
	USA	4.0702	.90356						
D	IRE	3.5410	.97594	1.105	117.000	.271	.23064	-.18275	.64403
	USA	3.3103	1.28701						
E	IRE	2.7288	1.22939	1.200	114.643 ^a	.233	.26330	-.17128	.69787
	USA	2.4655	1.14272						

Note: ^aEqual variances not assumed.

Two profiles, B and D, had a significantly different response between cultures to the second question which asked if the participant would respond to a communication from the author of the profile text on each profile. As shown in Table 16 and Figure 8, in profile B, 49 Americans (84.5% of American participants) answered yes to the question, compared with 36 of the Irish (61% of Irish participants). There was a positive significance between being American and answering yes: $\chi^2(1, N = 117) = 8.105$,

$p < .002$, one tailed. The association was of low strength: $\Phi = -0.263$ and thus being American accounted for 6.9169% of the variance in answering.

Table 16

Results of Chi-square Test for a Yes or No Answer to Question Two Profile B

IRE/USA Profile B Answer Crosstabulation					
			Ireland	USA	Total
B Yes/No	Yes	Count	36	49	85
		Expected Count	42.9	42.1	85.0
		% within B Yes/No	42.4%	57.6%	100.0%
		% within IRE/USA	61.0%	84.5%	72.6%
		% of Total	30.8%	41.9%	72.6%
	No	Count	23	9	32
		Expected Count	16.1	15.9	32.0
		% within B Yes/No	71.9%	28.1%	100.0%
		% within IRE/USA	39.0%	15.5%	27.4%
		% of Total	19.7%	7.7%	27.4%
Total	Count	59	58	117	
	Expected Count	59.0	58.0	117.0	
	% within B Yes/No	50.4%	49.6%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.4%	49.6%	100.0%	

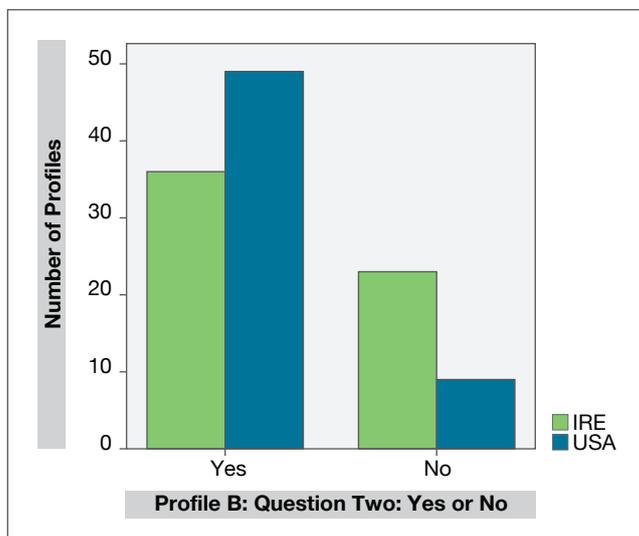


Figure 8. Profile B: Participant Yes or No answers to the question “Would you respond to a communication from the author of this profile?”.

As can be seen in Table 17 and Figure 9, in profile D, 36 of the Irish (60% of Irish participants) answered yes to the question, compared with 26 of the Americans (44.8% of American participants). There was a positive significance between being Irish and answering yes: $\chi^2(1, N = 118) = 2.723, p < .0495$, one tailed. The association was of

low strength: $\Phi = -0.152$ and thus being Irish accounted for 2.3104% of the variance in answering.

Table 17

Results of Chi-square Test for a Yes or No Answer to Question Two Profile D

IRE/USA Profile D Answer Crosstabulation					
			Ireland	USA	Total
D Yes/No	Yes	Count	36	26	62
		Expected Count	31.5	30.5	62.0
		% within D Yes/No	58.1%	41.9%	100.0%
		% within IRE/USA	60.0%	44.8%	52.5%
		% of Total	30.5%	22.0%	52.5%
	No	Count	24	32	56
		Expected Count	28.5	27.5	56.0
		% within D Yes/No	42.9%	57.1%	100.0%
		% within IRE/USA	40.0%	55.2%	47.5%
		% of Total	20.3%	27.1%	47.5%
Total	Count	60	58	118	
	Expected Count	60.0	58.0	118.0	
	% within D Yes/No	50.8%	49.2%	100.0%	
	% within IRE/USA	100.0%	100.0%	100.0%	
	% of Total	50.8%	49.2%	100.0%	

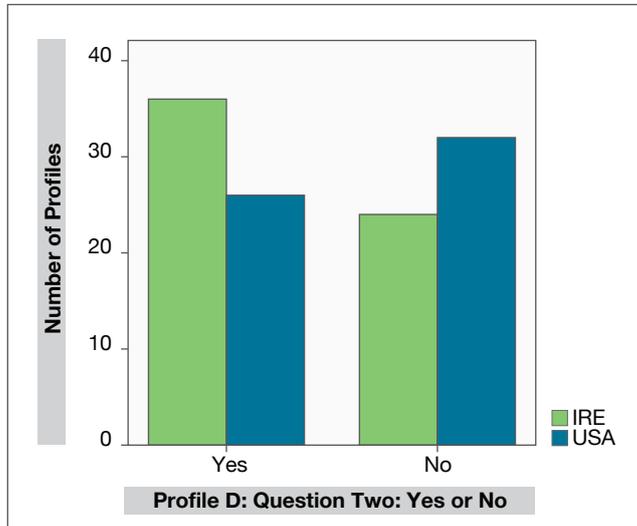


Figure 9. Profile D: Participant Yes or No answers to the question “Would you respond to a communication from the author of this profile?”.

Profile A showed no significance between nationality and answering yes or no: $\chi^2(1, N = 115) = 0.003, p = .955$, two tailed. Profile C showed no relationship between nationality and answering yes or no: $\chi^2(1, N = 117) = 0.312, p < .577$, two tailed. Profile E showed no relationship between nationality and answering yes or no: $\chi^2(1, N = 117) = 1.352, p = .245$, two tailed.

There is evidence to show internal validity of the questions within the profiles. American participants mean ratings on profiles B and C were higher than Irish ratings, this corresponded with the answers to the yes no question where Americans answered yes more than Irish. Irish mean responses were higher than Americans on profiles D and E, and Irish answered yes more than Americans on the yes no question on profiles D and E. Profile A is the only occurrence outside of this trend, where Irish participants rated the profile higher than Americans, but Americans answered yes more than Irish participants on the yes or no answer.

Study Two: Discussion

The experiment in study two looked at whether homophily would affect the ratings of attractiveness for the experimental profiles across Irish and American participants. Hypothesis eight and nine expected that each culture would find their own cultures' experimental profile texts to be more attractive. While little research was found in online dating for homophily across personality, evidence had previously been found for increased preference for partners with similar demographic and life course choices. This research attempted to find support for homophily affecting choices in personality traits indicated by language.

The hypotheses were supported by the results of this study. Americans rated the more positive American profile as most attractive, and the Irish participants rated the positive Irish profile most attractive. Both nationalities rated the mixed Irish and American experimental profile second most attractive which indicates that a profile containing half of the culturally typical elements is more attractive than a positive profile with complete language markers from the other culture. Both cultures rated the other culture's positive profile third most attractive. This demonstrates that presenting a positive profile is more important than presenting a negative profile that fits the cultural language or personality. Interestingly both cultures rated the negative American profile as least attractive. This may indicate that homophily is slightly more important to Irish daters and they prefer even the negative profile from their own culture to the American one, or it may only indicate that the negative American profile is overall more unattractive than any others.

As the experimental profiles were designed not to differ completely in content, but instead in functional language, this suggests that participants possibly picked up on cues given off in the language used in the profiles in order to determine attractiveness ratings rather than in specific activities or interests of the experimental author. This is an area worthy of considerable further research.

Limitations of the Study

Study two was conducted with only 120 participants and five experimental profiles. This study would benefit from greater numbers and more experimental profiles showing different aspects of the typical cultural expressions. The participants were not asked to identify if they were single or in a relationship, and it would be interesting to determine if this would have an effect on ratings of attractiveness.

As this study created the experimental profiles to be of equal length despite Americans typically writing more, it would be interesting to repeat this study with the original length profiles and with the spelling and grammar errors in place in some of the profiles in order to assess their effect.

Future Research and Implications

This study was conducted using only Caucasian, heterosexual, male profiles, and Caucasian, heterosexual, female participants. It would be of benefit to extend this research to a larger cohort, and across genders and sexual persuasion.

This data if researched further, could possibly be used to create more accurate and successful matching systems for online dating sites. As more people turn to online dating as an avenue for meeting a partner, it could be important for these sites to improve their matching criteria beyond simple categorical information into more complex and evidence based areas such as personality and language. Homophily has previously been shown to affect choices across demographic and life choice categories (Fiore & Donath, 2005), but has not been shown in online dating across personality. If study two indeed indicates that language indicating personality is picked up as a cue in a profile text, and is attractive to those with similar personality characteristics, this is an element that could be used for more accurate profile matching. Matching could also be useful in employment and team situations.

General Discussion

In summary, differences were found between Irish and American online daters in the free text element of their profiles. Both cultures were found to be similar in neuroticism, Americans slightly higher in extraversion, higher in agreeableness and conscientiousness, and Irish daters were found to be higher in openness to experience, psychoticism and deception. Study two found that Irish people preferred positive Irish profiles, and Americans preferred positive American profiles, and this study suggested that it is possible that language cues indicating personality may be unconsciously or consciously picked up by readers of the profiles, and this may account for the ratings of attractiveness.

Other Factors Affecting Profile Attractiveness

Fiore et al. (2010) found that men who used more positive emotion words in online dating were more likely to be higher in general caution and attachment anxiety, and those who use more tentative language were higher in attachment anxiety and lower in general trust. In this study Irish daters scored higher in positive emotion words, and thus could be considered higher in general caution and attachment anxiety than American daters. However they also scored significantly lower in tentative language, and thus could be considered lower in attachment anxiety contradicting the first finding, and higher in general trust. As men higher in general caution have been rated as less attractive and contacted less often, Irish profiles should possibly have attracted an overall lower score in attractiveness than American profiles. However, as Irish profiles were considered more attractive by Irish raters, and the negative Irish profile was more attractive to both nationalities this appears not to be the case.

Implications

Personality trait matching through language could also be a useful tool for artificial intelligence, where analysis of communication from human sources could be used to improve avatar or computer responses. There has been research to show that interactive interfaces that match the user's personality are more user friendly and more liked (Mairesse & Walker, 2010), and there is potential with more research in this area to

modify the language of an interface to match the user in personality traits, making the interface more accepted and liked.

Through the online and offline world written text is freely available in many different forms through blogs, websites, historical texts, literature and many other avenues, and the potential for analysis is equally as great as the number of sources. It is also possible that changes in culture could be mapped by analysing documents from different moments in history through to contemporary culture, or cultural differences tracked through the process of colonies becoming independent from their coloniser, with the cultures evolving separately thereafter.

Conclusion

This research used language analysis to determine personality traits from variables in written text using the programme LIWC, and additionally using qualitative data analysis. The free text “About Me” element of 150 Irish and 150 American Caucasian, male, online daters’ profiles were analysed for differences in personality trait indicators, and the differences were compared across the two cultures. The results found that both nationalities were similar in neuroticism, that the Irish were higher in psychoticism, openness to experience and deception, and that Americans were higher in conscientiousness, agreeableness and slightly higher in extraversion. These results supported the hypotheses that differences would be found between the two cultures, that the Irish and Americans would be similar in neuroticism, that the Irish would be higher in psychoticism, and Americans higher in extraversion, agreeableness and conscientiousness. The results also provide validity for the method of analysis used in this study, where psychoticism has been found in previous research to have a negative relationship with agreeableness and conscientiousness (Avia et al., 1995; Draycott & Kline, 1995; Saggino, 2000), the results of this study were in line with the previous research.

Additionally, the concept of homophily, that people tend to be attracted to and bond with people like themselves, was investigated using culturally typical experimental profile texts. Typical, Irish and American, positive and negative texts were created along with one text that contained a positive mixture of both Irish and American language markers. This research determined that profiles were more successful within their own culture than outside of it, with Americans preferring positive American profiles, and Irish preferring positive Irish profiles.

Applications of this research include online dating matching, naturalistic personality testing, social network profile analysis, adaptive interface designs, and responsive language and interface for artificially intelligent systems.

References

- Avia, M. D., Sanz, J., Sánchez-Bernardos, M. L., Martínez-Arias, M. R., Silva, F., & Graña, J. L. (1995). The five-factor model-II. Relations of the NEO-PI with other personality variables. *Personality and Individual Differences, 19*, 81–97.
- Chung, C. K., & Pennebaker, J. W. (2008). Revealing dimensions of thinking in open-ended self-descriptions: An automated meaning extraction method for natural language. *Journal of Research in Personality, 42*, 96–132.
- Christiansen, M. H., Chater, N., & Reali, F. (2009). The biological and cultural foundations of language. *Communicative and Integrative Biology, 23*, 221–222.
- Draycott, S. G., & Klein, P. (1995). The big three or the big five – the EPQ-R vs the NEO-PI: A research note, replication and elaboration. *Personality and Individual Differences, 6*, 801–804.
- Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication, 11*, 415–441.
- Fiore, A. T., & Donath, J. S. (2005). Homophily in online dating: When do you like someone like yourself? *Computer-Human Interaction 2005*, 1371–1374.
- Fiore, A.T., Shaw Taylor, L., Mendelsohn, G.A., & Hearst, M.A. (2008). Assessing Attractiveness in Online Dating Profiles. *Computer-Human Interaction 2008*, 797. New York, USA: ACM Press.
- Fiore, A. T., Taylor, L. S., Zhong, X., Mendelsohn, G. A., & Cheshire, C. (2010). Who's right and who writes: People, profiles, contacts, and replies in online dating. *In proceedings of Hawaii International Conference on System Sciences, 43*, Persistent Conversation minitrack.
- Gibbs, J. L., Ellison, N. B., & Heino, R. D. (2006). Self-presentation in online personals: The role of anticipated future interaction, self-disclosure, and perceived success in Internet dating. *Communication Research, 33*(2), 1–26.
- Gill, A. (2003). *Personality and language: The projection and perception of personality in computer-mediated communication* (Unpublished doctoral dissertation). University of Edinburgh, Scotland.

- Gill, A., & Oberlander, J. (2002). Taking care of the linguistic features of extraversion. In *Proceedings of the 24th Annual Conference of the Cognitive Science Society*, pp. 363–368.
- Hitsch, G. J., Hortaçsu, A., & Ariely, D. (2010). What makes you click? Mate preferences in online dating. *Quantitative Marketing and Economics*, 8(4), 393-427. doi: 10.1007/s11129-010-9088-6
- Hofstede, G., & McCrae, R. R. (2004). Personality and culture revisited: Linking traits and dimensions of culture, *Cross-Cultural Research* 38(1), 52–88.
- IAC. (2009). Facts. Retrieved from <http://www.iac.com/Our-Businesses/Match.com>
- Jiang, Y., de Bruijn, O., & De Angeli, A. (2009). The perception of cultural differences in online self-presentation. *Lecture Notes in Computer Science*, 5726, 672–685.
- Kachru, B. B. (Ed.) (1992). *The other tongue: English across cultures*. University of Illinois Press, Urbana.
- Kirby, S., Dowman, M., & Griffiths, T. L. (2007). Innateness and culture in the evolution of language. *Proceedings of the National Academy of Sciences of the United States of America*. 104(12), 5241–5245.
- Lester, D. (2000). National differences in neuroticism and extraversion. *Personality and Individual Differences*, 28(1), 35–39.
- Lynn, R., & Martin, T. (1995). National differences for thirty-seven nations in extraversion, neuroticism, psychoticism and economic, demographic and other correlates. *Personality and Individual Differences*, 19, 403–406.
- Maass, A., Karasawa, M., Politi, F., & Suga, S. (2006). Do verbs and adjectives play different roles in different cultures? A crosslinguistic analysis of person representation. *Journal of Personality and Social Psychology*, 90, 734–750.
- Madden, M., & Lenhart, A. (2006). Online dating. *PEW internet & American life project*. Washington, D.C., USA. Retrieved from http://www.pewinternet.org/pdfs/PIP_Online_Dating.pdf
- Mairesse, F., & Walker, M. A. (2010). Towards personality-based user adaptation: Psychologically-informed stylistic language generation. *User Modeling and User-Adapted Interaction*, 20(3), 227–278.
- Mairesse, F., Walker, M. A., Mehl, M. R., & Moore, R. K. (2007). Using linguistic cues for the automatic recognition of personality in conversation and text. *Journal of Artificial Intelligence Research (JAIR)*, 30, 457–500.

- Mandelbaum, D. G., & Sapir, E. (1949). *Selected writings of Edward Sapir in language, culture and personality*. University of California Press, California, USA.
- McCrae, R. R., & Costa, P. T., Jr. (1999). A Five-Factor Theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 139–153). New York: Guilford.
- Newman, M. L., Pennebaker, J. W., Berry, D. S., & Richards, J. M. (2002). Lying words: predicting deception from linguistic styles. *Personality and Social Psychology Bulletin*, 29(5), 665–675.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytical cognition. *Psychological Review*, 108, 291–310.
- Norton, M., Frost, J., & Ariely, D. (2007). Less is more: The lure of ambiguity, or why familiarity breeds contempt. *Journal of Personality and Social Psychology*, 92, 97–105.
- Pennebaker, J. W., Chung, C. K., Ireland, M., Gonzales, A., & Booth, R. J. (2007). *The development and psychometric properties of LIWC2007*. Austin and Auckland. University Texas at Austin and University of Auckland.
- Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001). Linguistic inquiry and word count (LIWC): LIWC2001. Mahwah, N.J.: Erlbaum Publishers.
- Pennebaker J. W., & King, L. A. (1999). Linguistic styles: language use as an individual difference. *Journal of Personality and Social Psychology*, 77, 1296–1312.
- Rosen, L., Cheever, N., Cummings, C., & Felt, J. (2008). The impact of emotionality and self-disclosure on online dating versus traditional dating. *Computers in Human Behavior*, 24(5), 2124–2157.
- Rosenfeld, M. J. (2010). Meeting online: The rise of the internet as a social intermediary. *Paper presented at the annual meeting of the American Sociological Association Annual Meeting*. Retrieved from http://www.allacademic.com/meta/p409508_index.html
- Rude, S., Gortner, E. M., & Pennebaker, J. (2004). Language use of depressed and depression vulnerable college students. *Cognition & Emotion*, 18, 1121–1133.
- Saggino, A. (2000). The big three or the big five? A replication study. *Personality and Individual Differences*, 28, 879–886.
- Seidel, J. V. (1998). Qualitative data analysis. Qualis Research. Available at www.qualisresearch.com

- Tauczik, Y., & Pennebaker, J. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology, 29*(1), 24–54.
- Tennyson, A. (1850). In Memoriam A.H.H. Section 5. In R. W. Hill, Jr. (Ed.), *Tennyson's Poetry: Authoritative Texts, Juvenilia and Early Responses, Criticism*. New York: W.W. Norton & Company, Inc., 1970.
- Toma, C. L. (2010). Perceptions of trustworthiness online: The role of visual and textual information. In *Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work (CSCW '10)*, pp. 13–22. New York: ACM Press.
- Toma, C. L., & Hancock, J. T. (2010). Reading between the lines: linguistic cues to deception in online dating profiles. In *Proceedings of the 2010 ACM conference on Computer supported cooperative work (CSCW '10)*. ACM, New York, NY, USA, 5–8. <http://doi.acm.org/10.1145/1718918.1718921>
- Toma, C., Hancock, J., & Ellison, N. (2008). Separating fact from fiction: An examination of deceptive self presentation in online dating profiles. *Personality and Social Psychology Bulletin, 34*, 1023–1036.
- Van Hemert, D., van De Vijver, F., Poortinga, Y., & Georgas, J. (2002). Structural and functional equivalence of the Eysenck Personality Questionnaire within and between countries. *Personality and Individual Differences, 33*(8), 1229–1249.
- Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (3rd ed., pp. 529–563). Thousand Oaks, CA: Sage.
- Whitty, M. T. (2008). Revealing the 'real' me, searching for the 'actual' you: Presentations of self on an internet dating site. *Computers in Human Behavior, 24*, 1707–1723. doi: 10.1016/j.chb.2007.07.002.

Appendix A: Chung and Pennebaker (2008) Custom Dictionaries

Factor 3: Evaluation		Factor 4: Sociability		Factor 5: Relationships	
Weight	.36	Shy	.39	Love	.47
Fat	.35	Outgoing	.36	Mom	.42
Lose	.31	Friend	.35	Family	.38
Pretty	.31	Quiet	.33	Daughter	.36
Bad	.30	Open	.32	Sister	.35
Boyfriend	.29	Meet	.31	Heart	.35
Ugly	.29	Talk	.28	Marry	.33
Know	.28	Reserved	.28	Dad	.31
Feel	.28	Hang	.28	Child	.31
Guy	.27	Close	.27	Wife	.29
Good	.24	Comfort	.27	Wonderful	.28
Want	.24	Tend	.26	Woman	.27
Guess	.25	Think	.26	God	.27
Like	.25	Feel	.26	Parents	.27
Smart	.25	Judge	.25	Raise	.26
Stupid	.25	Group	.24	Brother	.25
Think	.25	Emotion	.23	Husband	.24
Stop	.24	Perceive	.23	Care	.24
Nice	.24	Fun	.22	Boyfriend	.24
Gain	.24	Tell	.22	Girl	.23
Girl	.24	Trust	.22	Life	.23
Class	.23	Opinion	.21	Support	.23
Assignment	.22	Situation	.21	Strong	.22
Problem	.22	Party	.21	Taught	.20
Body	.22	Like	.21	Hurt	.20
Worse	.21	Care	.21		
Horrible	.21	Express	.20		
Need	.21	Easy	.20		
Attractive	.20	Different	.20		
Kind	.20	Conversation	.20		
Lie	.20	Avoid	.20		
Means	.20	Loud	.20		
Weird	.20				
Hard	.20				
Fun	.20				
Tell	.20				

Appendix B: LIWC 2007 Dictionary

Table 1. LIWC2007 Output Variable Information

Category	Abbrev	Examples	Words in category	Validity (judges)	Alpha: Binary/raw
Linguistic Processes					
Word count	wc				
words/sentence	wps				
Dictionary words	dic				
Words>6 letters	sixltr				
Total function words	funct		464		.97/.40
Total pronouns	pronoun	I, them, itself	116		.91/.38
Personal pronouns	ppron	I, them, her	70		.88/.20
1st pers singular	i	I, me, mine	12	.52	.62/.44
1st pers plural	we	We, us, our	12		.66/.47
2nd person	you	You, your, thou	20		.73/.34
3rd pers singular	shehe	She, her, him	17		.75/.52
3rd pers plural	they	They, their, they'd	10		.50/.36
Impersonal pronouns	ipron	It, it's, those	46		.78/.46
Articles	article	A, an, the	3		.14/.14
[Common verbs] ^a	verb	Walk, went, see	383		.97/.42
Auxiliary verbs	auxverb	Am, will, have	144		.91/.23
Past tense ^a	past	Went, ran, had	145	.79	.94/.75
Present tense ^a	present	Is, does, hear	169		.91/.74
Future tense ^a	future	Will, gonna	48		.75/.02
Adverbs	adverb	Very, really, quickly	69		.84/.48
Prepositions	prep	To, with, above	60		.88/.35
Conjunctions	conj	And, but, whereas	28		.70/.21
Negations	negate	No, not, never	57		.80/.28
Quantifiers	quant	Few, many, much	89		.88/.12
Numbers	number	Second, thousand	34		.87/.61
Swear words	swear	Damn, piss, fuck	53		.65/.48
Psychological Processes					
Social processes ^b	social	Mate, talk, they, child	455		.97/.59
Family	family	Daughter, husband, aunt	64	.87	.81/.65
Friends	friend	Buddy, friend, neighbor	37	.70	.53/.12
Humans	human	Adult, baby, boy	61		.86/.26
Affective processes	affect	Happy, cried, abandon	915		.97/.36
Positive emotion	posemo	Love, nice, sweet	406	.41	.97/.40
Negative emotion	negemo	Hurt, ugly, nasty	499	.31	.97/.61
Anxiety	anx	Worried, fearful, nervous	91	.38	.89/.33
Anger	anger	Hate, kill, annoyed	184	.22	.92/.55
Sadness	sad	Crying, grief, sad	101	.07	.91/.45
Cognitive processes	cogmech	cause, know, ought	730		.97/.37
Insight	insight	think, know, consider	195		.94/.51
Causation	cause	because, effect, hence	108	.44	.88/.26
Discrepancy	discrep	should, would, could	76	.21	.80/.28
Tentative	tentat	maybe, perhaps, guess	155		.87/.13
Certainty	certain	always, never	83		.85/.29
Inhibition	inhib	block, constrain, stop	111		.91/.20
Inclusive	incl	And, with, include	18		.66/.32

Appendix B: LIWC 2007 Dictionary continued

Category	Abbrev	Examples	Words in category	Validity (judges)	Alpha: Binary/raw
Exclusive	excl	But, without, exclude	17		.67/.47
Perceptual processes ^c	percept	Observing, heard, feeling	273		.96/.43
See	see	View, saw, seen	72		.90/.43
Hear	hear	Listen, hearing	51		.89/.37
Feel	feel	Feels, touch	75		.88/.26
Biological processes	bio	Eat, blood, pain	567	.53	.95/.53
Body	body	Cheek, hands, spit	180		.93/.45
Health	health	Clinic, flu, pill	236		.85/.38
Sexual	sexual	Horny, love, incest	96		.69/.34
Ingestion	ingest	Dish, eat, pizza	111		.86/.68
Relativity	relativ	Area, bend, exit, stop	638		.98/.51
Motion	motion	Arrive, car, go	168		.96/.41
Space	space	Down, in, thin	220		.96/.44
Time	time	End, until, season	239		.94/.58
Personal Concerns					
Work	work	Job, majors, xerox	327		.91/.69
Achievement	achieve	Earn, hero, win	186		.93/.37
Leisure	leisure	Cook, chat, movie	229		.88/.50
		Apartment, kitchen,	93		.81/.57
Home	home	family			
Money	money	Audit, cash, owe	173		.90/.53
Religion	relig	Altar, church, mosque	159		.91/.53
Death	death	Bury, coffin, kill	62		.86/.40
Spoken categories					
Assent	assent	Agree, OK, yes	30		.59/.41
Nonfluencies	nonflu	Er, hm, umm	8		.28/.23
Fillers	filler	Blah, I mean, you know	9		.63/.18

“Words in category” refers to the number of different dictionary words that make up the variable category; “Validity judges” reflect the simple correlations between judges’ ratings of the category with the LIWC variable (from Pennebaker & Francis, 1996). “Alphas” refer to the Cronbach alphas for the internal reliability of the specific words within each category. The binary alphas are computed on the occurrence/non-occurrence of each dictionary word whereas the raw or uncorrected alphas are based on the percentage of use of each of the category words within the texts. All alphas were computed on a sample of 2800 randomly selected text files from our language corpus.

The LIWC dictionary generally arranges categories hierarchically. For example, all pronouns are included in the overarching category of function words. The category of pronouns is the sum of personal and impersonal pronouns. There are some exceptions to the hierarchy rules:

^a Common verbs are not included in the function word category. Similarly, common verbs (as opposed to auxiliary verbs) that are tagged by verb tense are included in the past, present, and future tense categories but not in the overall function word categories.

^b Social processes include a large group of words that denote social processes, including all non-first-person-singular personal pronouns as well as verbs that suggest human interaction (talking, sharing).

^c Perceptual processes include the entire dictionary of the Qualia category (which is a separate dictionary), which includes multiple sensory and perceptual dimensions associated with the five senses.

Appendix C: LIWC Preparation of Written Text Guidelines

Preparing Written Text For LIWC2007 Analysis

1. Cleaning the text files.

Each file to be analyzed should be examined and adjusted for misspellings and inappropriate word use (e.g., “its” rather than “it’s”).

It is always wise to run all files through standard spell_check programs.

Because LIWC2007 converts all text files to lower case before processing them, grammar, capitalization, and sentence structure do not need to be corrected.

2. Typing Conventions: Writing and Interview Samples

In making corrections or cleaning text files, keep in mind what your goals are in analyzing the data.

LIWC2007 does not discriminate between upper_ and lower_case letters.

It can only count words that are in its dictionaries. Misspellings, colloquialisms, foreign words, and abbreviations are usually not in the dictionaries.

The following items should be checked before any files are analyzed:

1. Spelling, abbreviations, contractions.

Correct all spelling errors. It is best to use standard United States spelling (although the standard default dictionary also contains most British English spellings as well). Meaningful abbreviations should be spelled out. “Jan” should be January. More obscure abbreviations or acronyms, such as “AT&T”, can remain as such unless you have reason to want the term to be expanded and counted as four separate words: “American Telephone and Telegraph”.

Common verb contractions are in the dictionary and do not need to be changed. These include: don’t, won’t, isn’t, shouldn’t, can’t, couldn’t, I’m, I’ll, I’d, we’re, we’d, you’re, he’s, it’s, etc. Most others will be simply counted as possessive nouns: “Sally’s shoes” will be counted the same way as “Sally’s going to the store.” In the second case, change “Sally’s” to “Sally is.”

2. End of sentence markers and hyphens.

The Words per sentence (WPS) category is based on the number of times that end of_ sentence markers are detected. These include all periods (.), question marks, and exclamation points. One potential problem is that common abbreviations (such as “Dr.”, “Ms.”, “U.S.A.”, “D.O.A.”) will be counted as multiple sentences unless the periods are removed. Be careful that the removal of the periods doesn’t make a new word. For example, the United States, or “U.S.”, becomes “US” (1st person plural pronoun) when the periods are removed. In this case, change it to “USA”.

Time markers (e.g., 6 a.m. or 7:30 p.m.) can also be a problem. Because “a.m.” without the periods is a verb, “am”, change time to 6am or 7:30pm.

When words start or end with hyphens, they are read by LIWC2007 as part of the word. LIWC2007, for example, lists “self_esteem” as a meaningful word in one of its dictionaries. In cases of hyphenated phrases such as “this_or_that” LIWC2007 will search for a single word and won’t find it. To correct, change “this_or_that” to “this _ or _ that”.

Appendix C: LIWC Preparation of Written Text Guidelines continued

Watch out for hyphens between phrases, as in “we went to the store_I don’t know why.” LIWC2007 will think that “store_I” is one word. Insert blanks on either side of the hyphens so that both words will be counted.

3. Other common problems:

Typed entry Change to:

w/ with

b/ between

& and

‘cause because

gotta got to

lotta lot of

and/or and _ or

‘an or ‘n and

mos months

sec second

@ at

1. Nonfluencies.

Hm, hmm, uh, uhh, uhm, um, umm, and er are part of the nonfluency dictionary. Other forms will not be caught (e.g., ooooh should be changed to um if used as a nonfluency).

Uh_uh and uh_huh should be changed to “no” and “yes”. Huh? should be changed to “what?” Or, if you are very, very proper, to “Excuse me madam, I didn’t quite catch what you said.”

2. Fillers.

Everyday speech is littered with “meaningless” fillers. Unfortunately, these fillers use some of the most important words in our dictionaries. Watch out for the following:

You know. As in, “we went, you know, to the store and, you know, bought gum.”

Change to one word: youknow. “We went, youknow, to the store...”

I mean. As in, “we went, I mean, to the store...” Change to one word: Imean.

I don’t know. As in, “we went, I don’t know, to the store...” Change to: Idontknow.

Like. “We went, like, to like the store and like we like bought like gum.”

Be careful

with like because sometimes it is used appropriately. As a nonfluency, change it to: **rrlike**. Note that all words starting with “rr” will be coded as a nonfluency.

Appendix D: Profile Coding and Samples

PARTIC NO	AGE	IRE1 USA2	PROFILE CONTENT	Honesty	Pos Personal	Sport /Fit	Work	No games	Family Friends	COMMENT 2	COMMENT 1
1	33	1	Im honest, sometimes quiet and very loyal. Im looking for a lady. Never done this before and like most hate this bit...I like good music, festivals, good people and crazy times(not too crazy!!).	1	1	2	2	2	2		Negative towards writing about self. Belief that others feel the same way
2	38	1	A happy chappy!!! Quite spiritual, at the moment learning meditation and reiki healing. Like to keep fit with horseriding, gym, staying active. But still like a few pints, good food, wine and company.	2	2	1	2	2	2	keep fit, active	alcohol
3	51	1	Well I have a good sense of humour and life life to the fullest, but there is also some depth to my character. I get inspiration from simple things such as music and a sunset. I am pretty ambitious and driven person especially around my work. My friends would describe me as loyal helpful and as a genuine nice guy. Looking for someone to be a friend and lover. My interests include music and travel	2	1	2	1	2	2	work	humor, deep think, driven/ambition, loyal, nice guy, genuine, travel, live life,
4	26	1	If you dropped round for a look dont be rude...say hello...I'm a young professional whos a lover not a fighter. Intelligent, well educated, well travelled, good fun, kind, handsome, sporty, good body.	2	1	1	1	2	2	work, good body, sporty	intelligent, education, travel, fun, kind, handsome
5	36	1	Crap picture I know, crap cameraphone..I am going to be honest.. I hate these questions on describing myself.. lets just say im super great and everybody is super great..sweet.. Also, prepared to lie on how we met..(joke)	1	2	2	2	2	2		negative about profile, negative toward writing about self, joking, sarcasm
6	42	1	Sincere, friendly, humorous, honest. I have been told that I'm interesting company!	1	1	2	2	2	2		sincere, friendly, humor, honest, been told that
7	45	1	Outgoing fun guy. Maturing late in life and now enjoying the better things that life offers. Very appreciative person.	2	2	2	2	2	2		fun
8	36	1	I enjoy getting fit and then getting unfit and repeating the process. I like the outdoors, lucky enough to have been skiing a few times. I listen to all music, play some guitar and piano but by ear. My 2 dogs are my only house mates, they have their own flat off the house, we call it the kennel!! I like to taste most what life has to offer.Anything else you want to know just ask..PS1 can't help but feel the fact that I'm divorced can be a turn off to alot of girls, however, I got married young at 26 and it didn't last too long, it was an amicable split up and we remained friends and moved on. It's a pity we can't turn back the clock but that's life.<	2	2	1	2	2	2	get fit	
9	35	1	hate this, not sure if many like it..... i'm outgoing, active, love socialising, travelling, the great outdoors, the great indoors, being creative, music and all the rest	2	2	1	2	2	2	active	outgoing, travel, creative,social, Negative towards writing about self. Belief that others feel the same way,
10	36	1	Fun loving, deep thinking, gregarious and social publicly, intimate and sharing privately. Dedicated and focused when necessary; but for me, relaxing and enjoying the simple things in life is what makes the struggle worthwhile. Quite poor at punctuation and writing descriptions of myself!!! I have loads of photos in my private folder, send me a friend request and I'll show you mine if you show me yours ;)	2	2	2	2	2	2		Negative towards writing about self. Fun, social, deep think, simple things
149	40	1	Kind, gentle, caring, funny, quirky, Love life & having fun	2	1	2	2	2	2		kind, care, humor, love life, fun
150	42	1	Fun loving and enthusiastic about most things in life.	2	1	2	2	2	2		fun
151	54	2	Hi, I am a retired FDNY Lieutenant after 20 years on the job,miss the camaraderie. My passion right now is painting .I am currently taking classes in Manhattan for portait and figure painting in oil. I like to jog and bike to stay in shape, also play softball. I'll listen to most types of music, my favorites are rock and jazz. I like the arts,cooking, outdoor activities and traveling. Also I would like to learn to dance. I am looking to spent time with someone to share these interest and their interest, to grow and be happy. Sent me a message if you like my profile, Cheers.	2	2	1	2	2	2	play sport, shape,	work, varied int, stay in shape, travel
152	32	2	well let me see i am me i like campin fishin huntin i am down to earth been divorced for over two years lookin for the right one. hopefully she out there somewhere. im easy to get along with want to know more just ask i reply to all interests	2	2	2	2	2	2		lists, down to earth
153	27	2	A little about me... (always seems to be the toughest part of these sites) I am currently starting my own business, a sign company, and also working for a friend as a sales person doing sports uniforms... Currently i still play baseball and softball, along with being in the gym 5-6 nights a week... I have become a gym rat knowing you only have one body and you should take good care of it... Another hobby of mine is drag racing, and anything that gets the adrenaline pumping... some may call me an adrenaline junky... I want to do a few things in the next year or so, including sky diving, and some traveling... I haven't done much, but want to change that... I am very sarcastic, and outspoken... some may like it and some may not, but it is who i am... I am always joking around and having a good time... i am the one who will be making everyone laugh and keeping smiles on everyone's face (or at least trying to) what i am looking for - someone not into games, i don't handle that well... Someone who has an idea what they are doing with them-self and their future... Not into the girls who do drugs or drink 7 nights a week... I don't mind doing the bar/club thing, but not on a regular basis anymore... Someone down to earth and not trying to live over the top!!!	2	2	1	1	1	2	play sport, gym,	neg about writing about self, work for self, worktravel, stay in shape, adrenalialine, like/hate, outspoken, humor, joking around, no games, down to earth
154	47	2	Hi I am looking for someone special. I want to spend lots of time with you. Best friends always honest give and take romance honesty communication and spend our lives pleasing each other. lets get started!	1	2	2	2	2	2		romance, honesty

Appendix D: Profile Coding and Samples continued

PARTIC NO	AGE	IRE1 USA2	PROFILE CONTENT	Honesty	Pos Personal	Sport /Fit	Work	No games	Family Friends	COMMENT 2	COMMENT 1
155	25	2	Baseball, baseball, and baseball Football and basketball bars and lounges Movies and video games all kinds of music METS, JETS, AND KNICKS Pool and darts parks and beaches Ball Games and BBQS BMW's and Pick Ups oh and baseball, baseball,baseball I am a very easy going person, down for anything, and enjoys the simple stuff. I like trying new things,going new places, and just having a good time.I love the outdoors ,and finding things to do outside. I do also enjoy an evening inside with a good movie.	2	2	2	2	2	2	like sport,	heavy sport, lists, easy going, simple stuff
156	25	2	Hobbies -workin out being the country boy i am kinda stuff,tryin to find a DECENT girl thats actually has morals,some smarts at least,and a heart cuz through my encounters ive yet to find but one im doubting if theres any left out there,Music - country,rock/classic rock and some other stuff , wanna know anything just ask	2	2	1	2	1	2	work out,	neg about girls, list
157	35	2	Well I have run my own company for nearly 10 years. I have a 9yr. old son who is my whole world. I am looking for someone who is most of all honest and respects other peoples feelings. A lot of friends tell me i have a huge heart and pretty much would do anything for anybody. I enjoy the outdoors and try and stay active as possible. Something that I really want is to find a woman that is goal oriented and is constantly looking to improve her life. She would also need to have the drive to work for the things she wants. Most of all i am looking for friendship. Someone that can hang out and have a good time. Friendship is very important to me because i believe that's where it all starts. Although i enjoy going out there is nothing better than relaxing and watching a good movie. I enjoy boating and fishing. I also think there is nothing better then good company and a great dinner. Well if any of this catch's your interest feel free to contact me. If there's anything else you want to know please just ask. Good luck in your search.	1	1	1	1	2	1	active	honest, work self, work
158	50	2	(The pic with my hand in front of my face is me just seeing what i would look like with out the Moustache that all)Tall in shape guy with shaved head. I'm down to earth(Kid at Heart)and likes to have fun from anything from keeping in shape,The warm weather,I love to Cook...Grow my own Veg and Flowers....Harleys ...Nothing like Riding ...D) sometimes For fun(I play music from Rock to Dance Club Type) I love to shopping(Yes i really love to shop),Looking for a female that KEEPS IN SHAPE .She Likes to have fun (even the simple things)Like racing me to the car after we been shopping,Knows what she looking for in life and Can SAY IT and doesn't plays games,I wrote dating, but if i meet the right one,I would have no problem going long term .So What are you waiting for...Take a chance and email me .One of my Fav saying is.....Remember A Friend Is Someone Who Walks In When The World Has Walked Out !!!!!Please do not add yourself to my fav list if your not going to write...So after reading all this you don't think were a match ...Then Hire My Company for any repairs you may have...ac/heating/Plumbing/Electrical And Most other repairs..	2	2	1	1	2	2	in shape,	down to earth, in shape, fun, work self, work, cook
159	50	2	I'm here looking for my partner in life, my future better half, for someone to grow old together, enjoying each other's company in whatever we do. I'm a good listener, I'm honest, very patient (maybe too much). I am working on getting my divorce if the separated thing scares you. I did not leave my wife, she left me for another guy. I don't quit a relationship unless there is no hope (no hope on this one I really tried). She is happy and I'm trying to be happy. I don't believe in being involved with more than one woman at a time so if I'm with you rest assure there is no other. Tell you more if you ask me. Love my job (been working at the same location since 1978). Love my children, they are still living with me but are over 18. Love to take walks. Love the beaches and parks. Love my dog (really belongs to the kids). Love music from the 80's and 90's, some country and some metal. Very good with computer hardware and software (a hobby of mine).	1	2	1	1	2	1	walk	listener, honest, lists, work
160	52	2	I am broad-based and like to think I'm open-minded. I do have my opinions and preferences and would hope that you have some strong convictions and passions too. We may not have to agree on everything. My goals include visiting the remaining Seven New Wonders of the World that I have not seen and to keep learning and growing every day. My hobbies include athletics (golf, hockey, tennis), pool, travel, movies, and taking in artistic and cultural events. I enjoy all kinds of music, from classical to classic rock. Lopaka	2	2	1	2	2	2	play sport	outspoken, travel, lists

Appendix E: Experimental Profile Texts

Irish Profile Texts

Profile A: Positive Irish

Trustworthy, easygoing, loyal, a really good listener, friendly and humorous. I like getting out and about, socialising and chatting with people. Love playing sports. Also like going to comedy shows or to the theatre if there is something enjoyable on. Busy at times but like to relax also. Love to laugh and not take life too seriously at times :) I guess I can be a bit shy sometimes but once you get to know me I'm fun, always up for a laugh.

Profile B: Positive USA

I'm a hard working guy who is respectful and caring. I enjoy museums and plays as much as I enjoy playing football and outdoor activities. I work out and like to look good but enjoy being casual/scruffy at times. If you are looking for a guy who opens/holds doors for you, is family oriented, and will value you for who you are then I'm your man. I have a few favourite bands but my taste is all over the place and I'm always looking for something new. I love to hike, camp, and kayak. I love to cook, find it relaxing and creative. I enjoy taking photos and still use a film camera. I have a desire to travel too.

Profile C: Positive Mix

I'm hard working and my career is important to me – but I'm looking forward to meeting someone so I can take time out and relax and have fun. I'm easy-going, honest, genuine, have a good (sarcastic) sense of humour, like to be outdoors and active, play sports, cook for friends, and go to films. Some days there's nothing better than to relax at home. The music I

American Profile Texts

Profile A: Positive Irish

Trustworthy, easygoing, loyal, a really good listener, friendly and humorous. I like getting out and about, socializing and chatting with people. Love playing sports. Also like going to comedy shows or to the theatre if there is something enjoyable on. Busy at times but like to relax also. Love to laugh and not take life too seriously at time :) I guess I can be a bit shy sometimes but once you get to know me I'm fun, always up for a laugh.

Profile B: Positive USA

I'm a hard working guy who is respectful and caring. I enjoy museums and plays as much as I enjoy playing football and outdoor activities. I work out and like to look good but enjoy being casual/scruffy at times. If you are looking for a guy who opens/holds doors for you, is family oriented, and will value you for who you are then I'm your man. I have a few favorite bands but my taste is all over the place and I'm always looking for something new. I love to hike, camp, and kayak. I love to cook, find it relaxing and creative. I enjoy taking photos and still use a film camera. I have a desire to travel too.

Profile C: Positive Mix

I'm hard working and my career is important to me – but I'm looking forward to meeting someone so I can take time out and relax and have fun. I'm easy-going, honest, genuine, have a good (sarcastic) sense of humor, like to be outdoors and active, play sports, cook for friends, and go to movies. Some days there's nothing better than

Irish Profile Texts

like is a bit of everything – rock, R&B, hiphop, pop, soul and indie. I like to go travelling and try new things. I'm an old fashioned romantic too :)

Profile D: Negative Irish

Hate this part, not sure if many guys like it! I'm outgoing, nice, genuine, loyal, honest and sometimes deep-thinking. I would like to think of myself as someone that enjoys life to the full. Friends would say I'm funny and people tend to smile and laugh when they're in my company! Play golf and football to keep fit and don't like to sit in front of the TV too much. Love socialising, enjoy the great outdoors, the great indoors, love being creative, music and all the rest. I love to travel and have visited a variety of different countries.

Profile E: Negative USA

I love listening to music and going to art museums. I'm a writer and I love to sing!! Goals/Aspirations - To expand my business and to live a very comfortable life! I have expensive taste! What makes me unique? I believe that you should never go anywhere without a gift. Can't go wrong with chocolate!! I'm usually in a good mood and go out of my way to give people a hand! I love to cook for my family and friends, and being outdoors and working out. I like Rock, Pop, Soul, R&B and Classical - like fun old school! No game players please!

American Profile Texts

to relax at home. The music I like is a bit of everything – rock, R&B, hiphop, pop, soul and indie. I like to go travelling and try new things. I'm an old fashioned romantic too :)

Profile D: Negative Irish

Hate this part, not sure if many guys like it! I'm outgoing, nice, genuine, loyal, honest and sometimes deep-thinking. I would like to think of myself someone that enjoys life to the full. Friends would say I'm funny and people tend to smile and laugh when they're in my company! Play golf and football to keep fit and don't like to sit in front of the TV too much. Love socializing, enjoy the great outdoors, the great indoors, love being creative, music and all the rest. I love to travel and have visited a variety of different countries.

Profile E: Negative USA

I love listening to music and going to art museums. I'm a writer and I love to sing!! Goals/Aspirations - To expand my business and to live a very comfortable life! I have expensive taste! What makes me unique? I believe that you should never go anywhere without a gift. Can't go wrong with chocolate!! I'm usually in a good mood and go out of my way to give people a hand! I love to cook for my family and friends, and being outdoors and working out. I like Rock, Pop, Soul, R&B and Classical - like fun old school! No game players please!

Appendix F: Online Experiment

SELF-PRESENTATION IN ONLINE DATING



1. Participant Consent

11%

This study will assess how people present themselves in the text component of their online dating profiles. It is being carried out by Nicola Fox Hamilton of Dun Laoghaire Institute of Art, Design and Technology, Ireland (www.iadt.ie).

If you have any questions please don't hesitate to contact the author at NicolaFox@gmail.com.

You should be female, of straight sexual orientation, and born in the United States to participate in this survey.

This online study takes approximately 10 minutes to complete.

Take your time. Please don't rush through the questions. Choose a time and place where you won't be disturbed or interrupted.

There are no right or wrong answers. The best answer to choose is the one that you most identify with.

Answer honestly. As much as possible, avoid the temptation to choose answers simply because they sound most desirable.

This survey is voluntary and you are free to skip a question or leave the survey at any point if you wish.

Participation in this study will not involve any known risks and data gathered in the study will be anonymous, confidential and for research purposes only. The findings of the research may be published in the form of journal articles and conference proceedings, but your individual data will not be identifiable in the published accounts. You are free to withdraw from the study at any time.

If you are 18 or over, understand the statements above and freely consent to participate in this study then click on the "I Agree" button to begin the study.

*** 1. Are you over 18 years of age and do you agree to participate in this study?**

I agree

SELF-PRESENTATION IN ONLINE DATING



2. Introduction to the study

22%

In this study you will first be asked some basic demographic information to make sure that you are eligible. You should be female, of straight sexual orientation and Irish.

On the following pages you will be asked to read some online dating profile texts. These are composed of the descriptive text that a person writes about themselves on a dating profile. They are all written by men.

Please read each profile carefully - you will be asked to rate these profiles on a scale of how attractive you find them.

You will then be asked if you would respond to communication from the author of each profile on a dating site.

Answer honestly. As much as possible, avoid the temptation to choose answers simply because they sound most desirable.

This survey should only take approximately ten minutes.

Appendix F: Online Experiment continued

SELF-PRESENTATION IN ONLINE DATING



3. Demographic Information

33%

Please answer the following four demographic questions. Your information is completely confidential.

- 1. Please enter your age**
Age
- 2. Are you female?**
Yes
No
- 3. Were you born in Ireland?**
Yes
No
- 4. Are you of straight sexual orientation?**
Yes
No

SELF-PRESENTATION IN ONLINE DATING



4. Dating Profile A

44%

Please read each of the following five "about me" online dating profile selections carefully. You will be asked to indicate how attractive you find the author of each profile.

After reading each of the profiles please rate the authors on a scale from unattractive to attractive.

You will also be asked if you would respond to a communication with the author of the profile on a dating site.

Answer honestly. As much as possible, avoid the temptation to choose answers simply because they sound most desirable.

- 1. PROFILE A:**
Trustworthy, easygoing, loyal, a really good listener, friendly and humorous. I like getting out and about, socialising and chatting with people. Love playing sports. Also like going to comedy shows or to the theatre if there is something enjoyable on. Busy at times but like to relax also. Love to laugh and not take life too seriously at times :) I guess I can be a bit shy sometimes but once you get to know me I'm fun, always up for a laugh.

Unattractive Somewhat unattractive Neither attractive or unattractive Somewhat attractive Attractive

How attractive do you find the author of this profile?

- 2. Would you respond to a communication from the author of this profile on a dating site?**
Yes
No

Appendix F: Online Experiment continued

SELF-PRESENTATION IN ONLINE DATING



5. Dating Profile B

56%

Please rate the attractiveness of the profile text using the scale.
Please indicate whether or not you would respond to communication from the author of the text.

1. PROFILE B:

I'm a hard working guy who is respectful and caring. I enjoy museums and plays as much as I enjoy playing football and outdoor activities. I work out and like to look good but enjoy being casual/scruffy at times. If you are looking for a guy who opens/holds doors for you, is family oriented, and will value you for who you are then I'm your man. I have a few favourite bands but my taste is all over the place and I'm always looking for something new. I love to hike, camp, and kayak. I love to cook, find it relaxing and creative. I enjoy taking photos and still use a film camera. I have a desire to travel too.

Unattractive Somewhat unattractive Neither attractive or unattractive Somewhat attractive Attractive

How attractive do you find the author of this profile?

2. Would you respond to a communication from the author of this profile on a dating site?

Yes
No

SELF-PRESENTATION IN ONLINE DATING



6. Dating Profile C

67%

Please rate the attractiveness of the profile text using the scale.
Please indicate whether or not you would respond to communication from the author of the text.

1. PROFILE C:

I'm hard working and my career is important to me – but I'm looking forward to meeting someone so I can take time out and relax and have fun. I'm easy-going, honest, genuine, have a good (sarcastic) sense of humour, like to be outdoors and active, play sports, cook for friends, and go to films. Some days there's nothing better than to relax at home. The music I like is a bit of everything – rock, R&B, hiphop, pop, soul and indie. I like to go travelling and try new things. I'm an old fashioned romantic too :)

Unattractive Somewhat unattractive Neither attractive or unattractive Somewhat attractive Attractive

How attractive do you find the author of this profile?

2. Would you respond to a communication from the author of this profile on a dating site?

Yes
No

Appendix F: Online Experiment continued

SELF-PRESENTATION IN ONLINE DATING



7. Dating Profile D

78%

Please rate the attractiveness of the profile text using the scale.
Please indicate whether or not you would respond to communication from the author of the text.

1. PROFILE D:

Hate this part, not sure if many guys like it! I'm outgoing, nice, genuine, loyal, honest and sometimes deep-thinking. I would like to think of myself as someone that enjoys life to the full. Friends would say I'm funny and people tend to smile and laugh when they're in my company! Play golf and football to keep fit and don't like to sit in front of the TV too much. Love socialising, enjoy the great outdoors, the great indoors, love being creative, music and all the rest. I love to travel and have visited a variety of different countries.

Unattractive Somewhat unattractive Neither attractive or unattractive Somewhat attractive Attractive

How attractive do you find the author of this profile?

2. Would you respond to a communication from the author of this profile on a dating site?

Yes
No

SELF-PRESENTATION IN ONLINE DATING



8. Dating Profile E

89%

Please rate the attractiveness of the profile text using the scale.
Please indicate whether or not you would respond to communication from the author of the text.

1. PROFILE E:

I love listening to music and going to art museums. I'm a writer and I love to sing!! Goals/Aspirations - To expand my business and to live a very comfortable life! I have expensive taste! What makes me unique? I believe that you should never go anywhere without a gift. Can't go wrong with chocolate!! I'm usually in a good mood and go out of my way to give people a hand! I love to cook for my family and friends, and being outdoors and working out. I like Rock, Pop, Soul, R&B and Classical - like fun old school! No game players please!

Unattractive Somewhat unattractive Neither attractive or unattractive Somewhat attractive Attractive

How attractive do you find the author of this profile?

2. Would you respond to a communication from the author of this profile on a dating site?

Yes
No

Appendix F: Online Experiment continued

SELF-PRESENTATION IN ONLINE DATING



9. You're finished! Thank you very much for taking part.

100%

The study in which you just participated was designed to investigate the differences in how Irish and American people present themselves in writing in their online dating profiles. If you have questions about this study, or you wish to have your data removed from the study at any time, please contact Nicola Fox, at IADT at the following e-mail address: NicolaFox@gmail.com

Thank you sincerely for contributing and be assured that your data is confidential and anonymous, and if published the data will not be in any way identifiable as yours. Your contribution is very useful for investigating how people present themselves online.

1. If you would like to receive the results of this research when it is completed, please enter your email address here.