Giuseppe Riva, Brenda K. Wiederhold, Pietro Cipresso (Eds.)
The Psychology of Social Networking
Identity and Relationships in Online Communities

Giuseppe Riva, Brenda K. Wiederhold,
Pietro Cipresso (Eds.)

The Psychology of Social Networking:

Identity and Relationships in Online Communities

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Language Editor: Matthew Coleshill

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Contents

List of contributing authors —— XIII

Giuseppe Riva, Brenda K. Wiederhold, Pietro Cipresso

Introduction —— 1

Danilo Garcia, Oscar N. E. Kjell, Sverker Sikström

1 A Collective Picture of What Makes People Happy: Words Representing Social Relationships, not Money, are Recurrent with the Word 'Happiness' in Online Newspapers —— 4

1.1 Introduction —— **4**

1.2 The Co-Occurrence of the Word Happiness With Other Words in Online Newspapers —— **6**

1.3 Measuring Happiness' Relationship to Social Relationships, Money, And Material Things: The Word-Norm Approach —— **9**

1.3.1 Methods —— **10**

1.3.1.1 Participants and procedure —— **10**

1.3.1.2 Creating Semantic Representations —— **11**

1.3.1.3 Creating Semantic Scales: The word-norms —— **11**

1.3.1.4 Applying the semantic scales on articles including/not including the word Happiness —— **12**

1.3.2 Results —— **12**

1.3.3 Discussion —— **13**

1.4 Limitations, Strenghts, And Suggestions For Future Studies —— **13**

1.5 Concluding Remarks —— **14**

References —— **15**

D'Arcy J. Reynolds, Jr., William B. Stiles, Terry Hanley

2 The Online Calming Effect: Does the Internet Provide a More Comfortable Modality for Conducting Psychotherapy? —— 17

2.1 How the Study Was Conducted —— **20**

2.1.1 Participants —— **20**

2.1.2 Measurement of Session Impact —— **21**

2.1.3 Procedure —— **21**

2.1.4 Data Analysis Strategy —— **21**

2.2 Results —— **22**

2.2.1 Session Impact Averages, Variability, and Reliability —— **22**

2.2.1.1 Index means and standard deviations —— **22**
2.2.1.2 Internal consistency of the subscales —— **22**
2.2.2 Comparing Online Session Impact Averages with Face-to-Face Averages —— **22**
2.2.3 Participant Form Completion Latency —— **22**
2.2.4 Population-level Participants' Initial Scores and Slopes —— **23**
2.3 Discussion —— **24**
2.3.1 The Online Calming Effect Hypothesis —— **24**
2.3.2 Limitations and Practice Implications —— **25**
References —— **26**

Hui-Tzu Grace Chou, Ron Hammond

3 Feeling Anxious without It: Characteristics of People Prone to Facebook Addiction —— 29
3.1 Introduction and Literature Review —— **29**
3.2 Method —— **31**
3.2.1 Participants —— **31**
3.2.2 Measures —— **32**
3.3 Results —— **32**
3.4 Discussion and Conclusions —— **34**
References —— **35**
Appendix: Operationalization of Variables, Mean, and Standard Deviation —— **37**

Jen-Wei Chang, Chun-Chia Lee

4 What Determinants Matter When Users Engage in Particular Collaborative Storytelling Websites? Exploring Attractive Gamification Features and Design Guidelines —— 38
4.1 Introduction —— **38**
4.2 Systematic framework of gamification design —— **40**
4.2.1 Achievement —— **41**
4.2.2 Interpersonal relationship —— **41**
4.2.3 Role-playing —— **42**
4.3 Identifying gamification features for collaborative storytelling websites —— **43**
4.3.1 Materials —— **43**
4.3.2 Participants and Procedures —— **43**
4.3.3 Results —— **43**
4.4 Determining the relative attractiveness of gamification features —— **43**

4.4.1 Questionnaire design and data collection —— **44**
4.4.2 Data Analysis —— **44**
4.4.3 Results —— **45**
4.5 Discussion —— **45**
4.5.1 General Discussion —— **45**
4.5.2 Design guideline for implementing gamification in collaborative story telling websites —— **46**
4.6 Conclusion —— **47**
4.7 Areas for Future Research —— **48**
References —— **48**
APPENDIX 1. GAMIFICATION FEATURES —— **51**
APPENDIX 2. A FUZZY-AHP APPROACH FOR DETERMINING RELATIVE ATTRACTIVENESS OF COLLABORATIVE STORYTELLING GAMIFICATION FEATURES —— **53**

Jose A. Carmona, Adolfo J. Cangas, Roberto Zarate, Ari Ucar, Alvaro I. Langer

5 Assessment Of Risk Behaviors Related To Substance Use, Bullying and Alterations in Body Image in Adolescents Through a 3D Simulation Program —— 56
5.1 Definition of virtual reality —— **57**
5.1.1 Types of virtual reality —— **58**
5.1.2 Advantages of virtual reality —— **59**
5.2 Virtual reality applications in psychology: drug use, bullying and alterations in body image —— **60**
5.2.1 Virtual reality and drug use —— **61**
5.2.2 Virtual reality and bullying —— **62**
5.2.3 Virtual reality and eating disorders —— **62**
5.3 MySchool4web: Detection of drug use, bullying and alterations in body image through a virtual reality desktop program —— **64**
5.4 Evaluation of the MySchool4web properties: preliminary results —— **67**
5.5 Discussion —— **70**
References —— **71**

Chun-Chia Lee, Jen-Wei Chang

6 Play With My Team— Modeling Online Game Players' Teamwork Model in Massively Multiplier Online Role Playing Games (MMORPGs) —— 74
6.1 Introduction —— **74**
6.2 Modeling the teamwork mechanism in game —— **76**

6.3 Investigate the impacts of trust on players' teamwork —— **78**
6.3.1 Subjects —— **78**
6.3.2 Measures —— **79**
6.3.3 Reliability and validity of measurement items —— **79**
6.3.4 Structural model testing —— **79**
6.3.5 Result —— **80**
6.4 Developing several design recommendations that facilitate teamwork in MMORPGs —— **83**
6.4.1 Subjects and Procedures. —— **83**
6.4.2 Results —— **83**
6.5 Discussion and Implication —— **83**
6.6 Conclusion —— **85**
6.7 Areas for Future Research —— **85**
References —— **85**

Lina Gega, Richard White, Andrew O'Neill, David Fowler

7 Virtual Environments With Chroma-Keying Video Capture In Psychological Therapy —— 88
7.1 Introduction —— **88**
7.2 Virtual Environments With Chroma-Keying Video Capture —— **90**
7.2.1 System Description —— **90**
7.2.2 Use of video clips and chroma keying video-capture in VEs —— **91**
7.2.3 An "Out-of-Body" Experience? —— **91**
7.3 Feasibility Studies With Social Anxiety & Paranoia —— **92**
7.3.1 Design —— **92**
7.3.2 Objectives —— **93**
7.3.3 Participants —— **93**
7.3.4 Intervention —— **94**
7.3.5 Data Collection —— **94**
7.3.6 Analysis —— **95**
7.3.7 Findings —— **95**
7.3.7.1 Sample characteristics —— **95**
7.3.7.2 Can the VEs evoke emotional, cognitive and behavioural responses which are similar to their "real-life" alternatives? —— **95**
7.3.7.3 What factors may influence patients' emotional responses to the VEs? —— **96**
7.3.7.4 What do patients "learn" while using VEs in the context of psychological therapy? —— **97**

7.3.7.5 How do patients feel about seeing themselves projected and interacting live on a screen? —— **99**
7.4 Discussion —— **99**
7.5 Conclusion —— **101**
References —— **101**

Elizabeth Sillence

8 Sharing personal experiences and offering advice within online health-based social networks —— 104
8.1 Introduction —— **104**
8.2 Online Health Information —— **105**
8.3 Advice Exchange —— **106**
8.4 A study of advice exchange within an online breast cancer forum —— **107**
8.4.1 Method —— **107**
8.4.1.1 Analysis —— **108**
8.4.1.2 Findings —— **109**
8.5 Discussion —— **112**
8.6 Conclusions and implications —— **114**
References —— **114**

Ryan C. Martin, Lauren E. Vieaux

9 The Digital Rage: How Anger is Expressed Online —— 117
9.1 The Digital Rage: How Anger is Expressed Online —— **117**
9.2 Challenges Surrounding Online Anger Research —— **118**
9.3 Online Anger or Online Aggression —— **120**
9.4 Research on Online Anger —— **121**
9.5 Problems With Expressing Anger Online —— **122**
9.6 Why Does Online Anger Happen? —— **123**
9.7 Avoiding the Anger Online Trap —— **125**
9.8 In Conclusion —— **126**
References —— **126**

Meagan A. Ramsey, Ann M. Oberhauser, Amy L. Gentzler

10 College Students' Use of Communication Technology with Parents: Influences of Distance, Gender, and Social Presence —— 128
10.1 College Students' Use of Communication Technology with Parents: Influences of Distance, Gender, and Social Presence —— **128**
10.2 Parent-Child Relationships and ICT Use —— **129**

10.3 Distance —— **130**
10.4 Gender —— **130**
10.5 Social Presence —— **130**
10.6 Current Study —— **131**
10.7 Method —— **131**
10.7.1 Participants and Procedure —— **131**
10.7.2 Online Survey Measures —— **132**
10.8 Results —— **133**
10.8.1 Focus Group Themes —— **133**
10.8.2 Influence of Distance —— **134**
10.8.3 Influence of Student and Parent Gender —— **134**
10.8.4 Influence of Social Presence —— **135**
10.9 Discussion —— **136**
10.9.1 Distance and Students' and Parents' ICT Use and Relationships —— **136**
10.9.2 Gender and Students' and Parents' ICT Use —— **137**
10.9.3 Indirect Effects of Social Presence on ICT Use and Relationship Qualities —— **137**
10.10 Limitations and Future Directions —— **138**
References —— **139**

Deborah Ko, Mike Yao

11 Internet addiction: an cross-cultural perspective —— 141
11.1 Introduction —— **141**
11.2 (Re)conceptualizing Internet Addiction —— **141**
11.3 Cross cultural issues in IAD research —— **144**
11.3.1 A cross-cultural consideration of IAD measurement —— **144**
11.3.2 A cross-cultural consideration in Internet adoption and user behavior —— **150**
11.4 Conclusion —— **153**
References —— **155**

Nicholas David Bowman, Jaime Banks, Edward Downs

12 My pixels or my friends? Game characters as a lens for understanding user avatars in social networks —— 159
12.1 Introduction —— **159**
12.2 A (Brief) History of On-Screen Relationships —— **161**
12.3 Interactivity and the Active Audience —— **162**
12.3.1 Interactivity and Player Experiences —— **163**
12.4 The Experience of the Player-Avatar Relationship —— **164**

12.4.1 Explaining the Player-Avatar Relationship —— **165**
12.4.2 The Player and the Avatar: Who Impacts Whom? —— **168**
12.4.2.1 Player Agencies —— **168**
12.4.2.2 Avatar Agencies —— **169**
12.5 The Subjective Experience of the PAR —— **170**
12.5.1 Meaning as a Relational Effect —— **171**
12.6 Pixels or People? Implications for Understanding User-Avatar Relationships in Social Networks —— **174**
12.6.1 Extending PARs to social networking avatars —— **175**
12.6.2 Anti-Social PAR Effects —— **175**
12.6.2.1 Excessive usage —— **175**
12.6.2.2 Aggression —— **176**
12.6.2.3 Moral disengagement —— **177**
12.6.3 Pro-Social PAR Effects —— **178**
12.6.3.1 Identity exploration —— **178**
12.6.3.2 Parasocial contact —— **178**
12.6.3.3 Social issues —— **179**
12.7 Conclusion —— **179**
Mediography —— **180**
References —— **180**

Olatz Lopez-Fernandez

13 Problem Mobile Phone Use in Spanish and British Adolescents: First steps towards a cross-cultural research in Europe —— 186
13.1 Inroduction —— **186**
13.1.1 Cross-cultural research on cyber-addictions —— **187**
13.1.2 Problematic mobile phone use versus problematic Internet use —— **187**
13.1.3 Evaluating problematic mobile phone use —— **187**
13.1.4 Problematic mobile phone use in adolescents —— **188**
13.1.5 Research problem and objectives —— **189**
13.2 Method —— **189**
13.2.1 Participants —— **189**
13.2.2 Instruments —— **190**
13.2.3 Procedure —— **191**
13.3 Results —— **191**
13.3.1 Socio-demographic variables, usage patterns, and symptomatology data for each country —— **191**
13.3.2 Proposal for classification of problem mobile phone users —— **193**
13.3.2.1 Estimation of prevalence in each country —— **193**

13.3.2.2 Potential problem users' perception of PMPU in each country —— **195**
13.4 Discussion —— **195**
References —— **197**
APPENDIX A. MPPUSA (item number, item statement for Spanish and British adaptation, and Likert scale response) —— **200**

Silvia Casale, Caterina Primi, Giulia Fioravanti

14 Generalized Problematic Internet Use Scale 2: update on the psychometric properties among Italian young adults. —— 202
14.1 Defining Problematic Internet Use —— **202**
14.2 The update model of Generalized Problematic Internet Use —— **203**
14.3 The Generalized Problematic Internet Use Scale 2 —— **204**
14.4 Methods —— **206**
14.4.1 Participants and data collection —— **206**
14.4.2 Measures and Procedure —— **207**
14.4.3 Data analysis —— **208**
14.5 Results —— **208**
14.6 Discussion —— **212**
References —— **214**

Pietro Cipresso, Brenda K. Wiederhold, Giuseppe Riva

15 Smartphone for social networking: methodological aspects —— 217
15.1 Introduction —— **217**
15.2 Psychophysiology and Affective States —— **219**
15.3 Hypotheses and Research Questions —— **220**
15.4 Conclusion —— **222**
References —— **223**

List of Figures —— 228

List of Tables —— 229

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Introduction

The proposal of this book in the scientific panorama was to produce an edited collection of original chapters to provide a core and supplementary text with a number of well-recognized co-authors. There was a need for such a book as currently no all-encompassing compilation of diverse online behaviors from a social media perspective exists. Therefore, this collection makes a unique contribution to the rapidly growing area of cyberpsychology and has the additional advantage of being written in a sufficiently accessible way to appeal to cross-over disciplines, Internet service businesses ,and lay individuals alike who are interested in understanding the effects (positive and negative) of social media on individual, interpersonal, and societal behavior. Despite the continued rise of interest in the area of cyberpsychology, there is currently a dearth of reference works that can be recommended for the rapidly increasing number of core and modular courses being offered at both the undergraduate and postgraduate levels. Even fewer books have the range of expertise offered by the contributing authors in this collection, who come from diverse backgrounds to provide a good cross-over reference for other disciplines to which psychological theory and research is essential to understanding human behavior from a wide and varied approach. In order to achieve this, a number of the chapters contributed by experts from areas such as technology and the social sciences.

The opening paper by C.C. Nieuwboer and R.G. Fukkink discusses current variety of online services for parents, distinguishing between peer support and professional support. They focus on the design characteristics of these web-based resources and explain two major trends that give direction to future research and development.

Next, Regina M. Hechanova et al. in their paper "Online Counselling for Migrant Workers: Challenges and Opportunities" summarize research on online counseling, particularly for Filipino migrant workers. They present opportunities and challenges encountered by both counselees and counselors in online counseling and discuss the prospects for technology-mediated interventions in addressing the psychosocial needs of migrant workers.

After that there is a paper "Using Facebook: Good for Friendship But Not So Good for Intimate Relationships" by Ron Hammond and Hui-Tzu Grace Chou that examines the impact of using Facebook on the satisfaction with and quality of intimate relationships. Their study indicated that using Facebook is negatively related to the satisfaction with, and quality of, intimate relationships.

Later, a paper entitled "Communicatively integrated model of online community: A conceptual framework and empirical validation on a case of a health-related online community" by Gregor Petrič provides an alternative perspective on one of the key questions in online community research—How is online community possible? The

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hypotheses are tested on a sample of users from the biggest online health community in Slovenia. The authors conclude that a sense of virtual community is strongly associated with the quality of communication within that community.

Researchers Jamie Guillory and Jeffrey T. Hancock in their paper titled "Effects of Network Connections on Deception and Halo Effects in Linkedin" used two experiments to explore the pervasive influence that social relationships have on how we construct our self-presentations and how others form perceptions of our self-presentations on social networking websites.

After that there is a paper by Jesse Fox "The Dark Side of Social Networking Sites in Romantic Relationships" that evaluates the potential harmful effects of social networking sites. The author concludes that social networking sites can be a source of stress and relational turbulence for romantic partners from the early stages of dating to the post-breakup phase.

Next, researchers Leanne M. Casey and Bonnie A. Clough in their paper "Making and Keeping the Connection: Improving Consumer Attitudes and Engagement in E-Mental Health Interventions" discuss consumer attitudes toward e-mental health services, as well as the efficacy and use of strategies to improve attitudes and enhance engagement with such online services. Researchers assert that despite a lack of awareness about e-mental health services, individuals are receptive to gaining more information about these treatment options. Further, the effectiveness of e-mental health therapies depends on client engagement with these services.

After that there is a paper by Lise Haddouk entitled "Intersubjectivity in Video Interview", which discusses how videoconferencing enables the introduction of an important element from the point of view of "sensoriality": the body image, which engages the subjects' interaction in a different way than in a written or verbal exchange. She concludes that the "virtual" doesn't oppose the real, but that they similarly enable the emergence of the mental reality, and can also reach the same level of the symbolic as it is understood in psychoanalysis.

Next, Megan A. Moreno et al. present their paper "Institutional Review Board and Regulatory Considerations for Social Media Research". They present a review of common risks inherent in social media research and consider how researchers can consider these risks when writing research protocols. Finally, it summarizes that social media websites are immensely popular and present new opportunities for research as well as new challenges for Institutional Review Boards.

After that Megan A. Moreno et al. describes "Media Theories and the Facebook Influence Model", which illustrates key constructs that contribute to influence, incorporating perspectives of older adolescent Facebook users. She asserts that Facebook provides a novel lens for understanding behavioral influence in the context of existing behavioral theory.

Later, in "Social Networking and Romantic Relationships: A Review of Jealousy and Related Emotions" Nicole L. Muscanell and Rosanna E. Guadagno focus on contemporary research examining the use of SNSs and the resulting impact on

jealousy and related emotions in the context of romantic relationships. Specifically, they review the way couples utilize their social media profiles, individual differences, such as gender differences in the experience of jealousy, and the role of social media on actual relationship outcomes. Finally, the paper summarizes that there is a combination of factors that may influence whether individuals are likely to experience SNS-related jealousy or related emotions.

Noella Edelmann follows with a paper titled "What is Lurking? A Literature Review of Research on Lurking" which provides an understanding of the phenomenon of online lurking by defining lurking and showing that lurkers are both active and valuable online participants. The paper emphasizes that the understanding of lurkers, their activities and value in the online environment is important when studying online environments, particularly in terms of the interpretation of online research and results.

Later, a paper by Sean D. Young and Alexander H. Jordan titled "Can Social Media Photos Influence College Students' Sexual Health Behaviors?" presents the potential for such investigations to shed light on the social psychological complexity of online social networks and pave the way for interventions that improve student health behaviors and wellbeing. They provide evidence that Facebook – in particular viewing peer photos – may influence college students' perceptions of sexual health behavior norms among their peers, which may in turn influence students' own sexual health behaviors.

Selim Gunuc et al. then examine "Social Networks as a Communication Tool from Children's Perspective: A Twitter Experience" focusing on the effects of social networks on the lifestyles and behaviors of people both psychologically and socially by linking theory and practice. Researchers assert that Twitter is a promising tool in educational contexts. They also discuss what major arrangements are needed in educational contexts in order to benefit from everything that Twitter has to offer.

Shengli Deng in her paper "The Influence of Extraversion on Individuals' SNS Use" presents a model to elucidate how extraversion, an important dimension of personality, affects the perceptions of Internet users and their continuance intention. She asserts that a significant relationship between extraversion and critical mass indicates that extraverts are more likely to be accompanied by similar SNS users.

Finally, Riva et al. conclude the collection by highlighting the complex nature of social media in defining what a social network is. In particular, Riva and colleagues try to understand the complexity arising by parsing technology and identity, and the relationship in-between. Social networks are different from previous media in terms of two opportunities. The first is the ability to visibly use social networks. The second is the possibility to decide how to present oneself to the people who make up the network (impression management).

Danilo Garcia, Oscar N. E. Kjell, Sverker Sikström

1 A Collective Picture of What Makes People Happy: Words Representing Social Relationships, not Money, are Recurrent with the Word 'Happiness' in Online Newspapers

Abstract: The Internet allows people to freely navigate through news and use that information to reinforce or support their own beliefs in, for example, different social networks. In this chapter we suggest that the representation of current predominant views in the news can be seen as collective expressions within a society. Seeing that the notion of what makes individuals happy has been of increasing interest in recent decades, we analyze the word happiness in online news. We first present research on the co-occurrence of the word happiness with other words in online newspapers. Among other findings, words representing people (e.g., "mom", "grandmother", "you"/"me", "us"/"them") often appear with the word happiness. Words like "iPhone", "millions" and "Google" on the other hand, almost never appear with the word happiness. Secondly, using words with predefined sets of psycholinguistic characteristics (i.e., word-norms measuring social relationships, money, and material things) we further examine differences between sets of articles including the word happiness and a random set of articles not including this word. The results revealed that the "happy" dataset was significantly related to social relationships word-norm, while the "neutral" dataset was related to the money word-norm. However, the "happy" dataset was also related to the material things word-norm. In sum, there is a relatively coherent understanding among members of a society concerning what makes us happy: relationships, not money; meanwhile there is a more complex relationship when it comes to material things. The semantic method used here, which is particularly suitable for analyzing large amounts of data, seems to be able to quantify collective ideas in online news that might be expressed through different social networks.

1.1 Introduction

The Internet allows people to freely navigate through online news and use that information to reinforce or support their own beliefs (Tewksbury & Althaus, 2000; Althaus & Tewksbury, 2002). Along this thinking, we have earlier suggested (Garcia & Sikström, 2013a) that current and predominant views in a society tend to perpetuate themselves through, besides inter- and intrapersonal conversations, narratives in

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newspapers, popular songs and books, movies, and television, and in recent decades, even in blogs and other online media (see Landauer, 2008). This representation can be seen as the vox populi (or the voice of the people) in a certain culture; a notion that becomes part of that culture's knowledge about the world (Giles, 2003). From a statistical point of view, because we share experiences with many others, there should be relatively good agreement among members of a society concerning different topics (Landauer, 2008). The semantic knowledge of specific topics and abstract ideas become the current and predominant views of society's collective picture of specific topics, recursively feeding on itself (Landauer, 2008). See Figure 1.1.

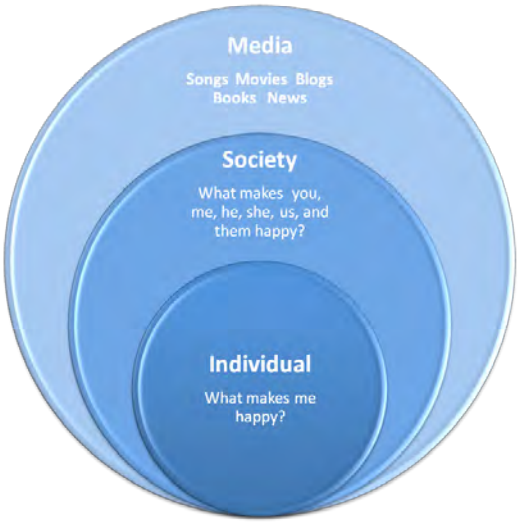

Figure 1.1. The individual's and society's ideas about happiness expressed in the media, which generates a collective theory of happiness; in turn, feeding the original ideas found at the individual and society levels

In the first part of this chapter we present how we tested our suggestions by analyzing the co-occurrence of the word happiness (lycka in Swedish) with other words in Swedish online newspapers (Garcia & Sikström, 2013a). The notion of happiness has for decades been of scientific and also of popular interest, and thus a natural choice for our study. Specifically, we hypothesized that by investigating the frequency or infrequency of the word happiness in relation to other words in the same language, we would be able to quantify a collective picture of "what makes people happy". This picture might be a belief or notion shared by the many and the one, but not necessary accurate in what really makes people happy (see for example Gilbert, 2007, who suggests that humans are actually inaccurate at imagining how happy we will be in the future or if we get things which we assume will make us happy). Although measurement of people's subjective experience of happiness using self-report is a cumulated or a collective result based on a large number of individuals (Gilbert,

2007), it is different from our proposed quantification of a collective theory of "what makes us happy". This is analogous to the difference between commuting to work by public transport and driving your own car, in which the former is a collective type of transport available for everyone. In other words, this representation of "what makes us happy" is collective in nature because it is a picture communicated by relatively few individuals to the masses. In the second part of this chapter we expand our earlier research by using words with predefined sets of psycholinguistic characteristics (i.e., word-norms) to further examine differences between sets of articles including the word happiness ("happy" dataset) and a random set ("neutral" dataset) of articles not including this word.

1.2 The Co-Occurrence of the Word Happiness With Other Words in Online Newspapers

In our original article (Garcia & Sikström, 2013), news articles were collected from the fifty largest daily newspapers in Sweden published online during 2010. These online newspapers are in most cases also published in printed format, making them representative of public media in Sweden. We randomly selected 3,000 of these articles that included the Swedish word "lycka" for the "happy" dataset, and 3,000 articles that did not include this word for the "neutral" dataset.

The data were analyzed with words as the basic unit of analysis. In total there were 1,065,429 words in the "happy" dataset, 493,927 words in the "neutral" dataset, and 93,093 unique words in both datasets. A frequency vector was generated consisting of the number of occurrences of each unique word in the "happy" dataset, and a similar vector was generated for the "neutral" dataset. For each unique word, a 2-by-2 chi-square test was conducted, consisting of four frequencies: the frequencies of the word in the two datasets and the number of remaining words in the two datasets. The resulting p-values were corrected for multiple comparisons using the Bonferroni method (i.e., multiplying each p-value by N). Words that were significant (at the 0.05 level) were selected for further analyses. The resulting significant words were divided into different word classes. Due to the large number of significant words, we find it appropriate to only present the p-value, whilst omitting other data that are typically presented in chi-square analysis, such as the chi-square value and the number of occurrences in each cell. In Table 1, the words are ordered by increasing p-values, where these Bonferroni corrected p-values were in the range $0.00001 < p < 0.05$. The total number of words, in all chi-square tests, is the sum of the words in both datasets. In Table 1, we present the results for pronouns, proper names, and nouns.

Table 1.1. Words discriminating between articles including or not including the word happiness (Printed with permission from D. Garcia and S. Sikström)

Word classes	**"Happy" dataset Articles including the word happiness**	**"Neutral" dataset Articles NOT including the word happiness**
Proper nouns	Victoria Tommy Daniel Anna Werner Samuelsson MFF Westling Salem Alfsson Jari VM Rydström Runo Thoralf Fakir Mats Kay v75 Kojer Swärd Linda Jim Tidholm Lagerbäck Svante Jonsson Johan Nigeria Iphoto Drogba Petri Eva Smith Zlatan Falkehed United Stellan Alice Taylor Kalmar Patrik Falk Bergendahl Degerfors Argentina Gustavsson Eric Franzen Hammarby Astrid Kuba Modo	Google Windows IT ipad iphone Microsoft Apple EU HP IDG Office Mac Microsofts Intel Sony Asus IBM Googles Facebook Strömsund Nokia Apples HTC Oracle Samsung IDC SAP Yahoo TT Eskilstuna Dell Linux Toshiba Mcafee Teliasonera Carnegie +143 more words.
Pronouns	Jag (I) du (you) min (my) mig (me) ni (you) dig (you) det (it) din (yours) hon (she) mitt (mine) mina (mine) han (he) man (one) henne (her) er (you) honom (him) varandra (each other) ditt (yours) dina (yours) hans (his) hennes (hers) oss (us) dem (them) vem (who) vi (we) dom (them)	—
Nouns	livet (life) människor (people) fråga (question) kram (hug) kärlek (love) pappa (dad) kronprinsessan (the Crown Princess) hjärtans (heart's) mormor (grandma') mamma (mom) hälsningar (greetings) dag (day) monarkin (the monarchy) deklarationen (the income-tax return) hälsning (greeting) kungen (the king) kramar (hugs) glädje (joy) fotboll (football) stadion (stadium) jobbannons (job ad) bröllopet (the wedding) brudparet (the wedding couple) dotter (daugther) hjärta (heart) lyckan (the happiness) coach (coach) familj (family) tränare (trainer) deklaration (income-tax return) chatten (the chat) träningen (the workout) spelarna (players) sambo (living-together) spelare (player) moderator (moderator) muslimer (muslims) piller (pills) prins (prince) son (son) låten (the song) bröllop (wedding) mat (food) familjen (the family) känslor (feelings) barn (children) svar (answer) vänner (friends) talet (the speech) puss (kiss) drömmar (dreams) frågor (questions) mobbning (bullying) guld (gold) artist (artist) webbplats (website) lillen (the kid) avdraget (the deduction) tjej (girl) kärleken (the love) scenen (the stage) karriär (carreer) längtan (the longing) mens (menstruation) lag (team) dröm (dream) landslaget (the national team) make (husband) scen (scene) uppskov (deferral).	procent (percent) kronor (crowns) miljoner (millions) polisen (the police) kvartalet (the quarter) miljarder (billions) företaget (the company) användare (user) vd (CEO) dollar (dollar) företag (company) usb (usb) datorer (computers) företagets (the company's) kunder (customers) data (data) marknaden(the market) funktioner (features/functions) kommunen (municipality) bolaget (the company) skärm (screen) tum (inch) app (app) leverantörer (suppliers) gigabyte (gigabytes) branden (the fire) servrar (servers) leverantören (the supplier) mkr (million of crowns) system (system) tillverkare (manufacturer) januari (January) affärer (business) bolaget (the company) +373 more words.

Note. The words are divided into the word classes proper nouns, pronouns, and nouns (other word classes are removed). The words are ordered by increasing p-values in the range $0.000001 < p < 0.05$ and only the approximately 40 most significant words are included. All words are significant following corrections for multiple comparisons (Bonferroni). English translation of pronouns and nouns in parentheses

Proper names associated with the "happy" dataset were almost exclusively names of people, where the Swedish Crown Princess' name "Victoria" was the most discriminative word followed by proper names associated with sports, especially soccer, for example, Zlatan, Lagerbäck (the former coach of Sweden's national soccer team), Drogba, Argentina, and Nigeria. Proper names discriminative for the "neutral" dataset were almost exclusively company names, where the most significant companies were in the IT field. Although these results were obviously inflated by the overrepresentation of the Swedish royal wedding and the FIFA World Cup in the media during 2010, the results with regard to relationships are in accordance with current findings suggesting that happy individuals always report strong positive social relationships (Diener & Seligman, 2002, 2004). Moreover, research on widows (Lucas, Clark, Georgellis & Diener, 2003) and divorced people (Clark, Diener, Georgellis & Lucas, 2008) has shown great declines in happiness precisely before and after the loss of a significant other. Also in line with this, the results regarding pronouns show that almost all pronouns discriminated between the datasets, and all of the significant pronouns were associated with the "happy" dataset (e.g., I, you, mine, me, yours, and she) and the results regarding nouns associated with the "happy" dataset were largely semantically related to love or people (e.g., people, hug, love, dad, grandmother, mom). In contrast, the "neutral" dataset was associated with nouns representing money or companies (e.g., crowns, millions, billions).

These results lead us to suggest that a collective theory of "what makes us happy" reflects research based on self-reports showing that people who put more value in love and relationships rather than money are happy (Diener & Biswas-Diener, 2002). On a larger level, research has only found small correlations between income and happiness within nations—the correlations are larger in poor nations, and the risk of unhappiness is much higher for people living in poverty. Moreover, economic growth in most economically developed societies has been accompanied by only small increases in happiness levels (Diener & Seligman, 2002). In other words, as long as basic needs are met, money or material things do not seem to increase happiness levels. Accordingly, our results do not mean that money and material things make us unhappy, rather that specific words representing money and material things are not associated with happiness in the media.

Our study was an addition to recent research on happiness using large datasets of texts (e.g., Dodds & Danforth, 2010; Dodds, Harris, Kloumann, Bliss & Danforth, 2011; Garcia & Sikström, 2013ab; 2014; Schwartz, Eichstaedt, Kern, Dziurzynski, Ramones et al., 2013) and also complemented self-reporting techniques by offering an approach to the investigation on how "what makes us happy" is presented through the mass media to large segments of a society at the same time. Earlier theories of individual unconsciousness and consciousness have suggested that humans possess a collective level of awareness or knowledge. Carl Jung (1968), for example, proposed a collective unconscious consisting of memories accumulated throughout human history. These memories are represented in archetypes that are expressed in the symbols, myths,

and beliefs found in many cultures, such as the image of a god, an evil force, the hero, the good mother, and the quest for self-unity and wholeness. Similarly, the French sociologist Émile Durkheim (1965) coined the term collective consciousness, which refers to the shared beliefs and moral attitudes that serve as a unifying force within a society. Determining whether this representation of happiness in our study is implicit (as Jung's theorized collective unconscious) or explicit is beyond the scope of our current research. Nevertheless, although at a collective level people probably understand the influence of close and warm relationships on their own happiness, they might not be consciously aware that such relationships are necessary for happiness (Lyubomirsky, 2007). After all, the importance of social relationships to a happy life is indeed epitomized in a simplified and larger-than-life manner in the standard ending of many fairy tales: "...and they lived happily ever after". Likewise, most people seem to understand that money can't buy happiness.....or love, as in the in the famous Beatles song "Can't buy me love". Moreover, we have suggested that the representation of a collective picture of "what makes us happy" in the media seems to be a notion that does not fit with theories of happiness focusing on individual differences (e.g., the theory of "Virtues in Action" by Peterson & Seligman, 2004) or for determining whether focusing on intentional activities is related to a happy life (e.g., Diener & Oishi, 2005).

In sum, our findings seem to mirror a collective theory of "what makes us happy" or an agreement among members of a community about what makes people happy: relationships, not money or material things. This picture is presented to all members of the society through newspapers and other media, making it collective in nature. Because this information is accessible through the Internet, it might be used by readers to reinforce or support their own beliefs and express those beliefs when social networking. In the next part of this chapter, we present new analyses of the same dataset using quantitative semantics and words with predefined sets of psycholinguistic characteristics (i.e., word-norms) measuring social relationships, money, and material things. We use this approach to further investigate if a collective picture of "what make us happy" suggests that social relationships, rather than money are of more importance in enabling happiness.

1.3 Measuring Happiness' Relationship to Social Relationships, Money, And Material Things: The Word-Norm Approach

The method we employed to quantitatively re-analyse the news texts and word-norms is called Latent Semantic Analysis (LSA; Landauer & Dumais, 1997). This method involves applying an algorithm to create semantic representations of the various semantic based contents. In short, the LSA-algorithm assumes that words that occur close to each other in text can be used as a source of information; which is used to create multi-dimensional semantic representations. That is, the context that words