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Professional MBA
Entrepreneurship & Innovation



“Revenue streams and willingness to pay for social messaging on smart devices”

A Master’s Thesis submitted for the degree of “Master of Business Administration, MBA”

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Affidavit

I, **Alejandro VERDIN CARDENAS**, hereby declare,

1. that I am the sole author of the present master’s thesis , 75 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
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Abstract

Within less than six years, Smart Devices have disrupted the way we communicate while “on the move”. They are the new Dominant Design for mobile communication.

Their presence as a Disruptive Innovation to the Alphanumeric Mobile Phone has affected the Telecommunication Industry, because of the open innovation scheme that allows to develop installable software, which in most cases, are better than the services, like the SMS, monopolized by the Telcos.

The technological barriers to entry are minimal. Successful developers, like the creators of the “WhatsApp” service, a direct competitor to the SMS, have attracted tens of millions of users worldwide to their messaging service. Such migration of users have affected the revenue of the Telecommunication industry with estimated losses amounting 13.9 billion Euros in 2011.

Communication between users is the main driver for the increasing adoption of Smart Devices, whether through messaging services or on social networks. Such adoption is also affecting time invested on Desktop Personal Computers, which until recently were the primary access devices for online activities. Consequently, this event is also affecting revenues from online advertisement, because the larger resolution of a Desktop PC monitor allowed to insert advertisement banners around the communication activities from users and still get profitable “clicks” from the advertisement revenue streams. A similar saturation of elements on the smaller screens from Smart Devices is not adopted by users, therefore avoiding the flow from advertisement revenue streams.

At the moment there is no dominant design for integrating advertisement on the messaging activities of users on smart devices. The revenue loss for the online advertisement industry is calculated to be between 13 and 38 Billion EUR per year.

The motivation for this study is to find out which elements are relevant for messaging activities and based on a proposed model, for integrating advertisement into the messaging activities on Smart Devices, I aim to offer hints for designing services in order to capture the latent revenues.

An innovative approach to Entrepreneurial Marketing is applied based on the article “An efficient algorithm for constructing Bayesian optimal choice designs” simplifying the process for Choice Based Conjoint Analysis. Each Stimuli is supported with Video Simulations.

As result, Importances and Utilities are presented, as well as a the design of an ideal messaging service which incorporates advertisement as a revenue stream.

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List of abbreviations and concepts.

Apps	Pieces of software or applications that may be installed on smart devices.
CA	Conjoint analysis.
CAGR	Compound average growth rate.
CPU	Central processing unit. It is a silicon chip that processes computational algorithms, like data and graphics.
.Desktop PC	Desktop personal computer.
F	forecast
Geolocation	A service to locate the point on earth where a person is. It could be achieved via Global Positioning Service or via a triangulation from telecommunication towers. The result to user is a map with the location or coordinates.
IPO	initial public offering to make a company public on the stock exchange market in order to sell their stocks to investors.
Messaging Apps	Software installed on smart devices for text communication.
Messaging Service	Standardized way for sending text over phone, web, or mobile communication.
Personal computer	A personal computer may be a desktop computer, a laptop or a handheld pc.
Smart Devices	Smartphones and tablets. is an electronic device that is cordless (unless while being charged), mobile (easily transportable), always connected (via WiFi, 3G, 4G, etc.) and is capable of voice and video communication, internet browsing, "geo-location". The device has an open operating system, that allows to install apps created by other users.
Social Messaging	Messaging that occurs through platforms other than SMS, MMS, or email, and which is either tied to a social network or has a social component attached. Social messaging players include mobile apps, mobile social networks, and even some mobile instant messaging platforms
SMS	Short messaging service
Status update	

Telcos	Telecommunication operators. It is the company that provides the voice and data service for your cellular phone or smart device.
UGC	User generated content
User generated content	Online publishing of one's own content and commenting on other people's. The Organisation for Economic Co-operation and Development define that UGC must be publicly accessible, must have a creative effort and must be created outside professional practices without the expectation of profit or remuneration.
Xerox PARC	Xerox computer Research Center located in the Californian city of Palo Alto

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Trying something new is the engine for change, novelty, civilization, and evolution. Either if it's to propose an innovation or to implement a change in personal aspects of someone's life.

The courageous ones, who thanks to passion and determination start such an enterprise, are all Entrepreneurs. However there are those who fail to see further, they lack patience or are just not made out of this kind of wood.

For those who jump off the boat in the middle of these overoptimistic entrepreneurial journeys I want to dedicate this work.

27. 7. 2012. Wien, Österreich

Lic., Alejandro **Verdín Cárdenas**

1. Introduction

In 2011, the telecommunication operators suffered an estimated worldwide revenue erosion from the SMS in the amount of 13.9 billion dollars¹, due to the increasing adoption of other messaging alternatives, in specific, social messaging². The root of this event are smart devices, who act as disruptor to cellular phones³ and personal computers.

Smart Devices enable mobile users to have a permanent connection to the internet⁴ and communication over messaging services and social networks. This enable users to share text messages, like status updates⁵ and other forms of user-generated content⁶ without the restrictions that SMS presented: maximum amount of 160 characters and no multimedia capabilities.

Social messaging offers other attractive features. First, users can send an unlimited amount of messages without incurring transactional costs like with the SMS, it is only necessary to have internet access. Second, messages can be exchanged with any other person in any city or country around the world without incurring in long distance or connection charges.

However, capturing revenue from social messaging and social network activities is still a complex problem⁷, mostly because online services are perceived as something that should be free⁸. A common revenue stream relies on the placement of advertisement⁹, as banners, pop-ups and other form of intrusive¹⁰ brand placement, which are overlaid on top of the user's activity. Until recent years this revenue model has worked successfully for personal computer users, because the size of PC monitors provide enough space for online advertisements, which eventually get "clicked" and generate revenue.

Personal computer users are also migrating their online activities¹¹ to smart devices, because of the comfort for internet access anywhere and anytime. However, this migration is affecting online advertisement. The banners that worked on large PC monitors would interfere with the consumer's ongoing cognitive process¹² because of the smaller screens of smart devices. Screen size is not the only problem, it is also a graphic design integration of the advertisement into the ongoing activity¹³ to improve reception

1. Financial Times.com "SMS-Ersatz: Die mysteriöse Story von WhatsApp"

2. Ovum Research. "Ovum estimates that operators lost \$13.9 bn in 2011 due to social messaging". Consulted the 14th of September 2012 at http://ovum.com/press_releases/ovum-estimates-that-operators-lost-13-9bn-in-2011-due-to-social-messaging/

3. Christensen, C., "Disruptive innovation explained" video interview available at <http://www.claytonchristensen.com/key-concepts/>

4. Wikipedia. "Smart device – Wikipedia" consulted on the 13th of September 2012 at http://en.wikipedia.org/wiki/Smart_device

5. See Table of abbreviations and terms

6. See Table of abbreviations and terms

7. Clemons, E. K., "The complex problem of monetizing virtual electronic social networks". *Decision Support Systems Journal*. Vol 48. 2009.

8. Vaccaro, V. L., Cohn, D. Y., "The evolution of business models and marketing strategies in the music industry". *The international journal on media management*. Vol 6. 2011.

9. Gallagher, J.M., Auger, P., et. al., "Revenue streams and digital content providers: an empirical investigation". *Information & Management*, Vol. 38. 2001.

10. Wehmeyer, K., "Mobile ad intrusiveness – The effects of message type and situation". European research center for informatics systems. University of Münster, Germany. *Merging and Emerging Technologies, Processes and Institutions*. 2007.

11. Kaplan, A. M., "If you love something, let it go mobile: Mobile marketing and mobile social media 4x4". *Business Horizons*, Vol. 55. 2012.

12. Wehmeyer, K., "Mobile ad intrusiveness – The effects of message type and situation". European research center for informatics systems. University of Münster, Germany. *Merging and Emerging Technologies, Processes and Institutions*. 2007.

13. Wehmeyer, K., "Mobile ad intrusiveness – The effects of message type and situation". European research center for informatics systems. University of Münster, Germany. *Merging and Emerging Technologies, Processes and Institutions*. 2007.

of the advertising message¹⁴. Due to this reason, marketers and advertisers are reluctant of advertising on smart devices.

The specific example of Facebook, shows that the growth rate for new users accessing with smart devices is 28% and for those accessing with a PC a negative 2% happens for the first quarter of 2012. At the moment also Facebook is not placing advertisement on their smart device platforms. It concerns social network investors¹⁵ and advertisers¹⁶, who don't have a functional advertising model for capturing revenue from online, social networking and social messaging activities on smart devices.

The rising adoption¹⁷ of smart devices and their influence for more social network activities and social messaging are determining the way that revenues will be made for online advertisement. This threat represents an opportunity for defining the characteristics of an advertisement models on smart devices that could fulfill the requirements of the current need. The revenue opportunity is estimated to be 50 billion USD from yearly advertisement revenue¹⁸ on a worldwide level.

1.1. Aim of the thesis

The aim of this thesis is to extract from scientific research and reports, those arguments about user acceptance, online advertisement, screen design, revenue models for messaging and social networks, that will present sustain a theory for positive acceptance of advertisement for social messaging activities on smart devices.

Also, it is relevant for this research to corroborate which revenue streams are valid: from the user and from advertisement.

For this purpose an experimental service will be tested, which aims to reduce the degree of intrusiveness of the product placement by integrating it as part of the social messaging conversation. Within this test I will also include a "price" attribute to determine real monetary value for the experimental service.

The results will be of interest for marketers and designers to know to what extent users are willing to accept product placement. With the empirical results I will propose the design of an ideal service. .

1.2. Structure of the Thesis

Section two, aims to understand, on one side of the research topic: the relationship between users, smart devices and the kind of communications that are happening on the

14. Gallaugher, J.M., Auger, P., et. al., "Revenue streams and digital content providers: an empirical investigation". Information & Management, Vol. 38. 2001.

15. Securities and Exchange Commission United States, Registration Statement on Form S-1 for Facebook Inc. Consulted on the 2nd of February 2012 at <http://sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm>,

16. AOL "AOL Advertising Report, Investor Day June 16, 2011" available online

17. Park, Y., Jengchung, V. C., "Acceptance and adoption of the innovative use of smartphone". Industrial Management & Data Systems, Vol 107, No. 9. 2007

18. "AOL Advertising Report, Investor Day June 16, 2011" available online

social networks. On the other side, the way that advertisement is being done today for online contexts, like banners or mixed video with social messaging.

In section three, a discussion is elaborated about specific visual and graphical aspects of how online advertisement is currently done and propositions for how a “more integrated design” could be adopted to reduce invasiveness in the message. At the end of the section the theoretical assumptions are presented, those that will sustain all aspects of the service to be tested.

Section four presents the design of a Choice-Based Conjoint Analysis to corroborate the importances and attributes. A efficient Design algorithm for Bayesian optimal choice design is used to decrease the amount of Stimuli. The Conjoint Analysis will be supported by Video-simulations and all will be integrated into an online survey.

Section five includes the discussion of results followed by section six with recommendations for future integration of advertisement social messaging on Smart Devices.

2. Theoretical Background and current situation

In the 1991 Scientific American article “The computer for the 21st Century”¹⁹, Mark Weiser from the Xerox PARC presents the idea of ubiquitous computing devices that are interactive and permanently interconnected, allowing their users to share programs and data.

The original article presents these devices in 3 sizes: centimeter-sized Tabs, decimeter-sized Pads and meter-sized Boards. Two of these devices are mass products²⁰ today, the hand-held known as Smartphone and the magazine-sized known as Tablet. In table 1 are presented the amount of units shipped for 2010 and 2011. The amount for 2012 is a forecast.

Table 1: Global shipment of units.

	Smartphones	Tablets
2010	267 million	n/a
2011	494 million	67 million
2012 f	660 million	100 million

Compilation of figures from different studies^{21, 22, 23, 24}.

The Smartphone, which appeared in 2007²⁵ as an incremental innovation²⁶ to the cellular phone, complies with Weiser’s criteria for ubiquitous computing and human interface. It integrated several functionalities, like calendar, agenda, music player, camera, speaker, microphone, video playback, geo-localization, internet connectivity, plus the primary functionalities from a cellular phone: telephone calls and SMS messaging.

Tablets made their appearance in the market on April 2010, they offer similar functionalities with a larger screen, 9.5 inches vs 3.5 inches from a smartphone.

There is a characteristic that makes the smartphone a very different phone than its cellular phone predecessor: it has an open system. It means that installation of new software is allowed for users²⁷. This was not possible with previous cellular phones.

19. Weiser, Mark “The Computer for the 21st Century” Scientific American, September 1991, p 94-104.

20. Deloitte “Deloitte, State of the media democracy survey, sixth edition” 2011. Consulted on the 19th of September at <http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Industries/TMT/uk-tmt-mediademocracy-interactive.pdf>

21. “Apple press info -iPad available in US in april 3”, conducted at <http://www.apple.com/pr/library/2010/03/05iPad-Available-in-US-on-April-3.html>

22. “Deloitte, State of the media democracy survey, sixth edition” Deloitte 2011.

23. IDC corporate market analysis. “Worldwide Smartphone 2012-2016 forecast and analysis”. Consulted the 19th of September 2012 at <http://www.idc.com/getdoc.jsp?containerId=233553>

24. Lane, W., Manner, C., “The impact of personality traits on smartphone ownership and use” International Journal of Business and Social Science. Vol 2, No. 17. 2011.

25. Macworld. “Apple unveils the iPhone, Macworld”, consulted on the 19th of September 2012 at <http://www.macworld.com/article/1054769/iphone.html>

26. Christensen, C. M., Bower, J. L., “Disruptive technologies: catching the wave”. Harvard business review. January 1995

27. Wikipedia. “Open system (computing) - Wikipedia” consulted the 19th of September at [http://en.wikipedia.org/wiki/Open_system_\(computing\)](http://en.wikipedia.org/wiki/Open_system_(computing))

These installable pieces of software are called Apps, a shortening for Applications. They are developed by an collaborative Innovation community²⁸ of developers around the world, who create apps to solve a wide variety of domains. By the second month of 2012, more than 725,000 apps were available, from apple, the first to offer a smartphone and apps as a complementary asset²⁹.

Several of these apps complemented and extended³⁰ the functionalities of smart devices, like the ability to create and share what is known as user-generated content³¹: personal status, text conversations, pictures, video or the aggregation of other resources, like links to news or other online content.

The open innovation scheme that enabled developers to create apps, enabled the possibility to the creation of an app that is better than the SMS.

2.1 Social messaging as a disruptive innovation.

A disruptive innovation transforms a product which was historically expensive and makes it accessible to a much larger population³². It also describes a product that only a few organizations with a lot of skills and financial resources had access to it, and thanks to a disruptive innovation it became available to more users. Such disruptive innovation appears slowly as a threat to an existing business and may eventually displace it³³

This theoretical model from Clayton Christensen fits what happened around social messaging that eventually disrupted the market position of the SMS. First, the open system model of smart phones allowed a democratization of innovation³⁴ and access to technology, enabling software developers with basic skills to create installable applications for smartphones. This technology was previously under complete control from the telecommunication operators and cellular phone manufacturers, making impossible an innovation³⁵ for messaging outside of the Telcos.

The following event that led for the SMS disruption was the creation of a social messaging app. I address the specific case of Whatsapp due to the volume of 2 billion daily messages³⁶ handled between their 10 million users. Whatsapp was launched on July 2009.

Whatsapp improved the performance of the messaging experience by exploiting features³⁷ from the smart devices that are related to social network activities: text conversations, sharing personal status, photos, audio messages, geo-location, music, video. The representation of such performance improvement, between social messaging and SMS, can be observed in figure 1.

28. Pisano, G.P., Verganti, R., "Which kind of collaboration is right for you?", Harvard business review. December 2008.

29. Ennen, E., Richter, A., "The whole is more than the sum of its parts- or is it? A review of the empirical literature on complementarities in organizations". Journal of Management. Vol. 36, No. 207. 2010.

30. Chesbrough, H.W., "The era of open innovation". MIT Sloan management review. Spring 2003

31. Wisegeek. "What is user generated content" consulted at <http://www.wisegeek.com/what-is-user-generated-content.htm>

32. Christensen, C. M., "The innovator's dilemma, when new technologies cause great firms to fail" Harvard business school press. 1997.

33. Rafii, F., Kampas, P. J., "How to identify your enemies before they destroy you" Harvard Business Review. Vol 80, No. 11. Nov. 2008

34. Von Hippel, E., "Democratizing innovation". MIT Press, 2005.

35. Pisano, G.P., Verganti, R., "Which kind of collaboration is right for you". Harvard business review, December 2008.

36. Kurier. "Der SMS-Nachfolger heißt Joyn", Kurier.at, 28. 2. 2012

37. Boudreau, K.J., Lakhani, K.R., "How to manage outside innovation", MIT Sloan management review, Vol. 50, No. 4. Summer 2009.

However, the features that make social messaging a success are: unlimited messages and no long distance connection fees. These are features that were monopolized by the telcos³⁸ but are open thanks to the ecosystem³⁹ surrounding smart devices.

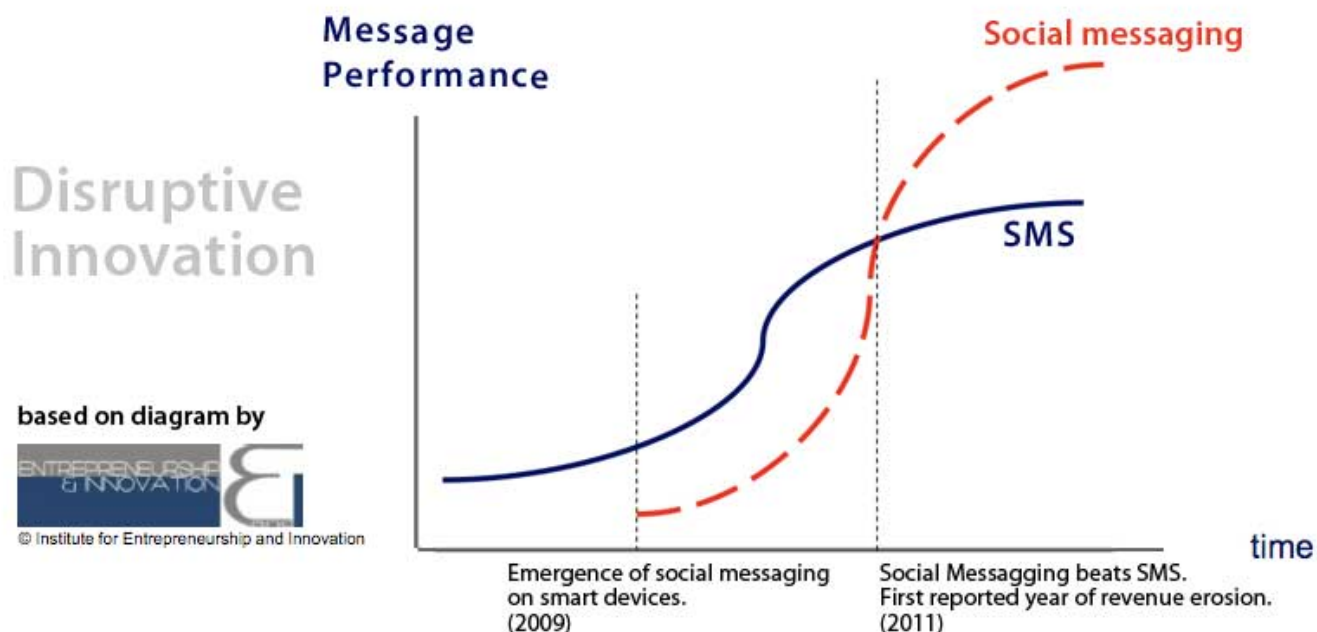


Figure 1: Disruptive innovation for messaging on smart devices.

2.2 Comparison between social messaging and sms.

Messaging is a preferred method for communicating for age groups between 18 and 44 years old⁴⁰, because it is reliable, quick and easy, cheap, discreet, confidential⁴¹. It also a favorite marketing tool for push SMS advertisement⁴².

The conversations exchanged on messaging services may be immediate or may be queued, because other daily tasks are performed in parallel. The spontaneity of messaging is preferred over a telephone call, because it does not need full attention and immediate response. 53% of mobile phone users prefer to write an SMS vs doing a telephone call⁴³.

Table 2: average daily messages per user.

SMS	41.5
Social messaging	200

For SMS value, data from study⁴⁴ with n=2,277 adult users.
For Social messaging value, estimation⁴⁵ based from public data⁴⁶.

38. Gallaugher, j. M. et al. "Revenue streams and digital content providers: an empirical investigation". Information and management journal. Vol. 38. 2001.

39. Adner, R., Kapoor, R., "Value creation in innovation ecosystems: how the structure of technological interdependence affects performance in new technology generations". Strategic management journal. Vol. 31. 2010.

40. Lane, W., Manner, C. "The impact of personality traits on smartphone ownership and use", International journal of business and social science. Vol 2. No. 17. 2011.

41. Michael, A., Slater, B., "Mobile Marketing. Achieving competitive advantage through wireless technology", Butterworth-Heinemann-Elsevier, 2006.

42. Kaplan, A.M."If you love something, let it go mobile: Mobile marketing and mobile social media 4x4". Business Horizons. Vol 55. 2012.

43. Exact Target Research "Messaging Behaviours, Preferences and Personas" Exact Target Research and the Ball State University. Consulted on the 29th of July 2012 at http://email.exacttarget.com/uploadedFiles/Resources/Whitepapers/ExactTarget_Personas_Whitepaper.pdf

44. The Pew Research Center's Internet & American Life Project, 2011, <http://pewinternet.org/Reports/2011/Cell-Phone-Texting-2011/Main-Report.aspx>

45. Estimation of 200 average daily messages, from calculating 2 billion daily messages between 10 million users.

The characteristics of social messaging promotes that users write more because it allows to communicate with their personal network⁴⁷ a wide circle of friends and family members in a cheap and effective way⁴⁸. In table 2 are compared the averages of daily messages between SMS and social messaging, showing 4 times more activity.

The performance improvement of social messaging compared to that of the SMS is because of the multimedia capabilities that are inherent to smart devices, in specific, the ability to share user-generated⁴⁹ content into messages. These differences can be observed in figure 2.



Figure 2: SMS on a cellular phone, left side. Social Messaging on a smartphone, right side.

Users also share links to videos, created by them or by somebody else, then they comment about it within their messages or on external social networks. Figure 3 shows a YouTube video of the Tsunami in Japan on March 2011. This video was created by a user and shared via social networks immediately after the event happened. Thanks to messages in social networks the video was watched by 2.6 million viewers in a few hours from users all around the world.

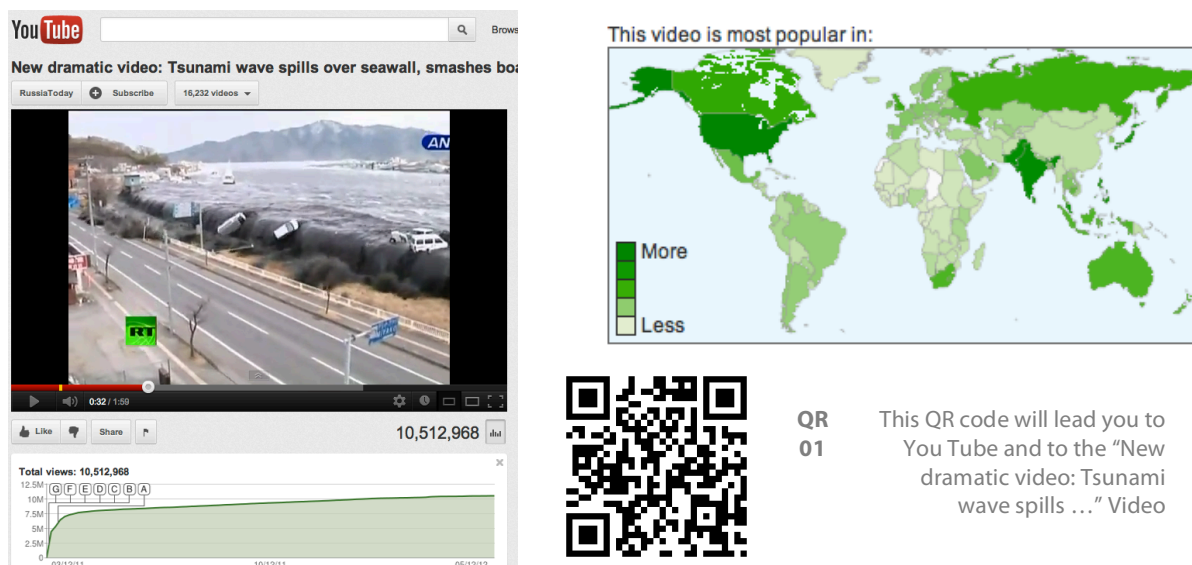


Figure 3: You tube video with 2.6 million views in a few hours.

46. Financial Times Deutschland. "SMS-Ersatz: Die mysteriöse Story von WhatsApp", consulted on the 28th of April 2012 at <http://www.ftd.de/it-medien/it-telekommunikation:/sms-ersatz-die-mysterioese-story-von-whatsapp/70027568.html>

47. McCarty, C., Bernard, H., Killworth, P. Shelley, G., and Johnsen, E. "Eliciting representative samples of personal networks". Social Networks International Journal of Structural Analysis, Volume19, 1997.

48. Gibson, L., Moncur, W., et. al. "Designing social networking sites for older adults". Focus, Vol. 44. 2010

49. Parent, K., Plangger, K., Bal, A. "The new WTP: Willingness to participate". Business horizons, Vol. 54. 2011

You-Tube is the most influential⁵⁰ video portal, with a year-over-year growth in audience⁵¹ of 51.2%. The demographic profile of this audience is between 25 and 49 years old and not by teenagers, as most people think. Altogether online activities on smart devices represent a significant amount of daily time, presented in table 3.

Table 3: daily time devoted to activities on smart devices.

Apps ⁵²	80 Minutes
Internet ^{53 54}	77 Min.
Mail ⁵⁵	7 Min.
Social networks ⁵⁶	15 Min.
Watching online Videos ⁵⁷	20 Min.

These numbers are a compilation of facts from different studies.

2.3 Revenue streams for SMS, social messaging and social networks.

In social network communication, it is important to serve the user's needs to interact and stay in contact with their personal network⁵⁸ and allow them to share contact with them in order to create customer value⁵⁹.

SMS is commercially available⁶⁰ since 1985 and is offered under a "Network Operator Centric Business Model"⁶¹. The operator owns the customer and collects directly the revenue from the customer. The price paid is transactional⁶², meaning that for every message a fee must be paid.

The amount of messages offered per Telecommunication operator could vary, from a couple hundred to a thousand on a monthly plan. However, Telcos are protecting the revenue from the SMS by bundling⁶³ the cost with telephone and data. This strategy integrates the whole service under a single price. It helps to reduce diversity in consumer valuation from each separate element. Internet and mobile services account for 50% of

50. Payne, N., Campbell, C., et al. "Placing a hand in the fire: assessing the impact of a youtube experiential learning project on viral marketing knowledge acquisition". *Journal of marketing education*. Vol 33, No. 2. 2011

51. Deloitte. "Deloitte, State of the media democracy survey, sixth edition" Deloitte 2011. Consulted on the 19th of September at <http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Industries/TMT/uk-tmt-mediademocracy-interactive.pdf>

52. Ad Mob "AdMob Mobile Metrics Highlights", based on 963 respondents. <http://metrics.admob.com>

53. Nie, N. H., Erbring, L. "Internet and mass media: a preliminary report". *IT & society*, Vol 1. No.2. 2002.

54. Com Score Data Mine. "Monthly average hours spent online per U.S. visitor in 2010", consulted the 21st of September 2012 at <http://www.comscoredatamine.com/2011/01/average-time-spent-online-per-u-s-visitor-in-2010/>

55. Murphy, M., Meeker, M. "Top 10 Mobile Trends". 2011. Available from KPCB.com

56. CNN "CNN, Smartphones, not computers, drive most Facebook use", CNN.com, May 8 2012, <http://edition.cnn.com/2012/05/08/tech/social-media/facebook-mobile-report/index.html>

57. The Nielsen Company. "Three Screen Report, Q1 2010" The Nielsen Company, 2010

58. McCarty, C., Bernard, H., Killworth, P., Shelley, G., and Johnsen, E. "Eliciting representative samples of personal networks". *Social Networks International Journal of Structural Analysis*, Volume 19, 1997.

59. Johnson, M. W., Christensen, C. M. "Reinventing your business model". *Harvard business review*, December 2008

60. Wikipedia, "Short message service", available at http://en.wikipedia.org/wiki/Short_Message_Service#cite_note-GSM_28.2F85-2

61. Bowman, H., "Mobile service innovation and business models". Springer-Verlag Berlin Heidelberg. 2008

62. Chakravarty, A. K., Werner, A. S., "Telcom service provider portal: Revenue sharing and outsourcing", *European Journal of Operational Research*, Vol 215. 2011

63. Jonnalagedda, S., "Revenue generation in the information era: Opportunities and challenges". *IIMB Management Review*, Vol 23. 2011

the revenue drivers⁶⁴ for the Telecommunication industry. In 2010 total global revenue was \$1.5 trillion USD.

Before the launch of social messaging, there was a lack of freed⁶⁵ messaging alternatives that enabled the telecommunication providers to hold a monopoly⁶⁶. A compilation of the revenue streams for SMS and social messaging competitors is presented in table 4.

Table 4: Revenue streams for SMS, social messaging and social networks

	Revenue from user's transaction	Advertisement	Membership Fee
SMS	Yes bundled	SMS marketing	no
WhatsApp	No	no	yes
Blackberry messenger	Yes bundled.	no	no
Skype	Free / premium yes	no	No
Facebook	no	yes	No
You Tube	no	yes	no

Another kind of revenue stream is referred as Freemium⁶⁷, for example used by Skype who was founded in 2003. A video messaging service that could reach users without paying for long distance costs. Initially was only available for PCs, now it is available on smart devices. They offer a free unlimited service and a premium service for international telephone calls and SMS at very low rates.

Skype started an IPO process in march of 2011 and therefore made their earnings and key figures available⁶⁸ for 2010. Registered users are 663 million, users paying premium features amounted 8.8 million users, which represents a 1.33% of all users and contribute with 860 million USD of revenue.

The main global competitor of the SMS at the moment is WhatsApp. It was launched in July 2009. The 2 founders, former employees at Yahoo, wanted to develop a clean service without advertisement, as a result from their working experience with cluttered advertisement at Yahoo .

WhatsApp is available only for smartphones and users have to pay an annual membership fee of \$0.99 USD. Perceived value is related to the expectation that a fee-based service would be better than a free service⁶⁹.

WhatsApp is still a privately owned company. In early 2012, Sequoia Capital, also investors in Yahoo, invested \$8 Mio USD¹⁴. At the moment no official data is available for users or

64. Chakravarty, A. K., Werner, A. S., "Telcom service provider portal: Revenue sharing and outsourcing", European Journal of Operational Research, Vol 215. 2011

65. Ye, L.R., Zhang, Y., et.al., "Fee-based online services: exploring consumers' willingness to pay", Journal of International Technology and Information Management. Vol. 13 Num 2, 2004.

66. Schumpeter, Joseph A., "Capitalism, socialism and democracy" 3rd edition. Harper Collins, 1950.

67. Osterwalder, A., Pigneur, Y., "Business Model Generation". Pp. 30-33. John Wiley & Sons, Inc. 2010

68. Techcrunch.com "Skype revenue up to 20 percent to \$860M in 2010", consulted on the 21st of September 2012 available at <http://techcrunch.com/2011/03/07/skype-revenue-up-20-percent-to-860m-in-2010-paid-users-up-19-percent/>

69. Ye, L.R., Zhang, Y., et.al., "Fee-based online services: exploring consumers' willingness to pay", Journal of International Technology and Information Management. Vol. 13 Num 2, 2004.

revenue. However an analysis from the Financial Times estimate more than 10 million⁷⁰ users.

Facebook was founded in 2004 and You-Tube in 2005, both examples of social networks who based their revenue stream mostly on advertisement⁷¹. There are no fees for membership or for transactions.

Online advertisement and on social networks is a cost efficient alternative with higher levels of efficiency than with other traditional media⁷². For the first quarter of 2012, Facebook's revenue from advertisement⁷³ amounted \$992 million USD and as mentioned at the beginning of this thesis, this revenue comes solely from users accessing through a PC. The amount of PC users are represented in graphic 4 as the lower half of the graphic.

Thanks to available historic data, we can see a growing trend of total users who actively participate during any specific month. They are referred as total monthly average users and in the first quarter of 2010 were 482 million growing up to 954 million on Q2 2012. A growth is also perceived for the users who access with a smart device, represented by the upper half of the graphic 4, they are referred as mobile monthly average users. Their number keeps growing but there is no advertising model for smart devices to capture revenue from their activities on smart devices.

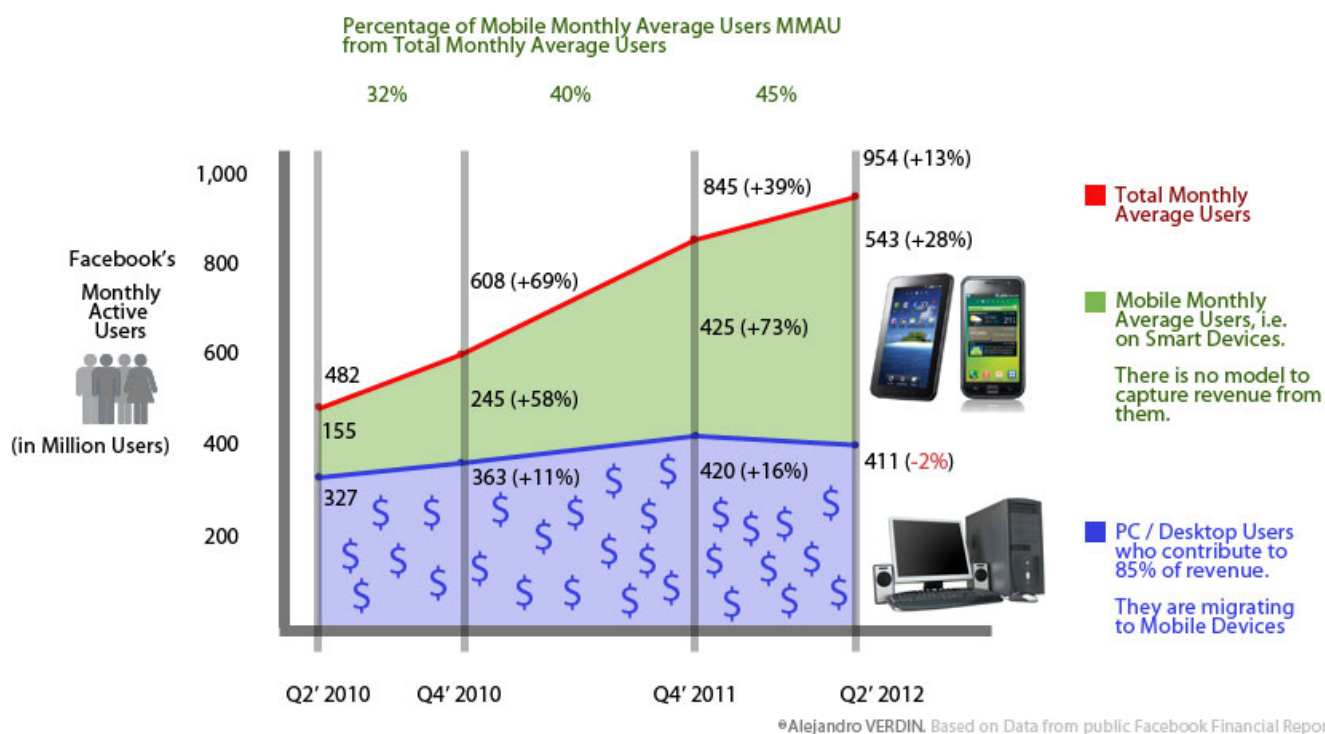


Figure 4: Distribution of Facebook monthly active users.
Key figures based on public financial reports from Facebook.

70. Financial Times "WhatsApp users get the message", FT.com, Bradshaw Tim, November 14, 2011.

<http://www.ft.com/intl/cms/s/2/30fd99a2-0c60-11e1-88c6-00144feabdc0.html#axzz1uMwX867Y>

71. Enders, A., Hungenberg, H., et. al., "The long tail of social networking. Revenue models of social networking sites". European Management Journal, Vol. 26. 2008.

72. Kaplan, A. M., Haenlein, M. "Users of the world, unite! The challenges and opportunities of social media". Business horizons. Vol 53. Pp. 59-68. 2010

73. Facebook Inc. "Facebook reports second quarter 2012 results", consulted on the 12th of September 2012 at <http://investor.fb.com/releasedetail.cfm?ReleaseID=695976>

Advertisement is mostly accepted by users as long as the access to the social network stays free of charge.⁷⁴ In the case of social messaging it combines also the revenue stream from annual membership fee. To follow the main theoretical question of this research, there is the need to analyze the elements of online advertisement and other social messaging activities that drive attention to users.

2.4 Advertisement on social network context.

Product placement and advertisement on social network context should result in a balanced value exchange between users and the promoted brand⁷⁵. The common practice is a banner that is placed around the content that the user is paying attention or a pop-up that abruptly places itself in front.

Such abrupt interference during the ongoing cognitive process of a user is defined as intrusiveness⁷⁶. Intrusiveness may cause irritation and avoidance which could end in rejection of the advertisement⁷⁷. The nature of smart devices, in specific the reduced size of the screen, may promote a higher degree of intrusiveness and the negative effects on the acceptance of advertisement.

Social context⁷⁸, a practice developed by facebook, has improved ad acceptance from those users who access via a personal computer. The concept, showed in figure5, integrates reference from members of the user's personal network who have observed the same advertisement and have shared a proof of their observation. It works similar like word of mouth⁷⁹ recommendation and helps for better diffusion⁸⁰ and a relevant⁸¹ ad.

74. Hadija, Z., Barnes, S. B., Hair, N. "Why we ignore social networking advertising" Qualitative Market research: an international journal. Vol 15, No. 1. 2012.

75. Solis, B. "The mobile Marketing Value Exchange". www.briansolis.com Consulted on the 14th of march 2012.

76. Li, H., Edwards, S. M., Lee, J. "Measuring the intrusiveness of advertisements: scale development and validation" Journal of advertising. Vol 31, No. 2. 2002

77. Speck, P.S., Elliot, M.T. "Predictors of advertising avoidance in print and broadcast media" Journal of advertising. Vol. 26, No. 3. 1997

78. United States Securities and Exchange Commission, Registration Statement on Form S-1 for Facebook Inc. Consulted on the 2nd of February 2012 at <http://sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm>

79. Bass, F. M., "Comments on A new Product Growth for Model Consumer Durables". Management Science, Volume 50, Num 12, 2004.

80. Martignoni, R. A., "Evaluation of the business model for mobile data services: an agent-based simulation approach" Dissertation no. 3595, University of St. Gallen. Difo-Druck Gmbh, Bamberg 2009.

Advertising Example—without Social Context*Advertising Example—with Social Context*

Figure 5: Samples of an advertisement with social context.
Advertisement used on the social network Facebook

A study from Nielsen on 79 advertising campaigns demonstrated a 50% increase in ad recall for Facebook ads with social context as compared to those that did not have social context.

There is a very interesting case of online advertisement that integrated characteristics of social context and invasiveness with remarkable revenue results for the advertised brand. The award winning Wieden+Kennedy advertisement campaign for “Old Spice”⁸².

A two part campaign with a few dozen You-Tube videos were posted on several social networks with social messaging capabilities. The videos attracted more than 6 million views only 24 hours after campaign launch plus hundred of thousands message participations from the viewers. The campaign improved sales growth for Old Spice by 107% after 4 weeks of campaign deployment²⁵ in July 2010. Snapshots from the videos are presented in figure 6.

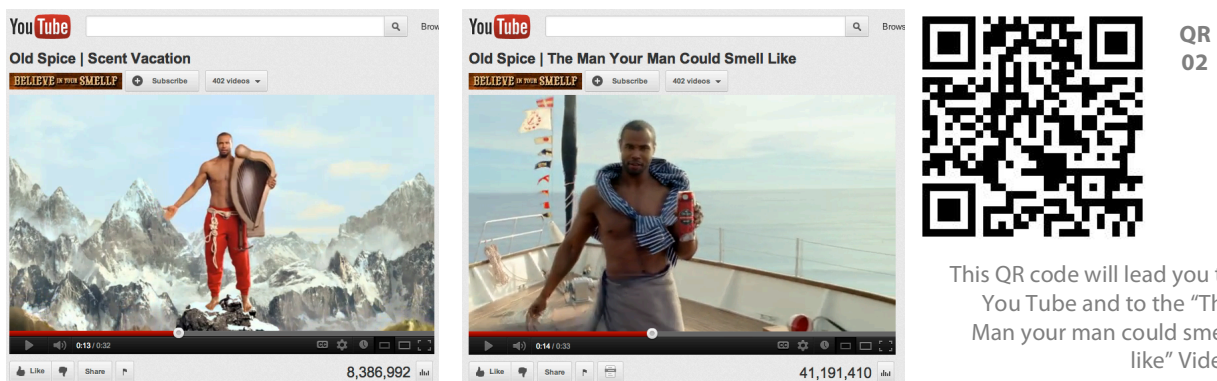


Figure 6: snapshots of You-Tube videos from Old spice campaign.

82. Mills, Adam; Kong, Novianty, Ghavami, Kim, Fraser. “Old Spice: The Man Your Man Could Smell Like” Rotterdam School of Management. Supervised by Professor Leyland Pitt.

It was not only a video campaign, there was a dialog, in a massive social network way, It had characteristics of social messaging because there were personalized answers from the video character to selected text messages from active brand followers⁸³

This campaign differentiated itself from the one channel communication of traditional tv where only the TV speaks and users you cannot give feedback. The message answers could be read by everybody, a fundamental characteristic of social networking improving awareness⁸⁴ and customer acceptance of the advertisement.

The value drivers⁸⁵ created for this campaign and the participation of this large audience acted like a referencing mechanism, similar to word of mouth propaganda. In this case through a visual mechanism, let's name it, clic-propaganda. The trust in neighbors⁸⁶ from the social network influenced positively the decision for other users to participate⁸⁷ in the campaign.

The costs for the campaign were the creativity provided by the advertisement agency, video production and active human effort for scanning participation on the social networks. No money was paid to facebook, the page is free to setup for everybody, also no payment was made to YouTube to publish all the videos.

The case of Old Spice proves that the mix of social messaging, social network awareness between users and video is a successful way for advertising. There is still the need to integrate these elements of success in an application for smart devices to capture the revenue stream from advertisement on smart devices. According to a report from AOL and Yahoo there is world wide opportunity to capture revenue from advertisement on mobile devices in the amount of \$50 Billion USD⁸⁸. Figure 7 shows the value of the opportunity and the shift from other media to those accessed online due to the portability and permanent connectivity of smart devices.

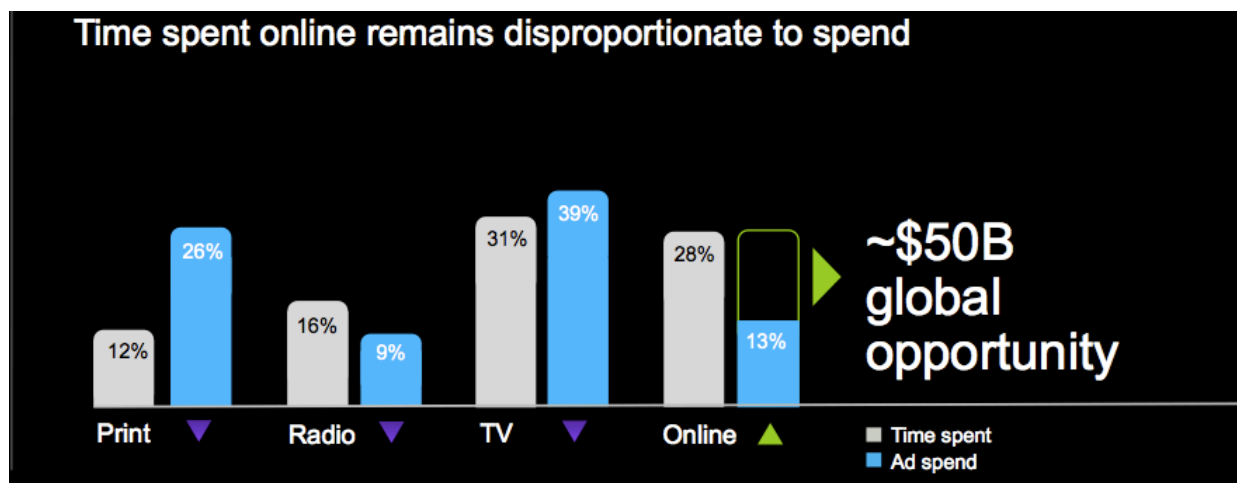


Figure 7: shift of time spent online and value of advertisement opportunity
Estimation from AOL Advertising Report, Investor Day June 16, 2011

The following section will develop graphical design elements and layout for advertisement on smart devices, based on the analysis from this chapter.

83. Fournier, S., Avery, J. "The uninvited brand" Business Horizons, Vol 54. Pp. 193-207. 2011

84. Rogers, E. M., "Diffusion of Innovation". New York. Free Press. 2003.

85. Enders, A., Hungenberg, H., et. al., "The long tail of social networking. Revenue models of social networking sites". European Management Journal, Vol. 26. 2008.

86. Alkemade, F., Castaldi, C., "Strategies for the Diffusion of Innovations on Social Networks", Computational Economics, Vol 25, 2005.

87. Banerjee, A.V. "A simple model of herd behavior" Quarterly Journal of Economics, Vol 107, Issue 3, 1992

⁸⁸ "AOL Advertising Report, Investor Day June 16, 2011" available online.

3. Suggestions for advertisement design on social network context.

An analysis from AOL⁸⁹ suggests how current online advertisement has no appropriate layout to engage user’s attention. It is filled with intrusive visual noise in the form of banners, text ads, information, logos and pop-ups.

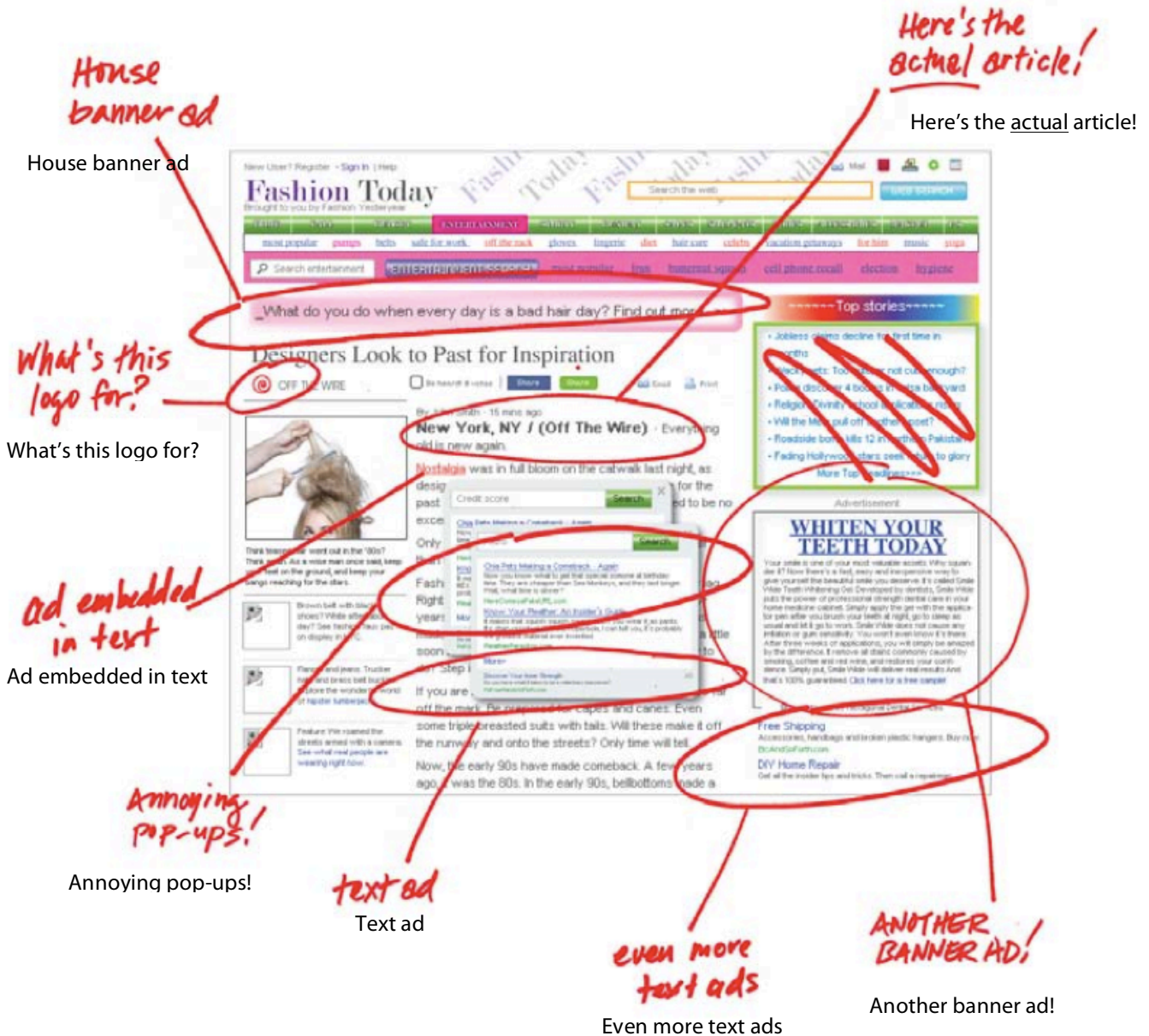


Figure 8: Analysis of layout on online advertisement.

Users of online social networks are not adverse to advertising, they simply do not notice it⁹⁰ The visual clutter from figure 8 sustains this statement. Users’ attention is caught easier by user generated content than by online advertisement.

⁸⁹ "AOL Advertising Report, Investor Day June 16, 2011"

⁹⁰ Hadija, Z., Barnes, S. B., Hair, N. "Why we ignore social networking advertising". Qualitative market research international journal. Vol 15. No. 1. Pp. 19-32. 2012

Design, layout and art contents should be cleaner and more effective. A suggestion is depicted in figure 9.

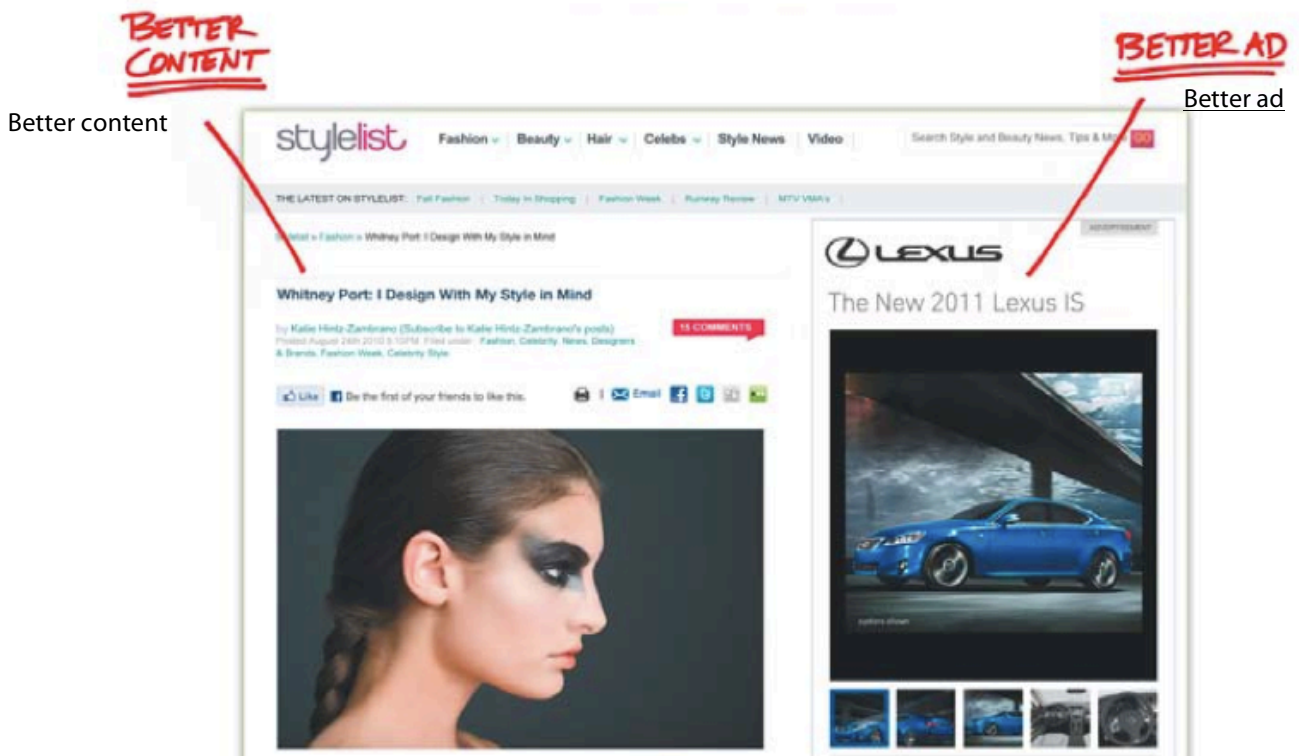


Figure 9: Suggestion for cleaner layout on online advertisement.

An alternative for advertisement on smart devices is Apple’s iAd with banners. It is presented in graphic and outlined with blue color. However this attempt for capturing users’ attention is still very noisy and intrusive.

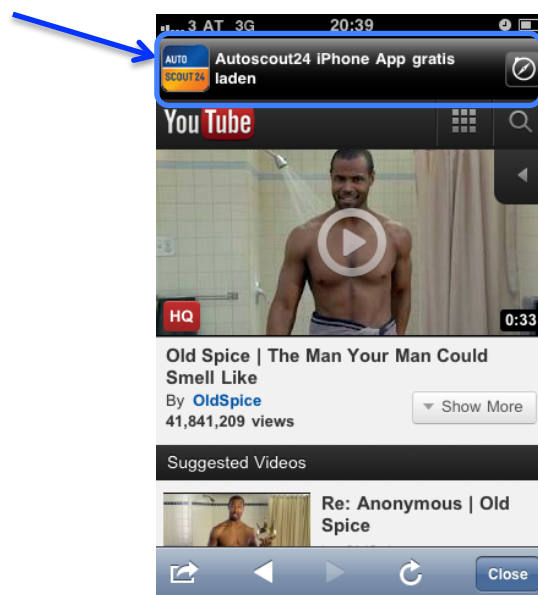


Figure 10: sample of banners on smart devices.

AOL suggests that this kind of element cluttering would never be seen on TV advertisement or film, therefore an alternative for integrating content on smart device

whose multimedia capabilities are able to playback video content, is that any attempt for Mobile Advertisement should be closer to that of awarded TV Spots and Films

My prior knowledge as designer drives me to recommend basic fundamentals of the Bauhaus design school⁹¹ developed between 1919 to 1925 in Weimar, regarding perception of form against background and its combinations with color.

A visual design trend that has won several awards is the combination of animated graphic elements, in Motion. It is known as Motion Graphics. An example of an award winning clip is shown in figure 11.

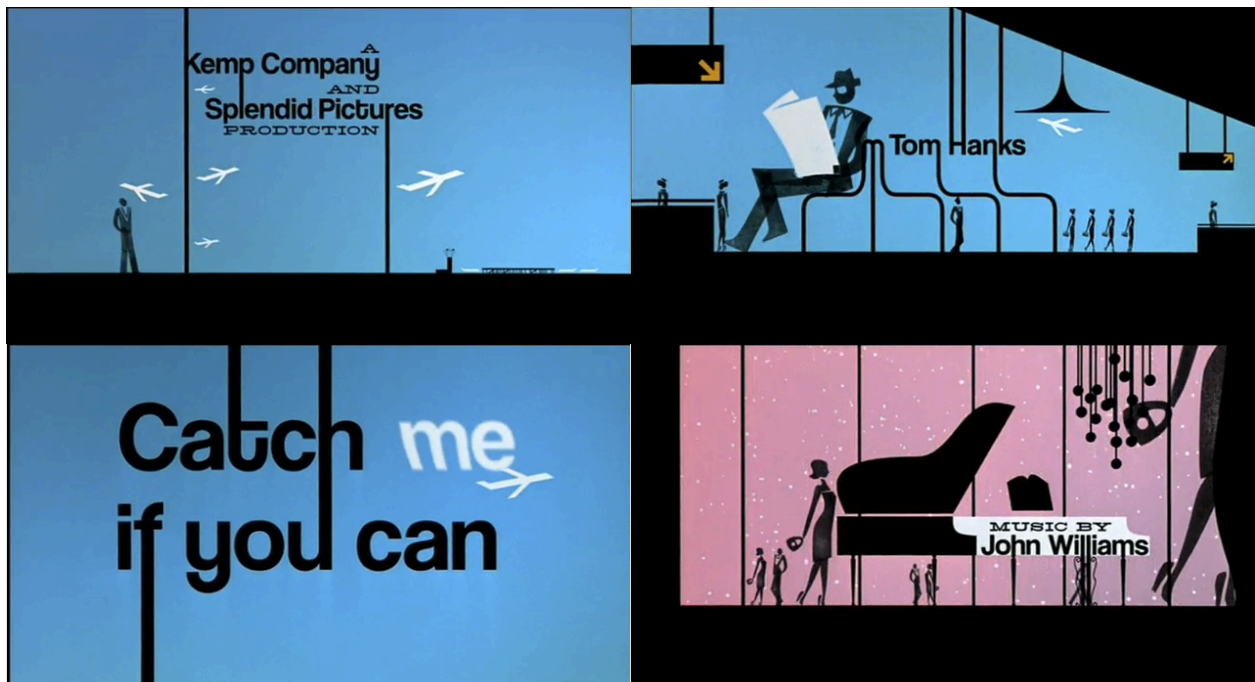
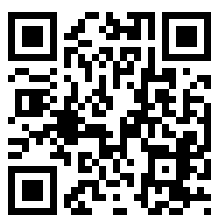


Figure 11: example of motion graphics.

Samples from Opening Titles for Award Winner Film "Catch me if you can"⁹²



QR
03

Link to You Tube Video Excerpt from Opening Titles from the Movie "Catch me if you can.

3.1 Argumentation to integrate advertisement into social messaging.

The recommendations and results from this research may set ground for the dominant design⁹³, which will set features that competitors and innovators must adhere for smart devices advertisement platforms, if they hope to gain significant market share⁹⁴.

91. Itten, J. "Design and Form: The Basic Course at the Bauhaus and Later " John Wiley and Sons, Revised Edition (1992)

92. DreamWorks SKG. Screenshots from the 2002 Movie "Catch me if you can".

<http://www.imdb.com/title/tt0264464/awards> consulted on the 1st of July 2012

93. Abernathy, W.J., Utterback J.M. "Patterns of Innovation in Technology", Technology Review (1978)

94. Utterback, J. M. "Mastering the Dynamics of Innovation", Harvard Business School (1994)

A better solution should integrate the advertisement into the message instead of placing intrusive ads on top of user's cognitive process. The art central concepts from a traditional print advertisement campaign are cleaner in the layout of their elements. Therefore I suggest to use elements from current advertisement campaign to create a graphic theme for the social messaging service.

A dynamic and interactive message, with the support of the graphic theme, will induce a better acceptance. With different themes available, users will be able to personalize the creative process of their messages, with a brand with whom they identify themselves. The final feeling which wants to be achieved is the sensation of a self-designed message. Franke, Schreier and Kaiser prove that this effect contributes to a higher willingness to pay⁹⁵. The graphic theme for the social messaging with integrated advertisement will be named Messaging Flavor.

Apart from integrating advertisement, another purpose of the Messaging Flavor is to differentiate users from others, a human need within social systems. The identification with the messaging flavor will depend on specific universal characteristic, such as lifestyle, fashion, visuals, emotions and self identity.⁹⁶

For this reason, the empirical concept testing will be based on a clothing brand, which will help members across age and social groups to identify with the service.

Sample of online advertisement campaign from a clothes retailer, in this case H&M that is presented in figure 12, will be used as basis for the design of the messaging flavor.

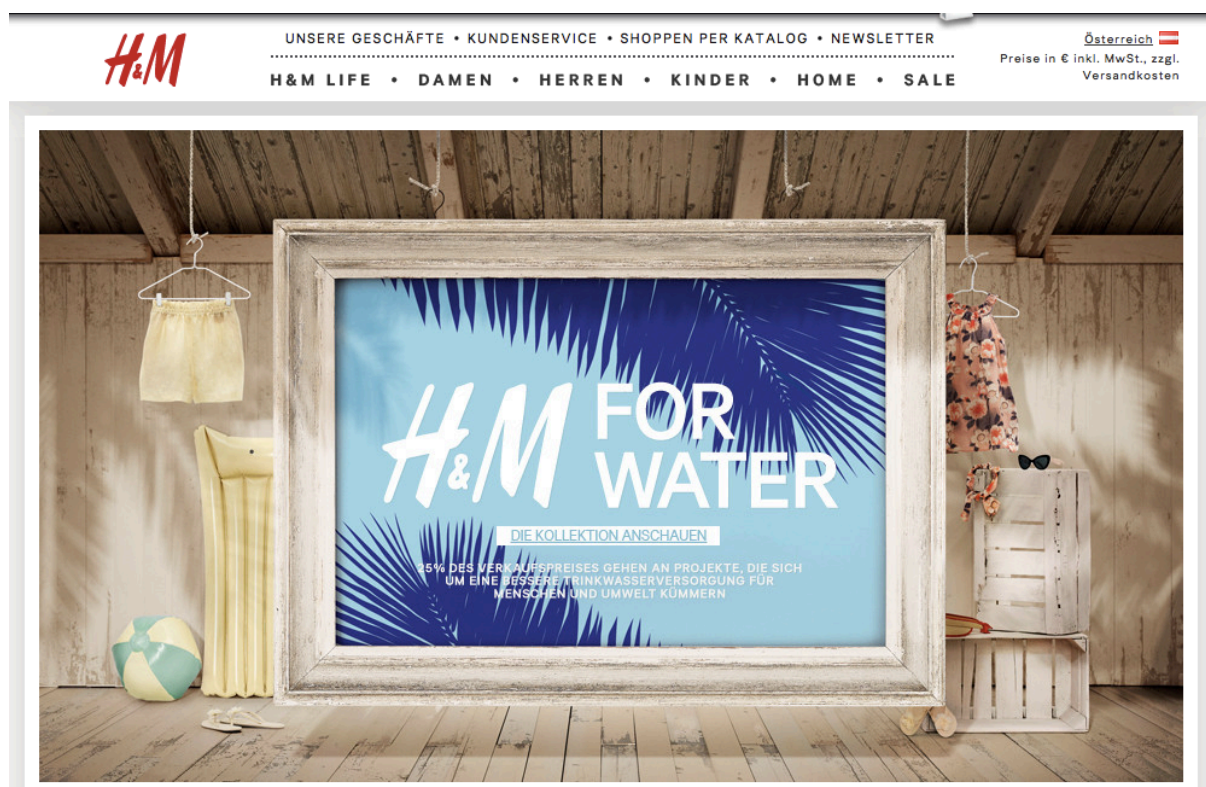


Figure 12: Current advertisement campaign theme, to be integrated into social messaging.

⁹⁵ Franke, N., Schreier, M., Kaiser, U. "The I "Designed it myself" effect in mass customization". Management science. Vol 56. No. 1. Pp 125-140. 2010.

⁹⁶ Silk, A. J., "What is Marketing". Pp. 50, 79. Harvard Business School Press. 2006.

From a text message, an enhanced version will be created, resulting in what I call Enhanced Messaging. It will incorporate attractive text and images in motion with product placement within its graphic design. The following attributes will be incorporated as a result of the current trends and literature analysis.

First assumption: Messages should look like a motion graphics video. Themes will be based on an existing design palette from an advertisement campaign. On one side it will provide the social messaging user with a fresh and hi-quality design. On the other side, this theme enables the possibility of placing a product advertisement into the social messaging cognitive process with a lower degree of invasiveness.

Second assumption: The constant presence of the sponsoring brand will take the form of what will be named a Messaging Flavor Button, which represents the sponsor's graphical theme. This will reinforce the brand presence, thanks to personalization and identifiability. It will also improve perceived quality and enjoyment⁹⁷.

I am assuming that Social Network integration and relevance is important for the users, therefore will be integrated into the service but it will not be tested in the empirical part.

Fourth assumption: Users give for granted the possibility to share their created messages on social networks.

Willingness to pay for social messaging is low, because it is perceived that online services should remain free⁹⁸. However, SMS messages on a portable phones are still paid by users. The combination of both worlds, social messaging and SMS, suggests that a membership price may be paid if the service offers unlimited messages. Payment per transaction i.e. per message, is no longer welcomed by users.

I will test the possibility to capture a revenue stream from the user using WhatsApp fee of 0.99 USD per year as a benchmark. A Free service will also be presented. On the upper pricing side, a price of 3.99 will be presented to users, with the assumption that the service is worth more than a flat text messaging service. The benchmark for this price is the average price of \$3.76 for the top 100 Apps⁹⁹

Fifth assumption: Users are used to pay for messaging on mobile phones and therefore would be willing to pay for an interesting and improved service.

Sixth assumption: Users expect a social messaging service with unrestricted number of messages i.e. unlimited.

3.2. Proposition for integration of advertisement into the graphical elements of messaging.

Advertisement will be tested in 3 different levels: none, moderate and prominent. Table 5 shows the qualities for all the elements where advertisement will take place.

97. Wang, W., Li, H. "Factors influencing mobile services adoption: a brand equity perspective". Internet research journal. Vol 22. No. 2. Pp. 142-179. 2012

98. Ye, Zhang, Nguyen & Chiu. "Fee-Based online services: Exploring Consumers' Willingness To Pay". @004 Volume 13, Number 2. Journal of International Technology and Information Management

99. PC Magazine. "Amazon Appstore more profitable than Android Market?" <http://www.pcmag.com/article2/0,2817,2400499,00.asp> Consulted at PC magazine.com on the 1st of July 2012

Table 5: Levels of advertisement into social messaging

	Flavor Button	During Progress	Design Elements from Sponsor	End of Message
• None				
• Moderate				
• Prominent				

Graphic designed by author.

•The messaging flavor button:

Shown in figure 13, this button will be a permanent element that will suggest graphical elements from the theme and the brand. The brand presence will be visible on top of the flavor button for the moderate and prominent levels.



Figure 13: Brand presence on messaging flavor button

• During progress window:

A progress window will appear for five seconds while the animated social message is being created and sent. Figure 14 shows an example with brand presence for the moderate and prominent levels.



Figure 14: Brand presence during progress window

- Design elements from brand into social messaging:

Product placement will run along with text as part of the Messaging Flavor. Figure 15 show how these integrated graphical elements align more with the technique of motion graphics. Brand elements will be present only for the prominent level.



Figure 15: Brand elements integrated in social messaging

Eighth assumption: The presence of carefully integrated graphical elements, i.e. products, will be a pleasant experience.

- End of each message with brand presence and product suggestions:

In figure 16 are presented examples of the brand presence that will appear at the end of each message, already after the users' conversation causing the minimum amount of intrusiveness. This is common to all levels of brand presence, to secure a revenue stream from advertisement.



Figure 16: Suggestion at the end of message of products with price.

3.3. Complexity of text and animation for social messaging.

The techniques employed in motion graphics for giving life and motion to text are two: Flat graphics, referred as 2D bi-dimensional and volumetric geometries referred as 3D with depth and volume. Figures 17 and 18 present details for each case.



Figure 17: Text sample as flat graphic referred as 2D

A similar effort in creativity is required for both techniques, however the computational effort required for 3D is ten times more for what 2D needs. The visual benefits of 3D are that camera movements and elements have a more dynamic look.



Figure 18:Text sample as volumetric geometry referred as 3D

The 2D technique will be referred in this research as moderated graphics. The 3D technique will be referred as sophisticated graphics

Ninth assumption: Users will find sophisticated graphics more attractive than moderated graphics.

3.4. Visual example of enhanced social messaging.



Figure 19: example of how enhanced social messaging looks like.



QR
04

This QR Code will take you to the Video "MSG_Tweezy_Level3"

Shown in figure 19, a schematic description of how the interface of enhanced social messaging looks. A theme, in specific a messaging flavor is currently activated, in this case Renault. All messages will use this design theme. Text is typed and sent, then a progress bar will run until the enhanced message is created. Access to the video sample is accessible via the QR 4.

3.5. Human presence in video to present sponsoring brand.

Based on the analysis made by the students from the university of Rotterdam, supervised by Prof. Leyland Pitt, on Old Spice advertisement campaign, I will integrate a similar character with whom audiences can identify. He or she will address to the user via a video and will present the sponsoring brand. I will name this character as the presenter, as presented in figure 20.



Figure 20: Speaker presenting the graphic sponsoring theme.

The presenter will offer a new graphic sponsored theme when it is available. The name for this theme is messaging flavor. The presenter will have different and fresh look every time: a formal or an eccentric scenario, clothes, accent, level of formality or coolness.

It is also contemplated that celebrities, as it happened in Old Spice Responses, will appear as presenters. They could be from several human disciplines: sport, music, literature, film, TV, NGOs, education, politicians, etc. A few suggestions are presented in figure 21.

Eighth assumption: The presence of a person, in an awkward or fantastic context, who talks directly to the user, will increase the acceptance of a sponsor and therefore of the sponsored social messaging flavor.

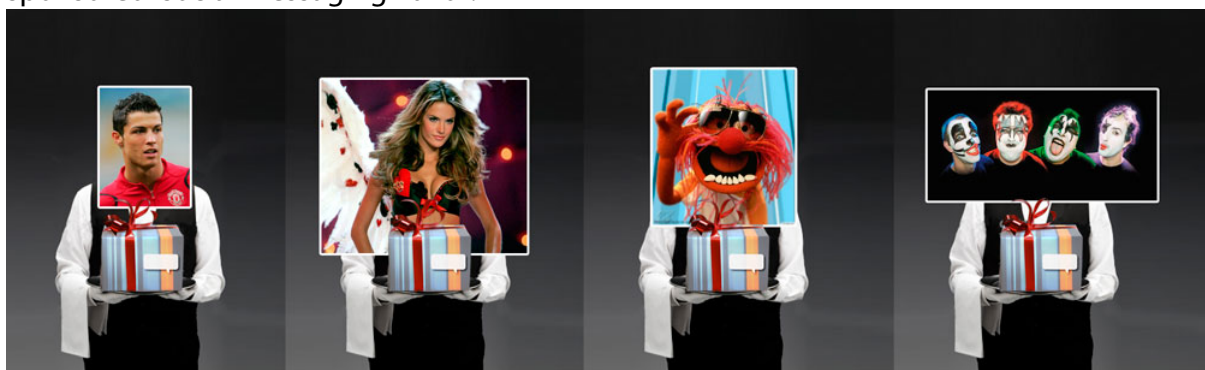


Figure 21: Alternatives for presenter

4. Specification of research model.

There are several models to measure the preferences of users attributes for products and services. In the following lines some of these models will be briefly discussed.

. Empathic design.

The aim of empathic design¹⁰⁰ is to understand intangible needs and requirements that are hard to express. For intangible attributes it is complicated for the user to formulate his needs, however with an observation of his activities it is possible to identify problematics and suggest solutions.

.Kano model.

It seeks to answer which product attributes generate customer satisfaction. The approach for the Kano model¹⁰¹ is by classifying the attributes into 3 classes: Excitement attributes, performance attributes and basic attributes. Users are presented with questions that refer to specific attributes on the premise of an attribute being present or not.

.Conjoint analysis.

The goal is to find out which product attributes generate which value for customers. It is possible to find out specific values for the importance and the ideal parameter of attributes. The conjoint analysis¹⁰² assumes that the value of a product is the sum of the individual value of attributes. An advantage is that a price value can be presented next to attributes and find out specific willingness to pay.

A concept testing is helpful for estimating the reaction from consumers regarding a product or service, even before they actually use it¹⁰³. This technique will be used to run a survey to collect the value for selected attributes from potential users. The aim is to estimate user reactions for the designed service before committing any significant financial resources into its development.

Conjoint analysis will be the model of choice for conducting the experimental research, because it will provide specific values for each of the evaluated attributes and an estimation of the whole perceived value, in monetary values, of the whole social messaging service.

4.1. Conjoint Analysis.

To evaluate the utility levels from the attributes to be included in the enhanced messaging concept, an empirical test will be executed as a choice based¹⁰⁴ conjoint Analysis. In a choice based experiment, a service is presented as a set of combination of attribute levels, each with different level of values. This task is repeated until the combination of sets to cover all possible alternatives of attributes and levels based on the respondents' preferences. It allows to make predictions about purchasing behavior.

100. Leonard, D., Rayport, J. F., "Spark innovation through empathic design" Harvard business review. Vol. 75, No. 6. 1997

101. Berger et al., "Kano's method for understanding customer defined quality". Center for quality management journal, Vol 4. 1993.

102. Backhaus, K., Erichson, B., Plinke, W., & Weiber R. (1994). Kapitel 9: Conjoint-Measurement. In K. Backhaus et al. (Hrsg.), *Multivariate Analysemethoden. Eine anwendungsorientierte Vertiefung* (7. Aufl., S. 498-554). Berlin: Springer

103. Lodish, L. M., Morgan, H.I., Archaibeau, S., "Marketing that works". Pp 45-57. Prentice Hall. 2007

104. Bliemer, M., Rose, J. (2010). "Experimental design influences on stated choice outputs: An empirical study in air travel choice. " *Transportation Research Part A* (pages 63-79) Science Direct, Elsevier.

From the assumptions presented in the previous chapter, there are several attributes which are to be evaluated. They are: 1. brand graphical elements in messages, 2. animated elements in messages, 3. social network connectivity, 4. price, 5. unlimited messages, 6. complexity of motion for text & graphics, 7. presenter to offer the sponsored graphic theme.

The total design of the experiment stimuli is to expose the user to an online survey that first will present the concept of social enhanced messaging and then will expose the user to sets of stimuli with combinations of attributes and their different levels. Regarding the presence of a presenter, respondents will be exposed to two choice question, to find out if this attribute increases the perceived value of the service.

One of the principles of choice based conjoint analysis is to expose the user to the minimum amount of attributes, only those with the higher amount of uncertainty. Therefore, these three were chosen:

To reduce complexity for the Conjoint Analysis only 3 Attributes, which carry enough uncertainty will be evaluated: 1.Price, 2. level of brand and product placement, 3. complexity of motion for text and graphics. The levels for each attribute are described in table 6.

Table 6: Attributes and levels to be tested with choice-based CA.

by DB	Levels			
	1	2	3	
Attributes	1 Transactional Cost	Free	0.99 unlimited per Year	3.99 unlimited per Year
	2 Brand Product Placement	Prominent Advertisement	Moderate Advertisement	NO Advertisement
	3 Text in Motion	Moderated Graphics (meaning just 2D graphics)	Sofisticated Graphics (including 3D geometry)	-

Attribute 1: Price

- (1.x.x) Level 1: Free
- (2.x.x) Level 2: \$0.99 or €0.99
- (3.x.x) Level 3: \$3.99 or €3.99

Attribute 2: Brand product placement

- (x.1.x) Level 1: None
- (x.2.x) Level 2: Moderated
- (x.3.x) Level 3: Prominent

Attribute 3: Text and graphics in motion

- (x.x.1) Level 1: Moderated /2D Graphics
- (x.x.2) Level 2: Prominent /3D Graphics

4.2. Design of Choice Based Conjoint Analysis

A bayesian efficient adaptive algorithm for choiced-based conjoint analysis is applied, as suggested by Roselinde Kessels¹⁰⁵ for a 3x3x2. Sets of the 3 Attributes with its own levels result in 15 Stimuli, presented in table 7

¹⁰⁵ Kessels, Roselinde; et al. "An efficient algorithm for constructing Bayesian optimal choice designs. Department of Decision Sciences and Information Management. University Leuven

Table 7: Design of 15 stimuli based on adaptive algorithm method.

	Transactional Cost	Brand Placement	Text Motion
Light Blue	Free	Moderate Ads	3D
	Free	No Ads	3D
	Free	No Ads	2D
	Free	Prominent Ads	2D
	Free	Moderate Ads	2D
Medium Blue	0.99 Year	Prominent Ads	2D
	0.99 Year	No Ads	3D
	0.99 Year	Moderate Ads	2D
	0.99 Year	Moderate Ads	3D
	0.99 Year	Prominent Ads	3D
Dark Blue	3.99 Year	Prominent Ads	2D
	3.99 Year	No Ads	3D
	3.99 Year	Prominent Ads	3D
	3.99 Year	Moderate Ads	2D
	3.99 Year	Moderate Ads	3D

Table with the values for this research, based on Kessels adaptive algorithm method.

4.3. Survey Design

Stimuli for the conjoint analysis will be presented as a video simulation as presented in figure 22. Such simulation is as close to what real service will be, in order to obtain the most accurate impression from the user¹⁰⁶.



Figure 22: Video simulation of stimuli.

Please refer to the annex 9.1 to access the QR codes and watch each video simulation for each combination of level of attributes.

¹⁰⁶ Lodish, L. M., Morgan, H.I., Arachbeau, S., "Marketing that works". Pp 45-57. Prentice Hall. 2007

From the Kessels article, the design set chosen was a 3x3x2 attributes on a 12 choice set, presenting two stimuli in each set. Table 8 shows the replacement of the numerical levels of attributes with my descriptive levels.

Table 8: Attributes 3x3x2 on 12 sets with double stimuli.

Choice Set Qty. Stimulus	Alt	Attribute				\mathcal{D}_B			
		1 (with 3)	2 (with 3)	3 (with 2)		Choice set	Alt	Attr	
1	I	Free	Moderate Ads	Sophist. Graphics	1	I	1	2	2
	II	0.99 / Year	Prominent Ads	Moder. Graphics			2	1	1
2	I	3.99 / Year	Prominent Ads	Moder. Graphics	2	I	3	1	1
	II	0.99 / Year	No Ads	Sophist. Graphics			2	3	2
3	I	0.99 / Year	No Ads	Sophist. Graphics	3	I	2	3	2
	II	Free	Moderate Ads	Sophist. Graphics			1	2	2
4	I	3.99 / Year	No Ads	Sophist. Graphics	4	I	3	3	2
	II	0.99 / Year	Moderate Ads	Moder. Graphics			2	2	1
5	I	0.99 / Year	Moderate Ads	Sophist. Graphics	5	I	2	2	2
	II	Free	No Ads	Sophist. Graphics			1	3	2
6	I	Free	Moderate Ads	Sophist. Graphics	6	I	1	2	2
	II	3.99 / Year	Prominent Ads	Sophist. Graphics			3	1	2
7	I	3.99 / Year	Prominent Ads	Sophist. Graphics	7	I	3	1	2
	II	Free	No Ads	Moder. Graphics			1	3	1
8	I	Free	Moderate Ads	Moder. Graphics	8	I	1	2	1
	II	0.99 / Year	Prominent Ads	Sophist. Graphics			2	1	2
9	I	0.99 / Year	Moderate Ads	Sophist. Graphics	9	I	2	2	2
	II	Free	Prominent Ads	Moder. Graphics			1	1	1
10	I	0.99 / Year	Moderate Ads	Moder. Graphics	10	I	2	2	1
	II	Free	Prominent Ads	Moder. Graphics			1	1	1
11	I	3.99 / Year	Moderate Ads	Moder. Graphics	11	I	3	2	1
	II	0.99 / Year	Prominent Ads	Moder. Graphics			2	1	1
12	I	0.99 / Year	Prominent Ads	Moder. Graphics	12	I	2	1	1
	II	3.99 / Year	Moderate Ads	Sophist. Graphics			3	2	2

4.4. Method of data analysis.

An online survey was deployed to 300 respondents from the United States, Austria, Germany, Mexico. They were also asked to forward the survey to their personal network.

The profile of the respondents was a symmetric amount of male and female, who owned a smart phone or tablet. Their professional status was aimed to reach students above 19 years old and adults of 46 years or older.

The repetitive nature of conjoint analysis and the 15 minutes duration of the survey engaged 78 respondents. However, after cleaning those respondents who dropped out before completing the survey, only 31 answers from 7 different countries were analysed.

Data analysis was executed with XLSTAT¹⁰⁷ statistics package “XLSTAT-Conjoint”.

¹⁰⁷ XLSTAT.com, consulted and downloaded on the 28th of June 2012, <http://www.xlstat.com/en/learning-center/tutorials/choice-based-conjoint-analysis-cbc-with-xlstat-conjoint.html>

5. Discussion of results.

This chapter presents with graphics the findings obtained from the data evaluation collected from the online survey, as well as the results from the Conjoint Analysis, i.e. Utilities and Importance for each Attribute. Subsequently, recommendations will be presented for design of the optimal service. Finally, the shortcomings of the empirical part of this research will be outlined.

5.1. Demographic and geographical origin of answers.

The most representative regions are Austria with 54% from the respondents and The United States with 27%, presented in figure 23. México follows with 7% and Slovakia, Kosovo, Australia, Brazil all with an insignificant 3% representativeness from the sample.

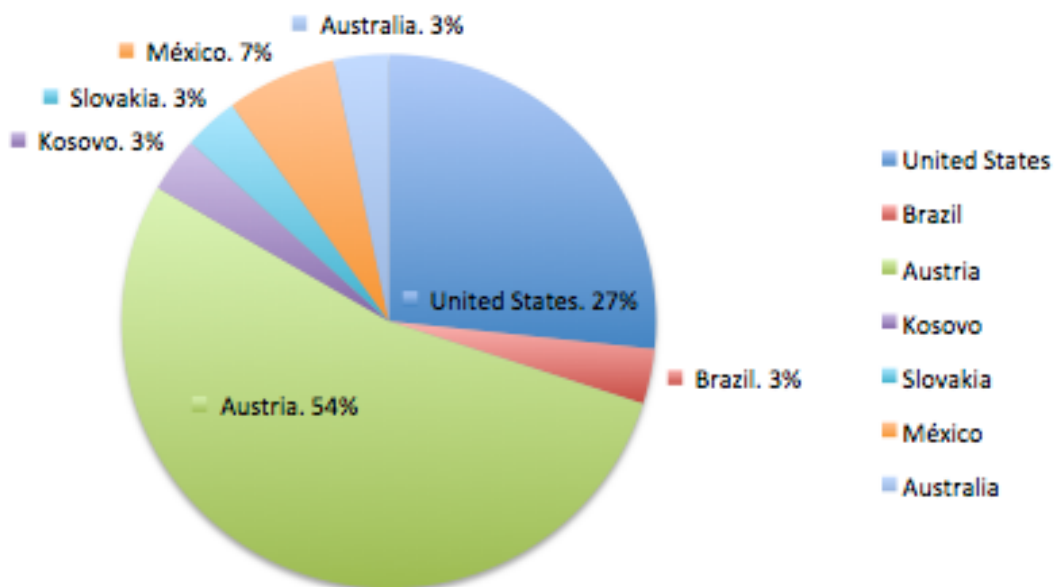


Figure 23: Countries of origin from answers.

The results describing the participants describe their genders, employment status and age ranges.

40 % Female, 60% Male, Gender is fairly balanced, in figure 24.

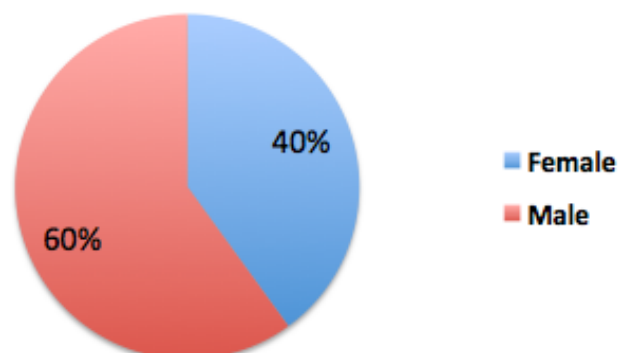


Figure 24: Gender of participants.

The most significant group belongs to 25 to 35 years old, with 50 %. A 19% between 19 and 24 years old. Only 17% belong to the 36 to 45 years old group. And 6% belong to the oldest group, with 45+. Presented in figure 25.

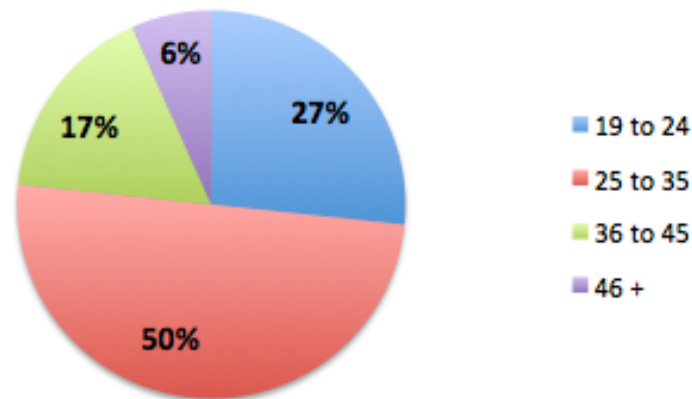


Figure 25: Age range of participants.

Almost three quarters of the sample are employed or self-employed, with 73%, depicted in figure 26.

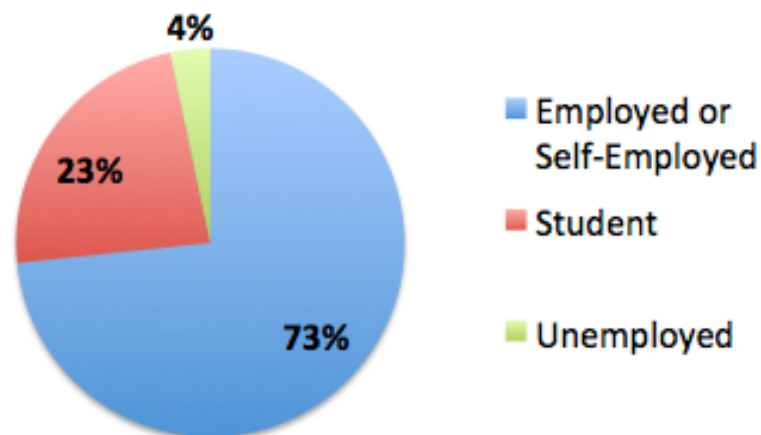


Figure 26: Professional status of participants.

5.3. Results for “The Presenter”

The concept of the presenter, in figure 27, is positively accepted by a 67% from the questioned sample, results presented in figure 28..

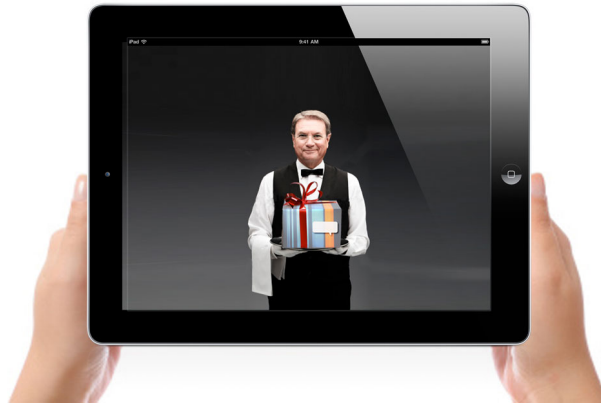


Figure 27: concept of the presenter

Therefore the concept of a person handing out the sponsored flavor is of importance for the users and can be used for delivering advertisement to an audience on smart devices.

A two choice question was presented: Which way would you choose to receive the sponsored messaging flavor?

"Presenter" or Just an Alert?

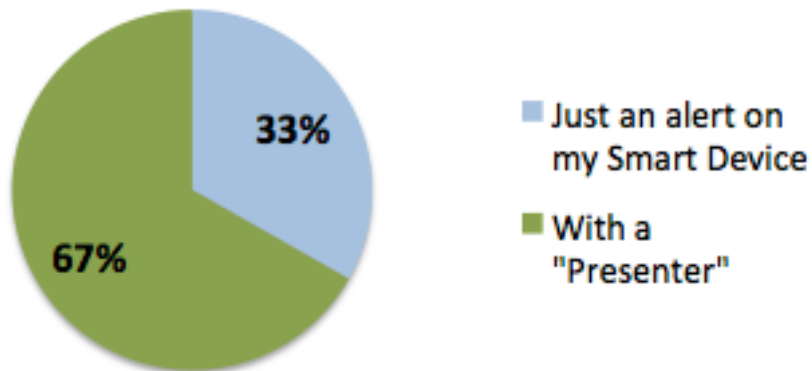


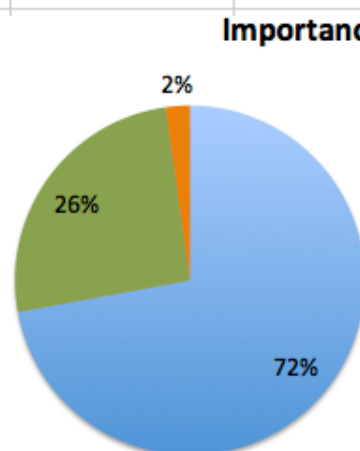
Figure 28: Results for the question relating the presenter.

5.4. Importances and utilities for advertising placement on enhanced social messaging.

As result from the choice-based conjoint analysis and its data processing, table 9 presents the results for Importance of each attribute. The percentage for each attribute will let us know what is important for users.

Table 9: importance values from conjoint analysis

Importances:		
		%
PRICE		72.099
PRESENCE OF SPONSORSHIP		25.677
COMPLEXITY OF TEXT & GRAPHICS		2.223
		100.000



Price is the most important attribute for users. Represents a 72 % of importance. The second is the presence of sponsorship with 26%. At last the complexity of text and graphics with an insignificant 2%.

For each level of attribute, a resultant utility is described in table 10

Table 10: Utility values from conjoint analysis.

Utilities:			
	Source	Utilities	Std. Dev
PRICE	3.99 Year	-1.394	0.166
	0.99 Year	0.071	0.098
	Free	1.323	0.140
ADVERTISEMENT	No Ads	0.568	0.170
	Moderate Ads	-0.169	0.099
	Prominent Ads	-0.399	0.146
TEXT & GRAPHICS	Moderated	0.042	0.112
	Sophisticated	-0.042	0.112

Results for price attribute are presented on figure29. Users have a negative perception about the higher price of 3.99, with a utility value of -1.394. Preference is inclined for a free service with a utility of +1.323.



Figure 29: Utilities for price attribute.

Advertisement integrated into the social messaging service has a mild negative effect. With utility values of -0.169 for moderate ads and -0.399 for prominent ads. The absence of advertisement is still preferred with a utility value of 0.568. Values are presented in figure 30.

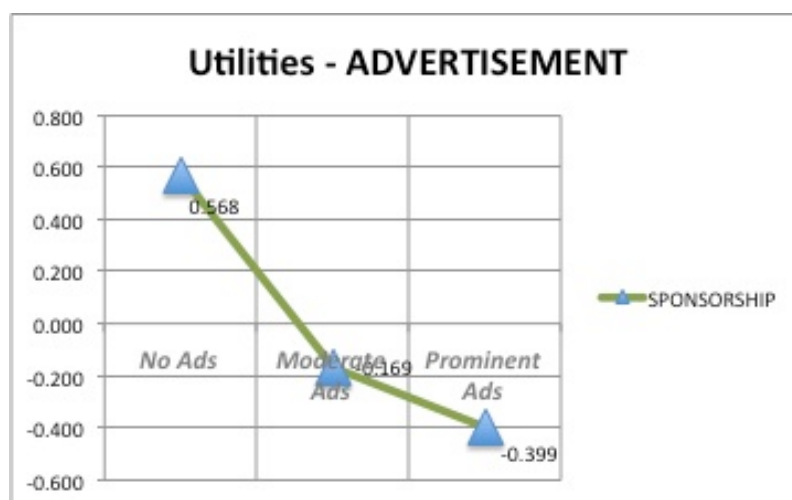


Figure 30: Utilities for advertisement attribute.

For the two types of text and graphics, presented in figure 31, the 2D moderated graphics have a utility of 0.042 and for 3D sophisticated graphics a utility value of -0.042.

It seems that the users don't find valuable the elaborated process of 3D sophisticated graphics, because of the negative utility value. Further research could be made to assess if it is perceived as more invasive. As a conclusion I recommend that the simplest kind of graphics should be used, i.e. moderated 2D graphics.

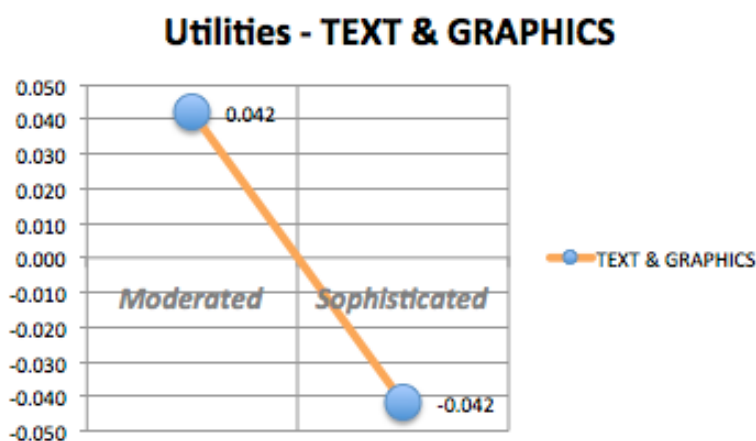


Figure 31: Utilities for text and graphics

5.6. Discussion of the findings

The evaluation of the research model presents importance values for the 3 most uncertain attributes which were evaluated with the choice-based conjoint analysis. Price is the attribute that users paid more attention, with a 72% of importance.

A positive utility of 1.323 for the price attribute with no payment, i.e. free and the advertisement attribute with moderated advertisement, leads to the assumption that for a social messaging service the user will be moderately against accepting the presence of moderated advertisement, utilities of -0.169.

An interpretation is that advertisement could exist within social messaging with no revenue stream from a paid fee from the users. Further research should be conducted to from these combination of ideal attributes to evaluate which fine details may improve acceptance of advertisement.

Another finding regarding pricing is that a 0.99 per year has a slightly positive utility value of 0.071. Therefore is of major importance to generate a positive perception of the service to enable the revenue stream from an annual membership fee. It is clear that the higher price of 3.99 is perceived as a negative utility, with a value of -1.394, therefore no attempt for a higher price should be pursued.

Regarding the results for text & graphics, the results for utilities are close to the zero value: 0.042 and -0.042 which proves that under the perception of the users, there is no difference between a more intensive graphic. This is a positive result because the simplest kind of graphics may be used, which represents a lower cost of production, with no

apparent difference in the perception of the service. It appears that the labor intensive, cost ineffective animations do not contribute to satisfaction.¹⁰⁸

5.6. Shortcomings of conducted research

The repetitive nature of choice-based conjoint analysis and the elaborated video stimuli challenged the cognitive capacity of respondents, as a consequence it was difficult to promote more participation on the survey.

The distribution of the survey via internet vs. a focus group diminishes the possibilities to obtain personal impressions from the respondents and an open dialog for understanding their perceptions. In this case with many intangible attributes an online approach does not allow an adaptive response, like the one achieved with a model like empathic design. It may have helped to overcome the first round of uncertainties in order to present clearer formulations and then, with personal findings, execute the conjoint analysis.

¹⁰⁸ Shrestha, Say. "Does the intrusiveness of an online advertisement influence user recall and recognition?". Usability news, Vol 8. No. 1. February 2006.

6. Design of ideal product based on results and proposed revenue streams.

The ideal service for social messaging with messaging flavors, as a way to incorporate advertisement within the cognitive process of the customer, would be as described in the following paragraphs.

A presenter would offer the branded graphic theme, i.e. the messaging flavor that would be used during messaging conversations. The attribute level for price for the user will be free.

Regarding advertisement placement, I would suggest to include moderate advertisement, although the utility value is negative, it is close to zero the other values still add to a positive 1.196 of total utility for the service. The presentation of attributes and their optimal values can be observed in table 11.

Table 11: Total value of utilities for ideal product.

	Level of Attribute	Utility
Presenter	YES	+
PRICE	FREE	1.323
ADVERTISEMENT	Moderate	-0.169
TEXT & GRAPHICS	Moderated (2D)	0.042
	Sum of Utilities	1.196

The user will have the following dynamic for the use of this social messaging service: The presenter, in figure 32, will offer a new sponsored messaging flavor. From this action, the advertised brand will be charged an advertisement fee, meaning that the revenue stream from advertisement is present for the service.

When the users open the box of the messaging flavor they will watch a 20 seconds video spot of the brand, figure 33.

1. Presenter offers sponsored messaging flavor.

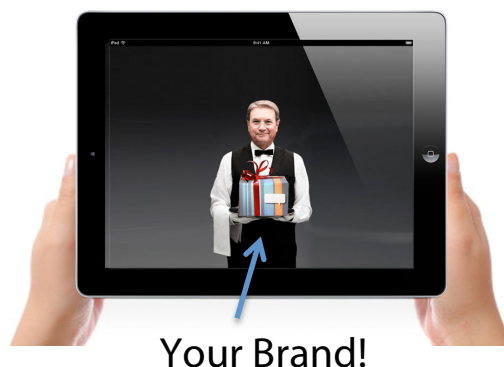


Figure 32: The presenter offering a sponsored messaging flavor.

2. User watches the video of the product.



Figure 33: User watches video of the sponsored product.

3. Messaging happens and the product is suggested as part of the elements of messaging



Figure 34: User engages social messaging with moderate ads

7. Conclusions.

The development of this thesis has analyzed the factors that influence user's acceptance for advertisement placement within their social messaging on smart devices and to propose a revenue stream for exploiting the opportunity of users migrating from PCs and cellular phones to smart devices.

The evaluation of the results from the online survey, including the utilities and importances from the conjoint analysis set ground for guidelines to achieve user's acceptance for the insertion of advertisement, as a source of revenue stream, within their social messaging activities. Conclusions are presented as a starting stone for the development of a functional service, which will be accepted by users.

As a first argumentation for this study is the assumption that text communication, first in the form of SMS and recently in the form of social messaging, is a current trend that keep users keep using messages as a favorite form of communication. The second section presents the current situation, where the crossroads of the already discussed disruptive innovations present a need for an innovation for capturing revenue within the span of time devoted into social network activities on smart devices.

As a third stage of this theoretical development, design aspects, that have to do with the visual perception of the interfaces and intrusiveness of online ads were presented and sustained with referenced studies from online companies pursuing to achieve a solution to this financial opportunity.

As consequence from these current happenings and their theoretical sustain, a research model was developed to test the user's acceptance of advertisement placement, as an integrated and less invasive way for incorporating the revenue stream of advertisement fees within the chosen business model and therefore obtain results to corroborate its acceptance.

With all these theoretical background, design parameters were chosen to implement into an online survey which was deployed to potential users, with the support of a choice-based conjoint analysis to obtain the percentage of importance for each of the three most uncertain attributes: pricing, text & graphics and advertisement, as well as the utilities for all levels from each attribute.

The final discussion of results revealed that for users, as initially presented from the current case of the SMS, paying a fee for the service, represents a slightly negative connotation if the value perceived from the service is not above the existing messaging services.

The findings of these theoretical and empirical study might be of interest for telecommunication new business development managers and for entrepreneurs, who aim to find a dominant design in order to spread a quicker acceptance, on the side of the users, for capturing revenue stream from advertisement placement on smart devices. Still, further research needs to be conducted on top of the fundamentals laid on this work, with more funding and resources, to gain more corroborations on the uncertainty of the innovation in need.

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XLSTAT.com , consulted and downloaded on the 28 th of June 2012, http://www.xlstat.com/en/learning-center/tutorials/choice-based-conjoint-analysis-cbc-with-xlstat-conjoint.html
Ye, L.R., Zhang, Y., et.al. , "Fee-based online services: exploring consumers' willingness to pay". Journal of International Technology and Information Management. Vol. 13 Num 2, 2004.

9. Annex

9.1. Printed version of survey with choice-based Conjoint Analysis

Online location for complete Survey, hosted by Survey Monkey: https://www.surveymonkey.com/s/Enhanced_Messaging

At the



moment, a weakness in the compatibility between Survey Monkey Platform and iOS Devices (iPhone and iPad) is not showing the videos while answering the survey. If you do the survey on a Desktop PC, you will have no problem in watching the Videos.



Alejandro VERDIN

I am really proud of this Visual Effort. However with more budget I could improve it so much, including a native speaker and a pretty Italian woman. As received in a feedback from one of the respondents. I agree

:D

"There were several gramatical Errors during the whole Survey. If you plan to present this to English speaking nations, make sure you use either a British or American National to do the presentation. Unless you wanted to use a sexy Italian woman, then it wouldn't matter if her sentence structure, gramatics and pronunciation was incorrect."

Respondent from the United States.

----- Survey | Page 01 -----

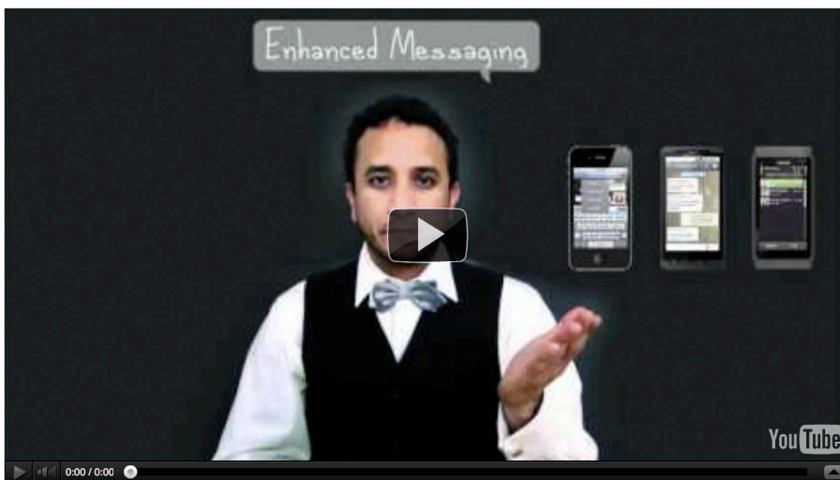


Welcome to the "Enhanced Messaging" experience. With illustrative videos and some questions we would like to find out how valuable it is for you this Concept Service.

The whole survey will take you between 15 and 20 min. We sincerely appreciate that you take the time and seriousness to participate.

Lic., Alejandro VERDIN

MBA "Entrepreneurship & Innovation" Student, WU Executive Academy (Vienna University of Economics and Business)

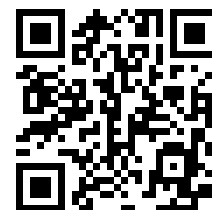


This QR Code will take you to the Video "Enhanced Messaging"

Please go to the next page after watching the video (0:52)

Next

----- Survey | Page 02 -----



This QR Code will take you to the Video "Sponsored Messaging Flavors"

Please go to the next page after watching the video (0:44)

Prev Next

3 / 21 14%



This QR Code will take you to the Video "Tweezy_level3"

After watching the Diagram and Video, please go to the next page.

Next

4 / 21 19%

Sponsored Messaging Flavors

We want to test 3 core Attributes related to Messaging Flavors:

1> Level of Sponsorship
i.e. Advertisement

How much the presence of the Sponsor is seen over the Flavor Button, During Progress window, the Design Elements and at the end with Brand Suggestions

	Flavor Button	During Progress	Design Elements from Sponsor	End of Message
• None				
• Moderate				
• Prominent				

----- Survey | Page 04 (continues)-----

2> Motion for Text & Graphics

- Moderated



- Prominent



3> Cost for one YEAR of unlimited Messages

• Free 

• 0.99 EUR or USD 

• 3.99 EUR or USD 

Click here!

It will open you a new Window with the attributes to have during the next Phase.
(it will be helpful)

Next

----- Survey | Page 05 -----

5 / 21 24%

Now, we are going to show you 12 combinations. Please choose from each step, the combination which is more valuable for you.

			
Cost	Unlimited Messages for one Year for 0.99	Cost	Unlimited Messages for one Year for 3.99
Advertisement	Prominent	Advertisement	Moderated
Text & Graphics	Moderated	Text & Graphics	Sophisticated

The videos which explain each combination are for your support.

You may skip Videos once you understand the attributes, by guiding yourself solely on the text description.

Please press the NEXT button to continue...

Next

----- Survey | Page 06 | **Stimuli 01** for Conjoint Analysis -----

6 / 21 29%

(You can repeat the video if needed)



This QR Code will take you to the Video "Stimuli 01 122 211"

*** 1. From these two options, which one would you choose? (1st of 12)**

(blue, left side)

Cost: Free

Advertisement: Moderated

Text & Graphics: Sophisticated

(green, right side)

Cost: 0.99 for a Year

Advertisement: Prominent

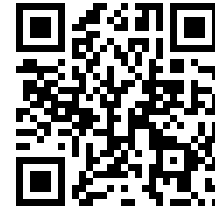
Text & Graphics: Moderated

Next

----- Survey | Page 07 | **Stimuli 02** for Conjoint Analysis -----

7 / 21 33%

(You can repeat the video if needed)



This QR Code will take you to the Video "Stimuli 02 311 232"

***2. Which one from these two modalities would you choose? (2nd of 12)**

(blue, left side)

Cost: 3.99 for a Year

Advertisement: Prominent

Text & Graphics: Moderated

(green, right side)

Cost: 0.99 for a Year

Advertisement: None

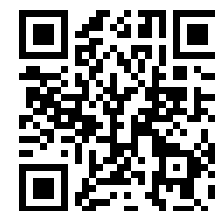
Text & Graphics: Sophisticated

Next

----- Survey | Page 08 | **Stimuli 03** for Conjoint Analysis -----

8 / 21 38%

(you can repeat the video if you need so)



This QR Code will take you to the Video "Stimuli 03 232 122"

***3. Please choose one of these two options. (3rd of 12)**

(blue, left side)

Cost: 0.99 for a Year

Advertisement: None

Text & Graphics: Sophisticated

(green, right side)

Cost: Free

Advertisement: Moderated

Text & Graphics: Sophisticated

Next

----- Survey | Page 09 | **Stimuli 04** for Conjoint Analysis -----

9 / 21 43%

(you can repeat the video if you want)

Cost	Unlimited Messages for one Year for 3.99	Cost	Unlimited Messages for one Year for 0.99
Advertisement	None	Advertisement	Moderated
Text & Graphics	Sophisticated	Text & Graphics	Moderated

*** 4. Which one would you choose? (4th of 12)**

(blue, left side)

Cost: 3.99 for a Year

Advertisement: None

Text & Graphics: Sophisticated

(green, right side)

Cost: 0.99 for a Year

Advertisement: Moderated

Text & Graphics: Moderated

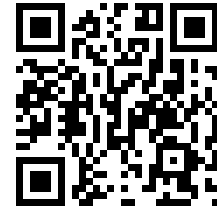
Next

----- Survey | Page 10 | **Stimuli 05** for Conjoint Analysis -----

10 / 21 48%

(you can repeat the video if needed)

Cost	Unlimited Messages for one Year for 0.99	Cost	Unlimited Messages for one Year for FREE
Advertisement	Moderated	Advertisement	None
Text & Graphics	Sophisticated	Text & Graphics	Sophisticated



This QR Code will take you to the Video
"Short 05 222 132"

* 5. Which one from these two modalities would you choose? (5th of 12)

(blue, left side)

Cost: 0.99 for a Year

Advertisement: Moderated

Text & Graphics: Sophisticated

(green, right side)

Cost: Free

Advertisement: None

Text & Graphics: Sophisticated

Next

----- Survey | Page 11 | **Stimuli 06** for Conjoint Analysis -----

11 / 21 52%

(you may watch the video for a second time if you need so)

Cost	Unlimited Messages for one Year for FREE	Cost	Unlimited Messages for one Year for 3.99
Advertisement	Moderated	Advertisement	Prominent
Text & Graphics	Sophisticated	Text & Graphics	Sophisticated

* 6. From these two options, which one would you choose? (6th of 12)

(blue, left side)

Cost: Free

Advertisement: Moderated

Text & Graphics: Sophisticated

(green, right side)

Cost: 3.99 for a Year

Advertisement: Prominent

Text & Graphics: Sophisticated

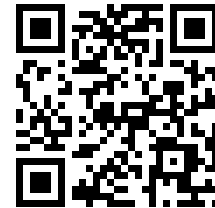
Next

----- Survey | Page 12 | **Stimuli 07** for Conjoint Analysis -----

12 / 21 57%

(you may watch the video again if you need to)

Cost	Unlimited Messages for one Year for 3.99	Cost	Unlimited Messages for one Year for FREE
Advertisement	Prominent	Advertisement	None
Text & Graphics	Sophisticated	Text & Graphics	Moderated



This QR Code will take you to the Video "Short 07 312 131"

*7. Please choose one of these options. (7th of 12)

- | | | | |
|--------------------------------|-------------------|----------------------------|---------------------|
| <input type="radio"/> | (blue, left side) | <input type="radio"/> | (green, right side) |
| Cost: 3.99 for a Year | | Cost: Free | |
| Advertisement: Prominent | | Advertisement: None | |
| Text & Graphics: Sophisticated | | Text & Graphics: Moderated | |

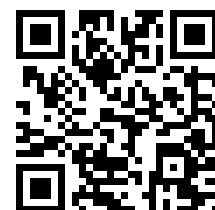
Next

----- Survey | Page 13 | **Stimuli 08** for Conjoint Analysis -----

13 / 21 62%

(if you need to, you can watch the video for a second time)

Cost	Unlimited Messages for one Year for FREE	Cost	Unlimited Messages for one Year for 0.99
Advertisement	Moderate	Advertisement	Prominent
Text & Graphics	Moderate	Text & Graphics	Sophisticated



This QR Code will take you to the Video "Short 08 121 212"

*8. Which one would you choose? (8th of 12)

- | | | | |
|----------------------------|-------------------|--------------------------------|---------------------|
| <input type="radio"/> | (blue, left side) | <input type="radio"/> | (green, right side) |
| Cost: Free | | Cost: 0.99 for a Year | |
| Advertisement: Moderated | | Advertisement: Prominent | |
| Text & Graphics: Moderated | | Text & Graphics: Sophisticated | |

Next

----- Survey | Page 14 | **Stimuli 09** for Conjoint Analysis -----

14 / 21 67%

(you may watch the video for a second time if you need so)



Cost	Unlimited Messages for one Year for 0.99	Cost	Unlimited Messages for one Year for FREE
Advertisement	Moderate	Advertisement	Prominent
Text & Graphics	Sophisticated	Text & Graphics	Moderated



This QR Code will take you to the Video
"Short 09 222 111"

***9. Which one from these two modalities would you choose? (9th of 12)**

(blue, left side)

Cost: 0.99 for a Year

Advertisement: Moderated

Text & Graphics: Sophisticated

(green, right side)

Cost: Free

Advertisement: Prominent

Text & Graphics: Moderated

Next

----- Survey | Page 15 | **Stimuli 10** for Conjoint Analysis -----

15 / 21 71%

(You can watch the video for a second time if you need so)



Cost	Unlimited Messages for one Year for 0.99	Cost	Unlimited Messages for one Year for FREE
Advertisement	Moderate	Advertisement	Prominent
Text & Graphics	Moderated	Text & Graphics	Moderated



This QR Code will take you to the Video
"Short10 321 211"

***10. From these two options, which one would you choose? (10th of 12)**

(blue, left side)

Cost: 0.99 for a Year

Advertisement: Moderated

Text & Graphics: Moderated

(green, right side)

Cost: Free

Advertisement: Prominent

Text & Graphics: Moderated

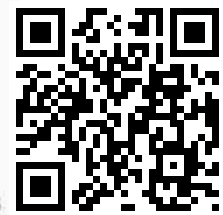
Next

----- Survey | Page 16 | **Stimuli 11** for Conjoint Analysis -----

16 / 21 76%

(you can watch the video for a second time if you need to)

Cost	Unlimited Messages for one Year for 3.99	Cost	Unlimited Messages for one Year for 0.99
Advertisement	Moderate	Advertisement	Prominent
Text & Graphics	Moderated	Text & Graphics	Moderated



This QR Code will take you to the Video "Short11 321 211"

*11. Which one would you choose? (11th of 12)

(blue, left side)

Cost: 3.99 for a Year

Advertisement: Moderated

Text & Graphics: Moderated

(green, right side)

Cost: 0.99 for a Year

Advertisement: Prominent

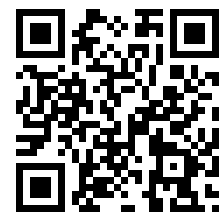
Text & Graphics: Moderated

Next

----- Survey | Page 17 | **Stimuli 12** for Conjoint Analysis -----

17 / 21 81%

Cost	Unlimited Messages for one Year for 0.99	Cost	Unlimited Messages for one Year for 3.99
Advertisement	Prominent	Advertisement	Moderated
Text & Graphics	Moderated	Text & Graphics	Sophisticated



This QR Code will take you to the Video "Short12 211 322"

*12. Which one from these two modalities would you choose? (12th of 12)

(blue, left side)

Cost: 0.99 for a Year

Advertisement: Prominent

Text & Graphics: Moderated

(green, right side)

Cost: 3.99 for a Year

Advertisement: Moderated

Text & Graphics: Sophisticated

Next

Nice!

That was the Core Concept of

Enhanced Messaging

Last 3 Questions. Please evaluate the next important attribute, which we call:

“The Human Touch”

Next

The Human Touch!

We believe that it makes a **HUGE difference** when a Person addresses to you, the same way that happened with the initial videos.

We incorporate a “Presenter” into the Enhanced Messaging Concept.



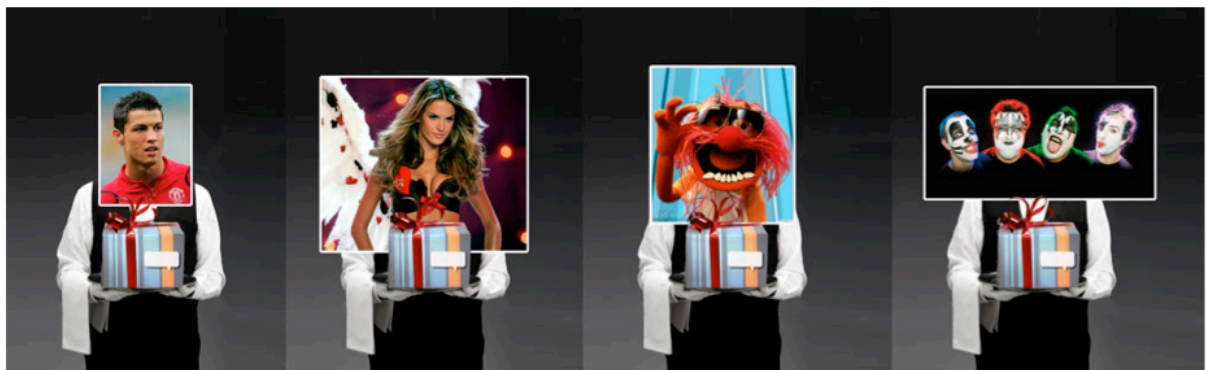
She or He will hand you a new Messaging Flavor, making a “more human” experience with your Smart Device, instead of only cold text.

Next



The Presenter will always be a **surprise**.

May be a cool or funny Character, may be related to a Sponsor (like the speaker from an NGO), or may be a celebrity from Sport, Music, Film, Art...



*13. Which way would you choose to receive the "Sponsored Messaging Flavors"?

- Just an alert on my Smart Device
- With a "Presenter"



Next

----- Survey | Page 21 -----

21 / 21

100%

Perfect!

Thanks a lot!



We just want to conclude with a few Demographic questions.

*** 14. Which gender are you?**

Female

Male

*** 15. Age Range**

under 18

19 to 24

25 to 35

35 to 45

45 +

*** 16. In which country are you living currently?**

*** 17. What's your professional Status?**

Employed or Self-Employed

Student

Unemployed

18. In case you have any thoughts that you want to share about this research, please do so here.

Thanks for your participation! =))

Lic., Alejandro VERDIN

MBA "Entrepreneurship & Innovation" Student, from conjoint program between:

•WU > Executive Academy > Wirtschaftsuniversität Wien (Vienna University of Economics and Business)

•TU Wien > Continuing education Center > Technische Universität Wien (Vienna University of Technology)

----- END of Survey -----

9.3. Analyzed Conjoint Analysis. Attributes & importances

Process for achieving these results is: 1. XLSTAT > XLSTAT-Conjoint > Choice-Based Conjoint Analysis (as explained in the Web Address¹⁰⁹) .2. Histogram from numerical values. 3. Pie Graphs from Frequency. 3. Line graphs from set of Utilities.

XLSTAT 2012.4.02 - Choice-based conjoint analysis - on /7/24/2012 at 5:47:48 PM
 Responses: Workbook = VERDIN_24Julio_Caregession.xlsx / Sheet = AnswerRawDATA / Range = AnswerRawDATA!\$E\$12:\$A\$24 / 12 rows and 31 columns
 Profiles: Workbook = VERDIN_24Julio_Caregession.xlsx / Sheet = AnswerRawDATA / Range = AnswerRawDATA!\$I\$4:\$N\$49 / 15 rows and 3 columns
 Choice table: Workbook = VERDIN_24Julio_Caregession.xlsx / Sheet = AnswerRawDATA / Range = AnswerRawDATA!\$H\$35:\$I\$47 / 12 rows and 2 columns
 Method: Choice model
 Constraints: Sum(a)=0
 Confidence interval (%): 95

Variable information:

Short name	No. of categories	Category 1	Category 2	Category 3
Transactional Cost	3	0.99 Year	3.99 Year	Free
Sponsorship	2	Moderate Ad/No Ads		Prominent Ads
Text Motion	2	2D		3D

Utilities:

Source	Utilities	Std. Dev.
PRICE	3.99 Year -1.394 0.99 Year 0.071 Free 1.323	0.166 0.098 0.140
ADVERTISEMENT	No Ads 0.568 Moderate Ads -0.169 Prominent Ads -0.399	0.170 0.099 0.146
TEXT & GRAPHICS	Moderated 0.042 Sophisticated -0.042	0.112 0.112

Importances:

	PRICE	%
PRICE	72.088	72.088
PRESENCE OF SPONSORSHIP	25.677	25.677
COMPLEXITY OF TEXT & GRAPHICS	2.233	2.233
	100.000	100.000

Goodness of fit statistics:

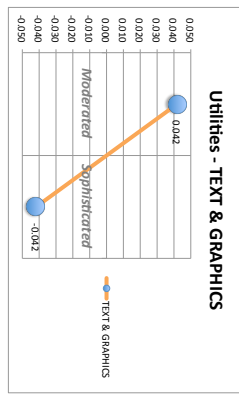
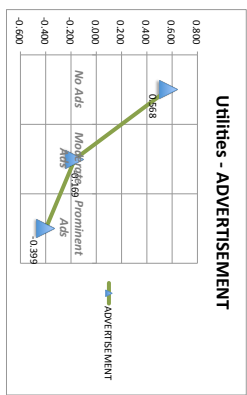
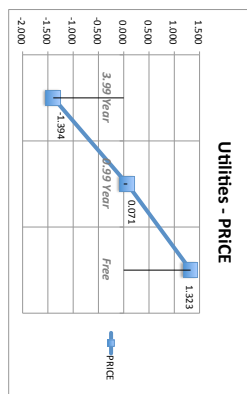
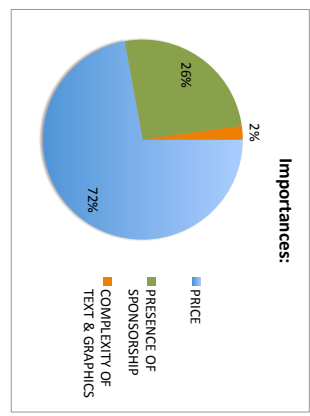
Statistic	Independent	Full
Observations	744	744
Sum of weights	744.000	744.000
Df	743	739
-2 * Log(Likelihood)	515.702	334.403
R (McFadden)	0.000	0.352
R (Cox and Snell)	0.000	0.216
R (Nagelkerke)	0.000	0.433
AIC	517.702	344.403
SBC	521.620	363.998
Iterations	0	5

Goodness of fit statistics (Conditional Logit)

Value	Value
Likelihood ratio (R)	181.298
R (Upper bound)	515.702
Aldrich-Nelson	0.328
Cragg-Uhler 1	0.386
Cragg-Uhler 2	0.514
Estrella	0.451
Adjusted Estrella	0.429
Veil-Zimmermann	0.564

Test of the null hypothesis H0: V=0

Statistic	Df	Chi-square	P <= ChiP
-2 * Log(Likelihood)	5	181.298	< 0.0001
Score	5	153.754	< 0.0001
Wald	5	106.622	< 0.0001



This QR Code will take you to the Conjoint Analysis data in XLSX format.

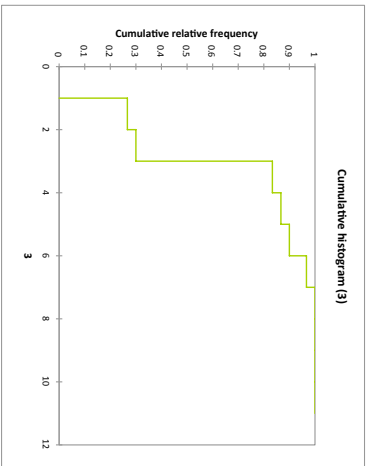
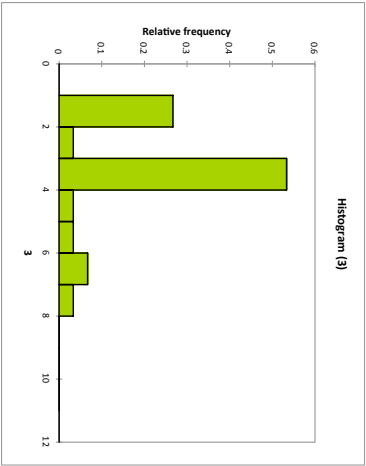
¹⁰⁹ <http://www.xlstat.com/en/learning-center/tutorials/choice-based-conjoint-analysis-cbc-with-xlstat-conjoint.html>

9.4. Regions analyzed.

XLSSTAT 2012.4.02 - Histograms - on 7/24/2012 at 5:07:09 PM
 Data: Workbook = Regions.xlsx / Sheet = Sheet1 / Range = Sheet1!\$D\$3:\$D\$33 / 30 rows and 1 column
 Intervals: Number = 10

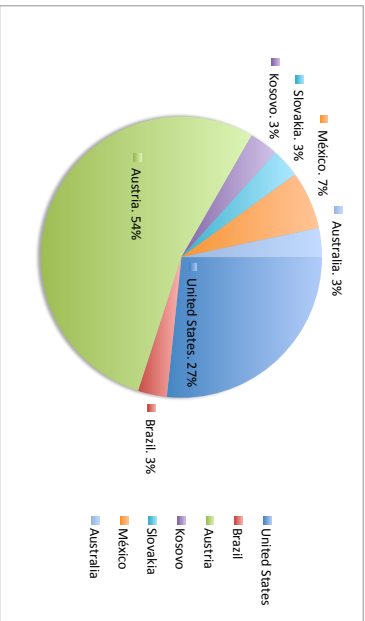
Summary statistics:

Variable	Observations with missing/without missing	Minimum	Maximum	Mean	Std. deviation
3	30	0	1,000	7,000	2,867
					1,570



Descriptive statistics for the intervals :

Lower bound	Upper bound	Frequency	Relative frequency	Density
United States	1	8	0.267	0.267
Brazil	2	3	0.033	0.033
Austria	3	4	0.533	0.533
Kosovo	4	1	0.033	0.033
Slovakia	5	1	0.033	0.033
México	6	1	0.033	0.033
Australia	7	2	0.067	0.067
	8	1	0.033	0.033
	9	0	0.000	0.000
	10	0	0.000	0.000
	11	0	0.000	0.000



In which country are you living currently?

Open-Ended Response	CODE for Country
United States	Austria 3
Austria	United States 1
Brazil	Brazil 2
United States	United States 1
United States	United States 1
United States	United States 1
United States	United States 1
United States	United States 1
United States	United States 1
United States	United States 1
Austria	Austria 3
Kosovo	Kosovo 4
Austria	Austria 3
Austria	Austria 3
Austria	Austria 3
Austria	Austria 3
Australia	Australia 7
Austria	Austria 3
Austria	Austria 3
Austria	Austria 3
Austria	Austria 3
Slovakia	Slovakia 5
Austria	Austria 3
Austria	Austria 3
Austria	Austria 3

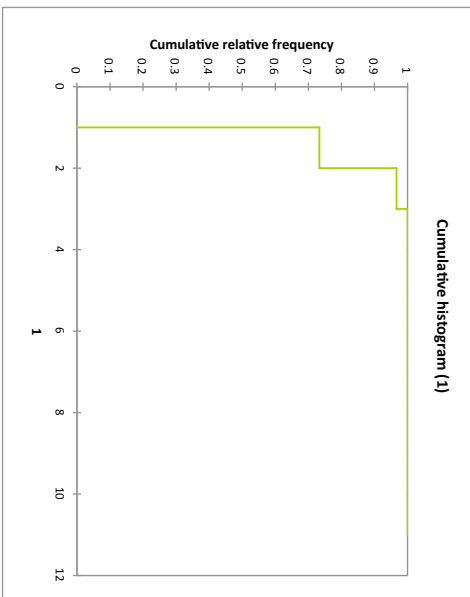
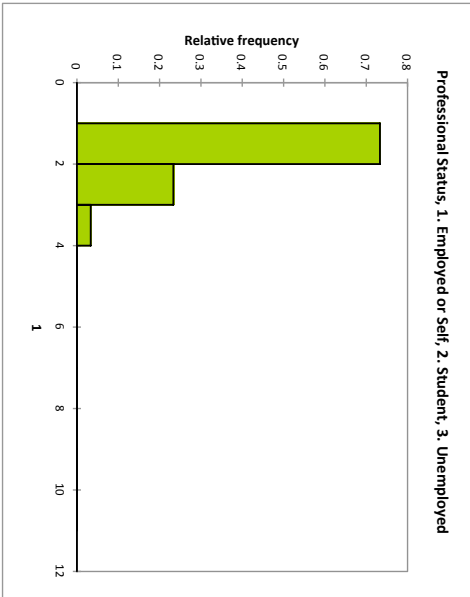
0	1 United States
	2 Brazil
	3 Austria
	4 Kosovo
	5 Slovakia
	6 México
	7 Australia
	8

9.5. Professional status

XLSTAT 2012.4.02 - Histograms - on 7/25/2012 at 4:27:33 PM
 Data: Workbook = VERDIN_24Julio_Caregression.xlsx / Sheet = Demographics / Range = Demographics!\$F\$9:\$F\$39 / 30 rows and 1 column
 Intervals: Number = 10

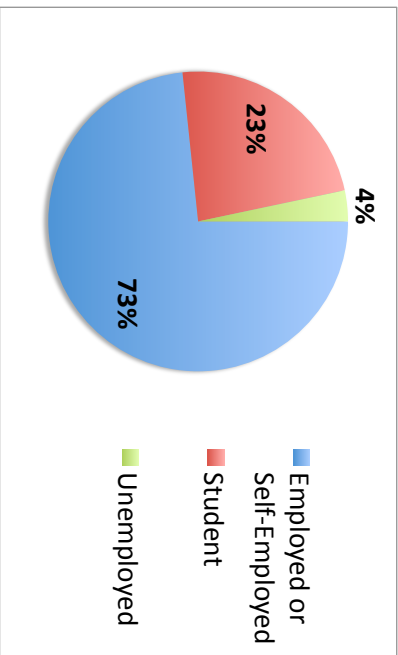
Summary statistics:

Variable	Observations with missing/ithout missin	Minimum	Maximum	Mean	Std. deviation
1	30	0	30	1.000	0.535



Descriptive statistics for the intervals :

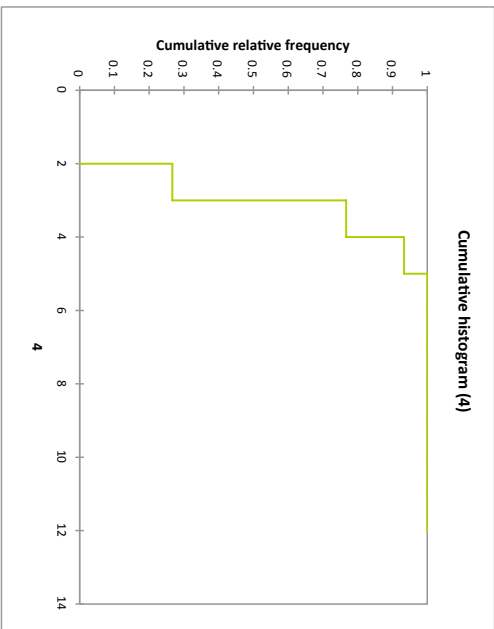
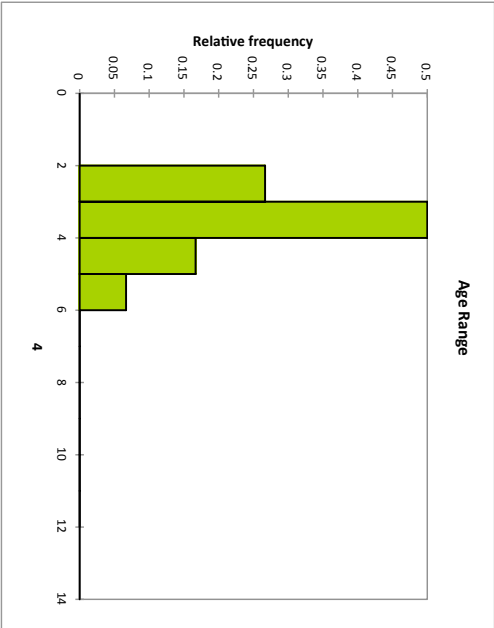
Lower bound	Upper bound	Frequency	Relative frequency	Density
1	2	22	0.733	0.733
2	3	7	0.233	0.233
3	4	1	0.033	0.033
4	5	0	0.000	0.000
5	6	0	0.000	0.000
6	7	0	0.000	0.000
7	8	0	0.000	0.000
8	9	0	0.000	0.000
9	10	0	0.000	0.000
10	11	0	0.000	0.000



XLSTAT 2012.4.02 - Histograms - on 7/25/2012 at 4:11:53 PM
 Data: Workbook = VERDIN_24Julio_CARregression.xlsx / Sheet = Demographics / Range = Demographics!\$D\$9:\$D\$39 / 30 rows and 1 column
 Intervals: Number = 10

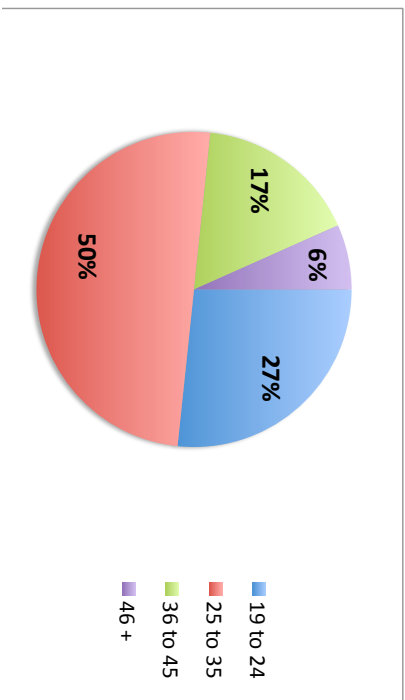
Summary statistics:

Variable	Observations with missing	without missing	Minimum	Maximum	Mean	Std. deviation
Age Range	4	30	0	2,000	3,033	0,850



Descriptive statistics for the intervals :

Age Range	Lower bound	Upper bound	Frequency	Relative frequency	Density
under 18	0	1	2	0.267	0.267
19 to 24	1	2	3	0.500	0.500
25 to 35	2	3	4	0.167	0.167
36 to 45	3	4	5	0.067	0.067
46 +	4	5	6	0.000	0.000
	5	6	7	0.000	0.000
	6	7	8	0.000	0.000
	7	8	9	0.000	0.000
	8	9	10	0.000	0.000
	9	10	11	0.000	0.000
	10	11	12	0.000	0.000
	11	12	0	0.000	0.000

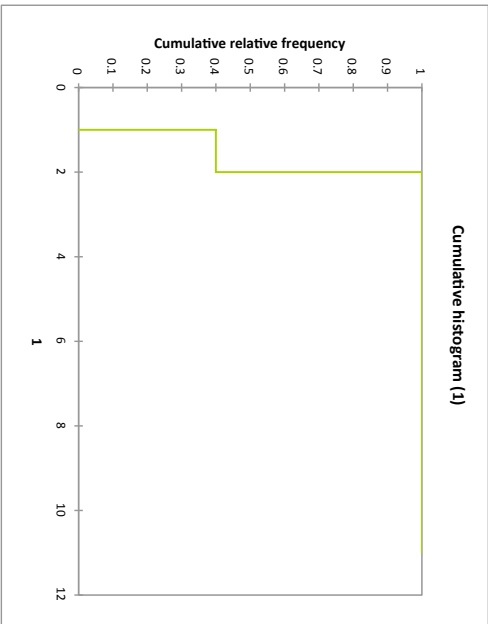
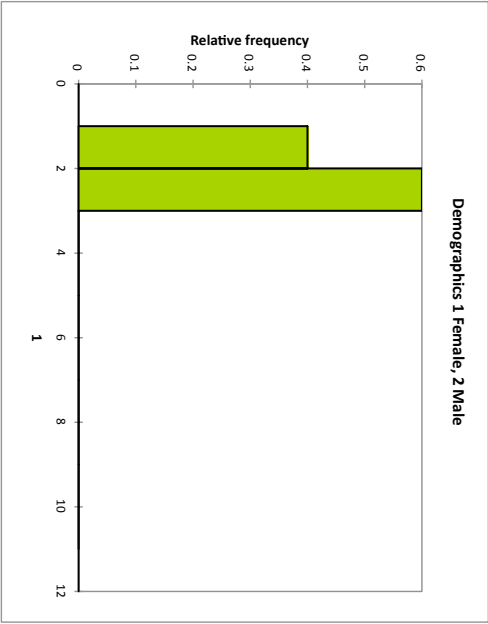


9.7. Gender

XLSTAT 2012.4.02 - Histograms - on 7/25/2012 at 4:04:11 PM
 Data: Workbook = VERDIN_24julio_Caregression.xlsx / Sheet = Demographics / Range = Demographics!\$C\$9:\$C\$39 / 30 rows and 1 column
 Intervals: Number = 10

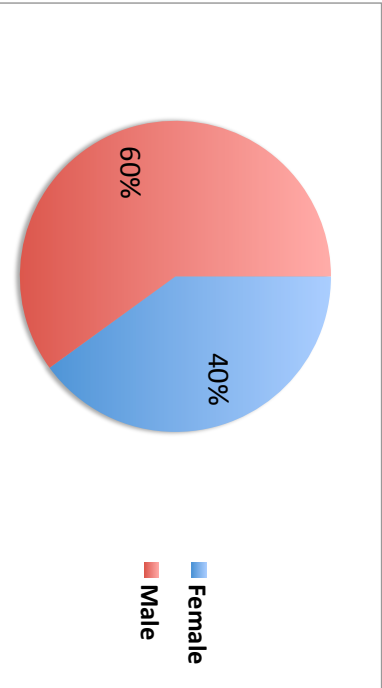
Summary statistics:

Variable	Observations with missing/ithout missin	Minimum	Maximum	Mean	Std. deviation
1	30	0	30	1.000	0.498



Descriptive statistics for the intervals :

	Lower bound	Upper bound	Frequency	Relative frequency	Density
Female	1	2	12	0.400	0.400
Male	2	3	18	0.600	0.600
	3	4	0	0.000	0.000
	4	5	0	0.000	0.000
	5	6	0	0.000	0.000
	6	7	0	0.000	0.000
	7	8	0	0.000	0.000
	8	9	0	0.000	0.000
	9	10	0	0.000	0.000
	10	11	0	0.000	0.000

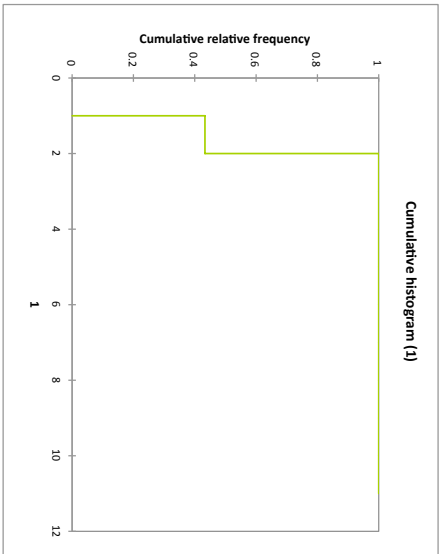
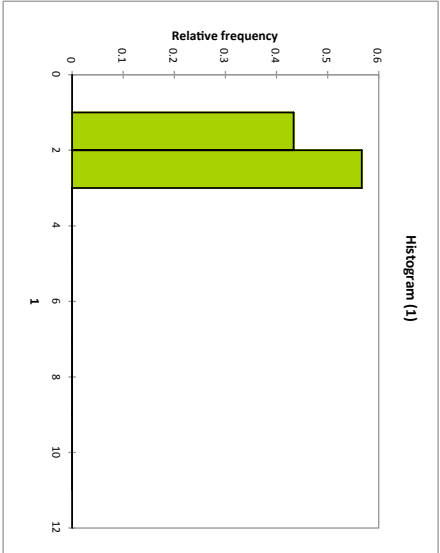


9.8. Results for "The Presenter"

XLSTAT 2012.4.02 - Histograms - on 7/25/2012 at 6:03:47 PM
 Data: Workbook = VERDIN_24Julio_Caregression.xlsx / Sheet = Presenter / Range = Presenter!\$C\$4:\$C\$34 / 30 rows and 1 column
 Intervals: Number = 10

Summary statistics:

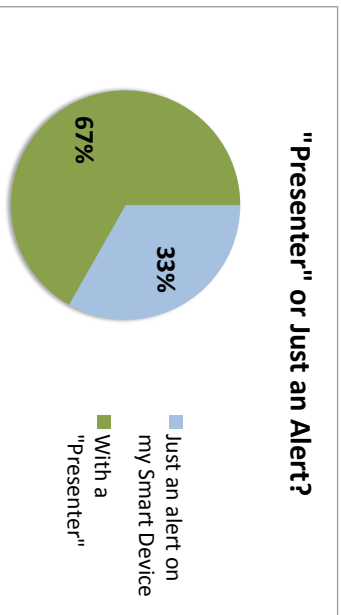
Variable	Observations with missing	without missing	Minimum	Maximum	Mean	Std. deviation
1	30	0	30	1,000	2,000	1,567
						0,504



Descriptive statistics for the intervals :

Lower bound	Upper bound	Frequency	Relative frequency	Density	er or Just an Alert?
1	2	13	0.433	0.333	33% Just an alert on my Smart Device
2	3	17	0.567	0.667	67% With a "Presenter"
3	4	0	0.000	0.000	
4	5	0	0.000	0.000	
5	6	0	0.000	0.000	
6	7	0	0.000	0.000	
7	8	0	0.000	0.000	
8	9	0	0.000	0.000	
9	10	0	0.000	0.000	
10	11	0	0.000	0.000	

Which way would you choose to receive the "Sponsored Messaging Flavors"?



END OF TRANSMISSION