LIFEISMEANING.COM: INFORMATION VISUALIZATION

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ABSTRACT

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The interface of “lifeismeaning.com” is a Flash Web site that visualizes the information of public thoughts stored in a database. The main objective of the project is to create a visually entertaining environment throughout the interface, to gather worldwide data on life-meanings and increase the project’s community to further its growth. Methods contain the information visualization that is based on the system of signs that has specifically been created for this project. Elements such as choice of color, shapes of icons and layout are created to distinguish between data from such categories as gender and age. Methods include also an online questionnaire that collects data about life-meanings. The data collected from the entries contain everything from philosophical thoughts, to rather stereotypical life-meanings. The final part is the on and offline promotion to increase collective participation. To find out how to approach this community, the attitudes are analyzed and ways to encourage participation are investigated. The project can be seen as a documentation of current collective lifestyles and experiences on a worldwide level that is presented in the form of an online art project.

Keywords
Creative research, Information visualization, Data visualization/collection, Web art, Internet art, System of signs, Flash, Collective participation, Community
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INTRODUCTION

This research paper contains three chapters that describe and analyze the project "lifeismeaning.com: Information Visualization", completed as a thesis project for the Graduate Certificate Program in Digital Technologies in Design Art Practice at Concordia University in 2008. Each chapter considers the project from different research angles and theoretical perspectives. Although the three chapters together present the complete research, each chapter can be read individually.

The layout of this paper is as follows: the first chapter, named The Meaning of Life in Images, is about the project’s information visualization that has been created by using a specifically created system of signs. In the second chapter, Extracting the Meaning of Life, I offer a more detailed account of the data collection procedures, as performed though the help of questionnaires. The last chapter, Community Participation and Project Promotion in lifeismeaning.com, deals with participation and community building within the project.

The initial idea for the “lifeismeaning.com” project was to create a gallery installation that included interactive components with which to engage gallery visitors. I planned to use text and typography as the main elements of the installation. Using movement sensors, people would control the way the text is displayed on the screen by modifying its size. The text itself would be composed with a typeface specifically designed for this project. I envisioned different ways to generate text data for the installation, including ideas to use poems, the recorded voices of visitors transformed into text, or text generated from email messages.

The final project became an interactive Web site. My role as an author was to parse data from participants and give it back in a particular visual form. The interface of “lifeismeaning.com” is a Flash Web site that visualizes the information of public thoughts stored in a database. In response to the question: “What gives meaning to your life?”, Internet users have written: “To get a smile every day”, “To balance what I have to do and what I choose to do”, “To take my coffee in the morning with the people I love”, and “My meaning in life is to worship Allah”.

The Web site displays these entries about different life philosophies using concepts from information visualization. This allows me to present them in a visually fun/entertaining form and make it interesting for participants to browse answers on life-meanings on a global level. For example, participants may compare the way males and females respond to a certain category and which of the two genders is more affected by that specific category. The main
purpose it to make participants aware of peoples’ lifestyles and experiences and to make them contribute to the ongoing electronic/social dialogue with their own thoughts and opinions.

The initial idea of using a traditional physical gallery space has been replaced by the idea of the Internet, which implies an “open access” philosophy.

In addition, instead of creating a self-designed typeface, I used three existing typefaces. This decision was made due to the time constraints of the short production period, which made it impossible to come up with both the project itself and the typefaces. However, I propose to develop three typefaces for this project as future work.

Montreal, Canada, September 2008

Note
This paper was formatted according to MLA guidelines; however, the overall layout differs somewhat from these guidelines. This choice derives not only from an esthetical point of view that allows a distinguishable and particular layout, but also because it is a common used format for conference research papers in the design and computation field. In MLA style the research would contain approximately 30 pages if printed on a 8.5 x 11” sheet with a font size of 10pt with a double space line-height and with 1-inch margins.
thoughts that are stored in a database. The project is basically an application in itself created for the user to navigate the information visualization in a comfortable way. The project visualizes the information by using its own system of signs that employs a clean, welcoming, and colorful feel and offers an intuitive and interesting way to query information. Each category uses its own graphical elements, whose purpose is to make the information clear to the participant and that s/he understands it more efficiently. The visualization should also awaken the participant’s desire to browse the entries with the help of the “find” form. After pressing the “find” button a screen will appear that shows the visualization of the earlier selected findings. The raw data is morphed into different types of graphical elements, shapes, colors and positions, which are applied to the entered categories, gender and age. Without its visual system the participant would not be able to navigate the project in a proper way. Colors and shapes will visually guide her/him and function in the form of an orientation instrument. Overall, the creation of a system of signs works as the framework for the data visualization.

Keywords
Information visualization, Information design, System of signs

1. INTRODUCTION

The way data is visualized can have a crucial impact on how information will be interpreted. Tufte, one of the leading experts in the field, illustrates that the disaster of the space shuttle “Challenger” can be connected to the engineers’ inability to understand the information from the representation they saw.1 The data in “lifeismeaning.com” is not that serious that life and death depend on it, but it still needs to be interpreted the right way. “lifeismeaning.com” is an information visualization that renders people’s thoughts about the meaning of life in a visually appealing form where raw data is transformed into visual elements. The project’s user interface is a Flash Web site that visualizes the information of public thoughts that are stored in a database. The project is basically an application in itself created for the user to navigate the information visualization in a comfortable way. The project visualizes the information by using its own system of signs that employs a clean, welcoming, and colorful feel and offers an intuitive and interesting way to query information. Each category uses its own graphical elements, whose purpose is to make the information clear to the participant and that s/he understands it more efficiently. The visualization should also awaken the participant’s desire to browse the entries with the help of the “find” form. After pressing the “find” button a screen will appear that shows the visualization of the earlier selected findings. The raw data is morphed into different types of graphical elements, shapes, colors and positions, which are applied to the entered categories, gender and age. Without its visual system the participant would not be able to navigate the project in a proper way. Colors and shapes will visually guide her/him and function in the form of an orientation instrument. Overall, the creation of a system of signs works as the framework for the data visualization.

The structure of this paper is as follows: in chapter two, Previous Research & Related Work, I investigate published work that bears a familiarity with my project, including the use of Semiotics and Information Visualization. Chapter three covers my methodology, the creation of a visually appealing atmosphere, systems of signs such as color, shape, typeface, layout and information visualization. In chapter four I layout out possible future avenues of research, especially in reference to the complexity of the interface, the choice of visualization, multilingual entries, typefaces and legends. My conclusion is then presented in chapter five.

1 With information/data visualization I refer to the presentation of results that appear in an artistic way.
they will at least experience an aesthetically pleasing environment when browsing through the information visualization, even though the communication would partially fail. Participants would understand some of the message, but not the encoded message.

Information Visualization
The instruments are those of writing and typography, of managing large data sets and statistical analysis, of line and layout and color. This is what Tufte values about information visualization and that is essentially what I tried to achieve in the visualization process of “lifeismeaning.com”. The following examples feature different ways (data) visualizations can be created, that are in some way related to “lifeismeaning.com”: Golan Levin with Kamal Nigam and Jonathan Feinberg, in their project “The Dumpster”, visualize breakups collected from blogs in 2005. People may browse by date and click on circles that lead them to more details on the breakup. In 2006, the project “We Feel Fine” by Harris Jonathan and Sep Kamvar was initiated, which collects human feelings from web blogs all over the Internet by querying entries containing “I feel” and “I am feeling” and visualizes them to a Flash Web site in the form of 2D floating bubbles. The “Visitor’s Eye project” by Fabien Girardin uses geo-referenced photos publicly available in Flickr to create 3D geospatial visualization of tourist density and flows. The “The Falling Times” project by Michael Bielicky, Kamila B. Richter, and Dirk Reinbold visualizes in real-time news on the Internet by using keywords and headings and translating them into pictograms that fall down the screen. Readers are invited to participate by “adding a keyword or a sequence of key words to an icon to select which news will be displayed”.

Although these projects use interesting visual elements, the technological method is different than the one used in “lifeismeaning.com”. Whereas those projects connect to the Internet to retrieve data, “lifeismeaning.com” uses a local server. This procedure, of using data from a local source, can be found in the following projects: data from a visual dictionary is visualized in the form of “80 Million Tiny Images”. This can be viewed online, and a visual dictionary poster is available for download in a high-resolution version. The project “Virtual Water” by Timm Kekeritz visualizes water consumption in conjunction with the food we consume based on the study “Water Footprint of Nations” by Hoekstra et al. The project is visualized on a Web site and in a printed poster using illustrative graphical symbols and elements. The examples illustrate that visualizations can be composed of different forms, including in 2D, in the form of circles or bubbles, 3D elements in the form of graphs, drawn pictograms and illustrations or even photographs. “lifeismeaning.com” follows those projects in its creative research in the way that it develops project-specific forms that serve particular project purposes. The elements, shapes and colors used for “lifeismeaning.com” are unique to this project.

3. METHODOLOGY

Visually appealing atmosphere
It is important to provide a peculiar and visually positive atmosphere with the goal to create a feeling of trust towards the project and to help the participants in completing the survey and to browse findings. Lumsden states that a “distinctive, positive visual impression” has a positive effect on trust and the process of filling out the questionnaire. He claims that users will only stay on the Web site if it is interesting enough or appealing. Here, the length of the questionnaire and content have an impact, too. However, to keep users interest up, image and site need to show a certain complexity. For instance, color helps to capture the viewer’s attention. In “lifeismeaning.com” color is used in a relatively complex way, providing fourteen different hues for the participants to view. However, Tufte claims that “well-designed data graphics are usually the simplest and at the same time the most powerful”. Thus, in “lifeismeaning.com”, the overall design of the visualization has to be executed in a simple way. Overall, browsing in an aesthetically interesting environment will likely allow the visitors to remember their findings. In “lifeismeaning.com”, this will mean an increase in how participants will remember people’s writing.

System of signs
The purpose is to visualize the information of the database entries by creating a unique system of signs. The context, in which the signs are used, has to be defined as well to make them understandable. The unique system of signs is supposed to be understood by the user in an intuitive way. Nevertheless, several other steps will help the user: when loading the project page “lifeismeaning.com”, an introduction video of 2:39 minutes in length explains the key points of the project including the signification of the graphical elements used in the project. In the “about” section of the home site, the legend shows text and visuals that again explain the system of signs.

Color
Different colors clearly identify the 15 categories. It was important to choose aesthetically appealing colors that look nice individually, but also work in the context of the combination of all colors.
Having the traditional 12-step color wheel in mind, I mixed the colors digitally using Adobe Illustrator. I generated the colors considering hue, which is a specific color choice, the value and the saturation, which is the intensity and purity of the hue.18 The starting points were the three primary colors: yellow, red, and blue. From there, mixing the primary colors in equal parts generated secondary colors. It resulted in orange, green, and violet. Hues such as yellow-green, or red-violet, the so-called tertiary colors, were created by mixing primary and secondary colors.19 Eventually, colors mixed from primary and secondary colors will generate the “quaternary colors.” Too similar looking colors were avoided to minimize the risk that the categories they are assigned to could cause confusion. In the next step, the colors were assigned to the categories. It has to be considered that colors are associated differently depending on the regional and cultural context.20 As the project is distributed worldwide, I did not want emphasis placed on the meaning of colors. Nevertheless, I chose a few color meaning associations attributed to the Western culture. Some categories are closely associated with Western color meanings. For instance, I assigned green to the category “Nature.” Green has not always had this meaning in the West, but this association has increased over time. Red is a color with a variety of symbolic meanings: it represents the forbidden, but also power and love.21 The latter fits to the meaning I assigned to the category “Socializing” when using red. Other categories were assigned a color in a similar way. The following is a list of all colors and its associations Family: orange, Personal: pink, Social: red, Food: brown, Work: olive green, Travel: blue, Athletics: yellow, Nature: grass green, City: turquoise, Ownership: orange, Philosophy: grey blue, Spirituality: violet, Culture: pink-violet, Pleasure: dark green, Other: bright green. Figure 1 gives an overview. The accessibility for colorblind people has not been considered in the research. Therefore, those are deprived from distinguishing categories.

Shapes
The shape of the rectangle that contains each text entry was developed out of its context. Basically, it has the length of the text. To distinguish gender I used rounded corners for female, and square-cut corners for male as figure 2 demonstrates. This choice derives from a Western cultural distinction that assigns softer, round shapes to female and sharper, blunt shapes to male.

Typefaces
The three age categories are distinguished by different typefaces. Figure 3 shows “Comic Sans” for young, sans serif, “Lucida Sans” for adult, and serif, “Garamond” for senior. Due to a technical issue that employs the same letter width for each font, the type choice is not very flexible. The decision to use text-only and not images is based on a few criteria. First, text typing is the easiest way to enter data. Typing on a computer keyboard can be compared to writing with a pen as the most basic and immediate activity to get words down. Second, even users who are not quite familiar with the computer, and do not use images frequently, will be able to participate in the project. Third, by seeing the text answer to the question “What gives meaning to your life?” users can imagine their personal experiences instead of having a pre-defined image. Although hypertext and textual aesthetics has been used in the early Internet art scene and technological possibilities have in these days developed towards the use of photographs, video, or animation in Internet art projects,22 I still want to stay with text entry as the most immediate form considering the above mentioned reasons.

Layout
The home site of “lifemeaning.com” is the documentation site of the project (figure 4). In the Web design it uses elements of the main design such as color stripes in the background, as well as the same font that is used all over the project, which is “Lucida Sans”.

The project site (figure 5), on the other hand, is designed for a screen resolution of 1024 x 768 pixel, which is a commonly accessible resolution for a Web site. The entry form enters the main area dynamically and grabs the participant’s attention (figure 6). Ideally s/he will fill out the form right away. If s/he does not, s/he still knows where to find the form later. The floating window is not only aesthetically entertaining, but also has the functional purpose of usability to show the participant in a dynamic way where it is positioned. Accordingly, the find form pops up the same way as the entry from appears dynamically when requested by the user. It enables the participant to browse through entries about life-meanings by category, gender, and age.

Information visualization
When participants first enter the project site, an information visualization pops up that shows all the entries in a chronological order that have been made since the project started. Right after participants enter their post about the “meaning of life”, it will appear in the data visualization on top of the list of existing entries as figure 7 shows. Not only its position, but also the fact that it does not contain a rectangle distinguishes it visually from previous entries. Furthermore, users are able to query data entries in the find form by selecting different categories, gender, age and year by pressing the “find” button. Here, they have the possibility to compare data within the given parameters. (figures 8–10) For instance, participants can find out if more men or women are sensitive to cultural events. For this scenario, which is shown in figure 11, they would select from the dropdown menu “culture”, “all genders”, “all ages”. Once they press the “find” button the query will open the visualization that contains all entries on culture by all genders and all ages (figure 12).

4. FUTURE WORK
Funding was supplied to develop the requirements to this particular part of the project. However, further research should investigate the following points:

Complexity of interface
So far, the project has only been designed for the Web platform. It is currently only available for mobile devices such as PDAs or cell phones that support Flash. As the majority of those devices are not equipped with this technology further research to develop the project interface using HTML, CSS and JavaScript should be considered given that HTML is more accessible than Flash along with the integration of CSS and JavaScript.

Choice of visualization
The visualization works in a simple way to represent graphical elements. For instance, no complicated scaling effects are employed. In future research, the visualization could have more of a 3D feel and allow the user access to a more detailed view. For example, s/he would be able to zoom in to different levels of information. The first level of information would contain the actual entry, the second level could lead the user to keywords, and from there s/he could click to see the author’s entry if the information is provided.

The Meaning of Life in Images
I The Meaning of Life in Images
Multilingual entries
Instead of using one particular language, icons could replace the written words such as is the case with English right now. For instance, in the categories, an icon showing a tree could metaphorically stand for nature. Nevertheless, it will be challenging and almost impossible to find clear icons that are understandable and unambiguous. English is the main language of the project. It is therefore only accessible to participants who are familiar with it. At the same time, a lot of people will not be able to understand the answers to the question that appear so far in English, French, German, Spanish, and Portuguese. Even though not everyone can understand the entries the different languages have a more or less symbolic meaning for the diversity of cultures.

Legend
At this point, a video and a legend are provided that explain the graphical elements used on the site. A third way to integrate the legend could be achieved by adding help menus or tool tips for user interaction elements. Although some participants might understand the project’s application right away, others might have more difficulty. The video or the information about the “system of signs” on the Web site could help participants understand the project in a better way. However, there is no guarantee that participants will see them. There is the danger that people will not participate actively by submitting an answer about the “meaning of life”, but will only participate passively by querying the data.

Typeface
At this point the choice of the typefaces is not aesthetically satisfying and should rather be considered as a temporary solution. When I do further research, I may design a font family that is optimized for the three categories and best distinguishes the age in a satisfactory way.

5. CONCLUSION
The project’s findings are situated in the creation of a visually comfortable atmosphere with the purpose to present raw data in a visually entertaining form. This can be achieved by developing a unique system of signs with emphasis on the choice of color, shapes of elements and layout. For instance, text entries use a colored rectangle to represent the category they are assigned to. The form of the rectangle edges distinguishes gender, and age is differentiated by different typefaces. All single elements will work together in the context of the data visualization.

This research paper is an example of a system of signs that has been developed to facilitate users’ browsing in the information visualization. It shows how database entries that contain raw text were transformed into a quickly understandable visual form.

The creation process is characterized by developing constantly new improvements. Those improvements came up by themselves or through conversations with others. Ideally, before the project is produced, experts and people off-field’s opinions should be collected and integrated in the concept phase. The project could have achieved a more satisfactory result if this had been done. I received some interesting feedback by showing the project at Siggraph 2008, where visitors from various backgrounds made comments on the project that could have served the project in an earlier state. For instance, right now, the colors I assign to the categories serve only to distinguish the categories themselves. I could have assigned certain colors groups (the reddish colors) to group categories. Categories that deal with human contacts could for example all have a reddish tone. A great concern lies also in the design of three typefaces, especially since the design of a typeface was my very first proposal, and which I now regret having abandoned early. The final execution of a typeface creation could therefore close the circle in a very personal way. Nevertheless, seeing the project come to fruition, and generating many exciting avenues for further developments is a pleasant and welcome reward.
The Meaning of Life in Images

**figures**

1. Categories and colors
2. Rounded corners for female and square-cut corners for male
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NOTES


ABSTRACT

This research paper deals with aspects of data collection within the project “lifeismeaning.com”, wherein we parse worldwide data about people's philosophies of living in the format of a Flash interface. The main objective is to gather worldwide data on life-meanings. After answering the question “What gives meaning to your life?”, participants enter their information about their gender, age, and optional email, and email-to-a-friend option. Initially, data was collected with hardcopy questionnaires, which were eventually replaced by the online questionnaire form. Results of entries contain everything from philosophical thoughts, to rather common life-meanings. Assigned categories are often “Family” and “Social” life. In conclusion, the data collection part is intrinsic to the project since this data is the launching point for the rest of the project.

Keywords
Data collection, Data generation, Electronic survey, Questionnaire

1. INTRODUCTION

Practitioners in many diverse fields, including sociology and the arts, work with data that often contains personal or private information. The Internet gives data collection a new dimension, because it allows us to gather material on a broader scale than was possible with traditional methods. The project originated from the idea of collecting worldwide thoughts about the “meaning of life” through the Internet, or more specifically, through an entry form in a Flash interface. The second component of the project’s interface is a Flash Web site that visualizes the information processed through a database in the backend.

The project’s first challenge involved figuring out a practical and efficient way to ask the question “What gives meaning to your life?” and to obtain meaningful results. Data gathering through different methods was crucial to the success of the project. The phrasing of the question about life-meanings was of major importance for the project, because it was the key question. Other parts of the survey, including categories, gender, and age were understood clearly by users. The original hardcopy questionnaire helped to optimize the wording of the questions. Eventually the online survey was chosen as the project's means of gathering data because of its numerous advantages, all of which will be highlighted later in the research paper. That everybody is different and has different ways of looking at life can be noticed by looking at the vast variety of people's answers. On one hand, I wanted to gather the diversity of human thoughts. Every single entry has its particular set of values exposed; however, all these disparate answers eventually become part of the whole set of responses. At the same time, I was interested in finding out if individuals cared more about materialistic things (which could contain entries in the categories “Personal”, “Ownership”, “Pleasure”), or spiritual values (“Spirituality”, “Philosophy”, “Pleasure”). Furthermore, the project allowed me to find out to which extent family (“Family”, “Personal”) is important as opposed to individual activities (“Socializing”, “Athletics”). I was also curious to find out if more females or males are interested in “Culture” or “Spirituality” or “Nature”, or if they are equally interested. “lifeismeaning.com” collects data in a rather playful, fun way. The different steps of data collection represent a variation of development phases of the project.

The layout of this research paper is as follows: in chapter two I present the finding of my research into other work similar to this project, especially in relation to the questionnaire and life-meanings. Chapter three
is concerned with the Methodology used during the project, from the early questionnaire to the creation of the main question (What gives meaning to your life?). This chapter also covers the creation of the various subcategories of the questionnaire: gender, age, e-mail, e-mail to a friend and multilingual entries. The evolution of the questionnaire is also presented here, as are issues dealing with the respondents' answers. Chapter four explores the possibilities of future work in the project, especially in dealing with format, data collection, marginal data and the scarcity of results in the early proceedings of the project due to time constraints. Chapter five presents the Conclusion.

2. PREVIOUS WORK RESEARCHED

Life-meanings and questionnaires

The project “lifeismeaning.com” is about life-meanings, a subject that is popular in many areas including the field of arts. In the dissertation “Television and Meaning”, Dr. Murphy analyzed, through interviews, the extent to which television influences people’s life-meanings/philosophy of living using the four areas of “intentionality, significance, symbols and sense”1. While “lifeismeaning.com” uses an open, rather uncontrolled online survey, the mentioned project is based on empirical interviews. Conveying personal views and experiences in a visually appealing format, Alex Ostrowski’s graphic design student project from the University of the West of England, Bristol, presents happiness in his book “The happiest book in the world.”2 “6 billion Others”, by Yann Arthus-Bertrand, is a collection of worldwide testimonies in the form of video documentaries or Internet entries. “lifeismeaning.com” is based on the use of interactive questionnaires to collect project data, specifically in the form of hardcopy questionnaires and the online survey.

3. METHODOLOGY

Questionnaire concept

Participants gain more confidence when keeping their posts anonymous.3 “lifeismeaning.com” intends on keeping participants anonymous and thereby obtain more reliable and candid answers. Riesman and Benney state that generally, it has to be considered that many human beings are very careful, even reticent, about making their private thoughts public because of social pressure and the weight of public opinion.4 An anonymous posting as it occurs in “lifeismeaning.com” does not restrict participants in even talking about intimate, private things. Dixon and Turner say that not being anonymous would make participants more likely to respond less openly or even not respond at all.5 However, there would be no tangible benefit to them in giving a false answer about life-meanings, even if it were not anonymous. Blogs or “Twitter” entries demonstrate as well that anonymity is not really necessary by featuring very intimate postings by writers, while at the same time showing their profile. In interviews, the psychological atmosphere in the relationship between interviewer and respondent is of importance.6 In “lifeismeaning.com” I want to generate an environment where participants feel free to express themselves and are not threatened in any shape or form.

Researchers and artists use different methods of collecting data on the philosophy of living. As examples demonstrate, this can be done through an interview, personal writings, video documentations or Internet entries. “lifeismeaning.com” is based on the interview, personal writings, video documentations or Internet entries. “lifeismeaning.com” is based on the interview, personal writings, video documentations or Internet entries.

Participant consents to and authorizes the author to use and publish the entered data for editorial purpose, and to alter said data without restrictions. The participant’s country is determined by their computer’s IP address. Participants who enter their email address will receive emails about this project. This is not a newsletter; the email address is used only for this purpose.7

The main question: “What gives meaning to your life?”

From the onset of the project I was trying to find the best way to define our main question about the “Meaning of life”. Initial questions included: What makes you happy?, What gives your life quality?, What makes life worth living?, What makes life worthwhile?, What makes your life enjoyable?, What recent event gave value to your life?, What is your favorite memory?, What is the purpose of life?, What keeps you from committing suicide? I discussed the questions with a focus group in order to come up with the best possible solution. We eventually decided to use the following question: What gives meaning to your life? This question proved open enough to cover just about all the other aforementioned questions. The problem and challenge is still that different cultures and socio-economic realities might interpret the question very differently. The challenge lies in formulating the question in a way that people from all backgrounds can understand it.8 Creating a question that all participants can fully understand is a crucial step of the project. It is a matter of vocabulary, but also a matter of the actual understanding of the vocabulary when presenting the question to an extensive and heterogeneous population.

Also, the information level has to be considered. Since “lifeismeaning.com” asks about personal things, everybody is able to answer the question as an expert in her/his field. It would be different if specific information about dates, for instance, would be expected. However, some people might not be able to answer a specific question psychologically, especially when people are asked about judgments, about values, or the question has to do with emotions that make them feel uncomfortable. A situation such as this could arise in “lifeismeaning.com”, resulting in the participant being unable, or unwilling, to accurately answer the question.9 Also, it is good to provide, through the questionnaire, a comfortable and visually positive atmosphere with the goal to create a feeling of trust towards the project and to help the participants in completing the survey.10 (More about “How important good design is” can be read in the chapter The Meaning of Life in Images of this paper) It is assumed that when people are asked a question, they add their personal frame of reference to it.11 “What gives meaning to your life?” has notions of personal matter in it, and even draws advantage from this.

The way the question is defined is as a so-called “free answer” that is uninfluenced and has the advantage to generate a wide variety of responses.12 This is advantageous for the project “lifeismeaning.com” that intends to gather data in the most open way.
Categories
I chose the categories by looking closely at humans’ needs, which have not changed since man’s existence. We need basic things such as a home, food, work, and sex. From there my initial categories “Family”, “Food”, “Work”, “Ownership”, “Athletics” were born. I then thought about hobbies, pleasurable values/ideals/activities and intellectual things, and came up with “Travel”, “Nature”, “City”, “Spirituality”, “Philosophy”, “Culture”, “Pleasure”, and “Other”. Finally, these things apply for to respondents individually or collectively, which generates “Personal” and “Social”.

Gender
Participants choose between female and male.

Age
The choice of age is personalized: instead of choosing a specific age range, the user selects the age s/he thinks suits her/him best: s/he can choose between young, adult and senior. I came up with this disposition because there are minor differences in accuracies, whatever way to ask individuals for their age. Results showed, that the question was too difficult to understand. I added exactly those keywords in further hardcopy questionnaires to help the user answer the questions without any further hints. The indication “event, activity, experience, other” was a good frame to control the answer.36

Hard copy questionnaires
The initial data collection through hardcopy questionnaires (figure 2) served several purposes: first, to generate data for a still-empty databank; second, to find out if participants understood so-called pilot questionnaire, where the process of the questionnaire is tested; and third, to examine the generated responses, satisfying myself of their relevance.

Email
Participants have the option to enter their email addresses in order to receive updates on the project. This entry is confidential and will never be shared with any third party.

Email-to-a-friend
The project is promoted and diffused by its own community through the sharing-with-friends-option.

Multilingual entries
Participants are invited to write in the language of their choice simply by experiencing that the posts are in different languages. Up to date entries are in English, French, German, Spanish, and Portuguese. A future evolution of the project could see the main question posed in the above-mentioned languages.

Questionnaires
Selection of formats
A study conducted by Maria Elena Sanchez emphasizes the use of good graphic design and layout in questionnaires to ensure a clear communication and to retrieve a good quality of the survey data.35 Clear and intuitive design help participants of “lifeismeaning.com” to understand “what is expected of them” and effectively answer the questionnaire. Also, the questionnaire is easy to access and use by participants because question and answer fields appear on the same screen. A few versions were developed and improved until the final version has been established.

Before the questionnaires
“Lorem Ipsum” dummy text has been used before any other data has been generated. The programmer used “Lorem Ipsum” to be able to fill the empty databank as shown in figure 1. This allowed testing what data queries looked like when they were visualized.

Online survey form
The Web questionnaire uses an input form (figure 3) that has been built with the computer application Flash. Furthermore, a database structure in the backend stores the data entered through this form and eventually a Flash script summarizes the data and displays them in the visualization. The Web is a more immediate medium compared to the hardcopy questionnaire. Generally, the online questionnaires have the advantage of being “cheaper, faster, more flexible, more functional, more usable, and more accessible” than the paper method.17 The Web method also has the advantage of being able to gather huge amounts of data, because it gives access to worldwide populations.14 Considering those arguments only the online survey is to be further used for the project.

Findings/Types of Answers
In this section, answers to the question “What gives meaning to your life?” are analyzed.

Although in the end only the digital form is used, the hardcopy contributed significantly to the testing process. It improved the way the question was put forth, and helped in adding further specificity to the question.

It must be taken into consideration, however, that a participant pool reached through the Internet cannot be considered to be an average group of general population with a completely varied background in terms of education, income, gender or ethnicity.36 For example, individuals with less education or a lower income can be assumed to have less access to the Internet.

Answers with different levels of meaning
A variety of answers is collected, from deep philosophical thoughts to banal daily life activities. Some of the answers illustrate a pragmatic and spiritual side, as for instance “To balance what I have to do and what I choose to do”. Others are details from daily life: “to take my coffee in the morning with the people I love”, “to get a smile every day”. Some answers are religious in nature: “My meaning in life is the worship of Allah”.

An answer might seem banal at first look, but might hold a deep and/or emotional importance for its author.

There are also stereotypical answers. There is for instance a high percentage of entries that contain the word “love”.

Case studies
Many of the answers are selected for the purpose of case studies. This is done by giving the whole answer, sometimes translated into English, and the person who filled it out is described. From the case studies conclusions are drawn that are also made visible in the visualization.

1. A 14 year old boy wrote “I want to be a professional soccer player”.
2. A 17 year old girl wrote “I want to become an astronaut”.
3. A 21 year old man wrote “I want to save the environment”.
4. A 24 year old woman wrote “I want to become a lawyer”.
5. A 30 year old man wrote “I want to become a doctor”.
6. A 38 year old woman wrote “I want to become a nurse”.
7. A 45 year old man wrote “I want to become a teacher”.
8. A 52 year old woman wrote “I want to become a doctor”.
9. A 60 year old man wrote “I want to become a lawyer”.
10. A 65 year old woman wrote “I want to become a nurse”.

For more information, please visit lifeismeaning.com.
Multiple answers/submissions
If a respondant were to participate several times, this would be advantageous to the project because it would increase the entry rate.

Every answer is important
Answers such as “blabla” or content that is not identifiable, unsatisfactory or insufficient, also happen to be submitted, along with the occasional vulgar comment. They are all important for the project. It is possible that some discriminatory or racist comments might cause a problem; however, worst-case scenario, I am in control of the database and able to delete undesirable content should the need arise.

Category assignment
The user has to connect their personal response to a category. These category assignments may appear complicated, since I encounter responses that don’t fit their category. The assignment requires a further level of analytical thought on the part of the user since s/he has to deal with 15 new meanings all at once. A potential fix to this situation would be for me to do the assignations personally based on my judgement.

Gender and Age
The contributor’s choice of gender and age are pretty straightforward. The participants choose to identify themselves. There are no restrictions on the user.

Beyond the empirical study
Although with the online survey the project uses a data collection method similar to those used in social research, it does not expect to obtain scientific results. Lang found out that Web surveys cannot really provide valid and reliable responses. Considering this method, using the Web fits perfectly to the kind of survey I am doing, because I am not dependent on scientific data. The project “lifeismeaning.com” is not intended to function as an empirical study, a scientific project or a sociological investigation. The purpose is to go beyond scientific research as for instance described in Csikszentmihalyi’s book “A Life Worth Living: Contributions to Positive Psychology”, which is about leading a happy life.21 The data in “lifeismeaning.com” is instead collected in an uncontrolled, rather playful environment that is influenced by factors such as participants’ mood, or the actual context they are in. The scientific way has specific standards and expectations which the project “lifeismeaning.com” does not have. It is an open experiment on life-meanings.

Influence on participants
A point of discussion is if and how people are influenced by former entries and whether participants should be able to see the answers before submitting their own. A risk could be that they copy some of the answers, rendering their personal answer less authentic. There is the tendency that people want to be received in a good way by other people and therefore they would approximate themselves to the group. In relation to “lifeismeaning.com” this could mean participants choosing answers they would never have thought of themselves in order to conform. On the other hand, if they don’t see the answers at all, there is the risk that people might just quit the project site. I decided not to go with a compromise, but to stick with the version where people can just look at other’s answers if they wish. Even in case they get influenced by one of the answers and copy it or modify it, I see it as a good thing rather than a bad thing for this particular art project. Access to the answers can have an inspiring affect and might even encourage participants in their postings.

4. FUTURE WORK
Further formats for data collection
An e-mail interview could be used as an alternative to online form data collection.22 Adapted to “lifeismeaning.com” the form would be put into an email and sent out to participants. However, this form of data collection could only be sent out to the author's personal or business contacts. As the number of contacts is not significant, there is no need to develop this further.

Marginal data
The online questionnaire contains very few entries for young or elderly participants. Ideally, I would continue collecting data in conjunction with the hardcopy questionnaires, to be able to reach target groups that are less present on the Web such as the elderly, or women.23 Target groups such as young people and kids could be best found in nursery schools, while seniors and elderly could be reached in elderly homes. Questionnaires could be handed out to those institutions with the purpose of balancing out the age differences that occur now in the project. On the other hand, the fact that only poor data for the young and elderly age group can be collected could also be seen as a metaphor for the less present users on the Web.

Scarcity of results due to time-constraints
One of the restrictions is that the project was only officially launched in July 2008, which accounts for the smaller amount of data collected. The text entries derive from the moment when the project was first shown in the gallery context in April 2008. Since then, slight modifications have occurred. However, even this small amount of data allows us to evaluate how the project is meeting expectations.

5. CONCLUSION
Particular emphasis had to be assigned to the main question about the “meaning of life”. The way this was phrased was adjusted in some points to direct the answers in a certain direction and to obtain more interesting data about life-meanings. Other entries such as Categories, Gender, and Age were less problematic for participants and answered in a straightforward way. Both survey formats, the hardcopy questionnaires and the web survey, contributed to gather data to the question about life-meanings. Eventually, however, only the online survey is further used.

People posted varied answers and on many different levels: single entries reveal sometimes deep philosophical thoughts, sometimes common perceptions on life. Overall, most entries are assigned to “Family” and “Social” life.

At this time the results may be limited, but we are in the first steps of this project and do not have much data yet. Marginal data collection could be improved by emphasizing data collection for an ever-broadening segment of the population.

Considering the small data count, I am quite satisfied with the quality of entries. However, the categories I have chosen could be modified and improved to be clearer for users. For instance, I could simplify the process for the user and let her/him choose a smaller number of categories (say six instead of thirteen categories). Instead of categorizing, there could also be the option of categories (say six instead of thirteen categories).
FIGURES

figure 1. "Lorem Ipsum" text

figure 2. Hard copy questionnaires

figure 3. Online survey form
CHAPTER III
Community Participation and Project Promotion in “lifeismeanging.com”
About life-meanings. I am trying to research people's philosophy about life through this work. Every single "entry" is important, but so are the entries seen as a whole. For the purpose of this paper, the term "entry" is defined as what people submit to the question "What gives meaning to your life?"

The purpose was to look closer at participation in the project and ways to improve it. In other words, I was interested in ways to increase the project's community. This can be achieved by reaching a better understanding of the behaviour of the project-based community. Ways to increase the participation are for instance online promotions through links from other sites, the project site itself, optimization of the project site for search engines, but not so much for the entries as they are in Flash, and off-line promotion. Only participation keeps the project alive. The final purpose of participation is that the user contributes to the final look of the data visualization* by adding more volume to it.

This paper is structured as follows: chapter two introduces my research into previously realized work in the areas of community and public participation; chapter three covers the Methodology used in this project to examine the role of communities. More specifically, this chapter covers my findings on the behavior of participants in similar projects, ensured participation and target audience. This chapter also examines ideas on how to promote participation online, offline, and through the project itself. Furthermore, the chapter deals with levels of exclusion in the project, including the exclusive use of the English language; the socio-economic realities of the community; and dealing with multi-lingual entries. Chapter four explores avenue of future expansions for the project, most notably through the use of an extended language.

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* With data/information visualization I refer to the presentation of results that appear in an artistic way.
frame, increased interaction for participants, the use of JavaScript versus Flash, encouraging participation and growing the respondent pool through e-mail initiatives. Chapter five presents the Conclusion.

2. PREVIOUS WORK RESEARCHED

Community/public participation
“lifeismeaning.com” is a collaborative project that relies entirely on the entries of its community. Also community integrated is Rivane Neuenschwander’s installation “I Wish Your Wish”, where individuals are invited to take one of the numerous ribbons that contain silkscreen printed wishes. In exchange, they write their own wish on a piece of paper and deposit it in a box, after which they become ribbons for future exhibits. 2 “lifeismeaning.com” works in a similar way: individuals receive or read entries and, as a further step, they submit their own answer which will be visible to future participants. The following are early examples of building up communities for projects on the Web. In 1990 email-based communities started off with so-called mailing lists. Emails sent to a particular name are forwarded to a list of subscribers, who may respond to this email. 3 Douglas Davis’s project “The world’s first collaborative sentence” was started in 1994. 4 Visitors are invited to contribute to the sentence that contains so far more than 200,000 entries in different languages. 4 “lifeismeaning.com” entries basically accumulate the same way as do the text submissions for the collaborative sentence. A further project on early Internet community was the project “please change beliefs” by Jenny Holzer, created for the project on early Internet community was the project “Change me”. They invited people to select from the Getty image’s animated flash visualization. 5 “lifeismeaning.com” uses this same principal, but the visual form changes: instead of photographs people submit text. Public participation occurs also within the project “Teекс”. It is a web-based editing application for video and sound footage from the Web. The project community may reedit edited projects. 6 In the “Scarf” project by “Moving Brands” people are invited to send pixel drawings via a web-interface. Their submissions will be combined to those of others into the patterns of a scarf, which will result in a piece of co-created fashion. 7 “The co-created end product for “lifeismeaning.com” will be the numerous visualized patterns.” Layer Tennis” by Adobe CS3 is an online game that sends a file back and forth in real-time. Each artist gets fifteen minutes to complete his artwork using Adobe design programs. A third participant, a writer, will comment on the actions. The game’s winner is announced in the forums. 8 “Globologos” by “The Sid Lee Collective” collects artwork through submissions via the Internet and integrates illustrations and graphical elements in an animated flash visualization. 9 A further commercial example for participation comes from the Getty image’s project ‘Change me’. They invited people to select from their image databank photos that represent the world’s problems. Those images were shown on the Internet site’s slideshow while promoting at the same time their fundraising campaign. 10 This project goes further than “lifeismeaning.com” as it links a fundraising cause to participants’ actions. The collaborative art community of the Internet is composed of communities and user participation. Individuals share images of office spaces, edit files together, co-create fashion, build animations or even help raise funds. “lifeismeaning.com” picks this notion up and its community creates content/information about life-meanings.

3. METHODOLOGY

Project based on community
The project is based on public participation. Participants are the protagonists of the project. First, they generate data by filling out the answer to the question “What gives meaning to your life?” and thereby contribute to the project. Furthermore, those participants will navigate in the project through data visualization and “take” the information. Others may choose to simply observe the network without contribution. This means there are two types of participants: those who enter answers, and those who browse answers. This happens the same way in public forums: if a user is not participating s/he is still exposed to new experiences and s/he might by chance find things s/he is interested in, and perhaps even learn something in the process. 11

Behavior of participants
Participants who, on average, show a tendency to spend less time surfing the internet tend not to respond or respond late, as opposed to those participants who are Internet literates. 12 It should also to be taken into account that Web users only remain on a site if it is interesting or pleasant. 13

Ensure participation
A research study found out that Internet users receive scientific surveys better than they do commercial surveys. 16 Since “lifeismeaning.com” has little to do with science, but functions more within the fields of art and design, it might prove to promote a greater interest in participants.

Target audience
Ideally, worldwide data with different socio-economic aspects including education, ethnicity, gender, race and income would be part of the project. However, the project is limited to today’s Internet users, and therefore various groups are excluded by default. 17 Ye instead states that while in the late 1990s Internet users were “white and male”, today they are much more representative of the average population of developed countries. 18 Nevertheless, it is still unrealistic to say that survey entries are representative for the whole population: Elderly and Female respondents, for instance, are not that present. 19 For “lifeismeaning.com” many potential participants will have backgrounds in the fields of design and art, depending on the various Web sites that will be linked to the project. It is also very likely that people from other fields will participate.

Increasing Participation Through Promotion Online
The project was shown in a gallery context at Concordia University at the beginning of May 2008 as shown in figure 1. This event was a direct way to test the questionnaire. About two months later, after initial bugs had been fixed, word about the project was spread through online promotion. One way to increase awareness of the project was to send an email to personal and business contacts. According to research, the best time of the week to send out the
email messages is between Monday and Thursday.
This has the highest response rate since these days are
when business people look at their incoming messages
the most. The idea is to send out press releases in the future to
potential websites that send out newsletters. In Montreal
these are some of the following associations: GRAFF,
a Fine Arts Gallery and Printmaking Studios, CIAM,
interuniversity media arts centre, Concordia University
fine arts department, or StudioXX, Feminist art centre for
technological exploration, creation, and critique.
On an international level, sites such as “infosthetics.com”,
and other blogs related to information visualization and
Internet projects are to be considered.
The project is also connected throughout links and
groups in social networks such as “Twitter”, “Identi.ca”
or “Facebook”. Connection to frequently used sites and online
communities helps to get extended participation to the
project site. The fact that users of social network sites
have often many contacts helps to spread the information
about the project “lifeismeaning.com”.
The information about the project is in text html that can
be indexed by common search engines.

The Project Itself
The project is promoted and diffused by its own commu-
nity through the sharing-with-friends-option. This means
participants can fill in the email of a friend or friends.
Their friend/friends will receive an email (figure 2) with
the message: “You have been invited by a friend (email of
participant) to check out the art project “lifeismeaning.
com”. The latest entry is “Eating carrots” gives meaning
to my life. What gives meaning to your life? You can
contribute your views at lifeismeaning.com. If you don’t
want to receive any updates about his project, please click
here, this is not a newsletter.” Friends can only be invited
if the participant enters her/his own email address.

4. FUTURE WORK
This project has opened many questions and
avenues for future research and experimentation:

Expanded languages
The option to select between three languages would
make the project accessible to a broader public: at least
French, German and Spanish could be added.

Interaction for participants
To generate discussions, a comment function could be
enabled for each entry. People could then again comment
on this entry. In this case the user’s email address entry
would be mandatory. There would also be the option
to provide one’s URL. The participants would receive
updates on comments that have been made on their entry.
This would have the advantage of generating more traffic
on the site, because users are curious to see what people
think about them.
On the other hand, the original concept would com-
pletely change. From a project that promotes anonymity,
it will change to a site where people open themselves
to the world. It would be an approach that compromises
people’s privacy.
The concept would be similar to sites such as “Twitter”
where users create their account and can then use the site
as a form of online diary.

Another way to increase participatory traffic could be
achieved by connecting “lifeismeaning.com” to “Twitter”
by loading “Twitter” entries in real time into
“lifeismeaning.com”’s visualization: “Twitter” data
visualized with “lifeismeaning.com”’s visual system.
Alternatively, the open source application “identi.ca”
that operates in a fashion similar to “Twitter” could
be used, considering its non-commercial approach.

Similar projects that are connected to “Twitter” are
“twistori twitter message filter” - a “first person”
visualization of “Twitter” messages, inspired by “We Feel
Fine”. “Twitter” messages are filtered by occurrences of the
phrases “I love”, “I hate”, “I think”, “I believe”,
“I feel” & “I wish”, which are placed in a visual scrolling
message ticker.

Technology: Flash or JavaScript
The use of HTML, CSS and JavaScript instead of Flash
could make it easier to integrate the project. Search
engines would notice participants’ entries, which is
not the case now by using a Flash script. Also, further
integrations to applications like “Twitter” would be more
likely and manageable. I initially chose to use Flash to
be flexible in case I decided to change the look of the
data visualizations.

Encouraging participation
Marketing tools could be used to broaden user
participation. For instance, in “visualthesaurus.com”,
users create their word combinations and are able to
print them on t-shirts or mugs. Adapted to
“lifeismeaning.com”, users could choose entries and
get them printed on a t-shirt. In this case an e-shop
application has to be implemented in the project or an
existing site such as “spreadshirt.com”.

Invite people by email
A constraint could lie in the fact that people might not
respond to the first email invitation to the project.
This applies for the author’s personal and business network,
but also for the sharing-with-friends-option. Pre-notice
emails on the project or emails that remind people to
participate to increase the response rate could be useful.
5. Conclusion

Data on life-meanings can only be gathered with the participation of a big community. The paper describes the project-based community, its behavior and how to keep people participating. The target group is further analyzed. Some people are unfortunately excluded right away from the project: for instance, those who do not speak English and those without access to the Internet. There are a few effective ways of making the community grow and thereby increase the project entries: online promotions through links from other sites, the project site itself, optimization of the site for search engines, and off-line promotion.

Due to the short running time of the project, I still do not know if people will actively participate in the project or if they will just passively browse it. I obviously hope that people enter their data. My main concern is that the project might at this point be somewhat isolated, even though it has been connected to social networks (such as “Twitter” or “Facebook”). Better traffic could be achieved with the “Future work” described in “Interaction for participants” that allow users for instance to comment on entries and thereby add a more personal feature that binds users to the project. Although there is the possibility, I do not like the idea of using marketing tools to increase participation; I am rather interested in an autonomous project that requires only minor maintenance.

38

III Community Participation and Project Promotion in “lifeismeaning.com”


7. McCallam, Ian. This ain’t no disco it’s where we work. 29 Jul. 2008. This ain’t no disco it’s where we work. 29 Jul. 2008 <http://www.aintnodisco.com>.


Chapter I


Chapter II


Chapter III


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