Measuring Happiness

How happy is the teenage generation, and what are the crucial aspects influencing it?

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Preface

First of all, we would like to thank Mr. Hendricks for guiding us through the months of hard work on our extended paper. He encouraged us, helped us and was always available whenever we wanted to drop by.

Secondly, we would like to thank Worldschool for giving us the chance to participate in the project HUGS. It was hard work, but very rewarding. We would also like to thank the Ministry of Infrastructure and the Environment for being open to our generation and appreciating and listening to our advice on how to improve our (green) society from the teenage perspective.

Last, but not least, we would like to thank every single respondent who took the effort for filling in our survey with great care and thought.

Thank you all very much!
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Introduction

How do we create a greener society? To promote sustainability and durability, nations and government often turn to developing a bio-based society or a circular economy. But what is the exact driving force behind this greener society? Exactly: humans.

Keeping this in mind, we felt that the human well-being is still too much neglected. A neglected human well-being results in no fundamental base for a better society to lean on. Consequently, all the progress made in developing a greener and sustainable society would collapse. To prevent enrolling in this Sisyphus trap, we chose to explore individual well-being in relation to national well-being for our extended paper. For this, we investigated what long-term subjective happiness means for teenagers and how much influence this happiness has on the well-being of a nation.

With these ideas in mind, we focused on the question ‘How happy is the teenage generation, and what are the crucial aspects influencing it?’ We divided this main question into 4 sub-questions, namely:

1. Who do we mean when we speak about “the teenage generation”?
2. What is happiness?
3. What is happiness affected by?
4. What are the acknowledged ways of measuring happiness?

These four sub-questions and their answers can be found in the theoretical framework of this paper. In addition, the conclusions we drew from our survey can also be found in this section.

After the research framework, we have provided a conclusion of our advice to the Ministry of Infrastructure and the Environment. That section is followed by room for discussion on the results, since happiness is a subjective, abstract topic on which everyone carries his or her own opinion.

In the subsequent research framework, which can be found in the appendix, we analysed research results from studies investigating happiness amongst people and compared these results with the results of our own survey. With our survey, we investigated the degree of influence of two phenomenon discussed in sub-question 3: social interaction and time management. Due to the lack of time and provisions we had while carrying out our investigation, we chose to focus on these two subjective influences of which we felt had the most significant influence on individual well-being, as is explained in the research framework itself.

The reference list as well as our personal logs can also be found in the appendix, after the research section.

To finish off, we created this extended paper not only for our own benefit, but as a mean to provide advice to the Ministry in The Hague to improve the durability and development of our society. Those are taken up in the prosperity of a nation, measured by the Gross Domestic (or National) Product (GDP/GNP). GDP measures the well-being of a nation in a materialistic, tangible way. We decided to measure the well-being of a nation in a more subjective way: namely, through measuring their mental states of happiness rather than the content of their wallets. Hopefully, this extended paper will give useful advice for HUGS, ‘Het Uitvinden van de Groene Samenleving’ (inventing a green society).
1. Who do we mean when we speak about “the teenage generation”?

With “the teenage generation”, we mean teenagers between 12 and 18 years-old. Recent studies in the journal of Psychological Science suggest that every generation is happier than the previous one. This should mean that the current generation is the happiest generation of all times. However, The National Institute of Aging has found that happiness and well-being decrease with age. The reason why we further explore this age group is, firstly, because most of the existing results on happiness rates have been obtained by questioning adult respondents. However, since the teenage generation is the new generation, they will soon be the mature driving force of the future. So, their happiness is significant for maintaining a good balance in the current and future world.

2. What is happiness?

Language reveals ancient definitions of happiness and the way in which happiness was conceived. The word for happiness in every Indo-European language, without exception, is related to the word for luck originating from the ancient Greek. This linguistic pattern gives away the fact that in ancient Greek happiness was thought to be uncontrollable, in the hands of God, and dictated by fate or fortune. The acknowledged Webster dictionary offers two main definitions of happiness: 1) the state of well-being characterized by emotions ranging from contentment to intense joy, and 2) Good luck; good fortune; prosperity.

However, is a definition set out in a dictionary acceptable as the real truth about happiness? Some say that happiness cannot be described, but only felt. Nevertheless, innumerable people disagreed and looked beyond dictionaries and senses to plunge deep into the meaning of happiness.

One of the most famous definitions is that of the Greek philosopher Aristotle (384BC - 322BC), saying “happiness depends on ourselves.” He introduced a science of happiness which held the idea that fulfillment of physical and mental well-being is the true requirement of a genuinely happy life. In one of his most influential works, the Nicomachean Ethics (±350BC), he concluded that the ultimate purpose of human existence, that which encompasses the totality of one’s life, is happiness.

Another conception of happiness is that of the Chinese Folk Psychology. One hundred and forty-two undergraduate students wrote responses to the question “What is happiness?” in 2001. Using thematic analysis, four main themes were found: 1) a mental state of satisfaction and contentment, 2) a harmonious state of existence, determined by the individual, 3) an entity depending on unhappiness for contrast and meaning, and 4) the wisdom of discovery, contentment, gratitude, giving, and self-cultivation.

However, the Journal of Medical Ethics looked at happiness from the scientific side and constructed a wholly different meaning than most philosophers and studies would do themselves. The Journal defined happiness as nothing more than a major affective disorder, pleasant type. They showed that happiness is statistically abnormal, consists of discrete cluster of symptoms, and probably reflects the abnormal functioning of the central nervous system.

Professor in Psychology at University of California, Sonja Lyubomirsky, has devoted the majority of her research career to studying happiness. In her book The How of Happiness (2007) she elaborates on happiness as “the experience of joy, contentment, or positive well-being, combined with a sense that

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http://www.espacoacademico.com.br/059/59esp_lauriola.htm

http://www.webster-dictionary.org/definition/happiness

http://www.pursuit-of-happiness.org/history-of-happiness/aristotle/

6 Lu, L., Understanding Happiness: A Look into the Chinese Folk Psychology (Taiwan 2001), 28-30.

http://jme.bmj.com/content/18/2/94.short
one’s life is good, meaningful, and worthwhile.” Lyubomirsky concludes that happiness is one of the most significant dimensions of human experience and emotional life. Happy people make a better, healthier, stronger society.¹⁰

Four American professors (Roy F. Baumeister, Kathleen D. Vohs, Jennifer L. Aaker, and Emily N. Garbinsky), all majoring in Psychology, described happiness as being derived from the satisfaction of biological needs and desires. The desires to be healthy, loved, and successful in life all add up to one’s well-being. Next to having satisfied desires, Baumeister and his team also conclude that happiness is rooted in being largely free from unpleasant events and balances out unhappiness.¹⁰

Researchers of the University of Virginia took their own shot at discovering the truth about happiness. They tracked the understanding of happiness over deep time, starting off with analysing the definition of happiness from 30 nations.¹¹ The first definition of “happiness” in the 1530’s Oxford English Dictionary was recorded as “good fortune or luck in life or in a particular affair.” In the 1961 edition of Webster’s Unabridged Dictionary, however, a major change took place, defining happiness now as something one can pursue. Subsequently, the University investigated books published between 1800 and 2008, looking at the frequency in which the term “national happiness” and “personal happiness” appeared. As a result, they found that happiness became a much more personal matter around 1920, rather than determined by your nation or by divine powers.

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¹ Greater Good, ‘About the Greater Good Science Center’, greatergood, December 17 2014. http://greatergood.berkeley.edu/about


3. What is happiness affected by?

Knowing the meaning of happiness is great in theory, but it does not get you very far in practice. Our ancestors who tried to come up with the right definition of well-being all had only one goal: making life better. In order to enable this, our knowledge has to be put into practice; we need to find out what influences happiness. We can divide these influences into short-term and long-term happiness. Subsequently, these can be furtherly divided into internal and external aspects.

The first internal aspect influencing happiness on the long-term is health. Elsevier Italy tested the relationship between happiness and self-rated health and concluded that happiness is strongly correlated with perceived good health. William C. Dement and Christopher Vaughan from the American Psychological Association made the vital connection between health, happiness, and sleep. The authors reveal the price we have paid for ignoring sleep: immeasurable physical, mental, and psychological disadvantages. Psychiatrist and professor at Columbia University M.D. Drew Ramsey connected health, happiness, and diet. He partly blamed the American diet for depression and Demetria, stating that we as a nation are overfed and undernourished. The human brain relies upon many nutrients for its growth, healing and healthy functioning. By stripping away these nutrients from our daily diet, brain disorders like depression and dementia are the results.

Another crucial internal influence for long-term happiness is time management. Elsevier showed that in developed countries, happiness does not increase in line with income levels, but with leisure time. This so-called ‘time-saving treadmill’ seems to make a significant contribution to the stagnation of happiness. According to Elsevier, society would be better off if they worked less and had more leisure time. Jennifer Aaker, professor at Stanford University’s Graduate School of Business has written about the calendar as a secret to happiness in her book The Dragonfly Effect. According to Aaker, time is loaded with personal meaning and feeds social connection, which are both critical to happiness. She also discussed that the intentions of how and with whom we spend our time, impacts the happiness we feel. Maximizing, expanding and designing time more proactively by putting activities on your calendar are key to happiness. Psychologist and self-help author Robert Epstein further explored on the topic of time management and unveiled the idea that planning contributes to one’s happiness. He showed that 25% of our happiness is related to our competence to manage stress.

Philosopher Confucius, founder of Confucianism argued that regular practice and study brought about joy. With this, he did not mean intellectual knowledge, but practical wisdom. 200 years later, in the 4th century Before Christ, teacher Mencius essentially argued the same thing. He stated that fully cultivating yourself would enable world peace and a global state of well-being. Both Confucius and Mencius, as well as many other philosophers and teachers in those days, underlined the sense of joy that accompanies

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   http://www.huffingtonpost.com/drew-ramsey-md/food-mental-health_b_1703007.html
15 Binswanger, M., Why does income growth fail to make us happier? (Olten 2006), 55-60.
   http://healthland.time.com/2011/05/31/study-25-of-happiness-depends-on-stress-management/
personal growth. Thus, up until this day, self-cultivation is seen as another major internal influence on long-term happiness.\textsuperscript{18}

An important external influence for long-term happiness is social interaction. The Social Indicators Research, exploring measurements of the quality of life, showed that, family and social relations were prominently associated with happiness.\textsuperscript{19} Love and feeling a sense of appreciation are crucial factors that influence mental well-being. People with a stable sentimental relationship report higher happiness levels.\textsuperscript{20} Thomas Sander, Executive Director of Saguaro Seminar (the study of ‘social capital’) at Harvard noted that where income is often seen as an influence of happiness, “community trumps materialism.” He proved that community-connectedness and well-being are closely associated.\textsuperscript{21} The Greater Good Science Center studies well-being from the psychological side to the neuroscience side. The California based university centre explored the link between the number and strength of social connections and one’s happiness, concluding that the quantity and quality of a person’s social connections can practically be equated to well-being. Friendship decreases the chances of experiencing sadness, loneliness, low self-esteem, and problems with eating and sleeping.\textsuperscript{22}

Government and nations is another external factor influencing long-term happiness. The political scientist Charles Murray argues in his modern classic \textit{In Pursuit: Of Happiness and Good Government} (1988) that in order to be happy, individuals must be members of communities. People have a need for close personal connections and standards of behaviour within real, authoritative social structures. Moreover, he shows that the realities of political power may bring out the worst or the best in a nation’s civilians.\textsuperscript{23} With his bestseller, Murray has proven that good governance has immense influence on a nation’s well-being. Senior Professor of Economics Bruno S. Frey also drew a connection between happiness and society, showing that the more democratic and decentralized a country is, the happier the inhabitants tend to be.\textsuperscript{24} Live Science Contributor Stephanie Pappas explored patriotism and governance, showing that societal characteristics can influence happiness. She proved that the more satisfied people are with their country, the happier they are, disregarding income and prosperity. Patriotism serves as comfort in rough times and tends to deliver a bigger personal boost from warm feelings about collective groups.\textsuperscript{25}

Bruno S. Frey also discussed how much micro- and macroeconomic conditions in the form of income, unemployment and inflation are all nurture to happiness. He concluded that they are large stimulants

\begin{itemize}
  \item \textsuperscript{18} Pursuit of Happiness, ‘Mencius’, \url{pursuit-of-happiness}, December 14 2014. \url{http://www.pursuit-of-happiness.org/history-of-happiness/mencius/}
  \item \textsuperscript{19} Fave, A. D., & Brdar, I., & Freire, T., & Vella-Brodrick, e.a., \textit{The Eudaimonic and Hedonic Components of Happiness: Qualitative and Quantitative Findings} (The Netherlands 2010), 150-155.
  \item \textsuperscript{20} Castriota, S., ‘Education and Happiness: a Further Explanation to the Easterlin Paradox?’, tovergata, December 14 2014. \url{https://art.tovergata.it/retrieve/handle/2108/538/4387/Education%20and%20Happiness.pdf}
  \item \textsuperscript{21} Sander, T., ‘Summary of recent happiness research’, socialcapital, December 17 2014. \url{https://socialcapital.wordpress.com/2010/10/27/summary-of-recent-happiness-research/}
  \item \textsuperscript{22} Greater Good, ‘Happiness is being socially connected’, greatergood, December 17 2014. \url{http://greatergood.berkeley.edu/raising_happiness/post/happiness_is_being_socially_connected}
  \item \textsuperscript{23} Murray, C., \textit{In Pursuit: Of Happiness and Good Government} (Indianapolis 2013).
  \item \textsuperscript{24} Frey, B. S., & Stutzer, A., \textit{Happiness and Economics: How the Economy and Institutions Affect Human Well-Being} (Princeton 2010), 210-213.
  \item \textsuperscript{25} Pappas, S., ‘Happiness Linked to Patriotism, Especially in Poor Countries’, livescience, December 18 2014. \url{http://www.livescience.com/12791-happiness-linked-patriotism.html}
\end{itemize}
for one’s well-being. In this way, economy and money is a second external stimulant of long-term happiness. Elsevier agreed, revealing that a negative effect on happiness was caused by impatience and unprofitably wasted time. Whoever said that money can’t buy happiness is proven wrong. Elsevier’s studies on this case showed that thinking about time in terms of money positively influence how people experience pleasurable events. They feel more satisfied and content after doing a job which they got paid for, than for doing the same or even a nicer job which they did not obtain any revenues for. Psychologist Daniel Kahneman and economist Angus Deaton created the price tag of happiness and concluded that after this specific income plateau more money has no measurable effect on contentment. This ‘magic annual income’ is $75,000 and contributes to happiness set about by evaluation of life, determined by one’s overall life satisfaction.

Previous empirical research has found another external influence for long-term happiness: education. Stefano Castriota proved that education raises aspiration levels, helps people develop minimum levels of capabilities to appear in public without shame, establishes higher employment probabilities, and ensures higher expected salaries. Proper jobs, high GDP rates, and active and stimulating cultural lives are all set out by education. This indicates that education is the source of happiness.

Regular fitness proves to be even more beneficial for mental well-being than it is for the body. Exercise is therefore another crucial external factor for long-term happiness. While exercising, feel-good chemicals called endorphins are released. Researchers from the Penn State University provided more evidence to this “happiness benefit”: people experienced greater general feelings of excitement and enthusiasm when they were more physically active. Little exercise delivers feelings of stress and unhappiness, which affects those in the inactive person’s surroundings, working as a downwards spiral.

The last external factor for long-term happiness is ecology combined with geography. Sustainable behaviour is the intention of protecting both the physical and the social environment. Many previous studies in the branch human ecology have shown that pro-ecological behaviours are very closely related to the levels of happiness of society. Happiness is a consequence of sustainable and more frugal behaviour. According to experts, establishing a durable physical environment enables a better social environment which is expressed through happiness. Subsequently, the Oxford Handbook of Happiness pinpoints specific geographical factors influencing pleasure in life. These include climate, physical environment, and social and spatial inequalities. The warmer and more predictable climate, the happier people tend to be. In addition, a clean, sustainable environment also increases well-being since

27 Sanford, E., & House, J., Time, money, and happiness: How does putting a price on time affect our ability to smell the roses? (Toronto 2011), 67-71.
http://www.huffingtonpost.com/2012/02/09/exercise-happy-enthusiasm-excitement_n_1263345.html
32 Boniwell, I., & Ayers, A. C., Oxford Handbook of Happiness (Oxford 2013), 99-104.
it makes people more comfortable and at ease. A polluted environment raises subconscious guilt and fear for the degeneration of the Earth and decreases happiness.

Nowadays, more and more people who cannot find true happiness in a natural way, start relying on substances. This so called ‘artificial happiness’ is short-term and external, reached through several factors. One of these artificial influences is drug stimulants. A stimulant is a type of drug that is supposed to increase one’s feeling of happiness, contentment and even euphoria while at the same time it increases one’s energy and alertness. Cocaine, for example, is a strong central nervous system stimulant that increases levels of the brain chemical messenger dopamine in brain circuits regulating pleasure and movement. However, excessive consumption can lead to negative effects, such as anxiety and life endangering heart diseases, diminishing happiness in the long run. Another anti-depression medicine is the Selective Serotonin Reuptake Inhibitor (SSRI), which increases the availability of certain brain chemical messengers called neurotransmitters. It blocks the reabsorption of the neurotransmitter serotonin in the brain, which regulates complex emotional behaviours. It therefore contributes to feelings of happiness.

Several research outcomes have pointed towards the probability of vitamin D serving as another external happiness stimulator on short-term basis. Sunlight increases vitamin D levels and improves the mood of Seasonal Affective Disorder (SAD) patients. Psychologist Dr. Michael Terman investigated SAD patients and showed that the antidepressant benefit comes from exposure to ultraviolet rays that act on the skin to stimulate vitamin D production. Another research at the Loyola University Chicago Niehoff School of Nursing proved that vitamin D supplements improved the moods of women with type 2 diabetes and signs of depression. However, lack of sunlight is not the only inhibitor of vitamin D production: lack of dairy products, fatty fish or oysters may also contribute to deficiency of vitamin D and in turn lead to depression.

The popularity of music festivals and radio stations shows just how much music is part of our culture. In addition, researchers from University of Missouri reveal that music can also be an integral part of our happiness. Two groups were asked to listen to the same happy and upbeat music. One group had to self-observe their mood over a two-week period and the other group should not intentionally let it affect their mental state. The results showed that the first group became increasingly happier and the second

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39 J. Howard, Sunshine & Happiness Study Links Time Outdoors To Improved Mood, The Huffington Post
group was not affected. According to MU professor Kennon Sheldon, this research suggests that we can intentionally seek to make mental changes leading to new positive experiences of life. Neuroscientists tend to agree. Blood and Zatorre showed by using PET-scans that the pattern of brain activity observed with the positive responses through music-induced chills is similar to the one associated with brain imaging studies on euphoria and pleasant emotions derived from the use of cocaine. Music increases the production of happiness hormones and proteins, and produces reactions in various regions of the brain. Thus, music momentarily stimulates one’s happiness.

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42 J. Choi, People’s intention to being happy plays role in their happiness level, studies suggest (England 2013), Mizzou Weekly, 35, 12. http://mizzouweekly.missouri.edu/archive/2013/35-12/happiness/index.php
4 Acknowledged ways of measuring happiness

Happiness is not a tangible matter, and it is, therefore, a major challenge to find a reliable method of measuring it. Even though many scientists and philosophers have already tried to do so, we find some major differences in how they approach the issue. These different approaches subsequently result in different definitions and perceptions of happiness, which will be discusses in this section.

4.1 Gross National Happiness

A tiny country near India called Bhutan constructed the Gross National Happiness index (GNH), which measures the quality of a country based on the well-being of a nation. The GNH implies that the material and spiritual development in the human society go hand in hand. The GNH index consists of 33 indicators and is divided into nine core domains which each represent the components of well-being. These components are psychological well-being, time use, community vitality, cultural diversity, ecological resilience, living standard, health, education, and good governance. These nine domains are to emphasize the different ways of meeting the human needs to reach a mental state of happiness. If a citizen meets sufficient achievements in six out of the nine domains or 66% of the weighted indicators, ‘happiness’ is met according to the GNH index.

4.2 Happiness, Economics and Public Policy

Economists Helen Johns and Paul Ormerod from the Institute of Economic Affairs proposed a body of research on happiness which is more securely grounded and economically based. They tracked the levels of happiness of specific individuals on a 3-point scale over time, basing it upon a longitudinal data analysis. Their research showed that the contentment of Western societies had not changed over the past 60 years. From this, Johns and Ormerod concluded that happiness cannot be measured through a correlation with the state of the economy. Therefore, they suggested that happiness can only be measured through a simple survey, asking people whether they were ‘very happy’, ‘pretty happy’, or ‘not too happy’.

4.3 Pursuit of Happiness Project

The Pursuit of Happiness Project has collected and analysed the most reliable and scientific studies on subjective well-being (SWB) or happiness. They gathered the most randomized and controlled studies which are the most widely used and respected questionnaires.

The first questionnaire is the Oxford Happiness Questionnaire, developed by psychologists Michael Argyle and Peter Hills at Oxford University. The questionnaire consists of 29 statements about

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particular mental states and self-assessment, which are either phrased positively or negatively. The scores are all added up and interpreted, varying from ‘not happy’ to ‘too happy’.

Another respected questionnaire is that of the University of Iowa, comprising two mood scales on the Positive and Negative Affect Schedule (PANAS). The PANAS consists of positively and negatively loaded adjectives that describe personality traits. The respondents then had to link these adjectives to a 5-point scale, ranging from not at all (1) to extremely (5), indicating how often they experiences particular emotions throughout the week.

A shorter measure of subjective well-being is the Subjective Happiness Scale (SHS), created by professors of the University of California. The SHS focuses on the external influences of peers and generalisations of humankind. The questionnaire consists out of 4 self-assessing questions or statements with a possible ranking of 1 to 7.

4.4 Integrated Household Survey
The Office for National Statistics (ONS) created the Integrated Household Survey, measuring national well-being in the United Kingdom. The study includes four questions concerning subjective indicators that affect our well-being and a 10-point scale. Additionally, the ONS measures four major areas on childhood, economy and inequality, health, and work/life balance.

4.5 OECD: the Better Life Initiative
The Better Life Initiative of The Organisation for Economic Co-operation and Development (OECD) allows users to share their views on what makes for a better life since 2011. The OECD has based their index on 11 topics they identified as essential in the areas of quality of life and material living conditions. These 11 topics are housing, jobs, education, civic engagement, life satisfaction, work-life balance, income, community, environment, health, and safety. It is an interactive web-based tool that allows each visitor of the website to rate the topics according to their importance to themselves. Visitors are ranked according to their sex, country, and age. 80,000 people make up an interactive map which shows well-being preferences by country.

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52 S. Lyubomirsky, & H.S. Lepper, A Measure of Subjective Happiness: Preliminary Reliability and Construct Validation, Social Indicators Research, 46, 1-7.


4.6 Quality of Life

Quality of life (QOL) can be defined as an individual’s satisfaction with one’s life in comparison with one’s ideal life and is therefore also seen as an indicator of one’s happiness. The QOL index consists of objective, measurable criteria and subjective criteria. It consists of 19 items concerning quality of life and 21 items about quality of working life. This measure of quality of life is identified through nine main indicators, ranked according to the importance: 1) material welfare (according to GNP); 2) health; 3) political stability and safety; 4) family life; 5) social life; 6) climate and geographical location; 7) employment; 8) political freedom; 9) gender freedom. These items are linked to the 5-point Likert response format, ranging from strongly disagree (1) to strongly agree (5). The consulting company Mercer Human Research converted the answers to the questions to the following equation:

\[
\text{QOL} = 0.3 \times \text{Sph} + 0.18 \times \text{Sm} + 0.2 \times \text{Se} + 0.1 \times \text{Si} + 0.12 \times \text{Ss} + 0.05 \times \text{Sl} + 0.05 \times \text{Sse} \quad (1)
\]

QOL – quality of life value
Sph – physical state value
Sm – material state value
Se – emotional state value
Si – self-improvement value
Ss – social relations value
Sl – self-expression and leisure value
Sse – safety and environment value

4.7 The World Happiness Report

Since the 2012 United Nations High Level Meeting on Happiness and Well-Being, each year a World Happiness Report is published. It includes several parts on the scientific understanding of the measurements and explanation of happiness and a range of comparative data of national average life evaluations across the world. The rankings in the World Happiness Report are conducted from data from the Gallup World Poll. Respondents were asked to think of a ladder, called the Cantril ladder, with the best possible life for them being a 10, and the worst possible life being a 0. After having done that, they are asked to evaluate their own lives on that 0 to 10 scale. The Gallup weights make use of six sub-bars, being levels of GDP, life expectancy, generosity, social support, freedom, and corruption, to make a ranking from nationally representative samples. Those sub-bars are a way of explaining why some countries rank higher than others.

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58 Juozas Ruževičius Vilnius University, *Quality of Life and of Working Life: Conceptions and Research* (Lithuania 2013)
Conclusion

Happiness is too much neglected. In our modern society, we are too occupied with prosperity in the monetary sense, that we neglect the importance of the human well-being. To find the answer to our research question, we compared the results of the happiness indexes dealt with in sub-question 4 with the results of our own survey. An extensive elaboration on the surveys of sub-question 4 and our own survey and its results can be found in the appendix.

Many surveys and researches have already been held on the subject of happiness as we already illustrated in sub-question 4. Some of these surveys also compare on a national level to get a better overview of the world’s well-being. (See appendix, National Happiness.) By looking at the overall state of happiness in our explored countries, we can put them into rankings from least happy to happiest. The external surveys show, in contrast to our survey, that Spain reports least happy and Sweden as one of the happiest. This can be explained by the fact that the external surveys mainly had adult respondents and we had teenagers filling in our survey. From this, we can conclude that happiness in Spain decreases with age; happiness in Sweden increases with age; and happiness in the Netherlands, France, UK, and Germany remains more or less the same. This means that every age acknowledges different crucial influences on their happiness and that, especially in Sweden and Spain, the provisions of these influences are not equal or stable.

After having looked at the general state of well-being in our explored countries, it is essential to look at what determines their happiness. This contributes to the understanding of fluctuating or stable happiness rates amongst the teenage and adult generations of the same nationalities. (See appendix, Influences.) When we take the World Happiness Report and the OECD Better Life Index together, we can see that economy (GDP per capita, jobs, and income), social time (social support and being part of a community), health (healthy life expectancy), and balance between work and leisure time (work-life balance) play a major part in an adult's well-being. Taking the averages of our survey into account, we can clearly see that the teenage generation connects most value to social life (social interaction and communities), time management, and health (including sleep).

Combining the results shown in the appendix, we can see that social interaction, time management, and health are not age-binding, meaning that both adults and teenagers value them. However, health is a phenomenon which is mainly determined by luck and lifestyle, whereas social interaction and time management are purely dependant on individual behaviour. Since happiness is determined by individual behaviour and mind-set, we explored the correlations between teenage happiness and social interaction and time management. (See appendix, A further analysis.) From the results of our survey, we proved that time management and social interaction play crucial roles in teenage well-being. So, by building on one’s social life and managing of time, together with a fortunate health, true happiness can be consciously reached amongst the teenage generation.
Discussion

As happiness is a subjective matter, it does not carry fixed definitions and explanations. The results of researches into mental well-being do not set out fixed numbers nor fixed conclusions. Furthermore, happiness remains a political and moral case, which will always carry the doubt of the usefulness of the objective measure. Therefore, happiness is a matter of strong discussion.

Of course, research into happiness has some potential limitations. As already mentioned, it is mostly limited by its subjective and psychological earth. In addition, the studies are based on self-reports, which may not sketch a totally honest or realistic image of one’s well-being. Additionally, participants in investigations are usually only a small proportion of the total inhabitants of a nation.

While carrying out our own survey, we came across the same limitations. We questioned foreign students who came to an international conference at our school. Therefore, they may be of the more privileged class of their country, subsequently sketching a more optimistic image of their country than reality proves.

However, all the potential limitations don’t cancel out the usefulness of research into happiness. This research is needed to understand and improve a country’s welfare, by analysing their inhabitants’ state of mind and controlling the influential externalities.

Hopefully, we have provided a good framework on how teenage happiness is achieved in order to develop a country furtherly and to have a fundamental base for building a more sustainable and durable society.
Appendix
Our survey

For our own survey, we examined the value of the 13 influences discussed in our theoretical framework to find an answer to our research question “how happy is the teenage generation, and what are the crucial aspects influencing it?” As a quick recap, these values were: social interaction, communities, governance, economy, ecology, health, profitable and leisure time, geography (climate), sleep, self-cultivation, education, nutrition, and exercise.

Subsequently, we evaluated for ourselves what our happiness is mostly determined by. We feel happiest after a useful and effective day in which we enjoyed ourselves with others. Therefore, we chose to furtherly explore the correlation between social interaction, time management, and happiness amongst the teenage generation. We did this because we did not have enough time (years) and provisions (contacts and budget) to explore all the 13 influential fields.

To make our survey widely acceptable in our Western European culture, we questioned teenagers from the countries France, the Netherlands, Germany, Spain, UK, and Sweden.

The questions:

1. I don’t believe that having lack of social interaction with people would decrease my happiness.
2. I believe that having many social contacts contributes to my happiness, even when my relationships with others is not that profound.
3. I would rather stay at home and entertain myself, than go out with friends.
4. I get a good night rest without worrying about my social life and relationships.
5. The social interaction that gives me the most happiness would be: with my family / friends / anyone even those who I don’t know well / only my partner.
6. There is a gap between what I would like to do and what I have done which gives me a bad mood.
7. Having more time to sleep and relax contributes to my happiness.
8. Effectively working on school for 4 hours at home makes me happier than uselessly/inefficiently sitting at school for 2 hours.
9. Spending more time on projects that energize me, and with people who energize me, makes me happier.
10. Time schedules with fixed activities and goals make me feel good and secure.
11. Describe your character in three words.
12. How would you define happiness?
13. Rate your happiness (1-10)
15. What influences your happiness the most? (put our explored fields in ranking)

Elaboration

Questions 1-5 explore the correlation between social interaction and happiness.
Questions 6-10 explore the relationship between time management and happiness.
Questions 11-15 are open questions on the view on happiness in general.

The first 10 questions could be answered according to a scale: extremely disagree - disagree - agree - extremely agree. We chose a 4-point scale because any odd number-scale would allow the participant to choose ‘neutral’. The reason we chose the number 4 was because any higher even number than 4 would
allow the participant to be less considerate about giving answers since two subsequent answers would not display a huge difference. Therefore, we chose to use a 4-point scale to make the respondent give thoughtful answers since for example ‘agree’ and ‘extremely agree’ have a wide gap between them due to the intensifier ‘extremely’. In this way, the degree of influence on happiness would be made very clear.

Questions 11, 12, and 14 are open questions to let the participant fully and freely express their thoughts on happiness without us enforcing a few options on them.

Question 13 could be answered by clicking on the number of stars that would display their happiness (1 to 10 stars).

The last question deals with the 13 aforementioned influences. The respondents had to put the 13 options into ranking of most to least influential for their happiness.

The questions were in random order so that the participant would not notice the directions that we were heading (namely social interaction and time management). In this way, they would think separately and profoundly about each question, without blindly copy-pasting their answers on for example social interaction underneath every question dealing with that influence.

**Hypothesis**

As already quickly mentioned before, we expect that social interaction and time management are of one of the greatest influences. We also expect that the countries observed will report relatively high rates of happiness, since they are wealthy and developed Western countries.
National happiness

Quality of Life

The Quality of Life Index would identify Germany as the happiest nation with the best Quality of Life Index in 2015, closely followed by Sweden as second happiest, and with Spain as least happy.

<table>
<thead>
<tr>
<th>Country</th>
<th>Quality of Life Index</th>
<th>Purchasing Power Index</th>
<th>Safety Index</th>
<th>Health Care Index</th>
<th>Consumer Price Index</th>
<th>Property Price to Income Ratio</th>
<th>Traffic Commute Time Index</th>
<th>Pollution Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>232.09</td>
<td>147.89</td>
<td>69.67</td>
<td>75.80</td>
<td>64.49</td>
<td>6.94</td>
<td>29.64</td>
<td>29.35</td>
</tr>
<tr>
<td>Sweden</td>
<td>230.13</td>
<td>148.40</td>
<td>56.82</td>
<td>75.72</td>
<td>71.42</td>
<td>7.95</td>
<td>28.35</td>
<td>19.39</td>
</tr>
<tr>
<td>Netherlands</td>
<td>209.41</td>
<td>138.09</td>
<td>66.56</td>
<td>69.66</td>
<td>72.38</td>
<td>5.64</td>
<td>38.15</td>
<td>33.60</td>
</tr>
<tr>
<td>England</td>
<td>202.62</td>
<td>114.99</td>
<td>78.91</td>
<td>70.91</td>
<td>88.03</td>
<td>9.54</td>
<td>27.50</td>
<td>21.48</td>
</tr>
<tr>
<td>France</td>
<td>180.11</td>
<td>125.78</td>
<td>52.42</td>
<td>81.05</td>
<td>72.66</td>
<td>7.95</td>
<td>29.35</td>
<td>45.40</td>
</tr>
<tr>
<td>Spain</td>
<td>153.65</td>
<td>111.05</td>
<td>64.98</td>
<td>73.83</td>
<td>59.63</td>
<td>9.71</td>
<td>33.46</td>
<td>59.98</td>
</tr>
</tbody>
</table>

Table 1: Countries ranked according to their quality of life index, 2015

The index has, however, only examined tangible matters. Internal state of mind of the inhabitants are not taken into account, which can be a limitation of this indicator.

OECD Better Life Index: Life Satisfaction

One of the indicators of the Better Life Index is the Life Satisfaction Index which captures a reflective assessment of which life circumstances and conditions are important for subjective well-being. It measures how people evaluate their life as a whole rather than their current feelings. People were asked to self-evaluate their satisfaction with life on a scale from 0 to 10. The overall results showed an average Life Satisfaction of 6.6. The satisfaction rates of our investigated countries are as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Life Satisfaction Index</th>
<th>Highest Rated Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>7.4</td>
<td>Environment</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.4</td>
<td>Life Satisfaction</td>
</tr>
<tr>
<td>Germany</td>
<td>7.0</td>
<td>Life Satisfaction</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.9</td>
<td>Life Satisfaction</td>
</tr>
<tr>
<td>France</td>
<td>6.7</td>
<td>Health</td>
</tr>
<tr>
<td>Spain</td>
<td>6.2</td>
<td>Health</td>
</tr>
</tbody>
</table>

Table 2: Average self-evaluation of life satisfaction, on a scale from 0 to 10

These results show that the western European countries are well off, except Spain, where satisfaction index lies below the global average of 6.6. These figures result from volunteers who filled in this survey. The OECD Better Life Index is an internet database and therefore, they cannot influence who fill in the survey.

The World Happiness Report 2015

The World Happiness Report compares different respondents from 156 different countries from 2012 to 2014. The Netherlands and Sweden are the happiest and the biggest part of their ranking can be explained by their GDP per capita.

<table>
<thead>
<tr>
<th>Country</th>
<th>Position in the world</th>
<th>Ranking of Happiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>7</td>
<td>7.378</td>
</tr>
<tr>
<td>Sweden</td>
<td>8</td>
<td>7.364</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>21</td>
<td>6.867</td>
</tr>
<tr>
<td>Germany</td>
<td>26</td>
<td>6.750</td>
</tr>
<tr>
<td>France</td>
<td>29</td>
<td>6.575</td>
</tr>
<tr>
<td>Spain</td>
<td>36</td>
<td>6.329</td>
</tr>
</tbody>
</table>

*Table 3: Rankings of Happiness Gallup Poll 2012-2014*

All discussed surveys seem to point into the same direction with Spain being the least happy. The top spot always seems to be covered by either the Netherlands or Sweden, closely followed by the United Kingdom and Germany.

**Suicide rates within countries**

Since happiness is sometimes described as ‘depending on unhappiness’, we also explored figure of unhappiness, from which happiness rates can be reversely concluded. Over 90 per cent of people who commit suicide have an untreated mental illness at the time of their death of which the most common mental illness is depression. The MacMillan Dictionary describes depression as ‘a medical condition in which a person is so unhappy that they cannot live a normal life’. This would, therefore, imply that the higher a country’s suicide rate, the higher the number of unhappy and depressed inhabitants.

<table>
<thead>
<tr>
<th>Country</th>
<th>Average</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>13.3</td>
<td>2008</td>
</tr>
<tr>
<td>Germany</td>
<td>8.8</td>
<td>2010</td>
</tr>
<tr>
<td>Spain</td>
<td>5.6</td>
<td>2009</td>
</tr>
<tr>
<td>Sweden</td>
<td>10.1</td>
<td>2010</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8.0</td>
<td>2010</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.0</td>
<td>2010</td>
</tr>
</tbody>
</table>

*Table 4: Suicides per 100,000 people per year*

These suicide figures do not only express the suicide rates caused by depression, but also by many other causes. For example, religion offers morality on the issue of suicide. Some religions like Christianity, Islam and Judaism strongly condemn committing suicide. Therefore, a country with low suicide rates

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65 World Health Organization, ‘Health topics: Suicide’, [World Health Organization](http://www.who.int/topics/suicide/en/)

66 K. Caruso, ‘Suicide Causes’, [Suicide](http://www.suicide.org/suicide-causes.html)

may not necessarily have the happiest inhabitants. Contrarily, they may even have a greater number of unhappy inhabitants, due to the belief that committing suicide is immoral. For example, Spain has a low suicide rate, which would imply that they have a very high happiness rate. However, the investigations discussed earlier point out that Spain has a low happiness rate. Taking into account that Spain is a Christian nation, it could possibly just as well be that it has a lot of unhappy inhabitants who do not see suicide as a way out. In this way, we can conclude that happiness cannot be measured through suicide rates.

**Our survey**

In our survey, the respondents were asked to rate their happiness on a scale of 1 to 10, with 10 being happiest and 1 being least happy. Overall, our survey showed that the general happiness level of the teenage generation in the investigated countries is 7.3 out of 10. However, the ratings differ between countries.

![Graph showing happiness scale 1-10 in explored countries](image)

**Table 5: happiness scale 1-10 in explored countries**

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Influences

The World Happiness Report 2015

Not only did the World Happiness Report investigate the happiness rankings of inhabitants in countries, they also examined the phenomenon the inhabitants thought of being most or least influential.

Table 6: World Happiness Report: the happiness rankings of inhabitants per country and influential phenomenon

The World Happiness Report marks that the largest part of adult’s happiness can be explained by the GDP per capita and therefore concerned with the economy and income of one’s nation. Second to be ranked after that is social support. Lastly, a major part of happiness can be explained by the individual’s healthy life expectancy. These three aspects are approximately the same in each Western-European country investigated.

OECD Better Life Index

The Better Life Index has established a much broader range of topics to find out which daily aspect influences our well-being the most. The influences with the highest average scores in the countries investigated is being part of a community, work-life balance, health, jobs and income, and their environment.

Table 7: OECD Better Life Index: Daily life influences per country
Our survey

Our respondents were asked to put the 13 investigated influences of the theoretical framework into rankings of most to least influential to happiness. The average positions of these influences held in the countries investigated are as follows:

Table 8: Our survey: Daily life influences per country
A further analysis

Social interaction

**The Gallup Poll**

Results of the Gallup-Healthways Happiness-Stress Index marked that social interaction with one’s friends and family plays a crucial role in one’s daily emotional well-being in the US.\(^{70}\) By interacting with others, individuals might get feelings of confidence and recognition. In 2008, the findings were based on a sample of 147,891 respondents in Washington D.C. comparing the enjoyment/happiness with stress/worry.

![Bar chart showing the relationship between social time per day and happiness/stress](image)

**Table 9: Gallup-Healthways Happiness-Stress Index by hour of social time per day, Jan 1 - May 25, 2008**

The figure shows how as the hours spend with friends and family increases, the amount of enjoyment and happiness increases and the amount of stress and worry decreases. The individuals stating to have no social time whatsoever score the poorest on the index with having almost as much pleasure as stress. However, spending more time to social activities proportionally increases with the ratio joy-stress. The index reaches its peak up to a ratio of 12-to-1 at six to seven hours spend socially a day.\(^{71}\)

During weekdays, this interaction time with friends and family is, however, much shorter than in the weekends and holidays due to work and school. Thus, the happiness derived from social interaction and leisure time go hand-in-hand. These daily changes explain the fluctuations in the Happiness-Stress Index as 87% of the day-to-day changes in happiness and 60% of the changes in stress are caused by weekends and holidays.


\(^{71}\) The One Thing Team, ‘Time is relative, not a relative’, *The 1 Thing*, April 26 2015. [http://www.the1thing.com/blog/applying-the-one-thing/time-is-relative-not-a-relative/?sf22392828=1](http://www.the1thing.com/blog/applying-the-one-thing/time-is-relative-not-a-relative/?sf22392828=1)
This pattern in social relations and happiness is further confirmed by Chief Psychologist at the Mental Health Foundation, Michael Danielsen. "We know that to feel like a part of a social community - to be seen, heard and have space - is a fundamental human need absolutely crucial to well-being."

The respondents to his survey were divided into four sub-groups based on their satisfaction of their social relationships varying from ‘to a great extent’ to ‘not at all’.

The Happiness Research Institute interviewed these respondents and they all confirm the idea that good relationships with other people are the most significant for them and their well-being. This correlation works in both ways. When happy, one is also more capable to form profound social relationships with those around them.

Our survey
“I don’t believe that having lack of social interaction with people would decrease my happiness.” Generally, a majority of the participants agreed that happiness is decreased proportionally with a lack of social interaction (76.1%).

72 Happiness Research Institute, Dragor Municipality: Happiness survey (Slovakia 2013) 2-7.
“I believe that having many social contacts contributes to my happiness, even when my relationships with them are not that profound.”
However, the opinions on whether the profoundness of the relationship is important to happiness obtained from social interaction differed more: 43.5% disagreed that happiness could be brought about by shallow relationships, while 56.5% did not care whether a relationship was profound or not; any contact with people in their surroundings brought them a sense of well-being.

“I would rather stay at home and entertain myself, than go out with friends.”
An overwhelming majority of 91.3% of the participating teenagers would rather go out with friends than stay at home and entertain themselves. Therefore, external entertainment is very important to the teenage generation.

“I get a good night rest without worrying about my social life and relationships.”
Things don’t come freely: even happiness carries a price. Namely, effort and maintenance. 43.5% of the respondents admitted that they sometimes lose good nights of sleep to worrying about their social lives (of which 9.8% suffered from extreme worries).
“The social interaction that makes me happiest would be...”
43.5% of the questioned teenagers stated that interacting with their friends brings about the most satisfaction in the field of social interaction. 23.9% stated that any social interaction makes them happy; whether it is with people they know well and don’t know profoundly at all. 15.2% obtained feelings of well-being from time spent with their families, 4.3% felt happiness only when they were with their boyfriend or girlfriend, and 13% found happiness in other things.
Time Management

OECD the Better Life Initiative
The Better Life Index consists of several indicators with one of them being Work-Life Balance. Within these indicators they take two sub-indicators into consideration. The first sub-indicator measures the proportion of dependent employees whose usual hours of work per week exceeds 50 hours.

<table>
<thead>
<tr>
<th>Country</th>
<th>Employees/students working very long hours (percentage)</th>
<th>Time devoted to leisure and personal care (hours)</th>
<th>Happiness Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>1.14%</td>
<td>15.11</td>
<td>7.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.59%</td>
<td>15.44</td>
<td>7.4</td>
</tr>
<tr>
<td>Germany</td>
<td>5.6%</td>
<td>15.31</td>
<td>7.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>12.27%</td>
<td>14.83</td>
<td>6.9</td>
</tr>
<tr>
<td>France</td>
<td>8.71%</td>
<td>15.33</td>
<td>6.7</td>
</tr>
<tr>
<td>Spain</td>
<td>5.95%</td>
<td>16.06</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Table 11: Better Life Index 2014 edition: Work-Life Balance

The findings proof that on average the lower the percentage of the inhabitants is, the higher the country is positioned in the happiness rankings. However, the less people work, the more time they have left for other activities such as personal care or leisure. Although the time devoted to leisure and personal care does not support the happiness ranking, the explanation may be unpaid domestic work and other activities that do not fall under leisure nor personal time.

ICREA Researchers Spain

However, M. Sahlins, an American anthropologist, conducted a hypothesis almost 40 years ago assuming that the quantity of leisure time proxies for well-being in 1968. He noted that as technological improvements in society made people work harder and made them lose the quantity of free time they had. Historians have found prove on either side: Bird-David has found that levels of leisure time declined as societies and economies grown in complexity while Sackett found non-linear trends.

Putnam, in contrast, tested the quality of leisure rather than the quantity as the quantity only captures happiness indirectly and partially. Victoria Reyes-Garcia and several other ICREA researchers established a paper exploring the correlation of the quality solitary and social leisure and happiness. They have used two econometric models to ensure robustness of results and their respondents were a Tsimane folk, a native Amazonian society of about 8,000,000 people. They have used happiness as their dependent variable and used smiling during interviews as a direct measure of happiness.

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Results concluded that people who engage more in leisurely activities with others were, on average, happier than those who spent their leisure time alone. Sahlins’ hypothesis that in industrial societies an increase in solitary leisure is associated with the breakdown of social capital is borne out. The findings suggest that social leisure, an expression of social capital, brings forth a positive association with subjective well-being.

Our survey
“There is a gap between what I would like to do and what I have done which gives me a bad mood.” Many teenagers don’t manage to finish all their responsibilities and duties on time. 67.4% of the participants of our survey reported that they find a gap between what they would like to do and what they have done. 19.6% of this 67.4% even reported to extremely agree with this statement. This brings them a bad mood and, subsequently, lowers their happiness rates.

“Having more time to sleep and relax contributes to my happiness.” With the pressure of school, social life, and duties at home, teenagers need time to relax and sleep properly. 43.5% of the teenage generation questioned agreed that having more time to sleep and relax contributes to their happiness. 37% even extremely agreed with this statement, making an overwhelming 81.5% majority that values sleep and relaxation time enormously.
“Effectively working on school for 4 hours at home makes me happier than uselessly/inefficiently sitting at school for 2 hours.”
Teenagers spend most of their times at school, often coming back with complaints of long, boring days. When asked whether they are more willing to work on school at home for 4 hours than to be inefficiently sitting around at school for 2 hours, 80.4% was more willing to spend a doubled time on school at home in return for efficiency and profitability.

Of course, hard and energy-draining tasks are part of life. But these need to be balanced with energising projects and activities. Unsurprisingly, 97.8% agreed that spending more time on energizing projects and with energizing people is a great source of happiness. Meaning, that if we put too much weight on teenagers by assigning them tiresome tasks, it would have a tremendous negative influence on their happiness.

“Time schedules with fixed activities and goals make me feel good and secure.”
To give a clear view on the future, time management and schedules are needed. 73.7% of the teenagers feel good and secure by creating time schedules with fixed activities. Teenagers might be characterised as being impulsive and spontaneous, but they still need to have a clear and calm mind by arranging all
their responsibilities in time schedules. If most of them don’t manage to do this, loss of time and structure will result in loss of happiness.
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**Visuals front page:**
http://content.time.com/time/magazine/article/0,9171,2146449,00.html
## Personal log: Shirley

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration</th>
<th>What</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-06-2014</td>
<td>30 min</td>
<td>Meeting with Mrs. Schaaff about the HUGS project</td>
<td>School</td>
</tr>
<tr>
<td>05-06-2014</td>
<td>1 hour</td>
<td>Subject chosen: measuring happiness</td>
<td>School</td>
</tr>
<tr>
<td>23-06-2014</td>
<td>4 hours</td>
<td>Presentation on green energy; mock debates (with Selin)</td>
<td>Instituut Clingendael</td>
</tr>
<tr>
<td>09-07-2014</td>
<td>1.5 hours</td>
<td>Start exploring general info on happiness and extended paper (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>10-07-2014</td>
<td>2 hours</td>
<td>Set up main and sub-questions (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>21-07-2014</td>
<td>½ hour</td>
<td>Made an outline of the whole paper in google docs; set outlines of the sub-questions (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>22-07-2014</td>
<td>2 hours</td>
<td>Work on sub-question 4</td>
<td>At home</td>
</tr>
<tr>
<td>24-07-2014</td>
<td>1 hour</td>
<td>Work on sub-question 4</td>
<td>At home</td>
</tr>
<tr>
<td>25-07-2014</td>
<td>3 hours</td>
<td>Make questionnaire with a 5-point scale with statements (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>17-09-2014</td>
<td>½ hour</td>
<td>Go through progress of extended paper so far (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>03-10-2014</td>
<td>4 hours</td>
<td>Information day organised by HUGS Worldschool (with Selin)</td>
<td>Ministry of Infrastructure and the Environment</td>
</tr>
<tr>
<td>19-11-2014</td>
<td>½ hour</td>
<td>Revise what we already have for the paper and pick up working on it again. (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>Date</td>
<td>Duration</td>
<td>Activity Description</td>
<td>Location</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>12-12-2014</td>
<td>1 hour</td>
<td>Research topic sub-question 3 and find sources</td>
<td>At home</td>
</tr>
<tr>
<td>13-12-2014</td>
<td>2 hours</td>
<td>Work on sub-question 3: drug stimulants and SSRI</td>
<td>At home</td>
</tr>
<tr>
<td>14-12-14</td>
<td>1 hour</td>
<td>Work on sub-question 3: sunlight</td>
<td>At home</td>
</tr>
<tr>
<td>17-12-14</td>
<td>2 hours</td>
<td>Work on sub-questions 3: music and find additional information; edit research framework suicide</td>
<td>At home</td>
</tr>
<tr>
<td>18-12-14</td>
<td>2 hours</td>
<td>Finish sub-question 3: external influences; finish research framework suicide</td>
<td>At home</td>
</tr>
<tr>
<td>22-02-15</td>
<td>3 hours</td>
<td>Work on sub-question 2 and search for more sources</td>
<td>At home</td>
</tr>
<tr>
<td>27-02-15</td>
<td>1.5 hours</td>
<td>Work on sub-question 4 and search for more sources</td>
<td>At home</td>
</tr>
<tr>
<td>02-03-2015</td>
<td>45 min</td>
<td>Look up questionnaires on happiness and brainstorm for own questionnaire</td>
<td>At home</td>
</tr>
<tr>
<td>08-03-2015</td>
<td>4 hours</td>
<td>Edit sub-questions 2 and 4; find additional sources</td>
<td>At home</td>
</tr>
<tr>
<td>11-03-2015</td>
<td>1 hour</td>
<td>Formulate questions on the influences found (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>12-03-2015</td>
<td>½ hour</td>
<td>Decide on the questions put in the survey</td>
<td>At home</td>
</tr>
<tr>
<td>13-03-2015</td>
<td>½ hour</td>
<td>Finalize questions survey on all aspects of happiness</td>
<td>At home</td>
</tr>
<tr>
<td>15-03-2015</td>
<td>4 hours</td>
<td>Edit sub-question 2 and 4; make both texts coherent; write down questions for Hendricks</td>
<td>At home</td>
</tr>
<tr>
<td>Date</td>
<td>Duration</td>
<td>Task</td>
<td>Location</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>16-03-2015</td>
<td>20 min</td>
<td>Meeting with Hendricks to discuss our survey</td>
<td>School</td>
</tr>
<tr>
<td>18-03-2015</td>
<td>2 hours</td>
<td>Narrow down the survey to three main topics (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>19-03-2015</td>
<td>1 hour</td>
<td>Finalise survey</td>
<td>School</td>
</tr>
<tr>
<td>20-03-2015</td>
<td>1 ¼ hours</td>
<td>Search for a survey website and fill in the questions; final check-up of the survey from Hendricks</td>
<td>School</td>
</tr>
<tr>
<td>22-03-2015</td>
<td>-</td>
<td>Send out the survey to respondents</td>
<td>At home</td>
</tr>
<tr>
<td>03-04-2015</td>
<td>15 min</td>
<td>Set up to do list and rough outlines of the research framework (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>10-04-2015</td>
<td>50 min</td>
<td>Make a final to-do list and divided final tasks</td>
<td>School</td>
</tr>
<tr>
<td>14-04-2015</td>
<td>60 min</td>
<td>Make an outline of the content of my final parts</td>
<td>At home</td>
</tr>
<tr>
<td>17-04-2015</td>
<td>15 min</td>
<td>Finalise outlines of the research framework (with Selin)</td>
<td>School</td>
</tr>
<tr>
<td>19-04-2015</td>
<td>4 hours</td>
<td>Merge sub-questions Shirley with sub-questions Selin and make it coherent; finalise theoretical framework; make an overview of the research framework</td>
<td>At home</td>
</tr>
<tr>
<td>20-04-2015</td>
<td>1 hour</td>
<td>Work on research framework: external surveys</td>
<td>At home</td>
</tr>
<tr>
<td>26-04-2015</td>
<td>1 hour</td>
<td>Work on research framework: external surveys</td>
<td>At home</td>
</tr>
<tr>
<td>30-04-2015</td>
<td>1 hour</td>
<td>Work on research framework: external surveys</td>
<td>At home</td>
</tr>
<tr>
<td>Date</td>
<td>Duration</td>
<td>Task Description</td>
<td>Location</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>2-5-2015</td>
<td>5 hours</td>
<td>Work on research framework: external surveys</td>
<td>At home</td>
</tr>
<tr>
<td>3-5-2015</td>
<td>5 hours</td>
<td>Work on research framework (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>4-5-2015</td>
<td>5 hours</td>
<td>Finish off research framework and write the conclusion and discussion (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>5-5-2015</td>
<td>1 hour</td>
<td>Wrote extra paragraph for research framework</td>
<td>At home</td>
</tr>
<tr>
<td>8-5-2015</td>
<td>-</td>
<td>Handed in the draft of the extended paper</td>
<td>School</td>
</tr>
<tr>
<td>30-6-2015</td>
<td>30 minutes</td>
<td>Discussed draft version with Mr. Hendricks</td>
<td>School</td>
</tr>
<tr>
<td>1-7-2015</td>
<td>4 hours</td>
<td>Finalised extended paper (with Selin)</td>
<td>At home</td>
</tr>
<tr>
<td>3-7-2015</td>
<td>-</td>
<td>Hand in final version extended paper</td>
<td>School</td>
</tr>
</tbody>
</table>
## Personal log: Selin

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration</th>
<th>What</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-06-2014</td>
<td>½ hours</td>
<td>Meeting with Mrs. Schaaff about the HUGS project</td>
<td>School</td>
</tr>
<tr>
<td>05-06-2014</td>
<td>1 hour</td>
<td>Subject chosen: measuring happiness</td>
<td>School</td>
</tr>
<tr>
<td>23-06-2014</td>
<td>4 hours</td>
<td>Presentation on green energy; mock debates (with Shirley)</td>
<td>Instituut Clingendael</td>
</tr>
<tr>
<td>09-07-2014</td>
<td>1.5 hours</td>
<td>Start exploring general info on happiness and extended paper (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>10-07-2014</td>
<td>2 hours</td>
<td>Set up main and sub-questions (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>21-07-2014</td>
<td>½ hour</td>
<td>Made an outline of the whole paper in google docs: set outlines of the sub-questions. (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>24-07-2014</td>
<td>1 hour</td>
<td>Work on sub-question 1</td>
<td>At home</td>
</tr>
<tr>
<td>25-07-2014</td>
<td>1 hour</td>
<td>Work on sub-question 1</td>
<td>At home</td>
</tr>
<tr>
<td>19-08-2014</td>
<td>2 hours</td>
<td>Finish sub-question 1 and work on 2</td>
<td>At home</td>
</tr>
<tr>
<td>17-09-2014</td>
<td>½ hour</td>
<td>Go through progress of extended paper so far (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>03-10-2014</td>
<td>4 hours</td>
<td>Information day organised by HUGS Worldschool (with Shirley)</td>
<td>Ministry of Infrastructure and the Environment</td>
</tr>
<tr>
<td>19-11-2014</td>
<td>½ hour</td>
<td>Revise what we already have for the paper and pick up working on it again. (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Task Description</td>
<td>Location</td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
<td>-----------------------------------------------------------</td>
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</tr>
<tr>
<td>28-11-2014</td>
<td>½ hour</td>
<td>Work on sub-question 2</td>
<td>School</td>
</tr>
<tr>
<td>17-12-2014</td>
<td>½ hour</td>
<td>Work on sub-question 2</td>
<td>School</td>
</tr>
<tr>
<td>22-02-2015</td>
<td>2 hours</td>
<td>Work on sub-question 2 and look up info for sub-question 3</td>
<td>At home</td>
</tr>
<tr>
<td>26-02-2015</td>
<td>1.5 hours</td>
<td>Finish sub-question 2 and edit sub-question 1</td>
<td>At home</td>
</tr>
<tr>
<td>27-02-2015</td>
<td>2 hours</td>
<td>Work on sub-question 3 and finish sub-question 1</td>
<td>At home</td>
</tr>
<tr>
<td>02-03-2015</td>
<td>45 min</td>
<td>Look up questionnaires on happiness and brainstorm for own questionnaire</td>
<td>At home</td>
</tr>
<tr>
<td>08-03-2015</td>
<td>1 hour</td>
<td>Create rough outlines of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>11-03-2015</td>
<td>1.5 hours</td>
<td>Edit sub-question 2</td>
<td>At home</td>
</tr>
<tr>
<td>12-03-2015</td>
<td>2.5 hours</td>
<td>Edit sub-questions 1 and 2</td>
<td>At home</td>
</tr>
<tr>
<td>13-03-2015</td>
<td>½ hour</td>
<td>Edit whole file; rearrange it; go through what we still need to do</td>
<td>At home</td>
</tr>
<tr>
<td>15-03-2015</td>
<td>45 min</td>
<td>Edit sub-questions 1 and 2</td>
<td>At home</td>
</tr>
<tr>
<td>18-03-2015</td>
<td>1 hour</td>
<td>Finalise survey</td>
<td>School</td>
</tr>
<tr>
<td>22-03-2015</td>
<td>-</td>
<td>Send out survey to participants</td>
<td>At home</td>
</tr>
<tr>
<td>27-03-2015</td>
<td>2.5 hours</td>
<td>Look up information and requirements of an extended paper; readjust sub-questions 1 and 2; rearrange whole file</td>
<td>At home</td>
</tr>
<tr>
<td>03-04-2015</td>
<td>15 min</td>
<td>Set up to do list and rough outlines of the research framework (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>Date</td>
<td>Duration</td>
<td>Task Description</td>
<td>Location</td>
</tr>
<tr>
<td>------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>17-04-2015</td>
<td>15 min</td>
<td>Finalise outlines of the research framework (with Shirley)</td>
<td>School</td>
</tr>
<tr>
<td>18-04-2015</td>
<td>1 hour</td>
<td>Analyse results of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>19-04-2015</td>
<td>1 hour</td>
<td>Analyse results of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>27-04-2015</td>
<td>1.5 hours</td>
<td>Write the preface and introduction</td>
<td>At home</td>
</tr>
<tr>
<td>29-04-2015</td>
<td>3 hour</td>
<td>Analyse results of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>30-04-2015</td>
<td>1 hour</td>
<td>Analyse results of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>02-05-2015</td>
<td>2 hours</td>
<td>Analyse results of the survey</td>
<td>At home</td>
</tr>
<tr>
<td>03-05-2015</td>
<td>5 hours</td>
<td>Work on research framework (with Shirley)</td>
<td>At home</td>
</tr>
<tr>
<td>04-05-2015</td>
<td>5 hours</td>
<td>Finish research framework and write the conclusion and discussion (with Shirley)</td>
<td>At home</td>
</tr>
<tr>
<td>08-05-2015</td>
<td>-</td>
<td>Handed in the draft of the extended paper</td>
<td>School</td>
</tr>
<tr>
<td>30-06-2015</td>
<td>30 minutes</td>
<td>Discussed draft version with Mr. Hendricks</td>
<td>School</td>
</tr>
<tr>
<td>01-07-2015</td>
<td>4 hours</td>
<td>Finalised extended paper (with Shirley)</td>
<td>At home</td>
</tr>
<tr>
<td>03-07-2015</td>
<td>-</td>
<td>Hand in final version extended paper</td>
<td>School</td>
</tr>
</tbody>
</table>