



Nordic Council
of Ministers

#SortingOutSocialMedia

DOES SOCIAL MEDIA
REALLY POSE A THREAT
TO YOUNG PEOPLE'S
WELL-BEING?

Does social media really pose a threat to young people's well-being?

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Nordic Council of Ministers

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#SortingOutSocialMedia

DOES SOCIAL MEDIA REALLY POSE A THREAT TO YOUNG PEOPLE'S WELL-BEING?

This report examines the relationship between social media use and well-being. It demonstrates that young people's online and offline lives are inextricably linked, and that it is necessary to consider *which* platforms young people use, *how* they use them, and *which* personal characteristics make some young people more vulnerable than others online.

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Debates about well-being and social media often turn into a fight between technology fans and technophobes.

We need a more nuanced discussion

Anne Mette Thorhauge, associate professor,
Department of Media, Cognition and
Communication, University of Copenhagen

Foreword

The Ministers for Nordic Co-operation have set the goal that the Nordic countries should be the best place in the world for children and young people. However, we also know that there are a number of young people in the Nordic countries who are not happy – even though various reports show that the peoples of the Nordic countries, taken as a whole, are among the happiest in the world.

A highly topical question right now is how we are being affected by our increased use of social media. Social media has become an important and integral part of the everyday routines and social lives of young people, the vast majority of whom spend a great deal of time on various social media platforms such as Facebook, Snapchat and Instagram. Against this background, the Nordic Council of Ministers has wished to elucidate the question of how the use of social media by young people affects their well-being and experience of happiness.

The aim of this report is to contribute to an increased understanding of how young people's use of social media is linked to their general well-being. Enhanced knowledge in this field will help to strengthen our work to improve the lives of young people in the Nordic countries.

I would like to thank Michael Birkjær and Micah Kaats of the *Happiness Research Institute*, who have written the report on behalf of the analysis and statistics unit of the Nordic Council of Ministers' secretariat. This report is part of a series of reports produced by the unit which highlight various topics that are important from a Nordic perspective.

Copenhagen, June 2019

Paula Lehtomäki

Secretary General

Nordic Council of Ministers

Summary

Young people in the Nordic countries are major consumers of social media, and there is an ongoing public debate about whether this consumption is harmful to their well-being. It is important that these conversations are nuanced and factually based, yet in both academic research and popular writing, social media is often painted with a broad brush. Distinctions regarding who uses social media and how social media is used are rarely taken into account. From here, generalizations are often made that can provide a breeding ground for myths to spread about the effects of social media use on the well-being of young people.

This report examines the relationship between young people's consumption of social media and their personal well-being. Does the growing amount of time young people spend in front of screens and on social networking sites threaten their mental health and hinder their participation in non-digital communities?

The main conclusion of this report is that we cannot judge social media to be unequivocally positive or negative for young people's well-being without considering a number of specific conditions that add important nuances to the picture. To truly understand the effects of social media use, we ought to consider the following:

1. **Who uses social media:** Young people are not a single homogeneous group, and some are more sensitive to the effects of social media use than others. The effects vary depending on age, gender, and especially the quality of young people's social relationships offline.
2. **How social media is used:** Social media can be used in more ways than one. In this report, we distinguish between active use (activities that facilitate direct communication with others) and passive use (consumption of content without direct communication). We find that how young people spend their time on social networking sites plays a crucial role in determining its effects.
3. **Which social media platform is used:** In many large-scale studies on the effects of social media use, the data does not distinguish between different platforms and contains only broad information about frequency of social media use in general. However, in this report, we demonstrate that the relationship between the use of social media by young people and their well-being is particularly dependent on which platform they use.
4. **How much time is spent on social media:** Despite our primary conclusion that the amount of time young people spend on social networking sites has mostly minor effects on their well-being, spending more time online can amplify the effects of social media use in certain contexts. Extreme use seems to be unconditionally associated with unhappiness, although the causal dynamics of this relationship are less certain. We do not know whether extreme use leads to unhappiness, or whether unhappiness leads to extreme use.

When the above conditions are taken into account, we find a number of significant effects associated with young people's consumption of social media:

- It is more difficult for girls than for boys to do without social media.
- Boys who use social media every day are not less satisfied with their lives than boys who don't.
- Girls who use social media on a daily basis only become less satisfied with their lives if they also feel emotionally unsupported by their parents.
- When young people use Facebook to look at their friends' profile pages, they feel in that moment less proud, less interested, more lonely, and more ashamed.
- When young people use Facebook to share links, they feel in that moment happier, more proud, and less lonely.
- In general, young people who use social media actively (to communicate directly with others) spend more time with friends offline, volunteer more, and are more likely to participate in cultural events.
- In the case of young people who use Snapchat and Instagram, we observe a paradox. Spending more time on Snapchat and Instagram is associated with lower life satisfaction, negative social comparison, and less trust in others, but also with increased levels of social activity.
- Although the amount of time spent on social media has generally weak effects on well-being, the most frequent social media users tend to be less satisfied with their lives and more likely to make negative social comparisons.

Our findings demonstrate that it is impossible to judge social media without at the same time addressing the context in which it is used. Young people's offline lives are inextricably linked with their online lives, and their use of social media reflects their social lives and well-being in general.

This report does not therefore provide concrete recommendations for how much time young people should spend on social networking sites. It is the authors' conviction that neither the results of this report nor the research field in general are yet capable of supporting qualified answers to this question. While we find that extreme use of social media is negatively linked with the well-being of young people – and that is something we take very seriously – screen time alone is not a reliable indicator of how young people are affected by social media. It is therefore the authors' recommendation that increased attention be paid to the additional conditions and circumstances relating to the use of social media by young people in order to better understand the ways in which engaging in online social networks can both impair and facilitate good lives for young people in the Nordic region.

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**We do not have enough research
from the Nordic countries on
how social media affects the
well-being of young people**

Laura Sillanpää, sociologist and project manager at the
Finnish Society on Media Education



Introduction

Almost unanimously, international studies find Nordic people to be the happiest in the world.¹ Our society is widely admired for its ability to translate economic prosperity into human welfare. However, as in many other western nations, there is still considerable inequality between those who are thriving and those who are not.² In recent years, a certain degree of social erosion has become apparent in communities throughout the Nordic countries and is beginning to threaten the cohesion that has previously been so characteristic of the world's happiest region.

In 2018, increasing inequality and dissatisfaction in Nordic countries was mapped out in the report *In the Shadow of Happiness*, in which we found that young people in particular are struggling. New research conducted for this report on representative data for 15 to 16 year-olds also reveals that loneliness has risen significantly among Nordic teenagers since 2000.³

These worrying trends demand explanation. This report has been compiled with the aim of achieving a deeper understanding of the dynamics that foster unhappiness among young people in Nordic countries, and to seek answers as to how we can better address these challenges in the years to come. We will do this by examining one of the most remarkable behavioural changes of our time: the rise of social media. All over the world, and particularly in the Nordic region, social media has become more and more important in the lives of young people.

Online social networks have a wide range of functions, but they are primarily designed to connect people with one another. For that reason alone, social media should actually be a great boon to our lives. One of the most robust and reliable conclusions of happiness research is that social interactions and social relationships are crucial to our well-being.⁴ However, it is a matter of impassioned debate whether or not young people actually achieve greater social connectivity and well-being through the use of social media. Researchers in the field are often divided on the issue. Some studies find considerable negative effects⁵, some find positive effects⁶, and some find no effects at all.⁷

One of the biggest challenges in this field of research is that relatively little is known about how young people spend their time on social media. Most of the data that is currently publicly available contains only general information about social media, and does not include data on the same young people over time.

Although Nordic people are the happiest in the world, there is also considerable inequality in the Nordic countries between those who are thriving and those who are unhappy. Unhappiness is relatively common among young people.

Young people are big consumers of social media, but we know relatively little about how this influences their well-being.

¹ Helliwell, J., Layard, R., & Sachs, J. (2019). *World Happiness Report 2019*, New York: Sustainable Development Solutions Network. <https://worldhappiness.report/ed/2019/>; OECD (2017). *How's Life? 2017: Measuring Well-being*. OECD Publishing, Paris. https://dx.doi.org/10.1787/how_life-2017-en

² Birkjær, M. (2018). *In the Shadow of Happiness*, analysis no. 01/2018, Nordic Council of Ministers.

³ PISA data is available at: <https://www.oecd.org/pisa/data>. The data covers young people in all five Nordic countries from 2000 to 2015.

⁴ Diener, E., & Biswas-Diener, R. (2018). Social Well-Being: Research and Policy Recommendations. In *Global Happiness Policy Report 2018*. <http://www.happinesscouncil.org/>

⁵ Kross, E., et al. (2013). Facebook use predicts declines in subjective well-being in young adults. *PLoS one*, 8 (8), e69841; Shkya, H. B., & Christakis, N. A. (2017). Association of Facebook use with compromised well-being: A longitudinal study. *American Journal of Epidemiology*, 185 (3), 203-211.

⁶ Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, 41, 27-36.

⁷ Jensen, M., George, M., Russell, M., & Odgers, C. (2019). Young Adolescents' Digital Technology Use and Adolescents' Mental Health Symptoms: Little Evidence of Longitudinal or Daily Linkages (publication forthcoming); Orben, A., Dienlin, T., & Przybylski, A. K. (2019). Social media's enduring effect on adolescent life satisfaction. *Proceedings of the National Academy of Sciences*, 201902058.

This can make it exceedingly difficult to determine whether social media actually causes young people to be unhappy, or whether feeling unhappy causes increased use. The fact is, we know relatively little about the relationship between social media use and well-being among young people.⁸

Against this backdrop, this report seeks answers to the following questions: What are the conditions in which social media use can support well-being or create unhappiness? What can we learn about the kinds of young people engaging in online social networks? And how can we arrive at a better understanding of these dynamics in the future?

Method

This report consists of a number of analyses undertaken by the Happiness Research Institute with a primary focus on young people between the ages of 14 and 29 in the five Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden).

The contents and conclusions of this report are primarily drawn from two sources: (1) an independent study conducted with approximately 1,160 Nordic young people aged 14 to 29, and (2) an analysis of representative PISA data of up to 77,600 Nordic teenagers, aged 15 to 16.

Quantitative study

In order to shed more light on the relationship between social media use and well-being, the Happiness Research Institute designed and conducted an independent study with support from the Nordic Council of Ministers in March 2019. Participants were recruited from Facebook and asked a series of questions about their current mood – whether they felt *happy*, *lonely*, *connected*, *interested*, *anxious*, *proud*, *ashamed*, or *bored*.⁹ The questions were adapted from the frequently-used *Positive and Negative Affect Scale* and the questions used by the Office for National Statistics in nationwide questionnaires of subjective well-being in the United Kingdom.¹⁰ Respondents were then asked about what they had been doing on Facebook immediately prior to answering the survey. The goal of this part of the experiment was to uncover any significant relationships between specific digital activities on Facebook and momentary happiness.¹¹ The results of this part of the survey are reviewed in the chapter ‘The digital here-and-now feelings’.¹²

In the second half of the survey, respondents were asked additional questions aimed at more general conditions, including life satisfaction, social comparison, social activity, generalized trust, participation in cultural events, volunteering, overall social media use, and a number of sociodemographic characteristics.¹³ We have used this data – combined with representative data for 15-16-year-olds

⁸ Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, 41, 27-36.

⁹ The 8-item affect scale used in this study demonstrated a high degree of internal consistency. Cronbach's alpha = 0.84.

¹⁰ OECD (2013). ANNEX A, Illustrative examples of subjective well-being measures. In *OECD Guidelines on Measuring Subjective Well-being*. Paris: OECD Publishing. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK189562/>.

¹¹ This study design was inspired by Sagioglou, C., & Greitemeyer, T. (2014). Facebook's emotional consequences: Why Facebook causes a decrease in mood and why people still use it. *Computers in Human Behavior*, 35, 359-363.

¹² N ≈ 850.

¹³ N ≈ 1,160. All survey questions were randomized to protect against order effects and professionally translated into Danish, Finnish, Icelandic, Norwegian, and Sweden by AdHoc Translations.

This study focuses on young people in the Nordic countries, and is mainly based on a survey we have conducted, and representative data from PISA.

in the Nordic countries, which we derive from PISA – in an analysis that appears in the chapter 'Online activity and offline well-being'¹⁴. In this way, we will move from a discussion of social media's effects on momentary mood to a discussion of its relationship with the overall quality of life of the young people. More information on the research design and control variables may be found in the online appendix.

Qualitative study

Throughout the course of our research, we also interviewed a number of experts in the field.¹⁵ These interviews helped us navigate a complex field to identify the most important areas of research for our analysis, and also qualified and nuanced some of our quantitative results.

Limitations of the study

The research presented in this report has at least three important limitations that the reader should be aware of.

Firstly, our own independent study of 1,160 young people in Nordic countries is not intended to be a representative summary of how all young people interact with social media. Since our sample was recruited directly from Facebook and consists primarily of young women (82%), we do not use this data to present proportions, averages, or frequencies that could imply that our results are representative of all young people in the Nordic region. Instead, we rely on regression techniques to control for the distortions inherent in our data and present qualified claims regarding associations between the young people's specific digital activities and their subjective well-being. To make representative claims regarding young people's overall social media habits, we will rely on our analysis of the PISA dataset, as well as on additional data provided by Eurostat and other national statistical agencies.

Secondly, while this report focuses primarily on young people living in the five Nordic countries, we include additional respondents from Canada, the United Kingdom, and the United States at various points in our analysis. These additions are noted throughout the report and in the online appendix. We also carried out robustness checks of the data by including respondents over 29 years of age. These are also available in the online appendix and largely reflect the results presented in this report.

Finally, it is important not to overinterpret the findings presented here as evidence of causation. Even with advanced statistical techniques, we cannot rule out the possibility that well-being affects social media use, and not the other way around. We will return to this issue in the following chapters.

Online appendix

The online appendix for this report can be found at www.happinessresearchinstitute.com. Any specific requests regarding data and methods should be directed to Michael Birkjær and Micah Kaats.

¹⁴ N ≈ 18,000. Relevant data is provided for 2015.

¹⁵ We interviewed the following experts: Anne Mette Thorhauge, associate professor at the University of Copenhagen's Department of Media, Cognition and Communication; Laura Sillanpää, sociologist and project manager at the Finnish Society on Media Education; Göran Bolin PhD, Södertörn University, Media and Communication Studies; Christopher Holmberg PhD, assistant professor at the Institute of Health and Care Sciences, University of Gothenburg; Niamh Ní Bhroin, Researcher and Coordinator, Department of Media and Communication, University of Oslo; Tea Kristiansen, Master's in media studies, social media professional, Tijana Milosevic PhD in Communication, Postdoctoral Fellow in Department of Media and Communication at University of Oslo and Elisabeth Starksrud PhD Department of Media and Communication, University of Oslo. We have also interviewed representatives from a number of non-profit organizations in the Nordic countries, including UNICEF, DanChurchAid Youth (Denmark) and Dyslexia Norway (Norway).

A person with long, light-colored hair is walking away from the camera on a snowy path at night. They are wearing a dark, quilted jacket and dark pants. The background is a blurred, snowy landscape with some distant lights.

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**When it comes to young people,
their social lives and their lives on
social media cannot be separated.
They are inextricably linked**

Laura Sillanpää, sociologist and project manager at the
Finnish Society on Media Education

Young people are digitally connected, but loneliness lurks beneath the surface

1

In this chapter, we will examine the parallel rise of social media and loneliness among young people in recent years. We will also consider what the available research actually tells us about the relationship between these two trends.

Social media is extremely popular in the Nordic countries

Today, virtually all young people in the Nordic countries have a presence on social media. A survey of social media use in Denmark, Finland, Norway, and Sweden from 2017 shows for example that the vast majority of young people between the ages of 15 and 25 are highly active on multiple social media platforms (Figure 1.1).

Almost all young people in the Nordic countries use social media, and they tend to spend many hours on them every day.

In Denmark in particular, one in four 15-year-old girls report spending at least four hours a day on social networking sites and other forms of digital communication, compared with one in five 15-year-old boys.¹⁶

While different social media platforms vary in popularity between the countries, a majority of young people in all Nordic countries use Facebook, Instagram, and YouTube. Facebook in particular is extremely popular, as 85% to 95% of Nordic young people report regularly using the platform.¹⁷

Social media consumption is also significantly higher in the Nordic region than almost anywhere else in Europe. According to Eurostat figures from 2011 to 2018, Nordic young people between the ages of 16 and 24 are well above the European average in their consumption of social media (Figure 1.2). For every year that data is available, at least three of the top five European countries with the highest social media use among young people have been Nordic countries.¹⁸

On average, young people in the Nordic countries use social media far more than other young Europeans.

While social media use has been steadily increasing in the Nordic region in recent years, the rise is primarily due to older generations 'jumping on the bandwagon' (Figure 1.3). In fact, rates of social media use among young people between the ages of 16 to 24 have remained remarkably stable every year since 2011.

Unfortunately, Eurostat does not provide data on social media use before 2011, but given the relatively short time the media have been in existence, it seems reasonable to infer that the large influx of young people to social networking sites occurred very quickly after the platforms were established.

¹⁶ Rasmussen, M., et al. (2019). Survey of schoolchildren 2018. *Copenhagen: The National Institute of Public Health*.

¹⁷ Iceland is not included in the AudienceProject study.

¹⁸ Eurostat tracks young people's participation in social networks in the last three months. Data for 2012 and for Iceland in 2015 and 2016 are not available. However, Iceland reported the highest rates of social media consumption in Europe for all other years except 2011, when it came in second place behind Norway. It is therefore likely that had Iceland been included in the 2015 and 2016 data, it would have pushed the Nordic average up even higher.

Figure 1.1
The majority of young people in Nordic countries use social media

Source: AudienceProject (2017)

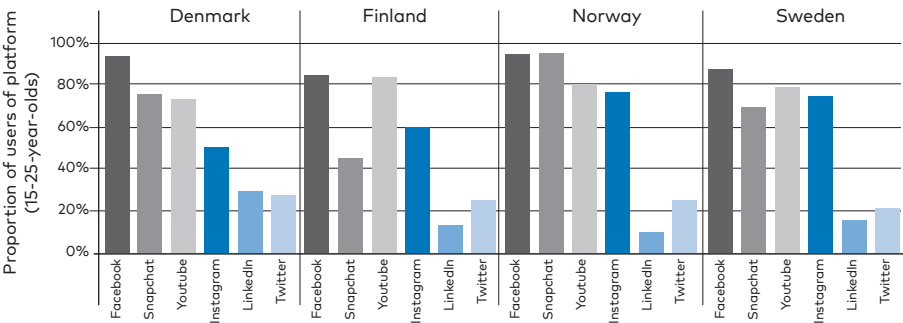


Figure 1.2
Young people in the five Nordic countries are well above the European average in terms of social media use

Source: Eurostat (2018)

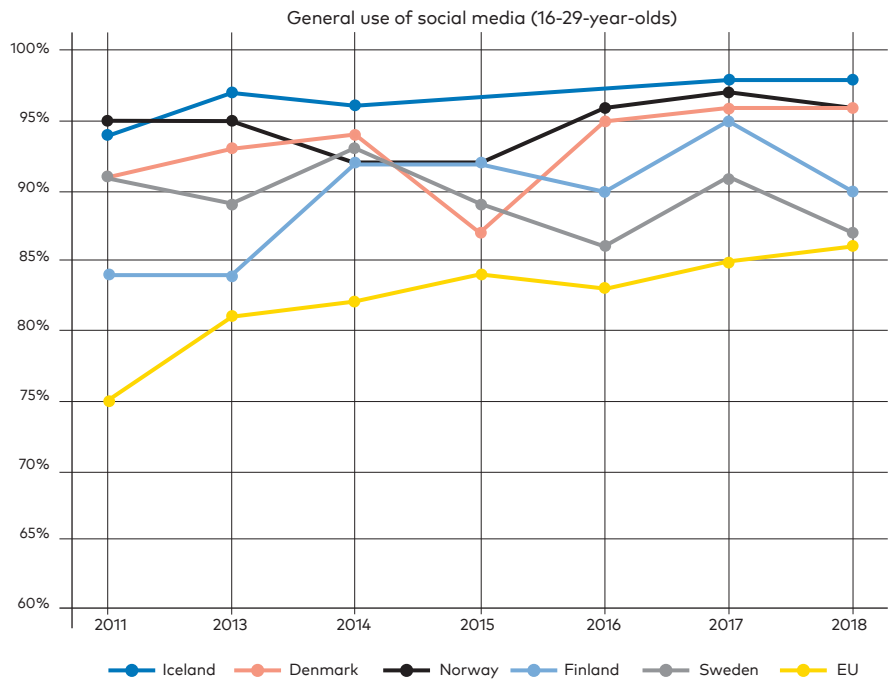
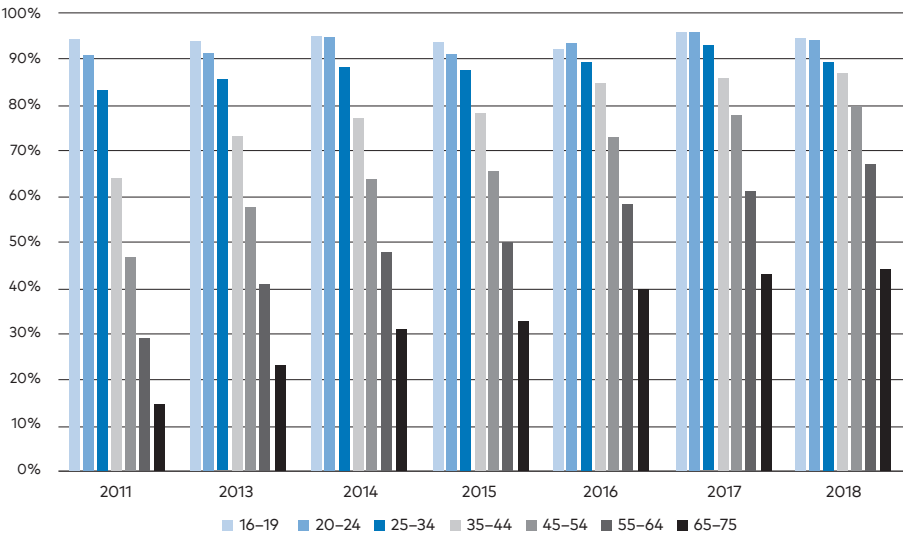


Figure 1.3
Social media use has increased in the Nordic region since 2011

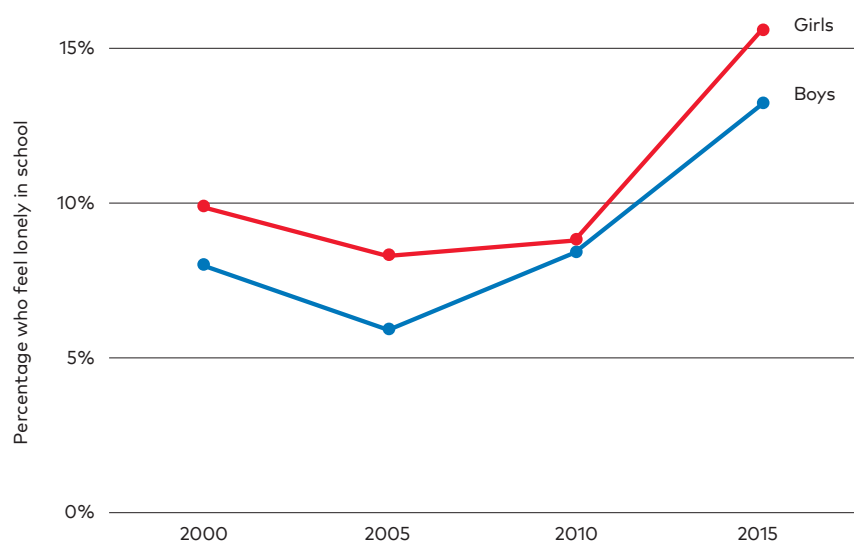
Source: Eurostat (2018)



Loneliness is on the rise

In recent years, loneliness has also risen among young people in Nordic countries. National data from Sweden, for example, show an increase in the proportion of young people who do not have close friends from 4.8% in 2008 to 6.8% in 2017.¹⁹ In Denmark, similar increases are observable in the proportion of young people who feel involuntarily alone, from 7.3% in 2010 to 9.4% in 2017.²⁰

Data from PISA also show that the proportion of 15 to 16-year-olds in all five Nordic countries who feel lonely at school was under 10% until 2012, after which it increased significantly to 15.6% for girls and 13.2% for boys (Figure 1.4).



Loneliness is on the rise among young people in the Nordic countries, as several studies have shown.

Figure 1.4. Trend in the proportion of young people (15-16 year-olds in the Nordic countries) who feel lonely at school – from 2000 to 2015

Source: PISA (2015)

Experts disagree about the effects of social media use

Parallel trends alone are not necessarily evidence of causation. The question remains whether these two developments – the observed increases in social media consumption and the observed increases in loneliness – are interrelated. Despite an ever-growing public interest in the psychological effects of social media use, experts are largely divided on the issue.

Does social media use threaten young people's well-being?

On the one hand, some experts believe that the available evidence points clearly in one direction. In a number of widely publicized articles and books, social media (and digital technology in general) are often presented as the culprit behind the observed declines in young people's well-being and the rise in loneliness.²¹

Some researchers believe that social media and digital technology contribute to poorer well-being and more mental health problems in young people. They see, for example, a link between increased social media consumption and depression.

¹⁹ Den Nationale Sundhedsprofil (2017). Data is available at: <http://www.danskernessundhed.dk/>

²⁰ Statistics Sweden (2017). Data is available at: <https://www.scb.se/>

²¹ Twenge, J. M. (2017). Have Smartphones Destroyed a Generation? *The Atlantic*: <https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/>; Hymas, C. (2018). Social media is making children regress to mentality of three-year-olds, says top brain scientist. *The Telegraph*. <https://www.telegraph.co.uk/news/2018/08/05/social-media-regressing-children-mentality-three-year-olds-says/>

Studies relying on large-scale datasets from the United Kingdom and the United States have linked young people's use of social media to reduced self-confidence, lower life satisfaction, poorer mood, higher rates of depression, and even suicide²². It is argued that social media has negative impacts on young people's social interactions, feelings of empathy, and sense of personal identity.²³

These arguments have also been supported by research conducted by the Royal Society for Public Health. In 2017, the Society published a report that received widespread media attention after concluding that Instagram was the worst platform for young people's mental health.²⁴

Criticism of the lack of focus on nuances in the use of social media

Some researchers believe that the available research is not yet capable of establishing a link between unhappiness and social media consumption. They argue, for example, that the relevant datasets are not sufficiently detailed to clearly determine whether it is social media consumption that causes unhappiness, or vice versa.

However, these findings are not uncontroversial. Other experts in the field argue that conclusions about the effects of social media on the well-being of young people rest upon a somewhat slender foundation.²⁵

One main criticism stems from the fact that the large-scale datasets that have been used are not detailed enough to support reliable statistical research. For example, in the Monitoring the Future dataset, one of the most widely used in the literature, students are asked whether they use social media "Never", "A couple of times a year", "1-2 times a month", "Once a week", or "Almost daily". For several years now, the vast majority of young people have placed themselves in the last of these five categories. Studies relying on these sorts of questions are therefore likely to be uninformative at best, and perhaps even misleading.²⁶

Moreover, spending 10 minutes looking at photos of celebrities on Instagram and spending 10 minutes communicating with friends on Facebook are likely to have very different effects on well-being. If we only consider the general amount of time that young people spend on social media, these important nuances will thus fail to be taken into account.

Social media may only be as bad for you as eating potatoes

Another point of criticism in relation to the research results is that there is an important difference between *statistical significance* and *practical significance*. *Statistical significance* is what scientists (and the authors of this report) refer to as valid and reliable associations between variables. It tells us that two variables (for example, increasing Facebook use and increasing unhappiness) are linked to each other, and that this relationship is unlikely to be due to

²² Twenge, J. M., Martin, G. N., & Campbell, K. W. (2018). Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. *Emotion*, 18 (6), 765-780; Twenge J. M. et al. (2017). Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science*, 6 (1), pp. 3-17.

²³ Greenfield, S. (2015). *Mind change: how digital technologies are leaving their mark on our brains*. New York: Random House Incorporated.

²⁴ Gilchrist, K. (2017). Instagram most likely to cause young people to feel depressed and lonely out of major social apps, study says. *CNBC*. <https://www.cnn.com/2017/05/19/instagram-most-likely-to-cause-young-people-to-feel-depressed-and-lonely-out-of-major-social-apps-study-says.html>

²⁵ Bell, V., Bishop, B. V. M., & Przybylski, A. (2015). The debate over digital technology and young people. *British Medical Journal*, 351, h3064.

²⁶ The PISA dataset suffers from similar limitations. In 2015, the most recent year for which data is available, the most frequent social media use option was "Every day".

chance. However, statistical significance alone cannot tell us anything about how meaningful these relationships are in practice. For example, how do the negative effects of Facebook use compare to the negative effects of seeing a bad movie on television? Are they equally severe, or is one worse than the other? The measure of how significant these relationships are in practice is called *practical significance*.

Along these lines, in a recent study of more than 100,000 adolescents published in *Nature*, scientists found that social media consumption explained less than 0.1% of the variance in quality of life. To put this figure into context, regularly eating potatoes and wearing glasses were found to have similarly negative effects.²⁷ These results clearly demonstrate that a statistically significant relationship between social media use and well-being among young people is not necessarily a practically significant one. The study's authors conclude that the negative effects of social media consumption are not large enough to warrant policy change.

Cause and effect are not settled

A third criticism, which may also be the most important one, is that there is a huge lack of reliable causal evidence within this field of research. Despite a growing public interest in the significance of social media use, the vast majority of studies cannot distinguish cause from effect.

It thus remains largely an open question whether social media use causes young people to be unhappy, or whether young people who are already unhappy are likely to make more use of social media.

As most research in this area is based on comparisons between individuals (for example, between heavy users and light users), as opposed to looking at changes in a single individual's behaviour over time, statistical significance alone cannot always determine causality. It is therefore imperative to establish focused panel data capable of tracking developments in young people's well-being and social media use over a longer period of time.

The analyses presented in this report mostly do not address this third criticism of causality. We do however make every attempt to address the remaining two challenges in the following chapters.

²⁷ Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3 (2), 173.



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You can use social media to stay in touch with your friends and family. It's very practical, and makes it easy to get hold of other people

Göran Bolin PhD, Södertörn University,
Media and Communication Studies

In the first chapter, we documented the widespread popularity of social media among young people in Nordic countries, as well as accompanying increases in loneliness. We also noted the difficulty in determining causal relationships between these two trends.

In this chapter, we will take a closer look at how young people spend their time on social media to uncover the conditions in which social media use predicts changes in mood – that is, their here-and-now-feelings. The analysis in this chapter focuses primarily on Facebook.

The complex relationship between Facebook and well-being

Over the past 10 years, Facebook has become the most widely used and influential social media platform in the world. More than two billion people use the site every month, and one million people log on every second.²⁸

In the Nordic countries, four out of five people use Facebook, making it the most popular social media platform in the region. While Instagram and Snapchat have become increasingly popular among teenagers, 90% of Nordic young people under the age of 25 still use Facebook on a regular basis.²⁹

Despite the platform's immense popularity, an emerging body of research suggests that Facebook use may have adverse effects on mental health. In a large number of studies, Facebook use has been associated with increases in envy³⁰, loneliness³¹, stress³², social comparison³³, and depression³⁴, as well as decreases in life satisfaction³⁵ and social capital.³⁶

Facebook is the world's most popular social media platform. Among young people in the Nordic countries, nine out of ten use Facebook regularly.

²⁸ Facebook Reports Fourth Quarter and Full Year 2018 Results: https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q4/Q4-2018-Earnings-Release.pdf; Desdarjins J. (2019). What Happens in an Internet Minute in 2019? *Visual Capitalist*: <https://www.visualcapitalist.com/what-happens-in-an-internet-minute-in-2019/>

²⁹ AudienceProject (2016). Device Study 2016: https://www.audienceproject.com/wp-content/uploads/study_social_media_across_the_nordics.pdf

³⁰ Appel, H., Gerlach, A. L., & Crucius, J. (2016). The interplay between Facebook use, social comparison, envy, and depression. *Current Opinion in Psychology*, 9, 44-49.

³¹ Burke, M., Marlow, C., & Lento, T. (2010). Social network activity and social well-being. In *Proceedings of the SIGCHI conference on human factors in computing systems*, 1909-1912; Primack, B. A. et al. (2017) Social Media Use and Perceived Social Isolation Among Young Adults in the U.S. *American Journal of Preventive Medicine*, 53 (1), 1-8; Arampatzis, E., Burger, M. J., & Novik, N. (2018). Social network sites, individual social capital and happiness. *Journal of Happiness Studies*, 19 (1), 99-122.

³² Brooks, S. (2015). Does personal social media usage affect efficiency and well-being? *Computers in Human Behavior*, 46, 26-37; Steers, M. N., Wickham, R. E. & Acitelli, L. K. (2014). Seeing Everyone Else's Highlight Reels: How Facebook Usage Is Linked to Depressive Symptoms. *Journal of Social and Clinical Psychology*, 33 (8).

³³ Steers, M. L. N., Wickham, R. E., & Acitelli, L. K. (2014). Seeing everyone else's highlight reels: How Facebook usage is linked to depressive symptoms. *Journal of Social and Clinical Psychology*, 33 (8), 701-731; Lee, S. Y. (2014). How do people compare themselves with others on social network sites?: The case of Facebook. *Computers in Human Behavior*, 32, 253-260.

³⁴ Nesi, J., & Prinstein, M. J. (2015). Using social media for social comparison and feedback-seeking: Gender and popularity moderate associations with depressive symptoms. *Journal of Abnormal Child Psychology*, 43 (8), 1427-1438.

³⁵ Krasanova, H., Wenninger, H., Widjaja, T., & Buxmann, P. (2013). Envy on Facebook: A Hidden Threat to Users' Life Satisfaction? Conference paper.

³⁶ Burke M., Marlow, C., & Lento, T. (2010). Social Network Activity and Social Well-Being, Conference paper.

Some research shows that there is often a link between the use of Facebook and unhappiness. However, when Facebook is used for direct communication, it can lead to increased connectivity and self-confidence.

However, such negative relationships are not always present. When Facebook is used primarily as a means of direct communication with others, it has been found to promote feelings of connectedness, social capital, and self-esteem.³⁷ However, it is once again important to emphasize that much of the available research is incapable of determining causation.

A Facebook experiment

In March 2019, we recruited Facebook users to participate in an online study designed to uncover the here-and-now emotional effects of engaging in specific digital activities on the platform. Approximately 70% of our survey respondents reported having just been on Facebook immediately prior to answering the survey. These respondents were first asked a series of questions about their current mood, or what experts typically refer to as *affective subjective well-being*. They were then asked about what they had just been doing on Facebook, how much time they had spent on the site, and a battery of sociodemographic characteristics. The final sample used for the analyses presented in this chapter consisted of approximately 860 respondents, mostly young women (84%), between the ages of 14 and 29.³⁸

Active versus passive use

To examine the relationship between Facebook use and mood, we will first consider its effects on overall *positive affect* and overall *negative affect*. Positive affect refers to a combination of generally positive emotional states – in this case feeling *happy*, *interested*, *connected (to others)*, and *proud*. Negative affect refers to combination of generally negative emotional states – in this case feeling *anxious*, *bored*, *lonely*, and *ashamed*.

In our study, we find a number of statistically significant links between the total amount of time users spend on Facebook and their current mood. Specifically, each additional minute spent on Facebook seems to increase overall negative affect by approximately 0.1%.³⁹ However, this effect is too small to be practically significant in most cases.

Moreover, there is no significant relationship between time spent on Facebook and overall positive affect.

The problem with this kind of analysis is that we group all forms of Facebook use into one large category. As we will demonstrate, the relationship between Facebook use and well-being is largely dependent on how young people spend their time on the platform.

³⁷ Verduyn, et al. (2015). Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence. *Journal of Experimental Psychology: General*, 144 (2), 480; Krasanova et al. (2013); Kross et al. (2013); Best et al. (2014).

³⁸ In addition to the five Nordic countries, respondents from Canada, the United Kingdom, and the United States were included in the analyses presented in this chapter to ensure reliability. Summary statistics and control variables are presented in Table 1 of the online appendix.

³⁹ Table 3 in the online appendix.

It is useful here to distinguish between two types of social media use:⁴⁰

Active use:

Engaging in activities that facilitate direct communication with others

- On Facebook, this includes posting status updates, sending messages, commenting on posts, and sharing links.

Passive use:

Passively consuming content without directly communicating with others

- On Facebook, this includes scrolling through the newsfeed, reading status updates, and looking at friends' pages.

When active and passive use are taken into account, markedly different and even contradictory effects begin to emerge. While increased passive Facebook use tends to be associated with increased *negative* affect – i.e. poorer mood – active Facebook use tends to be associated with increased *positive* affect – i.e. better mood (Figure 2.1). These associations hold even after controlling for the number of offline close social relationships. In other words, the positive influence of active use is not explained by the fact that active users simply have more friends to talk to. Communicating directly with others has a positive effect even for those with few close social ties.

Active use of Facebook, in which you communicate directly with other people, is associated with good mood. Passive use, in which you look at content without communicating, is associated with poor mood.

However, we also find that the amount of time spent on Facebook has important implications. The above-mentioned effects apply only to users who spend more than five minutes on Facebook.

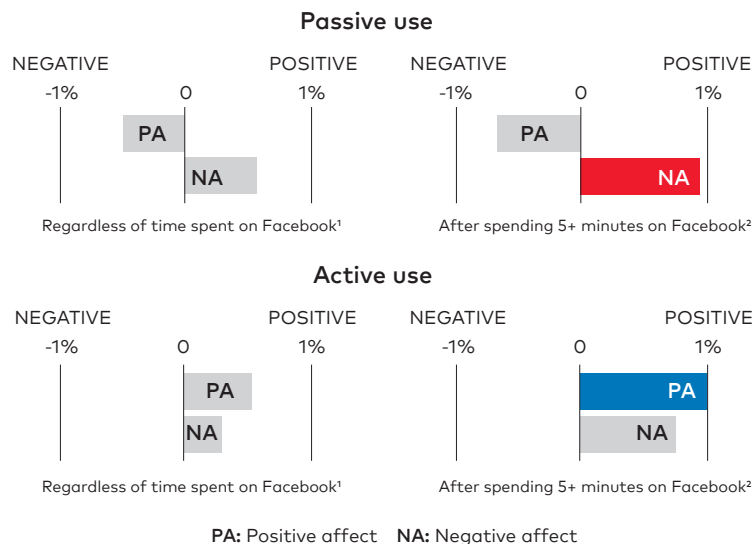


Figure 2.1
The relationship between type of Facebook use and affect⁴¹

¹N = 829. ²N = 534. Colours represent significance at $p < 0.1$. The effects express 'percentage change in positive and negative affect with increased consumption, characterised by active use (0-16 scale) and passive use (0-12 scale), respectively'. The questions were inspired by Verduyn et al (2015). The control variables include: Time spent on Facebook, number of close relationships, level of social activity, age, country, area, civil status, job status, gender. The sample covers respondents from the Nordic countries (Denmark, Iceland, Finland, Norway and Sweden) and has been further strengthened with respondents from Canada, the US and the UK. See online appendix, table 3.

⁴⁰ Drawn from Burke et al. (2010); Krasanova et al. (2013); Verduyn et al. (2015).

⁴¹ We find similar dynamics in a robustness check on a larger sample presented in Table 4 of the online appendix.

Lonely staring and proudly sharing

In the remaining analyses in this chapter, we will take a closer look at the specific emotions that are associated with various Facebook activities. Once again, we find that different Facebook activities are associated with different positive and negative emotions.

In our survey, we asked respondents who had just been on Facebook to report how much time they had spent posting status updates, sharing links, commenting on posts, sending messages, browsing the newsfeed, looking at friends' pages, reading status updates, and searching for events. Possible answers included "0 = None of the time", "1 = Some of the time", "2 = Half of the time", "3 = Most of the time", and "4 = All of the time". In Figure 2.2, we show the percentage change in emotional well-being per one unit increase in time spent engaging in each activity. For example, we find that sharing links predicts a 5% increase in feeling happy. This means that users who spent some of their time on Facebook sharing links were likely to feel 5% happier than those who didn't share any links at all.

In addition to increased feelings of happiness, time spent *sharing links* also predicts increased feelings of pride, as well as decreased feelings of loneliness. *Searching for events* is significantly associated with increased feelings of interest. On the other hand, more time spent *scrolling through the news feed* is related to lower levels of happiness. These links are significant even after we have adjusted for the amount of time the users spend online on Facebook, the number of close relationships they have, their general level of social activity and a number of socio-economic factors.

Overall, *looking at friends' pages* is the strongest predictor of changes in young people's mood. This particular activity is associated with decreased feelings of interest and pride, as well as increased feelings of loneliness and shame.

These findings also seem to support what has previously been referred to as the "highlight reel effect". Because people tend to share more positive experiences online than they do negative experiences, the more time young people spend on Facebook passively observing the lives of others, the more likely they are to make upward (negative) social comparisons.⁴² These sorts of comparisons have routinely been shown to decrease happiness.⁴³ In the next chapter, we will take a closer look at the relationship between social media and social comparison.

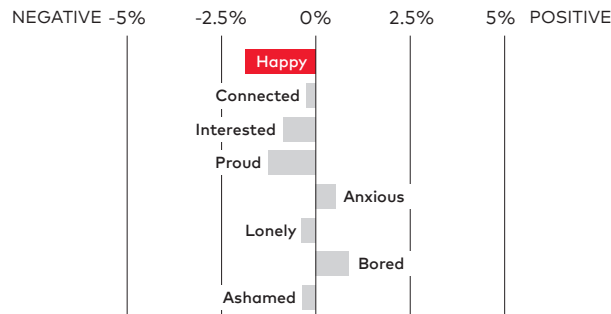
It is also worth noting that many Facebook activities do not significantly predict any changes in young people's mood. *Posting status updates*, *sending messages*, *commenting on posts*, and *reading status updates* are not associated with changes in either positive or negative affect.

⁴² Steers, M. N., Wickham R. E., & Acitelli, L. K. (2014). Seeing Everyone Else's Highlight Reels: How Facebook Usage Is Linked to Depressive Symptoms, *Journal of Social and Clinical Psychology*, 33 (8).

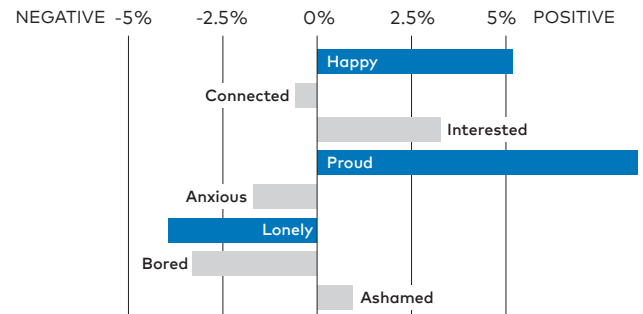
⁴³ Olson, B. D., & Evans, D. L. (1999). The role of the Big Five personality dimensions in the direction and affective consequences of everyday social comparisons. *Personality and Social Psychology Bulletin*, 25 (12), 1498-1508; Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, 3 (4), 206.

Figure 2.2
The relationship between Facebook activities and individual emotions

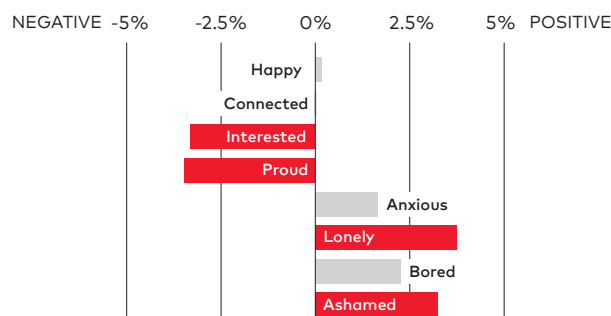
Scrolling through the newsfeed



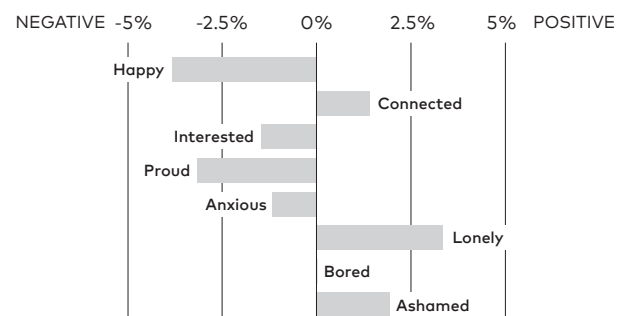
Sharing links



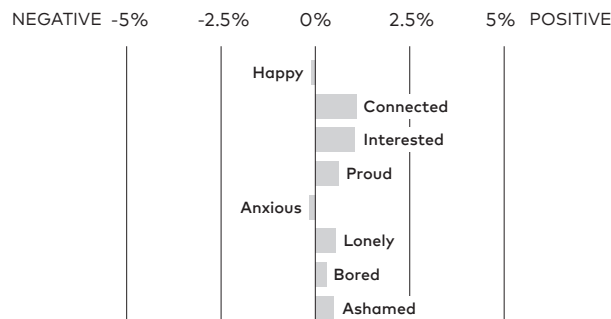
Looking at friends' pages



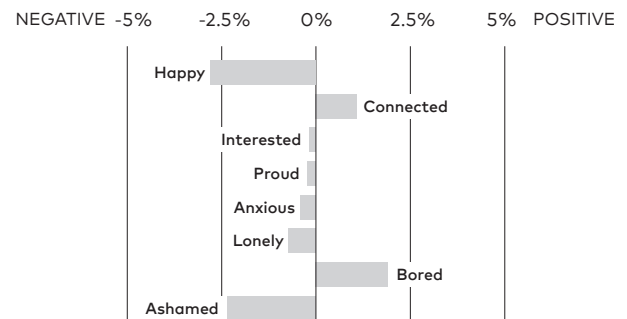
Posting status updates



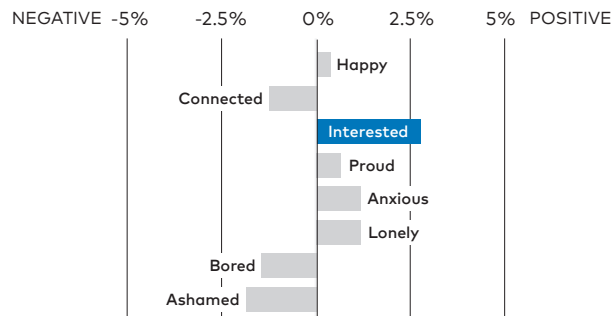
Reading status updates



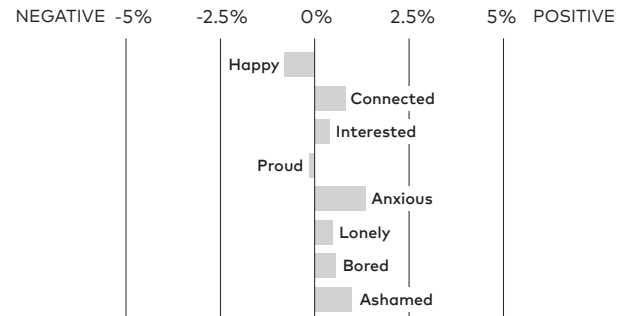
Commenting on posts



Searching for events



Sending messages



N = 850. The sample is limited to respondents aged less than 30 who spent 5 minutes or more on Facebook. The coloured blocks represent significant results, $p < 0.1$. The effects are represented as 'percentage change in positive and negative affect with increased consumption, characterised by various activities (0-4 scale)'. The questions were inspired by the Positive and Negative Affect Scale (PANAS). The control variables include: time spent on Facebook, number of close relationships, level of social activity, age, country, area, civil status, job status, gender. The sample covers respondents from the Nordic countries (Denmark, Iceland, Finland, Norway and Sweden) and has been further strengthened with respondents from Canada, the US and the UK. See online appendix, table 5.

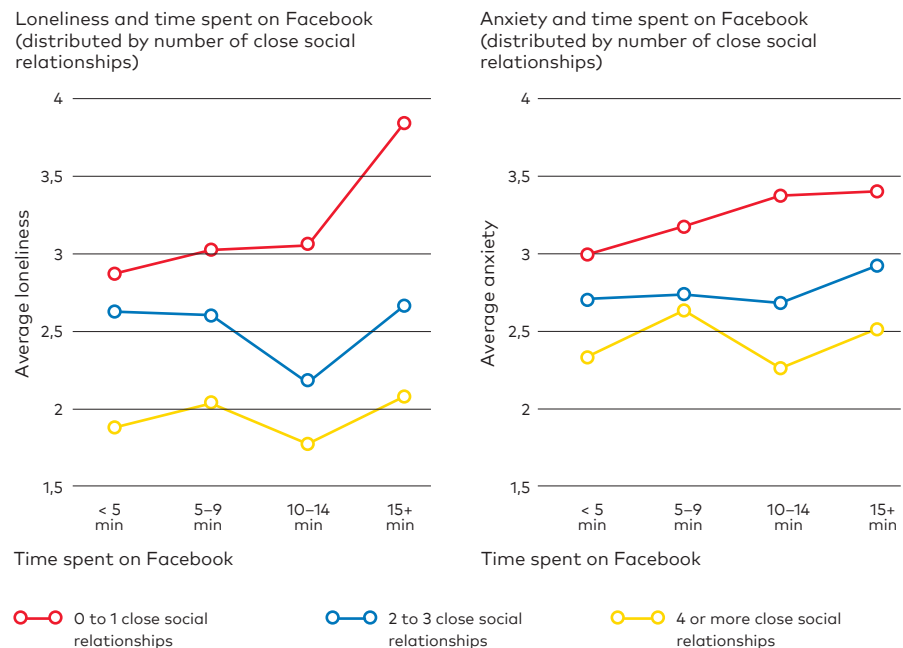
Young people without close social relationships are particularly vulnerable on Facebook

For young people who have few close relationships, we see that increased consumption of Facebook links to increased anxiety and loneliness. However it is once again difficult to determine causation.

In our survey, respondents were asked about how many people, if any, there were with whom they could discuss intimate and personal matters. Among those respondents who reported having less than two close relationships, we found a link between increased social media use and feelings of loneliness and anxiety. Or in other words, the more time these young people spent on Facebook, the more likely they were to feel lonely or anxious. These dynamics were not as apparent among young people with two or more strong social ties (Figure 2.3).

This may indicate that Facebook can quickly become an isolating and stressful experience for those already predisposed to feel lonely and anxious. However, these results could also be interpreted in the reverse direction. An equally valid explanation might be that lonely and anxious people are more likely to spend longer periods of time on Facebook. Once again, we cannot know for sure whether more Facebook use causes unhappiness, or whether unhappiness causes more Facebook use.

Figure 2.3
Young people without close social relationships are particularly vulnerable on Facebook





**We do not have enough
research from the Nordic
countries on how social
media affects the well-
being of young people**

Laura Sillanpää, sociologist and project
manager at the Finnish Society on Media
Education



“

Social media is used to maintain ongoing contact, which harmonises very well with the life situation of young people: they have moved away from home, are trying to find a life partner, are trying to find out who they can be good friends with

Anne Mette Thorhauge, associate professor, Department of Media, Cognition and Communication, University of Copenhagen

In the previous chapter, we investigated how the here-and-now mood of young people is associated with their use of Facebook while they are using the platform. In this chapter, we will move beyond the immediate context and instead examine the conditions in which social media predicts changes in young people's overall subjective and social well-being.

The insights presented here are partly based on our own independent study, and partly based on our analysis of representative PISA data on 15 to 16-year-olds in Nordic countries. While the PISA data can be used to make general claims about social media use, the results of our independent study add more detailed nuances to the picture.

'Social media consumption' is an empty concept if we ignore the nuances

In the second half of our survey, we asked respondents questions about their overall social media use and general well-being. We find higher social media consumption to be significantly associated with lower life satisfaction, negative social comparisons, reduced trust in others, less participation in cultural events, and less volunteering.⁴⁴

Similarly, in our analysis of representative PISA data for 15 to 16-year-olds in Nordic countries, we also find time spent on social media to be associated with lower life satisfaction, but only among girls.⁴⁵

However, all of these effects are relatively weak. Based on these results alone it seems premature to conclude unequivocally that social media is a *significant* threat to the well-being of young people. As we learned in the last chapter, these general associations can often mask important nuances lying just below the surface.

In the following sections, we will first present insights from our analysis of PISA data on Nordic teenagers to outline the general conditions in which social media can both support and undermine well-being. We will then return to the results of our independent study to provide a more detailed account of the varying effects of different social media platforms, depending on age and personal characteristics.

Girls seem to be more dependent on social media

The first key finding revealed in our PISA analysis is that girls seem to be more dependent on social media than boys. Around 59% of 15 to 16-year-old girls in Nordic countries report feeling uncomfortable when they do not have access to the internet, compared with 54% of boys (Table 3.1).⁴⁶ This may seem like a relatively small difference, but it is nonetheless surprising since boys spend more time using the internet than girls, on average.⁴⁷

Girls find it harder to do without the internet than boys, even though they spend less time online. However, they do spend more time on social media.

⁴⁴ Table 11 in the online appendix.

⁴⁵ Table 8 in the online appendix.

⁴⁶ Figures based on 2015 data for Denmark, Finland, Iceland, and Sweden.

⁴⁷ Eurostat 2018: <https://data.europa.eu/euodp/da/data/dataset/oY2vRJtab1L3klb5T9flghttps://data.europa.eu/euodp/da/data/dataset/oY2vRJtab1L3klb5T9flg>

When we test for potential explanations as to why this may be the case, we find that even though girls generally spend less time online, they spend much more time using social media. As it turns out, spending more time on social media is strongly predictive of feeling worse without internet access.⁴⁸

Table 3.1
Girls in the Nordic countries more frequently experience the negative aspects of digital technology

Source: PISA (2015)

	Denmark		Finland		Iceland		Sweden	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Do not use digital technologies as I would like	7.3%	14.4%	12.8%	14.7%	11.4%	12.4%	8.2%	13.9%
Forget the time when using digital technologies	61.7%	60.8%	45.0%	56.7%	61.0%	74.1%	52.0%	58.2%
Feel bad when unable to access the internet	59.9%	63.3%	40.4%	46.3%	40.4%	41.6 %	73.4%	82.0%

Parental support protects girls from social media's worst effects

Our analysis of PISA data also reveals a negative association between social media use and life satisfaction, but only among girls. However, parental support plays a crucial role in determining the extent of this effect.

Among girls who report having little or no emotional support from their parents, we find that increased social media consumption is strongly associated with lower life satisfaction.⁴⁹ In other words, in the Nordic countries, only girls who feel emotionally unsupported by their parents are likely to feel worse if they spend more time on social media.

This finding also appears to be consistent with results presented in the chapter "The digital here-and-now feelings", where we found that the quality of young people's offline social relationships can play an important role in determining the extent to which they are affected by spending time on Facebook.

Extreme use is probably a problem

In the remaining analysis in this chapter, we will focus primarily on the results of the second half of our own independent survey. In this part, the respondents were asked about their general well-being and their habits on social media.

Although we do not find any strong links between the general consumption of social media and the well-being of young people, we see some negative associations when we look at the heaviest social media users (upper quintile).

When compared to the average social media user, the most frequent 20% of social media users in our study are likely to be 3.7% less satisfied with their lives.⁵⁰

While overall, social media consumption shows limited effects, extreme use of social media is associated with a significant deterioration in quality of life.

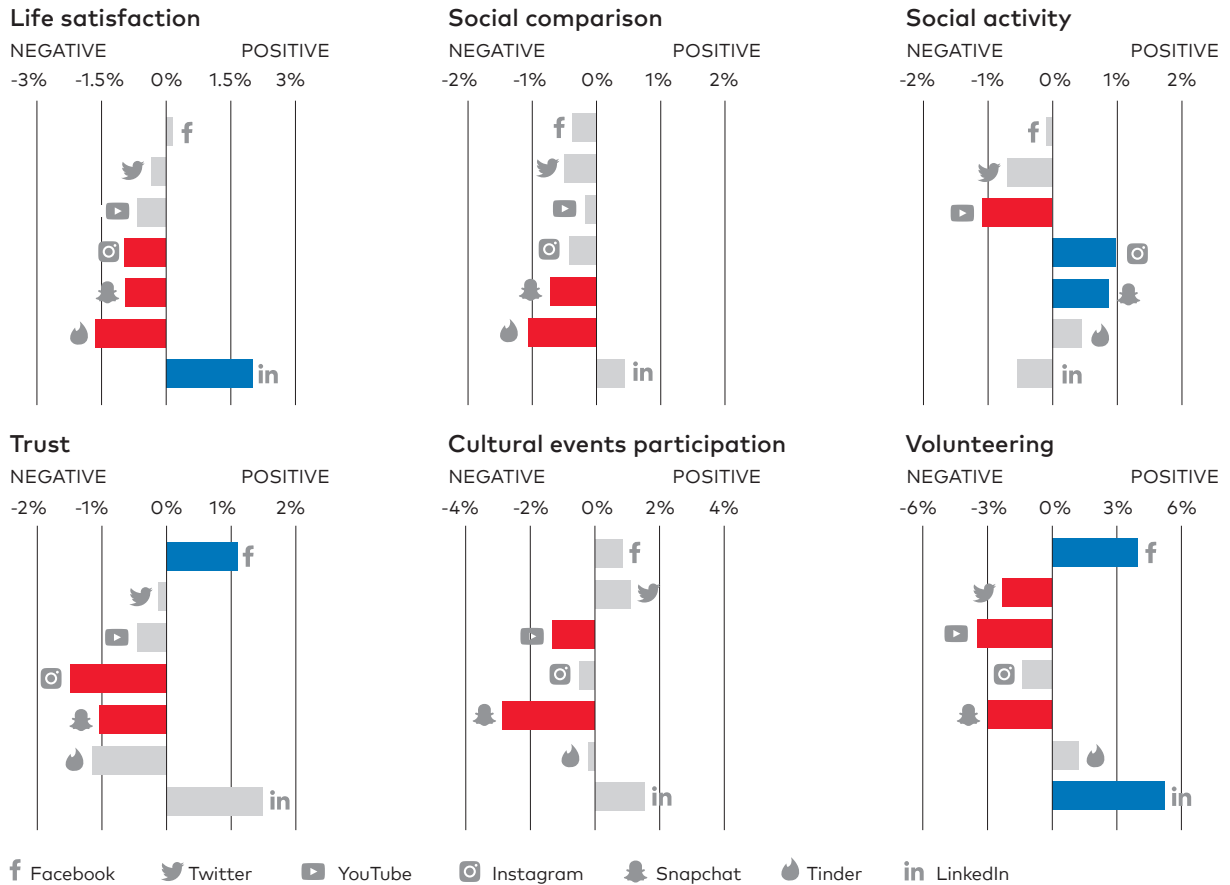
⁴⁸ Table 7 in the online appendix.

⁴⁹ Table 9 in the online appendix.

⁵⁰ Table 12 in the online appendix.

Figure 3.1

How various platforms are associated with life satisfaction, social comparison, social activity, trust, participation in cultural events, and volunteering

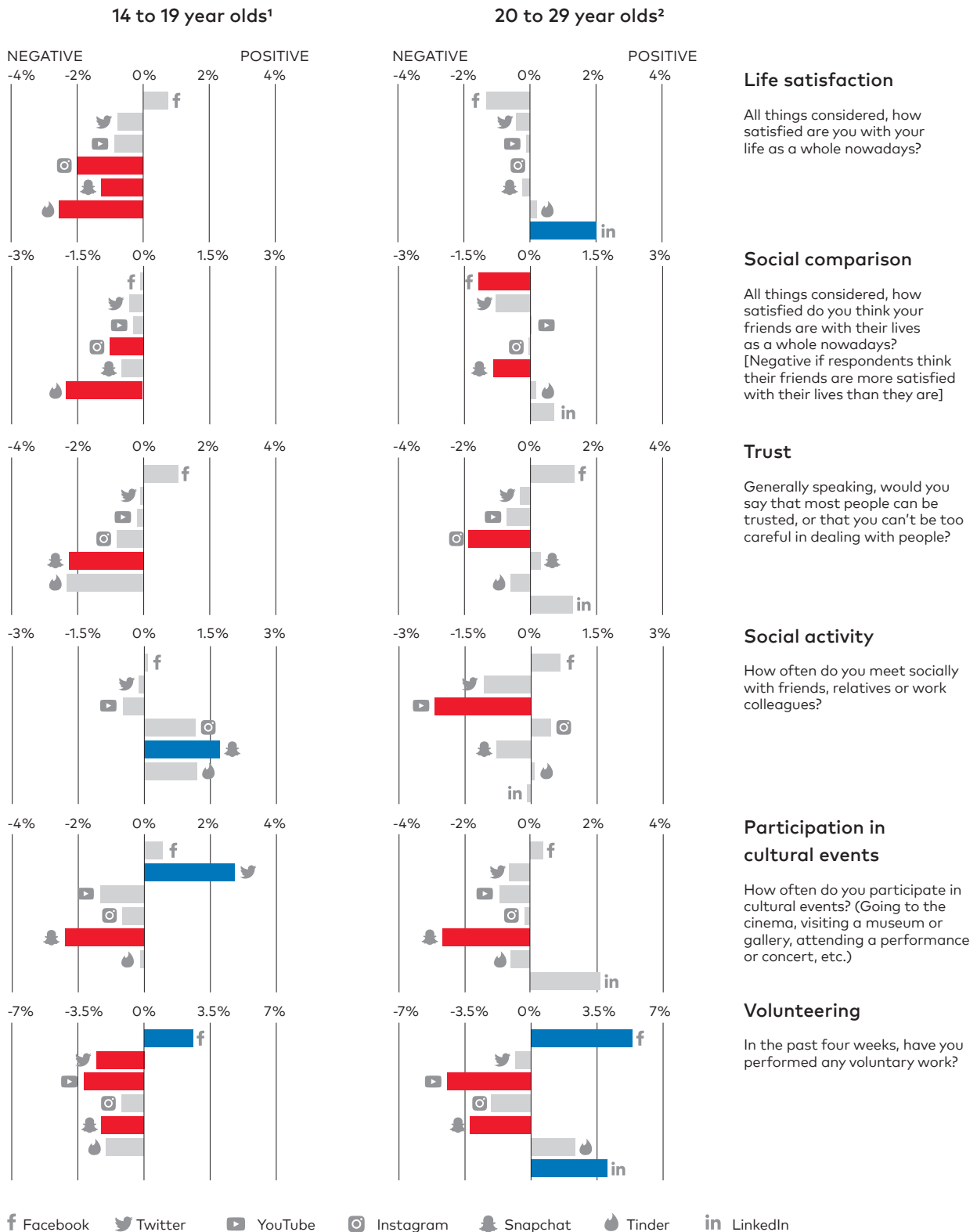


N = 1160. Colours represent significance at $p < 0.1$. The sample is limited to respondents aged less than 30. The effects express 'percentage change in dependent variable (e.g. life satisfaction) with increased consumption of various platforms (0–6 scale)'. The questions were adapted from the European Social Survey and the OECD Guidelines for Measuring Subjective Well-being. The control variables include: number of close relationships, level of social activity, age, country, area, civil status, job status, gender. The sample covers respondents from the Nordic countries (Denmark, Iceland, Finland, Norway and Sweden). See online appendix, Table 13.

A deterioration of 3.7% in quality of life is not negligible. To put it into perspective, the difference in life satisfaction between those with two close social relationships and those with only one close social relationship is 4.7%.

Figure 3.2

How different platforms are associated with life satisfaction, social comparison, social activity, trust, cultural participation and voluntary work (differences between teenagers and 20-29-year-olds)



¹ N = 650, ² N = 486. Colours represent significance at p < 0.1.

The effects are represented as 'percentage change in dependent variable (e.g. life satisfaction) with increased consumption of various platforms (0-6 scale)'. LinkedIn is excluded for 15-19 year olds, as too few teenagers in our study use this platform. The questions were adapted from the European Social Survey and the OECD Guidelines for Measuring Subjective Well-being. The control variables include: number of close relationships, level of social activity, age, country, area, civil status, job status, gender. The sample covers respondents from the Nordic countries (Denmark, Iceland, Finland, Norway and Sweden). See online appendix, Table 14.

The effects of social media use vary, depending on platform and age

When we take an even closer look at the data, we find that social media use can have a variety of different effects, depending on which platform is being considered (Figure 3.1).

In our survey, we asked respondents to report how often they used Facebook, Twitter, YouTube, Instagram, Snapchat, Tinder, and LinkedIn. Possible answers choices included "0 = I don't use this platform", "1 = Rarely", "2 = Weekly", "3 = Once per day", "4 = Multiple times per day", "5 = Once per hour", "6 = Multiple times per hour". In Figure 3.1, we plot the percent change in well-being per one unit increase in time spent on each platform. For example, we find that using Snapchat decreases trust by 1%. This means that for every one unit increase in overall Snapchat use, respondents are likely to feel 1% less trusting of others. In other words, those who use the platform multiple times per hour (those who replied '6' on the scale) have on average 6% less trust in other people than those who don't use Snapchat at all (those who replied '0' on the scale).

Overall, we find that while Facebook and LinkedIn seem to have mostly insignificant or even positive associations with well-being, spending more time on Twitter, YouTube, Instagram, Snapchat, or Tinder is linked to a number of negative outcomes.

Three out of seven platforms predict declines in life satisfaction, and heavier users of Snapchat and Tinder are more likely to make negative social comparisons. Use of YouTube predicts lower levels of social activity, cultural events participation, and volunteering. Instagram and Snapchat are linked to lower levels of trust, while the latter is also linked to decreased participation in cultural events and less volunteering. However, perhaps surprisingly, Snapchat and Instagram are also associated with increases in social activity.

These relationships can also vary significantly, depending on age. When we divide our sample into two groups, one with teenagers between the ages of 14 and 19 and the other with young adults between the ages of 20 and 29, a variety of new effects becomes apparent (Figure 3.2).

Most importantly, social media use no longer predicts declines in life satisfaction for young adults, although Instagram, Snapchat, and Tinder remain linked to lower life satisfaction among teens. On the other hand, young adults seem more likely than teenagers to make negative social comparisons when they use Facebook more. Snapchat seems to have a more negative association with trust than Instagram among teenagers, although the reverse is true among young adults. Once again, these effects remain significant even after adjusting for respondents' close social relationships offline, age, country of origin, residential area, education, civil status, employment, and gender.

We will examine many of these relationships in greater detail in the following sections.

Increased consumption of virtually all social media platforms increases the likelihood that young people will think their friends are happier than they are. Social media platforms are designed in such a way that the possibility for such comparisons is usually present.

Social media and social comparison

In addition to asking our survey respondents about their own happiness, we also asked them to estimate how happy they thought their friends were.

We find that increased use of Facebook, Instagram, Snapchat, and Tinder is associated with negative social comparisons in various contexts. In other words, young people who spend more time on these platforms are more likely to think their friends are happier than they are (Figure. 3.1).

Social comparison is a fundamental psychological process that governs how we feel about ourselves and those around us.⁵¹ However, on social media these tendencies can become considerably amplified. Social networking sites present near-constant opportunities to engage in social comparisons. *Comparison information* is almost always in greater supply on social media than it is in real life. We are always able to see whether we have fewer followers, likes, and comments than our friends do.⁵² The research also suggests that we tend to present ourselves in an overly flattering light on social media that does not always map onto the reality of our lives.⁵³

The social media paradox

One of the most surprising results of our study is that Snapchat and Instagram actually predict increased levels of social activity. The more time young people spend on these social networks, the more time they spend in the company of others. However, somewhat paradoxically, we also find that these very same young people are more likely to be unhappy (Figure 3.1).

It is not just our own study that shows such puzzling links. We also find similar results in our analysis of representative PISA data for 15-16-year-olds in the Nordic region. Once again, young people who use social media more are less likely to be happy, and are more often bullied, but more likely to spend time with friends outside of school.⁵⁴

It may seem contradictory that social media can be simultaneously associated with a more active social life and with unhappiness, especially as spending time with others is consistently found to be one of the strongest predictors of overall happiness.⁵⁵ However, it is important to note that *quantity* of social activity is not necessarily indicative of *quality*, and that social activity does not necessarily preclude the possibility of feeling lonely.

⁵¹ Corcoran, K., Crusius, J., & Mussweiler, T. (2011). Social comparison: Motives, standards, and mechanisms. In D. Chadee (Ed.), *Theories in social psychology*, 119-139.

⁵² Haferkamp, N., & Krämer, N. C. (2011). Social comparison 2.0: Examining the effects of online profiles on social-networking sites. *Cyberpsychology, Behavior, and Social Networking*, 14 (5), 309-314; Vogel et al. (2014). Social comparison, social media, and self-esteem. *Psychology of Popular Media Culture*, 3 (4).

⁵³ Jordan, A. H., Monin, B., Dweck, C. S., Lovett, B. J., John, O. P., & Gross, J. J. (2011). Misery has more company than people think: Underestimating the prevalence of others' negative emotions. *Personality and Social Psychology Bulletin*, 37 (1), 120-135; Steers et al. (2014); Lee-Won, R. J., Shim, M., Joo, Y. K., & Park, S. G. (2014). Who puts the best "face" forward on Facebook?: Positive self-presentation in online social networking and the role of self-consciousness, actual-to-total Friends ratio, and culture. *Computers in Human Behavior*, 39, 413-423.

⁵⁴ Table 10 in the online appendix.

⁵⁵ Diener E., & Biswas-Diener, R. (2018). Social Well-Being: Research and Policy Recommendations, *Global Happiness Policy report 2018*.

One possible interpretation of this data is that young people who spend more time on Snapchat and Instagram are more likely to spend time with large groups of people, and less likely to have meaningful one-on-one experiences with close friends. Another possible explanation is that using Snapchat and Instagram actually detracts from young people's ability to enjoy the time they spend together in the moment. Further research should seek to better understand the nature of these dynamics.

Young people who use Snapchat and Instagram more have less trust in other people

Trust is the Nordic gold. Nordic countries have some of the highest levels of trust in the world, both between people and in relation to institutions, which is of profound importance to our economy, quality of life, and democratic processes.⁵⁶ But does social media use have the potential to undermine Nordic young people's trust in others?

According to the results of our own study, young people who are large consumers of social media tend on average to have less trust in other people. However, important differences can be observed between social media platforms. While Instagram and Snapchat seem to be consistently negatively associated with trust, Facebook actually predicts higher levels of trust under certain conditions.⁵⁷

Once again, it is somewhat difficult to determine causation. We don't know if using Instagram or Snapchat causes young people to have less trust in others, or if this dynamic operates in the reverse direction. However, in this case, related research may give us some indication.

In one 2019 study, the link between trust and social media consumption was tested using a dataset of 50,000 people living in Italy.⁵⁸ By exploiting variation in the availability of high-speed broadband internet, the researchers were able to conclude that trust had significantly declined in communities that had recently experienced increases in social media use facilitated by fast internet speeds, but not among those that had not.⁵⁹

Even so, these potential explanations do not provide any indication as to why Snapchat and Instagram would be associated with lower levels of trust, while Facebook is not.

Trust between people is very high in the Nordic countries. Instagram and Snapchat are associated with mistrust, while Facebook is associated with trust. Further research will be required to explain why we see these links.

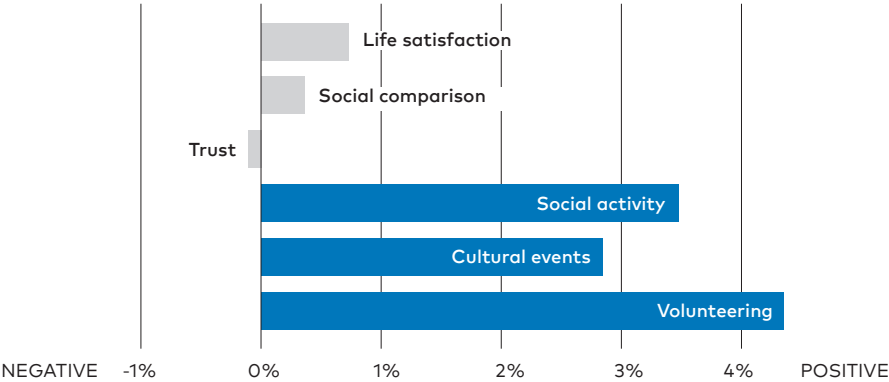
⁵⁶ Andreasson, U. (2017). *Trust – The Nordic Gold*, Nordic Council of Ministers.

⁵⁷ The positive effect of Facebook is seen only in figure 3.1, and not in figure 3.2. Figure 3.1 is based on a larger sample, which may be the reason why we see the effect here. However, it is important to note that the effect is not very significant, and is thus associated with considerable uncertainty.

⁵⁸ Sabatini, F., & Sarracino, F. (2019). Online social networks and trust. *Social Indicators Research*, 142 (1), 229-260.

⁵⁹ In addition to measuring trust in other people, this study also measured trust in neighbours and trust in the police.

Figure 3.3
How active use
of social media is
associated with
life satisfaction,
social comparison,
social activity, trust,
cultural participation
and voluntary work



N ≈ 1160. Colours represent significance at $p < 0.01$.
The effects are represented as 'percentage change in dependent variable (e.g. life satisfaction) with increased consumption (0-5 scale), independent of overall consumption. The questions were adapted from the European Social Survey and the OECD Guidelines for Measuring Subjective Well-being. The control variables include: time consumption, number of close relationships, level of social activity, age, country, area, civil status, job status, gender. The sample covers respondents from the Nordic countries (Denmark, Iceland, Finland, Norway and Sweden). See online appendix, Table 12.

Active social media users are also active in offline communities

In our independent survey, when we consider the relationship between young people's social media use and their participation in offline communities (including spending time with friends, volunteering, or participating in cultural events) we again find significantly different effects for different social media platforms (Figure 3.2).

While young people's use of Facebook and LinkedIn is associated with, for example, increased volunteering, the opposite applies to frequent users of YouTube and Snapchat (Figure 3.2). These effects tend to be more pronounced among young people aged 20–29.

Similarly, young people who spend more time on Snapchat are also less likely to participate in cultural events – that is, take trips to the cinema, visit museums, attend concerts, etc. – although the reverse is true for teenagers on Twitter.

All of these results are based on comparisons between young people spending different amounts of time on social media. In our survey, we asked respondents to report how often they generally use social media to communicate directly with others, and how often they generally use it to browse content. Once again, we find that higher rates of active use (direct communication) significantly predict increases in social activity, cultural events participation, and volunteering (Figure 3.3). This means that if we take two groups of young people who seem in every way identical (same gender, same number of close relationships, same level of education, same time spent on social media, etc.), with the exception that one group uses social media more actively than the other, then the latter group will also participate more in cultural events, go out more with friends and spend more time on voluntary work.

In summary, perhaps the most important takeaway of this chapter is that all of the significant associations we find between young people's use of social media and their subjective and social well-being are *conditional associations*. If we ignore crucial factors such as age, gender, social support, platform, and type of use, the concept of social media consumption on its own becomes somewhat meaningless.



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When active and passive use can be linked to high and low social activity, it is probably because the use of social media reflects other conditions in the person's everyday life, such as participation in social communities

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Social media in the future should support the good life for young people

4

There are no guarantees that we will continue to use Facebook, Instagram or Snapchat in the future, but it is unlikely that we will stop using social media altogether. Given the rapid rise and development of these digital technologies (Facebook has only existed since 2006), it seems likely that online social networks will become even more sophisticated, complex, and powerful in the future, and therefore the debate about how we can improve our digital well-being will continue.

The question therefore becomes: How can we ensure that social media platforms of the future create positive frameworks for the good life?

In this report, we have demonstrated that social media is linked both to young people's momentary well-being while they are online and their overall well-being after they log off. How young people use social media is also associated with social factors such as trust in others, cultural participation, and social engagement.

Optimizing social media to become more 'quality of life-compatible' in the future may require creating new digital infrastructure, publicly regulating social media platforms, or simply promoting healthier behaviour online. These responsibilities will likely fall on software developers, parents, civil servants, and politicians alike – but handling these issues in a qualified manner calls for qualified knowledge.

Unfortunately, it remains largely an open question whether the current science is capable of supporting reliable recommendations based on valid and sufficient data. In concrete terms, the problem seems to be that much of our understanding of the relationship between social media and well-being is either based on small experiments that are not representative of the general population or large datasets that are not detailed enough to uncover nuanced causal dynamics.

As we have demonstrated in this report, the story can change dramatically depending on *how* social media is used, *who* uses it, and *which* platform is being considered.

Based on our research, we have identified a number of specific conditions that are crucial to understanding the relationship between social media use and well-being, and participation in non-digital social communities.

Our knowledge of social media is based on data that is not sufficiently detailed. This report shows that there is a link between the use of social media by young people and their happiness or unhappiness, but also that we must take account of how the media are used, who uses them, and which media are used.

Four crucial conditions for understanding and promoting well-being in relation to social media:

1. WHO uses social media?

Instead of viewing young people as a single entity, researchers and decision-makers should make distinctions based on age, gender, and social circumstance. As this report has pointed out, the relationship between social media use and well-being can vary significantly between teenagers and young adults, between young women and young men, and between young people with strong or weak social ties. For example, our analysis indicates that young people with few close relationships and less emotional support from their parents are particularly vulnerable online.

2. HOW is social media used?

Many studies of social media and well-being only consider *how much time* young people spend on social media, and not *what* they spend their time doing. However, it is crucial that we pay more attention to type of use. As this report demonstrates, there is a significant difference between spending time on social media *actively* chatting and interacting with friends, and spending time *passively* observing the lives of others, such as by looking at pictures, scrolling through the newsfeed, or reading status updates.

3. WHICH platform is used?

Social media is often painted with a broad brush. This is particularly due to the fact that the available data most often used in the studies does not specify *which* social media the young people use, but only *whether* they use social media in general. This is problematic, as the media platforms differ greatly in their nature: Instagram, YouTube, Twitter, Tinder, Facebook and LinkedIn do quite different things – some are image-based, some are text-based, some are hybrids, some encourage more socially active use, and some encourage more passive use. In our study, we find significant differences in young people's well-being depending on which social media platforms they use. It is necessary to continue improving our knowledge about how the design and infrastructure of different social media platforms can impact upon young people's behavior, well-being, and communities.

4. HOW MUCH TIME is spent on social media?

Despite our primary conclusion that the overall amount of time young people spend on social media consumption has mostly minor or insignificant relationships with well-being, an exception can be observed in the case of extreme use. Extreme use seems to be unequivocally associated with unhappiness. Here, however, it is particularly important to keep an eye on causality. We do not know whether extreme use leads to unhappiness, or whether unhappiness leads to extreme use. It is therefore important to point out that unrestrained use of social media may still be harmful, even if the user is socially well-functioning, uses social media actively, and uses the least harmful social media platforms.

By becoming aware of these conditions, we can arrive at a better understanding of how to manage the costs and maximize the benefits of social media platforms today and in the future. If we do not keep these nuances in mind, we risk basing solutions and recommendations on irresponsible overgeneralizations, anecdotes, and even myths. In doing so, we may overlook the real problems associated with social media use, and neglect the ways in which it can be used to support young people's fundamental human and social needs.

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When you are young, it makes sense to have a broad circle of acquaintances. But when you have children and a permanent life partner, your social interaction is concentrated on a few people and your use of social media changes. This can then change again if you become divorced. Your life situation has a big influence on how you use social media

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This report investigates the relationship between the well-being of young people in the Nordic countries and their consumption of social media.

Is the growing amount of time that young people spend in front of screens and on social networking sites a problem for their personal well-being and their participation in non-digital communities in society?

The main conclusion is that we cannot assess consumption of social media as being unequivocally positive or negative for the well-being of young people without relating this to a number of very specific conditions that add significant nuances to the picture. We must relate to who uses social media, which social media they use, and how long they spend on them. We must also take account of how social media is used.

When we take the above conditions into account, we find a number of significant effects from young people's consumption of social media, about which you can read more in the report.



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