“The Economics of Happiness”

Inaugural Speech

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Dear Members of the Board of the University, Dear Guests,

Economics is often called the “dismal science,” but today, I am here to talk about one thing that even economists agree is worth smiling about—*happiness*.

When I first started researching the economics of happiness, I usually got two types of reactions. The first was a confused look followed by, “The Economics of Happiness? What is that?” And the second was an eager, “Great! Can you tell me how to be happy?”

These themes are central to my lecture this afternoon. I will first answer questions like: What *is* happiness from an economics perspective? And, can we really measure happiness?

Second, I will discuss factors that make us happy and maybe you can pick up a few tips. I will next share where my research agenda is headed next - especially as we think about well-being in a technological future. I will conclude by outlining what the research on the economics of happiness implies for policy and society.

I hope you will enjoy my lecture!

A new approach?

Happiness actually has a long tradition in economics. In the mid 18th century, Adam Smith, the father of economics, wrote in his book *The Theory of Moral Sentiments* that happiness is a fundamental aspect of human existence, intended by nature (Smith, 2010). He also argued that wealth should serve as a *means* to achieve happiness, not as an end in itself (Bruni, 2006).

Later, utilitarians like Jeremy Bentham suggested that happiness, or utility, was all about hedonism and pleasure. They believed that well-being is the balance between good and bad feelings and that this balance was something that we could measure (Powdthavee, 2010).

This idea of measuring happiness became a central focus in economics at the time. Francis Edgeworth even proposed a new device called a "hedonometer," which could measure our happiness in real time (Colander, 2007). Unfortunately, this idea proved impossible.

By the 1930s, most economists gave up trying to measure and compare utility, or happiness, directly. They argued that because happiness is subjective, it's impossible to compare one person's happiness to another's. So, they shifted their focus to understanding utility by looking at people's actions—what people *do* rather than what they feel or say. Income became a proxy for utility because it shows what people *can buy*, which is believed to directly impact their well-being.

But this approach assumes that people are always perfectly rational, weighing both the immediate and long-term benefits or costs of everything. However, a lot of research

shows that people often make choices based on what feels good right now or because of mental shortcuts, rather than purely logical thinking.

Thankfully, psychologists continued working on Bentham's ideas even when economists gave up on them. They created questions that collect information on people's subjective well-being in surveys.

Happiness and life satisfaction are two aspects of subjective well-being. But the key thing is that *happiness* and *life satisfaction* are not the same (Graham & Nikolova, 2015; OECD, 2013). Happiness is about how we feel right now, a mood, or a temporary emotion, just as Bentham envisioned it. It is the joy we feel when we kiss someone we love, the pleasure we get from eating our favorite dessert. And, of course, the happiness we get from listening to a lecture on happiness.

Emotions can also be negative – including experiences of stress, anger, and sadness. Based on the work of Nobel Prize winner Daniel Kahneman, among others, we know that it is best to measure daily emotions in surveys by asking people: "Did you experience a lot of happiness yesterday?" with answers being "yes" or "no."

Life satisfaction, on the other hand, is a broader evaluation of our life. It is how we judge our overall life circumstances, looking at the bigger picture. When we think about life satisfaction, we are reflecting on the overall direction in which our life is going. It is more than just how we feel right now. We typically collect life satisfaction data in surveys by asking people "How satisfied are you with your life as a whole?" The answers are on a scale, where 0 means "Not at all satisfied" and 10 means "Very satisfied" with a range of answers in between.

Importantly, we know that survey respondents understand the differences between happiness and life satisfaction. People *can* and *do* report that they are happy at the moment but dissatisfied with life or vice versa (Graham, 2011; Knabe, Rätzel, Schöb, & Weimann, 2010; Nikolova & Graham, 2022). In 2013, the Statistical Office of the OECD provided guidelines on how to collect these data, which many governments - also that of the Netherlands - now do as part of their national statistics.

Are happiness data just noise?

A few decades ago, convincing economists that subjective well-being data was valid was like trying to sell sand in the desert. But today, the evidence is clear. Let me highlight just a few examples.

First, we know that people's ratings of their own happiness and life satisfaction match the ratings by family and friends (OECD, 2013). So, if I report in a survey that I am very satisfied with my life, you can bet my husband would say the same about me—just ask him!

Second, self-reported well-being measures correlate with biological markers such as cortisol levels – a marker of stress— and with inflammatory markers, such as C-reactive protein, white blood cell counts, as well as serotonin levels (Bartels et al., 2022).. Neuroimaging techniques, such as fMRI scans also show that particular areas of our brain, such as the pre-frontal cortex, are associated with subjective well-being (Bartels et al., 2022).

Third, measures of subjective well-being predict our behavior (De Neve, Diener, Tay, & Xuereb, 2013). For example, life satisfaction is the most important factor determining how we will vote, even stronger than inflation or unemployment rates Ward,

2020). Subjective well-being measures can also predict how long someone will live (O'Connor & Graham, 2019; Steptoe & Wardle, 2012). My work, with co-authors, shows that subjective well-being predicts emigration intentions (Graham & Nikolova, 2018; Nikolova & Graham, 2015), effort, and job quit intentions (Cnossen & Nikolova, 2024; Nikolova, 2024).

But how comparable are these data across individuals? My co-author Anthony Lepinteur, along with Caspar Kaiser (2024), has replicated nearly 50,000 findings based on happiness economics papers in top scientific journals. They found that the results remain consistent when accounting for how individuals may express the same underlying happiness level differently due to their personal biases.

What about *cross-cultural* comparability? For example, when you are asked how happy you are in my home country of Bulgaria, you are supposed to grumpily say "unhappy" and start complaining to the interviewer. And in the United States, where I lived for 10 years, you are expected to say you are very happy at all times. Average life satisfaction in the US is a full point higher than that in Bulgaria. Is this difference only due to culture? Research by the OECD's Statistical Office concludes that cultural differences are <u>not</u> the main explanation (Exton, Smith, & Vandendriessche, 2015). The bulk of differences across countries is due to 6 factors - income, life expectancy, social support, freedom, generosity, and corruption levels (Helliwell, Layard, & Sachs, 2023). We also know how to deal with cultural influences using statistical and data collection tools, such as vignettes (Angelini, Cavapozzi, Corazzini, & Paccagnella, 2014), country fixed effects regressions, or looking at changes within countries.

But make no mistake: like *any* measure, subjective well-being data are *not* perfect – and things like the weather or question wording can affect responses. But we know how to collect and use these measures correctly (Nikolova & Graham, 2022). Additionally, we have robust econometric methods to analyze subjective well-being data, whether treated as cardinal or ordinal (Ferrer-i-Carbonell & Frijters, 2004; MacKerron, 2012; Powdthavee, 2010).

What makes us happy?

As I mentioned earlier, for a long time, in economics, income was the dominant metric of people's well-being.

And then came economist Richard Easterlin, who in 1974 asked a very simple question: What *is* the relationship between happiness and income? What he found is fascinating (Easterlin, 1974).

At any point in time, rich countries have higher life satisfaction than poor ones. This is clear from this graph, where in the poorest countries in the world, life satisfaction is on average just 4 (on a scale of 0 to 10), while it is 7 in the richest countries. The same is true within countries, at a point in time, rich people, for example, in the Netherlands are more satisfied with their lives than the poor.

But here is where things get interesting. Over time, as average income grows, average life satisfaction stays flat—it doesn't increase. This is the Easterlin Paradox. The explanation is simple: social comparisons (Easterlin & O'Connor, 2022). As John Stuart Mill put it, "Men do not desire to be rich, but richer than other men." This means that even if our income increases over time, we might not feel happier if everyone else's income is

also rising, because our *relative* standing (for example compared with our peers and neighbors) hasn't improved.

So, in the long run, money doesn't buy subjective well-being.

But in the long run, we are all dead. Does money matter in the short run? I will give you economists' favorite answer – "it depends."

Carol Graham and I (2015) studied this with data on thousands of individuals living in 150 countries worldwide. As you can see from this graph, income is the most important factor that determines life satisfaction. But income is relatively unimportant for daily happiness. Carol and I also found that income matters more in poorer world regions, where people have less money to begin with.

So whether money buys subjective well-being in the short run depends on the measure of well-being you use: income *does* matter for our overall satisfaction with life. This is because higher income means that we have more freedom of choice, a greater ability to invest in our health, and we can access better education, all of which matter for our life satisfaction.

At the same time, income does not matter much for daily happiness once basic needs are met (Kahneman & Deaton, 2010). We found that positive experiences and the possibilities to learn new things matter the most for daily happiness (Graham & Nikolova, 2015).

In addition, we know that inequality bothers people. Our work with Daniele Marchesi and Viola Angelini shows that *when we think* that inequality has increased, we become less satisfied with our lives, and this is *regardless* of what the actual inequality statistic in our country is (Marchesi, Nikolova, & Angelini, 2024). It is our *perception of*

inequality that matters. We dislike inequality because we see it as unfair and as a symbol of social division (Ferrer-i-Carbonell & Ramos, 2020; Marchesi et al., 2024). Here, the role of institutions, and in particular democracy and the rule of law, are critical as they ensure a fair and well-functioning system that enhances people's well-being (Berggren & Bjørnskov, 2020). Yet, the legacy of past political regimes, like communism, on societies and institutions is quite pervasive as my work with Olga Popova and Vladimir Otrachshenko shows (Nikolova & Popova, 2024; Nikolova, Popova, & Otrachshenko, 2022; Otrachshenko, Nikolova, & Popova, 2023).

In general, the factors that matter for subjective well-being are well-known and remarkably similar across countries (Graham, 2011) and I won't list them here one by one.

But I will say this: one of the most important factors is good quality relationships (Helliwell & Putnam, 2004). Close connections with family, friends, and community provide happiness and life satisfaction as well as support, love, and a sense belonging. So next time you see your loved ones, give them a hug - they are important!

This solid understanding of what matters for subjective well-being allows us to study the impact of life events and societal changes. I will give just one example that I have studied: job loss, which is one of the worst and most persistent life events. When we lose our jobs, we lose our sense of identity, our daily structure, and our contacts with colleagues. My research, with co-authors, shows that the unhappiness due unemployment also scars our spouses and children and time doesn't heal these wounds (Nikolova & Ayhan, 2019; Nikolova & Nikolaev, 2021).

New Directions: New Dimensions and Technological Change

The field of the economics of happiness is moving into new and exciting directions. I will mention two areas in which I am working, together with my PhD students and other co-authors.

First, exploring new dimensions of subjective well-being.

One aspect of subjective well-being that we don't know enough about is about flourishing and having a purpose: the so-called Aristotelian notion of well-being. In one attempt to learn more about this, Carol Graham and I examined the factors contributing to having a life purpose around the world and we found that perceptions of freedom, good health, and a strong work ethic matter the most (Graham & Nikolova, 2015). This laid the foundation for our research on work meaningfulness with Femke Cnossen (Cnossen & Nikolova, 2024; Nikolova & Cnossen, 2020). Work meaningfulness is about activities that people find purposeful and worthwhile, contributing positively to society.

We found that relationships with colleagues and managers, having autonomy, and feeling competent in what we do, along with career advancement opportunities, matter the most for work meaningfulness (Nikolova & Cnossen, 2020).

But why should economists care about work meaningfulness? Because we find that it predicts a number of behaviors that economists and their employers care about – including effort, job quits, attitudes towards work, retirement intentions, and, even the number of sick days that people will take!

This research has triggered a lot of interest, but a lot more work needs to be done. For example, we do not know how macro-economic conditions shape workers' ability to experience work meaningfulness and if this changes over time. And we do not have good

data to study this at the moment. My future work in this area will involve collecting data on work meaningfulness from the same respondents over time and across countries to study how these determine outcomes such as productivity and effort both within and across countries.

I have also started a new research line on understanding why some people tend to seek and find meaning in their work while others see their job as a way to pay the bills. These differences are actually far more important than economists realize and they explain our work effort and motivation. But we are only beginning to understand these important issues and we need good data. And data collection is expensive, so I hope the Dutch Research Council (NWO) is listening.

The second important direction for my future research is understanding how technology, and robots and AI in particular, impact our well-being. Economics is all about trade-offs and the economics of happiness can help us better understand the trade-offs between progress and innovation on the one hand and the fear and uncertainty that come with rapid technological change on the other.

The main fear of automation is about unemployment, and that fear is rational, given that I told you that unemployment is one of the worst life events. But technological change does not just lead to job loss but also to job creation. Today, 60% of workers are in jobs that didn't exist in 1940 (Autor, Chin, Salomons, & Seegmiller, 2024). Moreover, in Europe robots have caused very few job losses, and new jobs emerged in the service sector to make up for those lost in manufacturing (Jestl, 2024).

In contrast to many fellow economists, I am not worried about the quantity of jobs in the future. But I do worry about the *quality* and *content* of these jobs.

In new work, we study how technology affects these aspects using data on thousands of European workers in the past two decades (Nikolova, Cnossen, &Nikolaev, 2024; Nikolova, Lepinteur, & Cnossen, 2023). We find that when robots enter the factories, workers do less back-breaking physical work – for example, carrying heavy loads or working in tiring positions. This is not surprising given that industrial robots are designed to perform these sorts of tasks.

Interestingly, we find that robotization *increases* the routine tasks that workers report doing – repetitive, monotonous tasks, and reliance on the robot's pace of work. The explanation is this: Some tasks are hard to automate because they're difficult to explain and can't be easily turned into steps a robot can follow. This means that humans often end up doing these tasks while robots take on the ones that can easily be described and followed. But this leaves humans with less task variety. Imagine that you work in a car factory—while the robots might handle tasks like welding or painting, which are easily programmable, you may be left with repetitive tasks such as inspecting or assembling small parts that require human dexterity or judgment. As a result, your work becomes less varied and more monotonous, reducing the overall diversity of tasks you perform. On top of that, our work also finds that robotization leads to fewer interactions with colleagues, and also less problem-solving and learning.

It is therefore unsurprising that we find that robotization has made the jobs of European workers less meaningful. The adverse effects of robotization are concentrated among those performing repetitive tasks, for the reasons I just explained. Reassuringly, robotization is somewhat less bad for those with higher education and not that bad for workers in control of the technology.

I want to emphasize that we need more work in this area to understand the tradeoffs involved with technological adoption. For example, will new technology lead to the creation of what David Graeber (2018) calls “bullshit jobs” – superficial jobs that lack meaning and social purpose? Some of these new jobs may actually be harmful to society. For example, titles, such as *Online Brand Ambassador* or *Influencer*, which involve promoting unnecessary products, contribute to consumerism and envy without enhancing well-being, or even worse, are dangerous to our health.

My future projects focus on the impact of AI and other types of technology and try to understand their influence on our job quality, the *content* of work, and more broadly, our meaning and purpose in life.

One finding from my previous work gives me hope and inspiration to continue in this direction – the fact that the desire to learn new things is a strong determinant of happiness, life satisfaction, and work meaningfulness. As human beings, we are remarkably curious and we can leverage this to thrive in an ever-evolving technological landscape. And this is important.

Many experts agree that “the capacity to learn” will become one of the most valuable skills in the future, maybe even more valuable than technical expertise. As technology and industries evolve, this ability to learn, which is also what makes our lives happier and meaningful, will be crucial for working together with the technology, and possibly, for the future of humanity.

Implications for Policy And Society

By now I have walked you through a large body of literature on the causes and consequences of subjective well-being, and I have only scratched the surface. And you may be thinking – this is interesting, but is it useful to society?

The answer is, yes! And again, I can only scratch the surface here.

The first lesson is that researchers and governments should use subjective measures, like happiness and life satisfaction, and objective well-being measures, such as income, side-by-side to assess the well-being impacts of different policies or events on people. Doing so reveals important nuances.

Perhaps the strongest case for this is the Easterlin Paradox, which, as you remember, says that economic growth alone doesn't increase long-term life satisfaction. Looking at rising incomes alone may make us conclude that well-being is improving. But when we put trends in life satisfaction next to trends in income, we start to see important trade-offs that we miss by looking at income alone. And we can use this information to adopt better policies that improve well-being in all dimensions. For example, subjective well-being can be boosted, even at lower GDP levels, through policies that ensure full employment and strong social safety nets (Easterlin & O'Connor, 2022).

As a final example on impact, I want to share a story from our own work on robots and job quality. After we published our research in a scientific journal, we also wrote a blog for the Brookings Institution, the world's leading think tank. And it was nice that there was press coverage of our work by the Economist Magazine.

But there was something else, that I think better shows the impact of this work. One morning, I received an email from a high-school student in the U.S. who had read

the blog. She wrote that she wants to study engineering and build robots to make our lives easier but hadn't considered the potential negative impacts on job quality. She promised to keep this in mind as she designs robots, aiming to create technology that enhances human experience rather than detracts from it.

This email from the high school student, from whom this quote is here, was more meaningful than I could have imagined, and it highlights the impact that subjective well-being research can have. The subjective well-being approach offers a nuanced view and provides guidance on creating a better, happier, and more prosperous future for us all.

In this sense, the economics of happiness and the lessons it teaches us go back to the origins of the economics profession.

Like Adam Smith, Jeremy Bentham, and Francis Edgeworth at the time, scientists, policymakers, and ordinary people are increasingly recognizing that well-being encompasses more than just income and wealth.

But let me be clear: the economics of happiness is *not* a perfect approach, and we certainly don't have all the answers. Yet, it shifts our focus from seeing money as the ultimate goal to recognizing it as a means to an end. The advice from happiness economics for policymakers and society is thus clear—focus on what truly matters - community and relationships, equality of opportunity and quality education, democracy and trust in institutions, and technologies that empower people.

Thanks

I want to end my lecture today by expressing gratitude, which, as you may have guessed, is linked to subjective well-being (Kirca, Malouff, & Meynadier, 2023). I cannot possibly list all the people whom I'd like to thank. Yet, I want to make a few exceptions. First, I would like to thank Professor Carol Graham– my former PhD advisor at the University of Maryland who introduced me to the economics of happiness. *I know that she is watching us online*. Carol, you are amazing, or, as they say in Groningen, "kon minder." I will be forever grateful to you for being my co-author and my friend, and for showing me what makes research worthwhile.

I also want to thank Professor Klaus Zimmermann, who among other posts, is a Professor of Economics at Bonn University, my colleagues at the Faculty of Economics and Business, my PhD students and co-authors, and my family – Nora, Neli, and Martien.

Ik heb gezegd!

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