

Why Danes are smug: comparative study of life satisfaction in the European Union

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Introduction

Danes are unrivalled in satisfaction with life. The University of Leicester recently published the World Map of Happiness (http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/28_07_06_happiness_map.pdf) with Denmark as number one. For more than 30 years this country with five million inhabitants has ranked first in Eurobarometer surveys (europa.eu.int/comm/public_opinion/index_en.htm). More than two thirds of Danes are "very satisfied" with their lives according to these surveys. In no other Eurobarometer country has this proportion exceeded a half, and for most of the countries the proportion is less than a third (figure). To explain Danish contentment we sifted through literature, statistics, and common knowledge.

Hypotheses, methods, and results

We focused on accounting for why life satisfaction in Denmark substantially exceeds that in Sweden and Finland, the two Eurobarometer countries most similar to Denmark. We have ordered our hypotheses roughly from most to least implausible.

Hair colour—It may indeed be the case that "blondes have more fun." This hypothesis was launched in the 1950s by a commercial slogan for a hair dye and was cemented in popular culture in 1978 by rock musician Rod Stewart's album of the same title. Sweden, however, has a higher prevalence of blondes than Denmark.¹

Genes—Genetic factors might influence differences in life satisfaction within a country,² and Danes might have a special genetic constitution. Genotypes in Sweden, however, are similar to those in Denmark because most Swedes were Danes until the 17th century.

Food—Meals in Denmark can be politely described as unmemorable. "Danish cuisine" is an oxymoron, except perhaps the open faced "butter breads" that accompany the beer and aquavit Danes consume for lunch. Older Danes satisfy their hunger with potatoes, gravy, and a bit of pork, and younger ones devour hotdogs, hamburgers, and Baltic-style pizzas. Danish cuisine has some similarities with food from Switzerland and Austria, the second and third happiest nations according to the World Map of Happiness; this suggests that the consumption of comfort foods may be important for life satisfaction.

Climate—Danes bask in a somewhat colder and cloudier version of the balmy English weather. In 2004 there were 1539 sunshine hours in Copenhagen compared with 1573 in London and 1821 in Stockholm, not to mention 2538 in Rome (Danish Meteorological Institute, www.dmi.dk). A remarkable feature is the oscillation in life satisfaction during the year in Denmark. The proportion given in the figure is the average of spring and autumn assessments; satisfaction

with life is, for good reason, as much as 38% higher in spring than autumn.

Native tongue—The Danish word "tilfreds" may have a subtly different meaning than the English "satisfied" or the Swedish "nöjd." A millennium ago the three languages were close relatives, but today they differ considerably with English evolving from the rich merger of Germanic and Latin sources, Swedish developing into an effeminate sing song, and Danish faithfully preserving the guttural grunts of the Vikings. The root meaning of the Danish "tilfreds" is "at peace" and it can be translated as the English "contented" as well as "satisfied." Having considered the issue at length, the bilingual authors of this article conclude that it is difficult to be "tilfreds" if you are not satisfied and that very satisfied people are almost always very "tilfreds." Studies of the multilingual Swiss population show a consistent reporting level in Switzerland that is different from that in France, Italy, and Germany and show no cross border similarity dependent on language group in Switzerland.³

Alcohol and smoking—High levels of smoking and drinking are associated with low wellbeing, but Danes are among those with the highest consumption in Europe. This is reflected in causes of death and low life expectancy.⁴ A reviewer of our paper suggested that one reason that Danes seem smug may be that they were drunk when they participated in the Eurobarometer surveys.

Marriage and children—It is well documented that marriage and having children are both associated with life satisfaction. Denmark is the number one country in Europe with regard to marriages, but the divorce rate is correspondingly high, giving Denmark a leading position in the EU second only to Belgium (Statistics Denmark, www.dst.dk/HomeUK.aspx). When it comes to children, Denmark is among the EU countries with the highest fertility. Recent Danish research, however, suggests that children beyond the first child decrease life satisfaction, especially for women.⁵

General health—Good health is associated with life satisfaction. If self reported health is considered, Danes do well. When measured objectively, however, by diagnosed physical conditions and performance, the health of Danes is mediocre.⁶ The life expectancy of Denmark falls 13th among the 15 old EU countries (www.cia.gov/cia/publications/factbook/index.html).

Welfare state—Cross national studies show that a prosperous economy and a well functioning democracy are associated with a high level of wellbeing,^{3,7} although longitudinal studies of life satisfaction do not indicate any stable

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Dane, at peace

SIMON BURDY/GETTY SPORT



GETTY SPORT

Happy ever after?

changes as a result of a higher income.⁸ Denmark ranks number one in the Gini index, which is a measure of income equality,^{9,10} but is closely followed by Sweden, which is second in Europe. Virtually all historically Protestant societies show relatively high levels of subjective wellbeing.³ But again, Denmark does not differ much from Sweden and Finland in infrequency of church attendance or latent paganism.

Exercise—There are more than 1.6 million memberships of sports clubs in a country of 5.4 million inhabitants (Ministry of Foreign Affairs of Denmark, www.denmark.dk). Furthermore, Danes use bicycles to a great extent for transportation, a feature they have in

common with another high ranker in life satisfaction, the Netherlands.

Provens in sports—Guidebooks to Denmark correctly assert that winning the 1992 European Championship in football by beating Germany 2-0 in the final put Danes in such a state of euphoria that the country has not been the same since. This would explain the high plateau of life satisfaction in Denmark after 1992 (figure). Other research supports the plausibility of explanations of this kind. For instance, it has been shown in England that stock market prices are positively linked to the performance of English national football teams (John Whitfield, Football results kick share prices, *Nature News* 2003), and death rates from cardiovascular diseases rise among men when a local team loses at home or the national team participates in the European Football championships' play-off.^{11,12}

Expectations—The Eurobarometer surveys also contain a question about expectations for improve-

ment in the coming year. It has been argued that great expectations of favourable life circumstances in the future should be associated with life satisfaction,¹³ but if the expectations are unrealistically high they could also be the basis of disappointment and low life satisfaction. The Eurobarometer data on expectations go back to 1980 and show that while Danes are very satisfied, their expectations for the coming year are rather low, ranking among the bottom half. In contrast, Italy and Greece, which rank lowest on life satisfaction, rank high on expectations for the year to come; together with Swedes and Finns they rank at the top.

Comments

The causes of the stolid depth of Danish wellbeing are undoubtedly multifactorial. We are satisfied, however, that in the end and against all odds we have contributed to comprehension of the conundrum of Danish contentment. We doubt that further research would lead, in the foreseeable future, to deeper understanding, but decades of effort might possibly result in some incremental advance. Optimism is unwarranted.

Our analysis points to two explanatory factors. The Danish football triumph of 1992 has had a lasting impact. This victory arguably provided the biggest boost to the Danish psyche since the protracted history of Danish setbacks began with defeat in England in 1066, followed by the loss of Sweden, Norway, Northern Germany, the Danish West Indies, and Iceland. The satisfaction of the Danes, however, began well before 1992, albeit at a more moderate level. The key factor that explains this and that differentiates Danes from Swedes and Finns seems to be that Danes have consistently low (and indubitably realistic) expectations for the year to come. Year after year they are pleasantly surprised to find that not everything is getting more rotten in the state of Denmark.

This finding is supported by Danish news coverage of the 2005 pronouncement by Ruut Veenhoven, Dutch Professor of Social Conditions for Happiness and head of the World Database of Happiness, that Danes are the world's happiest people. The headlines in Denmark ran: We're the happiest "lige nu." The phrase "lige nu," which can be translated literally as "just now," is a quintessentially Danish expression redolent, indeed reeking, of the sentiment "for the time being, but probably not for long and don't have any expectations it will last."

In this humbug-bloated holiday season, with an undoubtedly disappointing New Year approaching, we do not wish to foster false hopes. Some tepid comfort might perhaps be taken, however, in the fact that if you lower your expectations enough you might feel a bit better next Christmas.

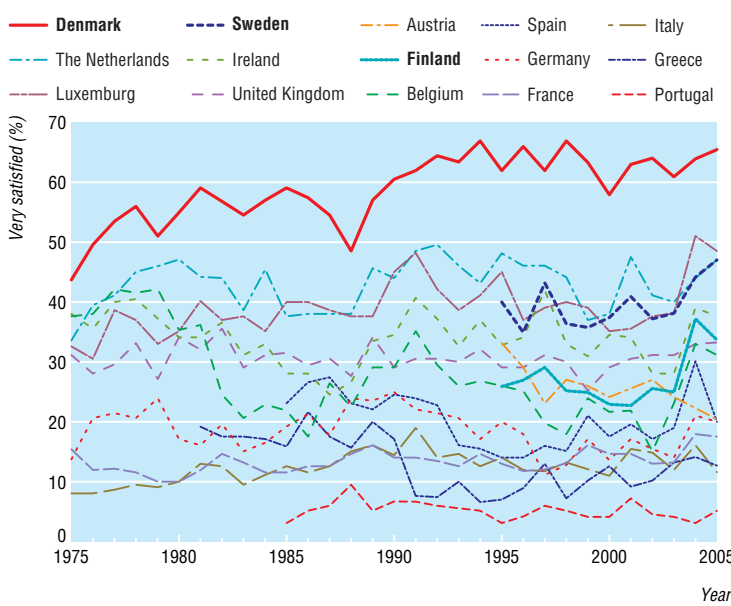
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Proportion who report to be very satisfied in 15 EU countries according to Eurobarometers (europa.eu.int/comm/public_opinion/index_en.htm)

- 1 Suter D. Hair colour in the Faroe and Orkney Islands. *Ann Hum Biol* 1979;6:89-93.
- 2 Lykken D, Tellegen A. Happiness is a stochastic phenomenon. *Psychol Sci* 1996;6:10-9.
- 3 Inglehart R, Klingemann H-D. Genes, culture, democracy, and happiness. In: Diener E, Suh EM, eds. *Culture and subjective well-being*. Cambridge, MA: MIT Press, 2000:165-83.
- 4 Jacobsen R, Von Euler M, Osler M, Lynge E, Keiding N. Women's death in Scandinavia—what makes Denmark different? *Eur J Epidemiol* 2004;19:117-21.
- 5 Kohler H-P, Behrman JR, Skytthe A. Partner + children = happiness. The effects of partnerships and fertility on well-being. *Popul Dev Rev* 2005;31:407-45.
- 6 Börsch-Supan A, Brugiavini A, Jürges H, Mackenbach J, Siegrist J, Weber G, eds. *Health, aging and retirement in Europe. First results from the survey of health, aging and retirement in Europe*. Mannheim: Mannheim Research Institute for the Economics of Aging (MEA), 2005.
- 7 Diener E, Diener M, Diener C. Factors predicting the subjective well-being of nations. *J Pers Soc Psychol* 1995;69:851-64.
- 8 Easterlin RA. Explaining happiness. *Proc Natl Acad Sci U S A* 2003;100:11176-83.
- 9 Gini C. Variabilità e mutabilità (1912). In: Pizetti E, Salvemini T, eds. *Memorie di metodologica statistica*. Rome: Libreria Eredi Virgilio Veschi, 1955.
- 10 Countries by income inequality metrics based on the Gini coefficient. In: *United Nations Development Programme Report*. New York: UNDP Publications, 2005.
- 11 Kirkup W, Merrick DW. A matter of life and death: population mortality and football results. *J Epidemiol Community Health* 2003;57:429-32.
- 12 Witte DR, Bots ML, Hoes AW, Grobbee DE. Cardiovascular mortality in Dutch men during 1996 European football championship: longitudinal population study. *BMJ* 2000;321:1552-4.
- 13 Lyubomirsky S. Why are some people happier than others? The role of cognitive and motivational process in well-being. *Am Psychol* 2001;56:239-49.

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Phenotypic differences between male physicians, surgeons, and film stars: comparative study

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We finished our medical training at the University of Barcelona more than 25 years ago, and have enjoyed our work ever since. At medical school we noted certain differences between male trainees who selected either surgery or medicine as their speciality. The tallest and most handsome male students were more likely to go for surgery, and the shortest (and perhaps not so good looking) ones were more likely to become physicians (including doctors of internal medicine and its subspecialties).

Now, after all these years we hypothesise that, on average, surgeons are taller and better looking than physicians. We conducted a comparative study to test this hypothesis.

Methods

We selected a random sample of senior staff surgeons and physicians working at the University of Barcelona Hospital Clinic (a 700 bed public hospital), matched by age (52 ± 7 years) and sex (all men), from the staff payroll of the surgical and medical departments. We contacted all eligible participants by email. If they agreed to participate, their height (in cm) was recorded and they were asked to submit a digital picture. Age (in years) was registered and checked against that recorded in the payroll database. The external controls were four well known film stars, mostly in their 50s—Harrison Ford as Dr Richard Kimble (a neurosurgeon in the film *The Fugitive*), George Clooney as Dr Doug Ross (a paediatrician in the television series *ER*), Patrick Dempsey as Dr Derek Shepherd (a surgeon in the television series *Grey's Anatomy*), and Hugh Laurie as Dr Gregory House (a nephrologist and infectious disease specialist in the television series *House*).

We randomly organised the pictures of all surgeons, physicians, and external controls and showed them to an independent group of eight female observers—three doctors and five nurses from our hospital. All observers were in the same age group as the

participants (no further checking of this information was attempted). We decided to avoid (for the time being) male observers, because of potential bias. Observers used the “good looking score” to classify each participant. This score measures the degree of handsomeness on a seven point Likert scale (1, ugly; 7, very good looking).

We discarded the highest and lowest score (outliers) for each participant and used the six remaining scores for our study. Mean scores, differences in means with 95% confidence intervals, and standard deviations were used to compare the three groups. We used the standard *t* test to compare age and the non-parametric (Mann-Whitney U) test to compare height and mean good looking scores.

Results

We contacted 14 surgeons and 16 physicians (24 surgeons and 38 physicians were eligible). Only two surgeons and two physicians did not answer the questionnaire or send a picture (their out of office auto reply was switched on). Two additional physicians were dropped from the final analysis because of the poor quality (technical, of course) of their pictures. The final analysis therefore comprised 12 physicians and 12 surgeons plus four external controls.

The mean age of physicians was 50.6 years (SD 4.02) and of surgeons 51.1 years (SD 4.11) ($P=0.76$). The mean height of physicians was 172.6 cm (95% confidence interval 170.2 to 175.4) and of surgeons 179.4 cm (175.1 to 184.0) ($P=0.01$).

Film stars (external controls) had significantly higher good looking scores than surgeons (5.96 *v* 4.39; difference between means 1.57, 95% confidence interval 0.69 to 2.45; $P=0.013$) and physicians (5.96 *v* 3.65; 2.31, 1.58 to 3.04; $P=0.003$). Surgeons had statistically significantly higher good looking scores than physicians (4.39 *v* 3.65; 0.74, 0.25 to 1.23; $P=0.010$). We found small, non-significant differences between film stars who played either

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