



An Analysis of the Spatial Variation in Well-being in The Netherlands

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‘Towards Well-being, Innovation and Spatial Transformation’ (TWIST)

**is the common research focus of the geographers,
planners, demographers and real estate scientists in
the Faculty of Spatial Sciences of the University of
Groningen, the Netherlands**



***THE NETHERLANDS IN MAPS
WELL-BEING IN THE NETHERLANDS; INTRODUCTION TO
THE 2011 MAPS***

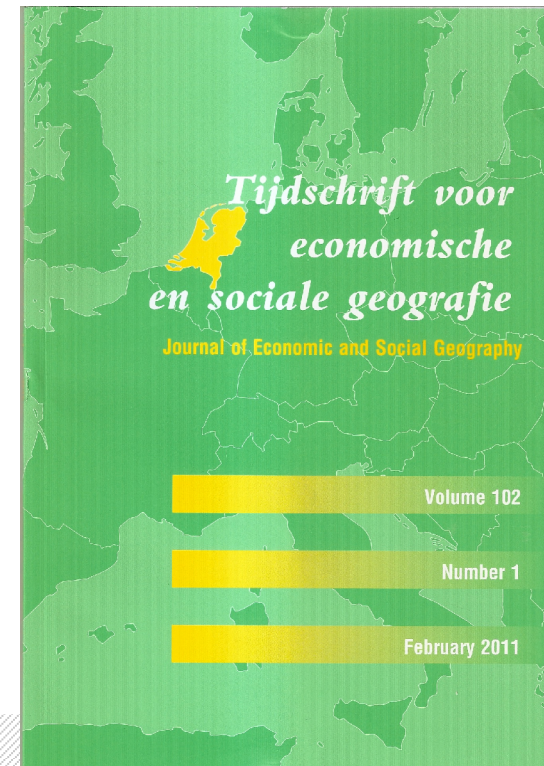
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*The 2011 series of The
Netherlands in Maps will
show **the spatial variety of
different aspects of wellbeing
of the Dutch population***

TESG





Well-being

- > ‘The focal point of human geography should be the **quality of human life**’
- > ‘Each of the various subfields of human geography ... is concerned with specific variables contributing to the spatial distributiouon of the sources of **well-being**’
- > *David M. Smith (1977) Human Geography, a welfare approach, p. xi and 12*



‘Another eventual development could be acceptance of a national well-being index, as a complement to the national income and product accounts’

David Kahneman (Nobel laureate) and Alan B. Kruger
Developments in the Measurement of Subjective Well-Being
Journal of Economic Perspectives 20/1, p. 22



http://www.nature.com/news/2011/110202/full/470018a.html?s=news_rss

- > *From the article:*
[*Social science lines up its biggest challenges*](#)
- > ***Top ten social-science questions***
- > ***1. How can we induce people to look after their health?***
- > *2. How do societies create effective and resilient institutions, such as governments?*
- > *3. How can humanity increase its collective wisdom?*
- > *4. How do we reduce the 'skill gap' between black and white people in America?*
- > *5. How can we aggregate information possessed by individuals to make the best decisions?*
- > *6. How can we understand the human capacity to create and articulate knowledge?*
- > *7. Why do so many female workers still earn less than male workers?*
- > *8. How and why does the 'social' become 'biological'?*
- > *9. How can we be robust against 'black swans' — rare events that have extreme consequences?*
- > *10. Why do social processes, in particular civil violence, either persist over time or suddenly change?*



Well-being

- > The problem of **definition**
- > Many terms for more or less the same thing (how well one's life is going)
 - Quality of life
 - Welfare
 - Health
 - Happiness

short term: emotional
feelings of happiness

long term:
life **satisfaction**

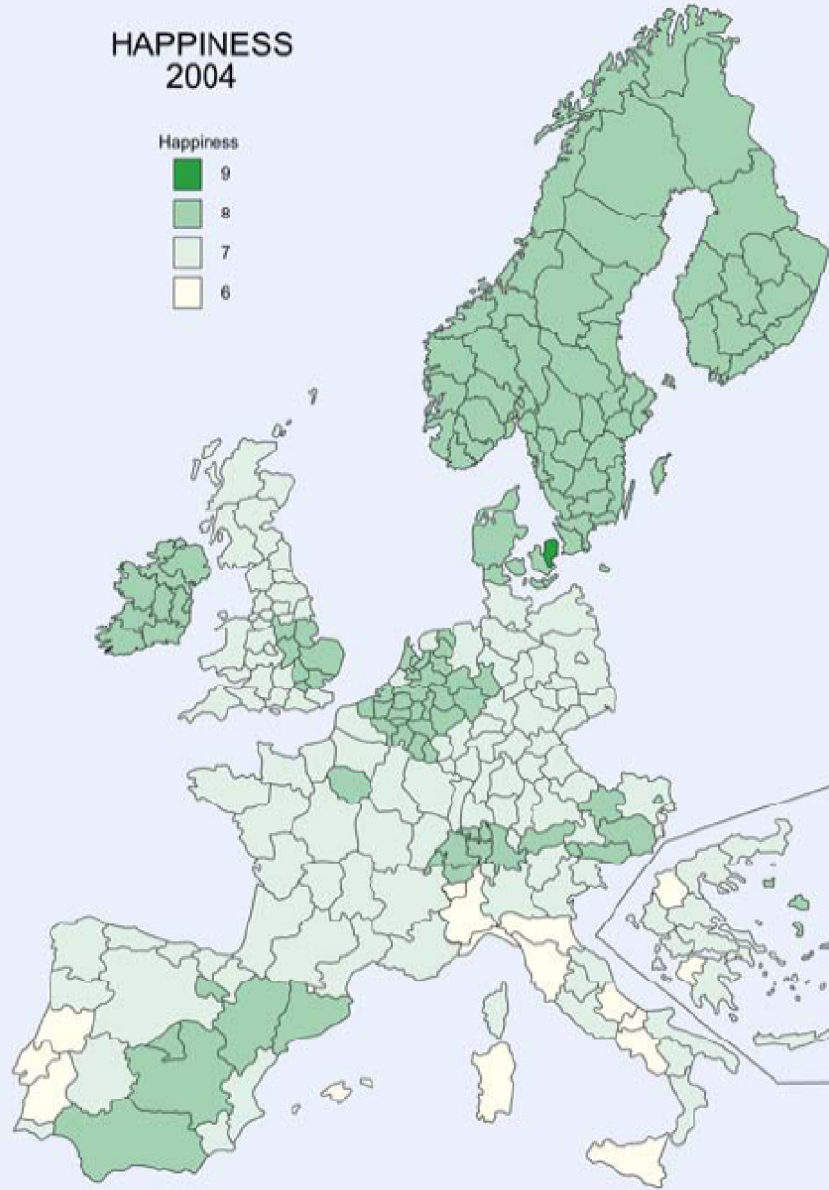
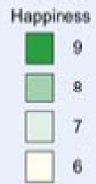
*> the approach chosen
for this analysis*



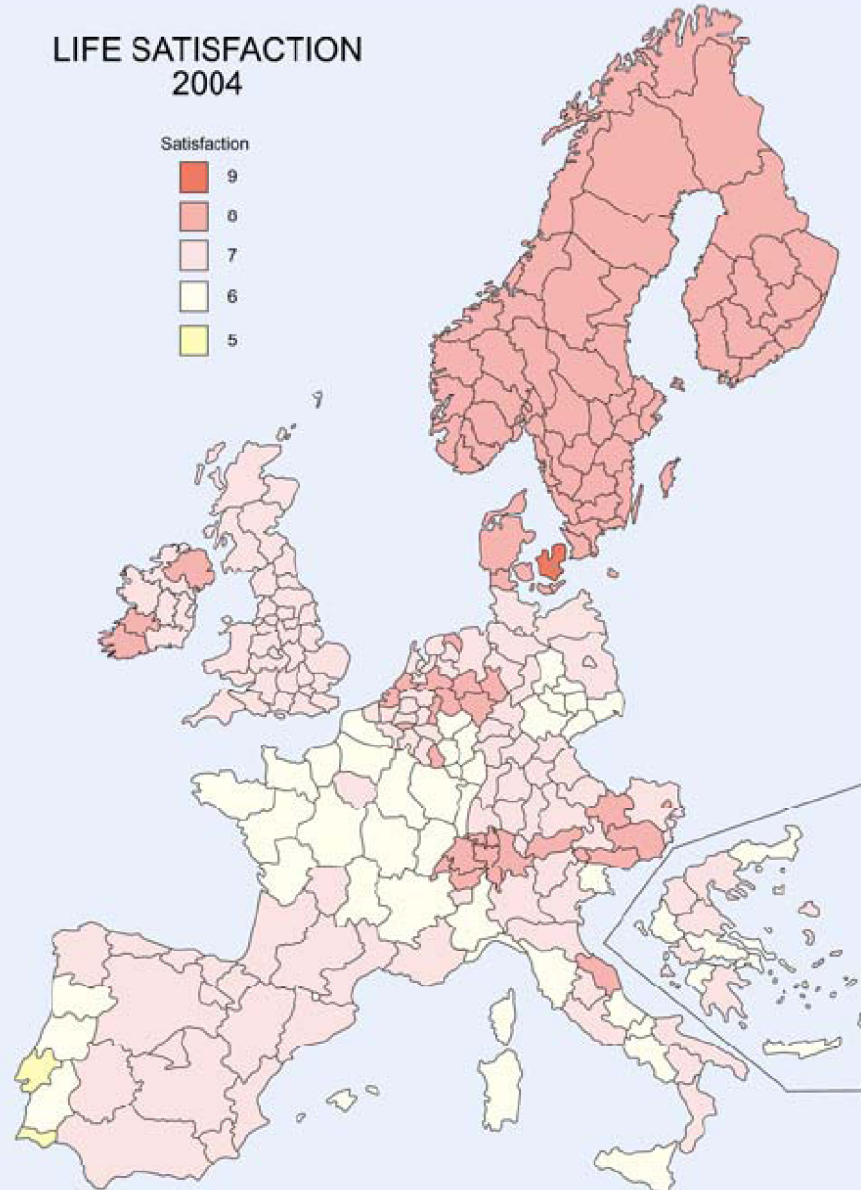
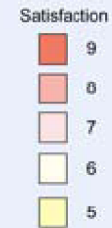
Emotion versus satisfaction

(European Social Survey; Aslam&Corrado 2007)

HAPPINESS
 2004



LIFE SATISFACTION
 2004





The **Netherlands Institute for Social Research** (Sociaal en Cultureel Planbureau SCP) each year publishes a **'life situation index'** in which it describes 'life situation' as a combination of welfare and wellbeing, that can be described with an index based on **eight indicators** for a range of 'social domains', viz. **health, social participation, housing situation, ownership of consumer goods, mobility and holiday patterns**. The SCP publishes the results from its life situation monitor since 1974



In the 2011 series of *The Netherlands in Maps* we used the SCP life situation index to visualise the spatial variation in the conditions for wellbeing. We have grouped the eight life situation indicators that are used by the SCP in **four pairs of maps**:

- > **1a and b home ownership and income**
- > **2a and b mobility and social participation**
- > **3a and b health and sports**
- > **4a and b holidays and leisure activities**

These factors are all assumed to contribute in a positive way to one's life situation. In a **fifth and final pair of maps** we will place next to each other two map showing the spatial variation in

- > **5a the addition of all eight life situation determinants, and**
- > **5b the spatial variation in perceived wellbeing or 'happiness'**








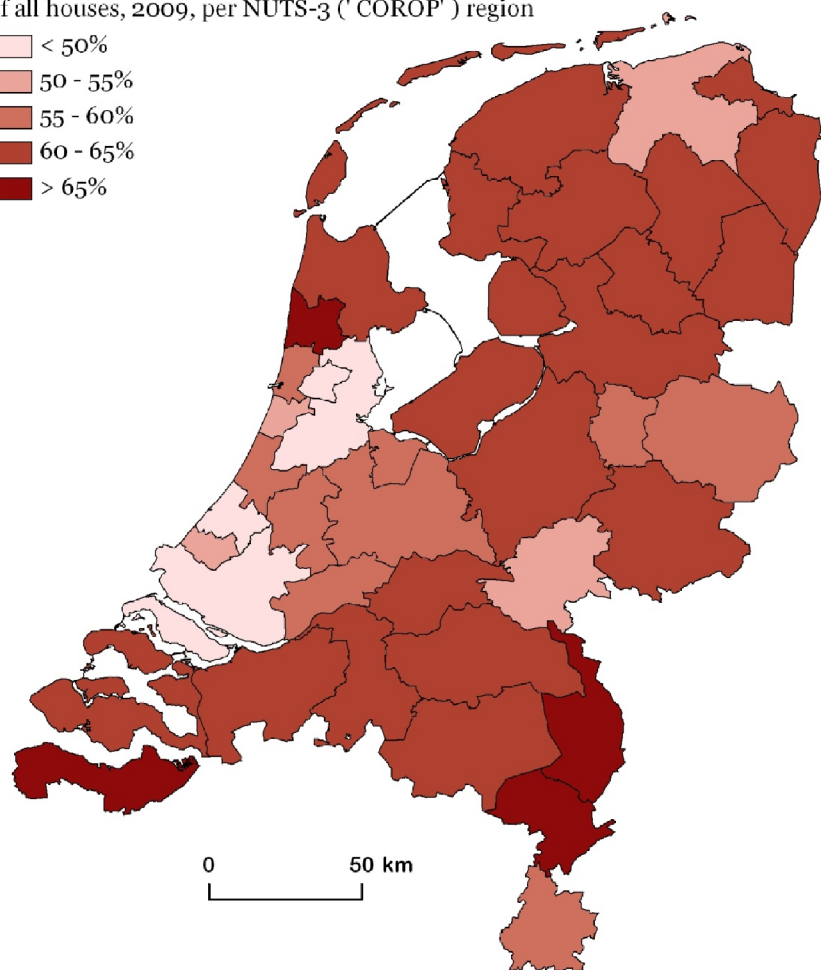
Map 1a and 1b

Well-being: Home Ownership

Legend

Owner-occupied houses as %
 of all houses, 2009, per NUTS-3 ('COROP') region

-  < 50%
-  50 - 55%
-  55 - 60%
-  60 - 65%
-  > 65%








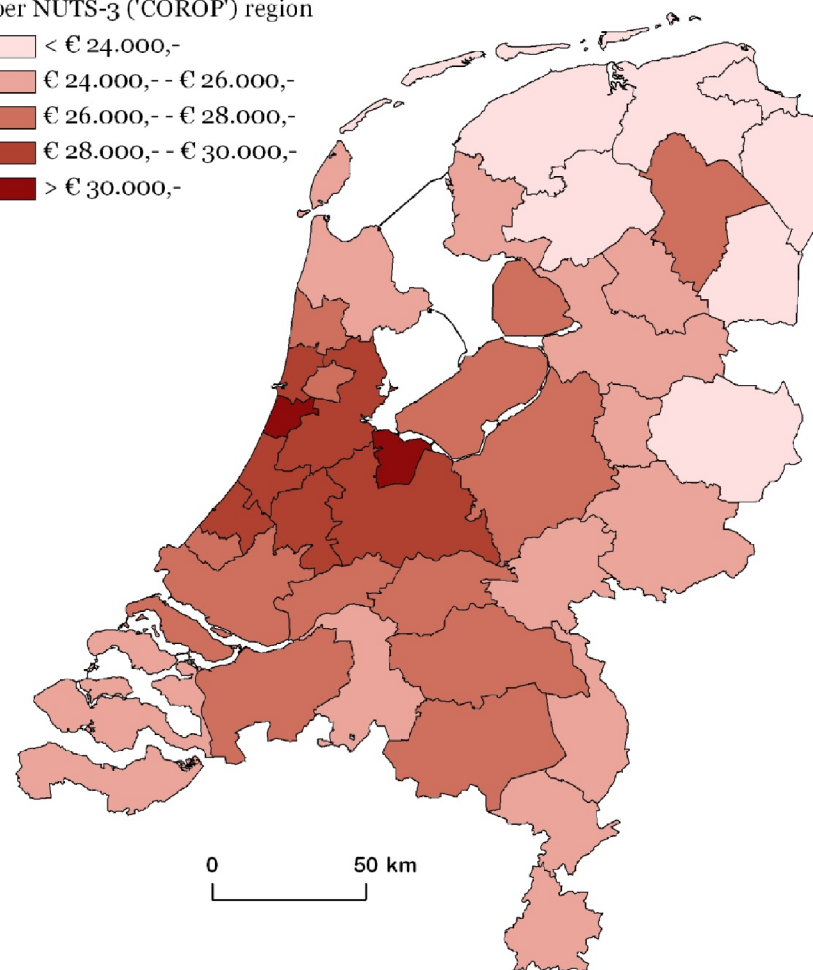
Data source: CBS, Statline 2010

Well-being: Income

Legend

Gross personal income, 2007,
 per NUTS-3 ('COROP') region

-  < € 24.000,-
-  € 24.000,- - € 26.000,-
-  € 26.000,- - € 28.000,-
-  € 28.000,- - € 30.000,-
-  > € 30.000,-



Data source: CBS, Statline 2010

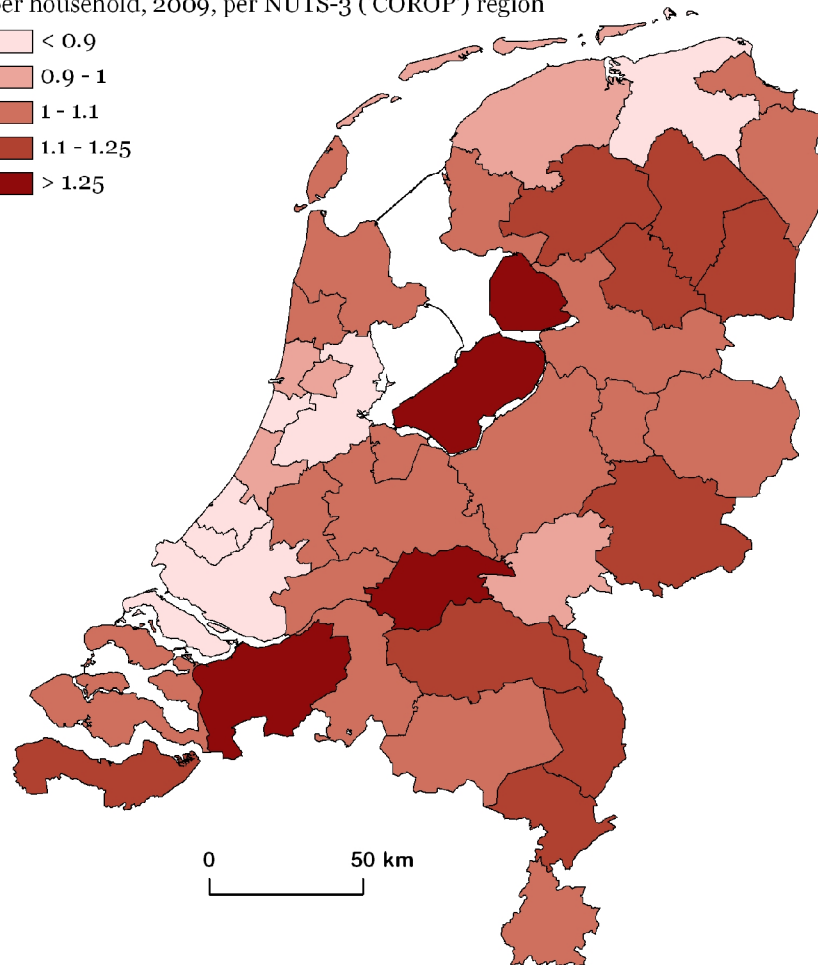
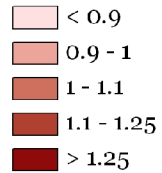


Map 2a and 2b

Well-Being: Mobility

Legend

Average number of cars owned
 per household, 2009, per NUTS-3 ('COROP') region

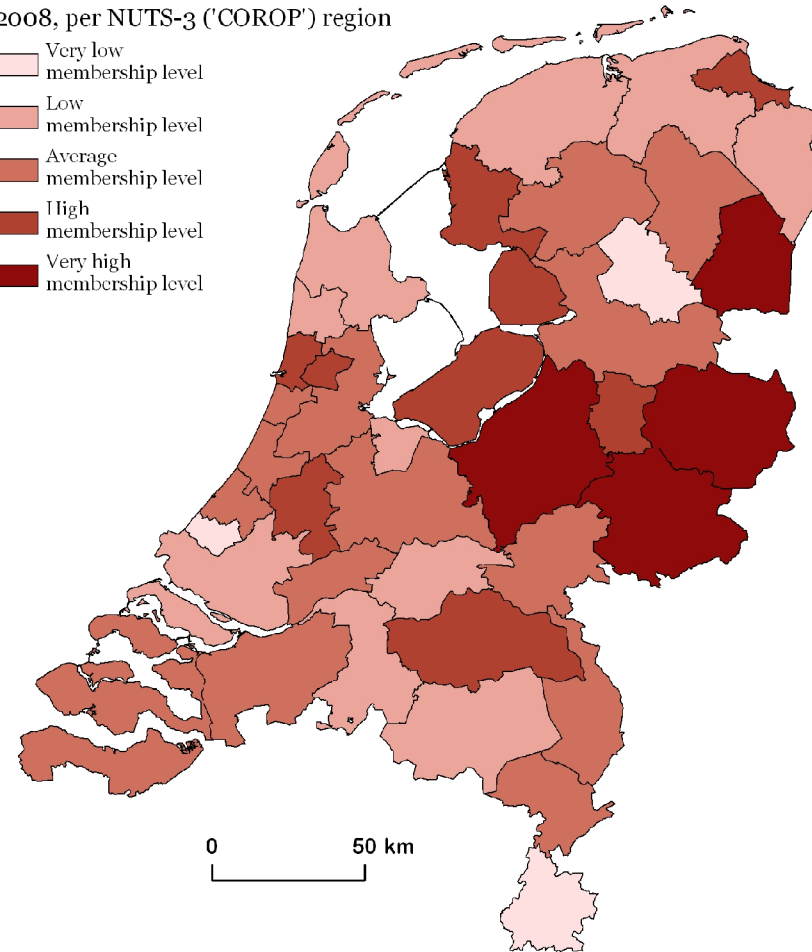
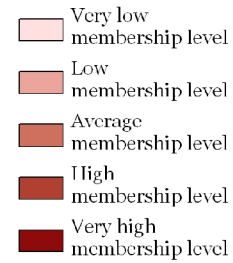


Data source: CBS, Statline 2009

Well-being: Social Participation

Legend

Household membership for 15 types of social organisations*
 2008, per NUTS-3 ('COROP') region



Data source: European Value Survey, 2008

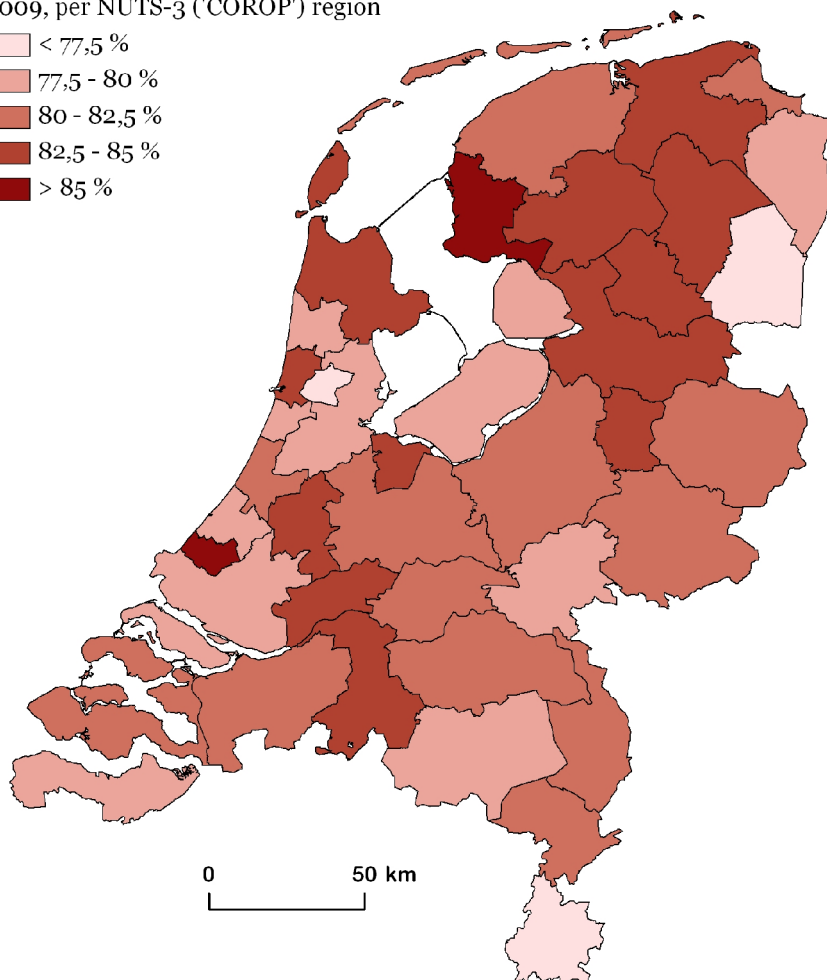
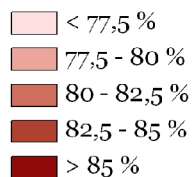


Map 3a and 3b

Well-Being: Health

Legend

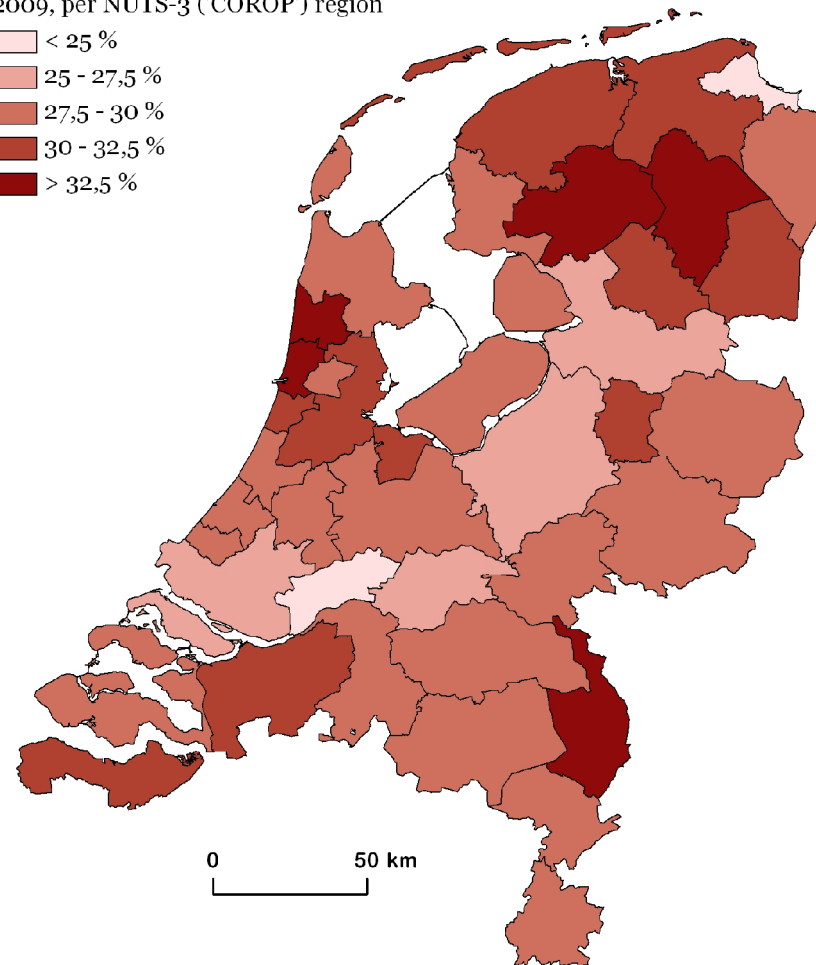
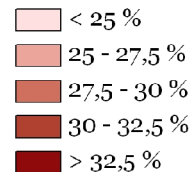
Percentage of people reported "good" or "better" health
 2009, per NUTS-3 ('COROP') region



Well-Being: Sports

Legend

Percentage of people sporting 6 hours or more per week
 2009, per NUTS-3 ('COROP') region



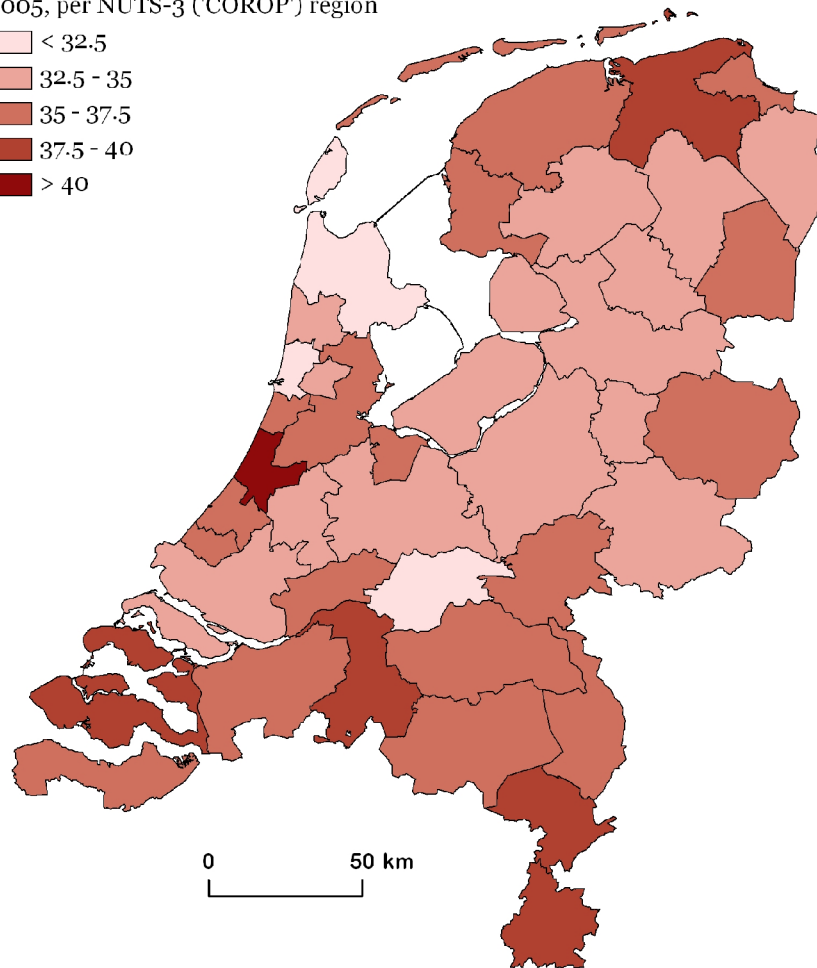
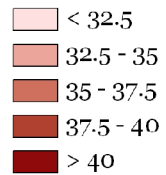


Map 4a and 4b

Well-Being: Leisure

Legend

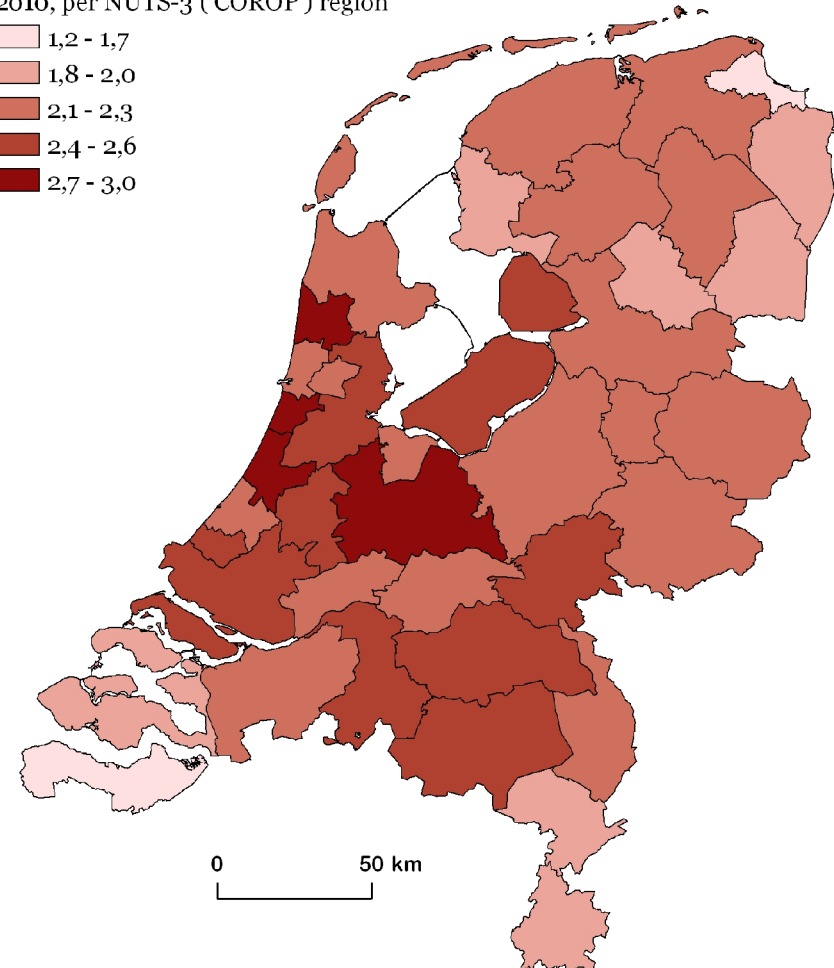
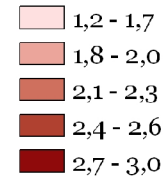
Reported hours of leisure per person per week
 2005, per NUTS-3 ('COROP') region



Well-Being: Holidays

Legend

Number of holidays per person per year
 2010, per NUTS-3 ('COROP') region










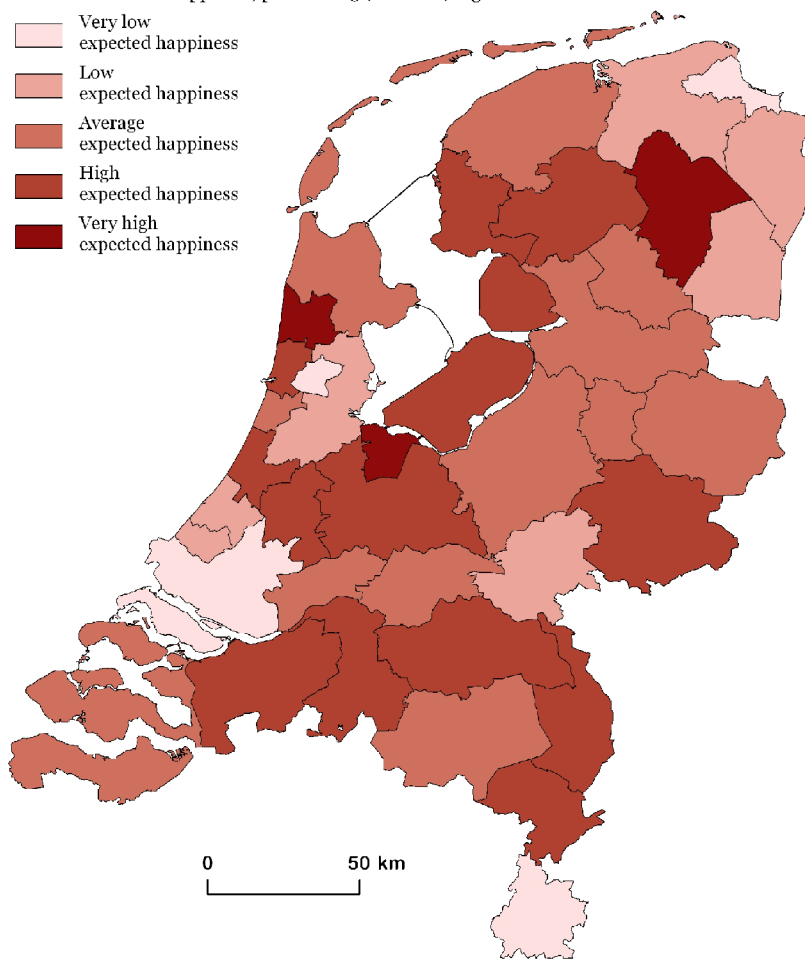
Map 5a and 5b

Well-Being: **Expected happiness
 (sum of scores)**

Legend

The sum of scores on the former eight maps
 as an indicator for happiness, per NUTS-3 ('COROP') region






-  Very low expected happiness
-  Low expected happiness
-  Average expected happiness
-  High expected happiness
-  Very high expected happiness

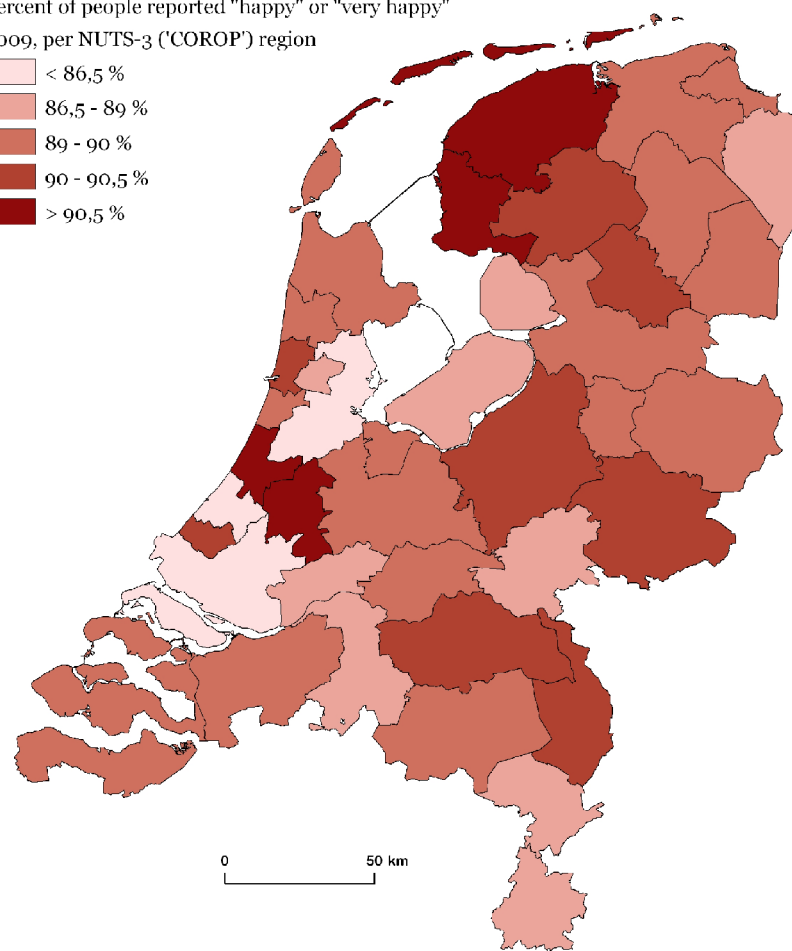


Well-Being: **Perceived
 Happiness**

Legend

Percent of people reported "happy" or "very happy"
 2009, per NUTS-3 ('COROP') region

-  < 86,5 %
-  86,5 - 89 %
-  89 - 90 %
-  90 - 90,5 %
-  > 90,5 %





Qualitative (visual) analysis of map similarities

- › **Larger urban regions** (especially Amsterdam and The Hague/Rotterdam) have a **low** score on both maps
- › The same is true for serious **population decline** regions (East Groningen, South Limburg)
- › **Higher** values for ‘expected’ *and* ‘perceived’ happiness appear for **rural regions** - but not typically the same ones on both maps!



Quantitative analysis of map similarities

- › ***Single*** linear regression for expected and perceived happiness:
positive relationship ($p < 0.0005$, $r^2 = 0.532$)
- › ***Multiple*** linear regression with the eight variables:
higher level of explanation ($r^2 = 0.774$)
- › Only ***housing and health*** are significant contributors in this model (both $p < 0.0005$)
- › Multiple regression with ***'very happy'*** instead of 'happy + very happy' as dependant variable:
only ***income*** is a significant contributor
($p < 0.0005$, $r^2 = 0.487$)



Conclusions

- > A higher sum of scores for the 8 indicators predicts a higher score for perceived happiness
- > Especially *owning a house and enjoying a good health* explain higher scores of perceived happiness
- > *Income* is a good predictor for the size of the category of *very* happy people