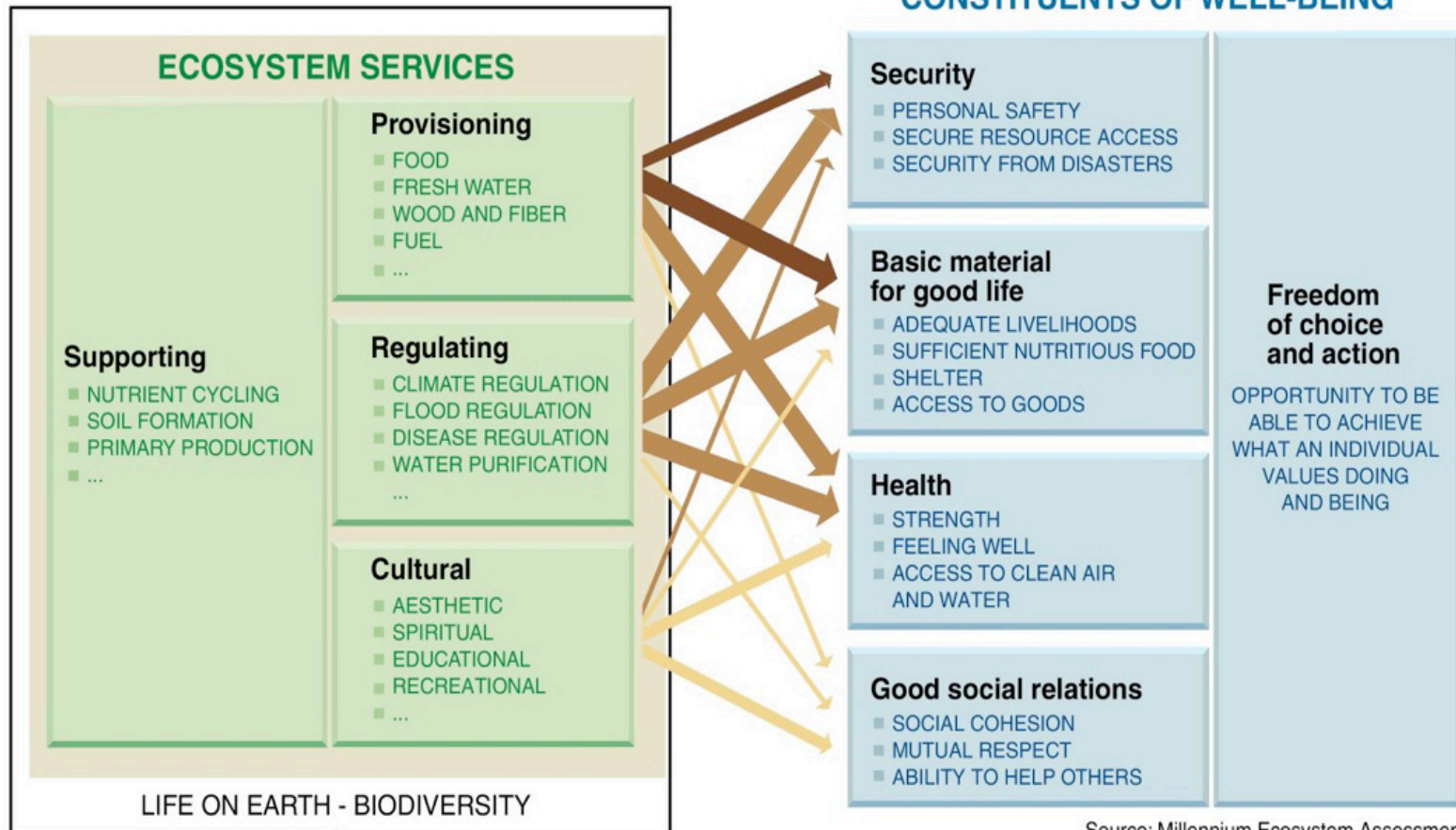


# Should we put a price on nature?

# Ecosystem Services: a market metaphor



Source: Millennium Ecosystem Assessment

# This paved the way for attempts to put a monetary value on nature



Costanza's intention was to 'give the natural capital stock that produces these services adequate weight' in decision-making (Costanza, 1997)

# How should a parasite value its host?

(Rees, 1998)

- Most environmental valuation takes people's actual, or hypothetical, 'willingness to pay' for an ecosystem service, as a proxy for its overall value.
- *Revealed* preference methods:
  - **HEDONIC PRICING** method analyses variations in market prices, particularly house prices
  - **TRAVEL COST** method analyses the amount people spend travelling to 'use' an ecosystem service
- *Stated* preference methods (aka Contingent Valuation):
  - **WILLINGNESS TO PAY SURVEYS** ask people to state, ideally off the top of their head, how much they would be **willing to pay** to conserve a hectare of forest, a coral reef, or a flock of birds.

# What do you think of these valuation methods?

Some criticisms:

- Greater weight to the preferences of the rich (Clive Spash, 2008)
- Until ecosystems cease to function, we may have no idea of their real value (William Rees, 1998)
  - Nobody wants to pay to conserve the ugly worm...
- A metaphor that blinds us to complexity? (See Richard Norgaard, 2010)
- Different dimensions of value – ecological, aesthetic, spiritual, cultural – which cannot be compressed into a single metric (Martinez-Alier, J., Munda, G. & O'Neill, 1998)

# The way you frame the question affects the response

Valuation studies involving non-monetary valuation techniques give different results:

- group deliberation

- See the [pioneering study in the Solomon Islands](#) led by Jasper Kenter. When asked separately for their instantaneous 'willingness to pay' to preserve an area of their local tropical forest, community members valued its services at 30% of their annual income. But after an hour of simple participatory and deliberative exercises, the forest became effectively priceless. Given time to discuss, community members raised concerns about **'decrease of food security; violation of cultural principles; privatisation of land; loss of community and social cohesion; and more inequality, jealousy and division'** and became unwilling to trade off the forest for any price. (Kenter, J.O., Hyde, T., Christie, M. & Fazey, I. 2011)

- subjective wellbeing data

- an innovative subjective well-being (SWB) valuation technique, based on individuals' ratings of their life satisfaction rather than on their actual or hypothetical economic preferences. In the context of a quasi- experiment in urban regeneration, Dolan & Metcalfe found that monetary estimates elicited from subjective wellbeing data were significantly higher than from Willingness to Pay data. (Dolan, P. & Metcalfe, 2008)

# Is an imperfect price better than no price? (SPECTRUM EXERCISE)

- Some argue that 'failure to include some measure of the value of ecosystem services in cost-benefit calculations will implicitly assign them a value of zero' (Heal et al 2005)
- Opponents warn that pricing nature could:
  - reinforce the idea that cost-benefit calculations can replace the need for political/ethical deliberation
  - pave the way for the commodification of ecosystems
  - Undermine our intrinsic motivation for protecting ecosystems

# Does pricing nature pave the way for its commodification?

- UNEP's 2010 Economics of Ecosystems and Biodiversity (TEEB) called on governments to develop 'new ecosystem property rights and trading schemes' and businesses to 'grasp new [biodiversity and ecosystem service] business opportunities'
- Britain and 38 other countries have, or are in the process of setting in place, policies which will allow "biodiversity offsetting", a market system of conservation used in the US and Australia which aims to ensure that there is no net loss of nature from any development.
- *"A market-based offsetting mechanism will put a price on nature and turn it into a commodity to be traded on markets. This ignores the fact that each part of Europe's biodiversity is unique and – due to its complexity – cannot be truly replaced. There is certainly no way of offsetting extinction of a species, which is what we risk with a policy that mistakenly treats nature like an accountant's ledger."* **Friedrich Wulf, biodiversity campaigner at Friends of the Earth Europe**



# A metaphor for biodiversity/carbon offsetting...?

cheatneutral.

Helping you because you can't help yourself

[about](#) [our projects](#) [become a project](#) [offset your cheating](#) [press/contact](#) [film](#) [small print](#)

## What is Cheat Offsetting?

When you cheat on your partner you add to the heartbreak, pain and jealousy in the atmosphere.

Cheatneutral offsets your cheating by funding someone else to be faithful and NOT cheat. This neutralises the pain and unhappy emotion and leaves you with a clear conscience.

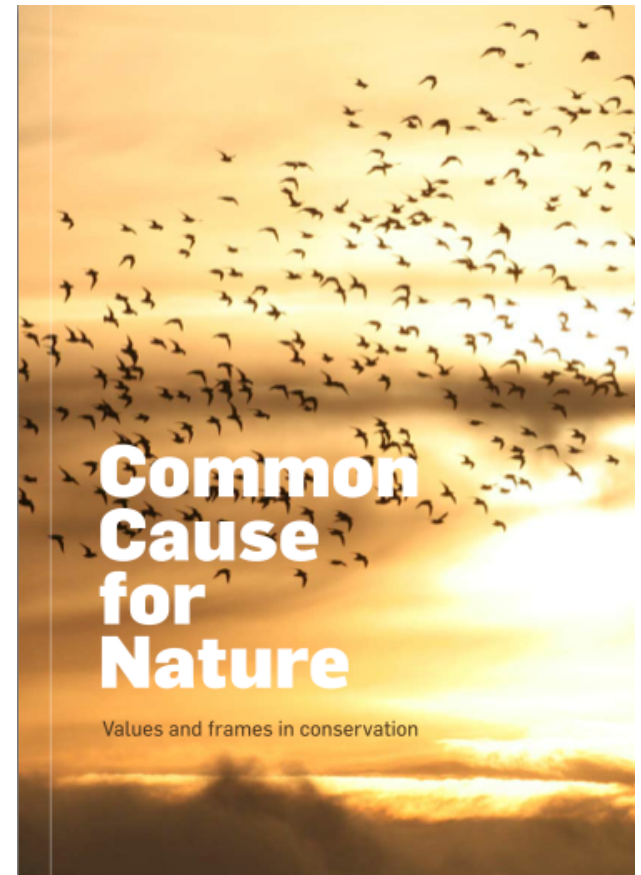
## Can I offset all my cheating?

First you should look at ways of reducing your cheating. Once you've done this you can use Cheatneutral to offset the remaining, unavoidable cheating



# How could 'pricing' nature undermine our intrinsic motivation for protecting ecosystems?

- Research on values from the field of social psychology may shed light on this question
- Next few slides draw on a summary of this research by the Public Interest Research Centre, UK



# AN EXPERIMENTAL EXERCISE

- What are the biggest man-made threats to wellbeing, the biggest causes of suffering?
- Imagine a future without these problems.
  - If we are to get there what five values must people hold as important?
  - ✕ Which five values must people let go of?



**Opinions** are the ripples on the surface of the public's consciousness, shallow and easily changed. **Attitudes** are the currents below the surface, deeper and stronger. **Values** are the deep tides of the public mood, slow to change, but powerful.”

**Sir Robert Worcester**

Founder of MORI

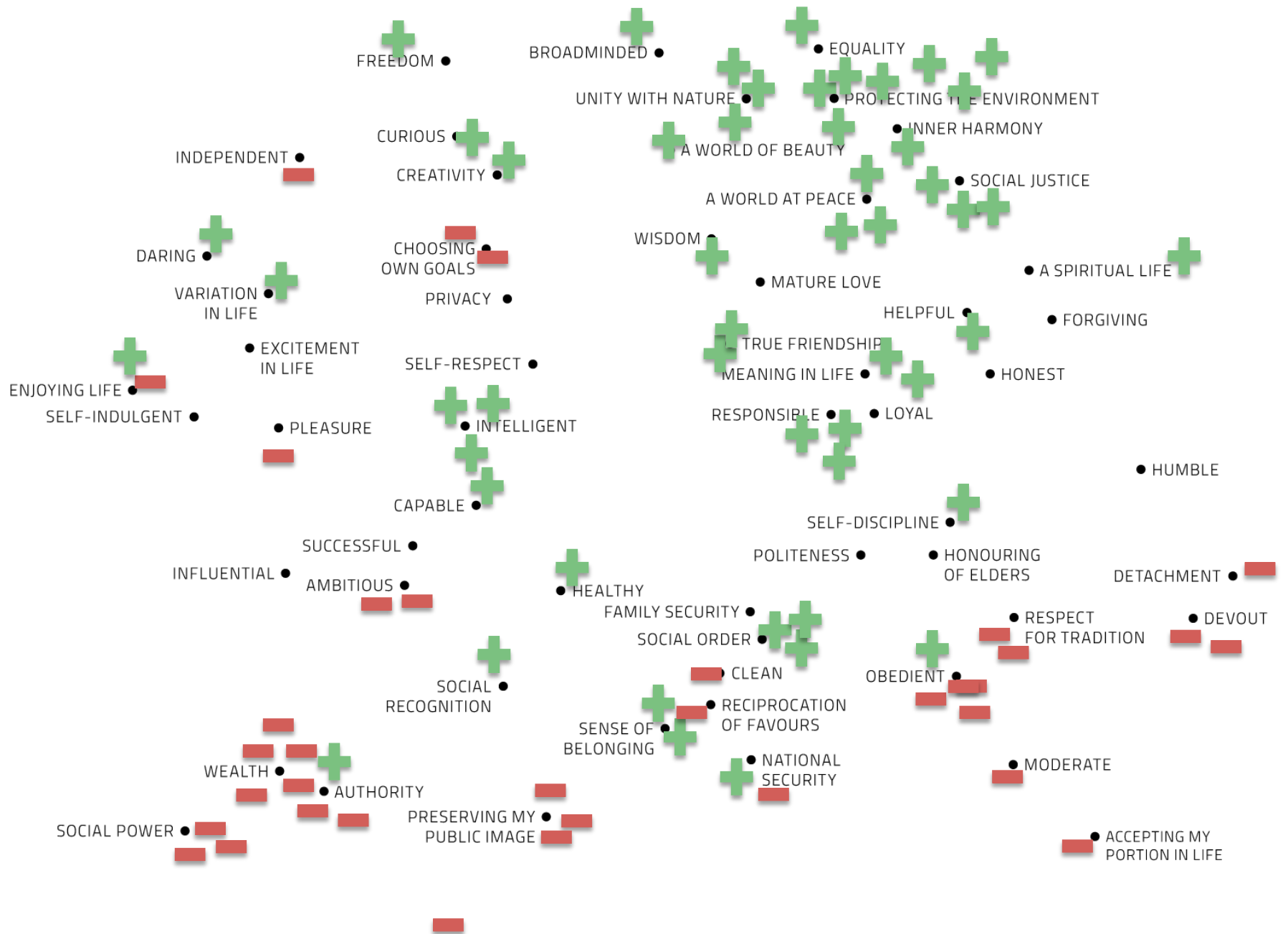


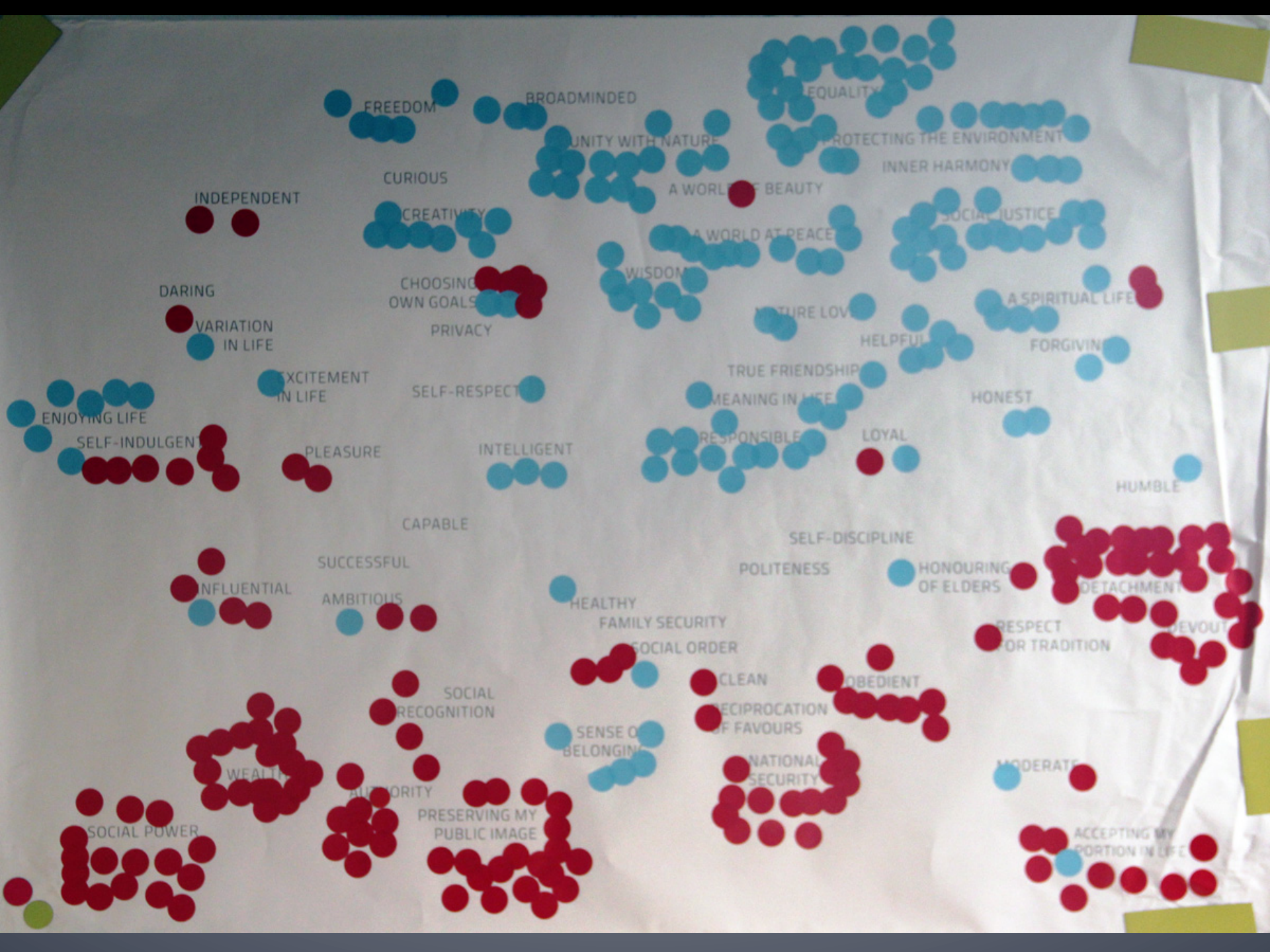
**Values**

**Goals**

**Attitudes**

**Behaviours**





FREEDOM

BROADMINDED

EQUALITY

UNITY WITH NATURE

PROTECTING THE ENVIRONMENT

INDEPENDENT

CURIOUS

A WORLD OF BEAUTY

INNER HARMONY

CREATIVITY

A WORLD AT PEACE

SOCIAL JUSTICE

DARING

CHOOSING OWN GOALS

WISDOM

NATURE LOV

A SPIRITUAL LIFE

VARIATION IN LIFE

PRIVACY

HELPFUL

FORGIVING

EXCITEMENT IN LIFE

SELF-RESPECT

TRUE FRIENDSHIP

HONEST

ENJOYING LIFE

SELF-INDULGENT

PLEASURE

INTELLIGENT

RESPONSIBLE

LOYAL

HUMBLE

CAPABLE

SELF-DISCIPLINE

INFLUENTIAL

SUCCESSFUL

POLITENESS

HONOURING OF ELDER

DETACHMENT

AMBITIOUS

HEALTHY

FAMILY SECURITY

REVOLUTION

SOCIAL ORDER

RESPECT FOR TRADITION

WEALTH

SOCIAL RECOGNITION

SENSE OF BELONGING

CLEAN

OBEDIENT

MODERATE

SOCIAL POWER

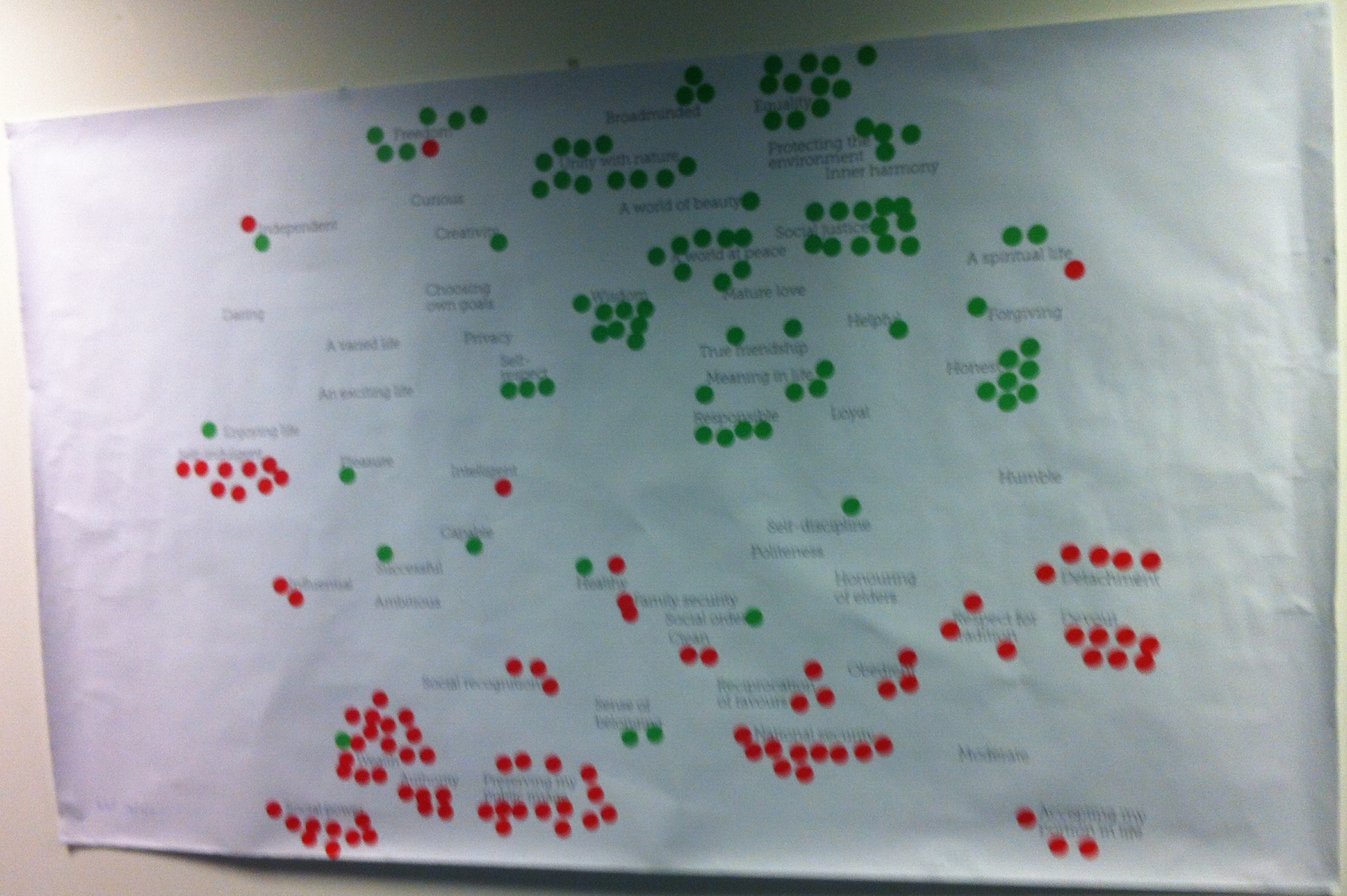
AUTHORITY

PRESERVING MY PUBLIC IMAGE

RECIPROICATION OF FAVOURS

NATIONAL SECURITY

ACCEPTING MY PORTION IN LIFE



Freedom

Broadminded  
Unity with nature

Equality  
Protecting the environment  
Inner harmony

Independent

Curious

A world of beauty

Social justice

A spiritual life

Daring

Creativity

A world at peace

Mature love

Forgiving

A varied life

Choosing own goals

Wisdom

True friendship

Helpful

An exciting life

Privacy

Self-respect

Meaning in life

Honest

Egoistic life

Treasure

Intelligent

responsible

Loyal

Humble

Capable

Self-discipline

Influential

Successful

Healthy

Politeness

Detachment

Ambitious

Family security

Honouring of elders

Dedication

Social order

Respect for tradition

Social recognition

Sense of belonging

Reciprocity of favour

Obedient

Respect for tradition

Warm

Preserving the public interest

National security

Moderate

Social power

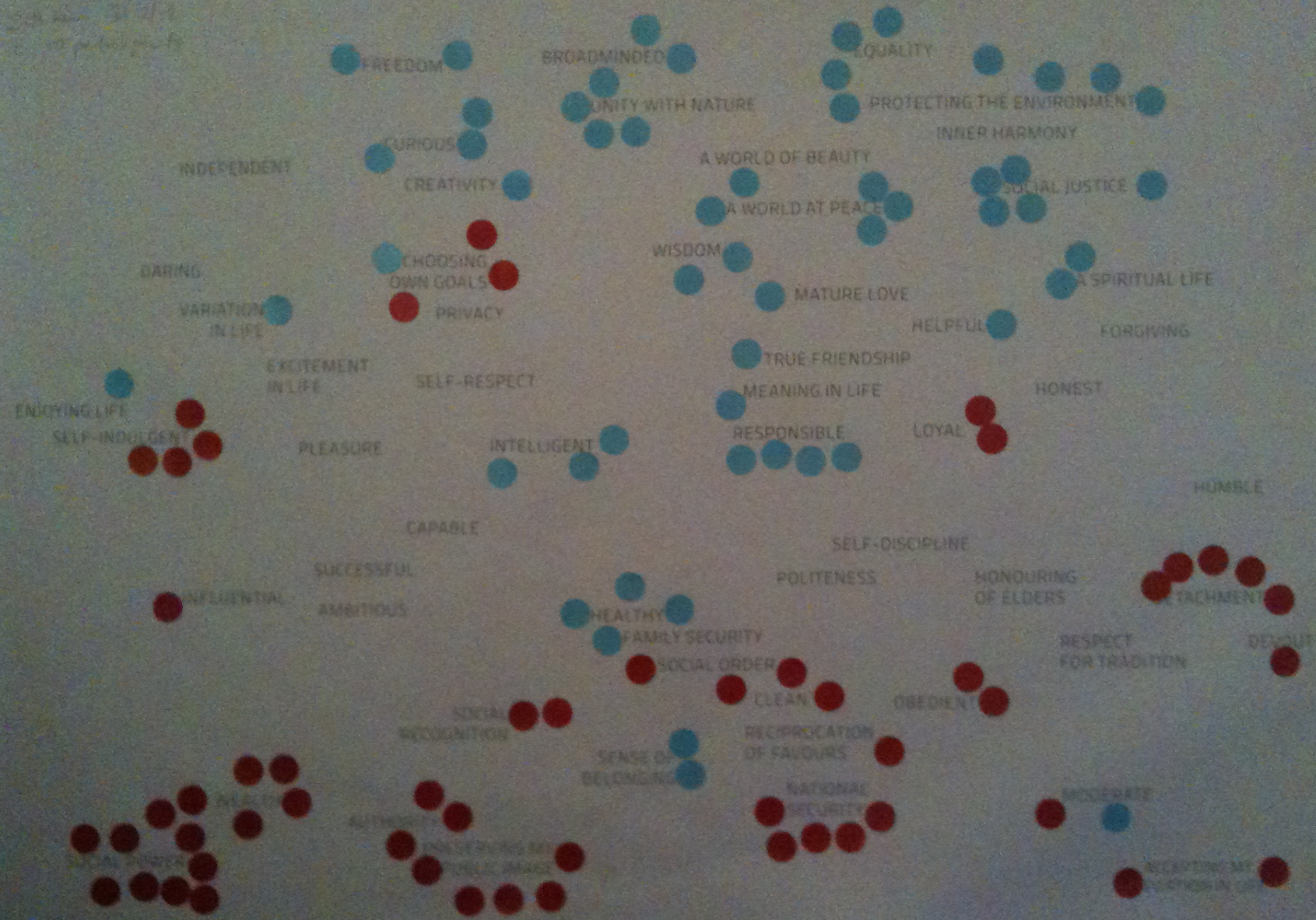
Authority

According to my position in life

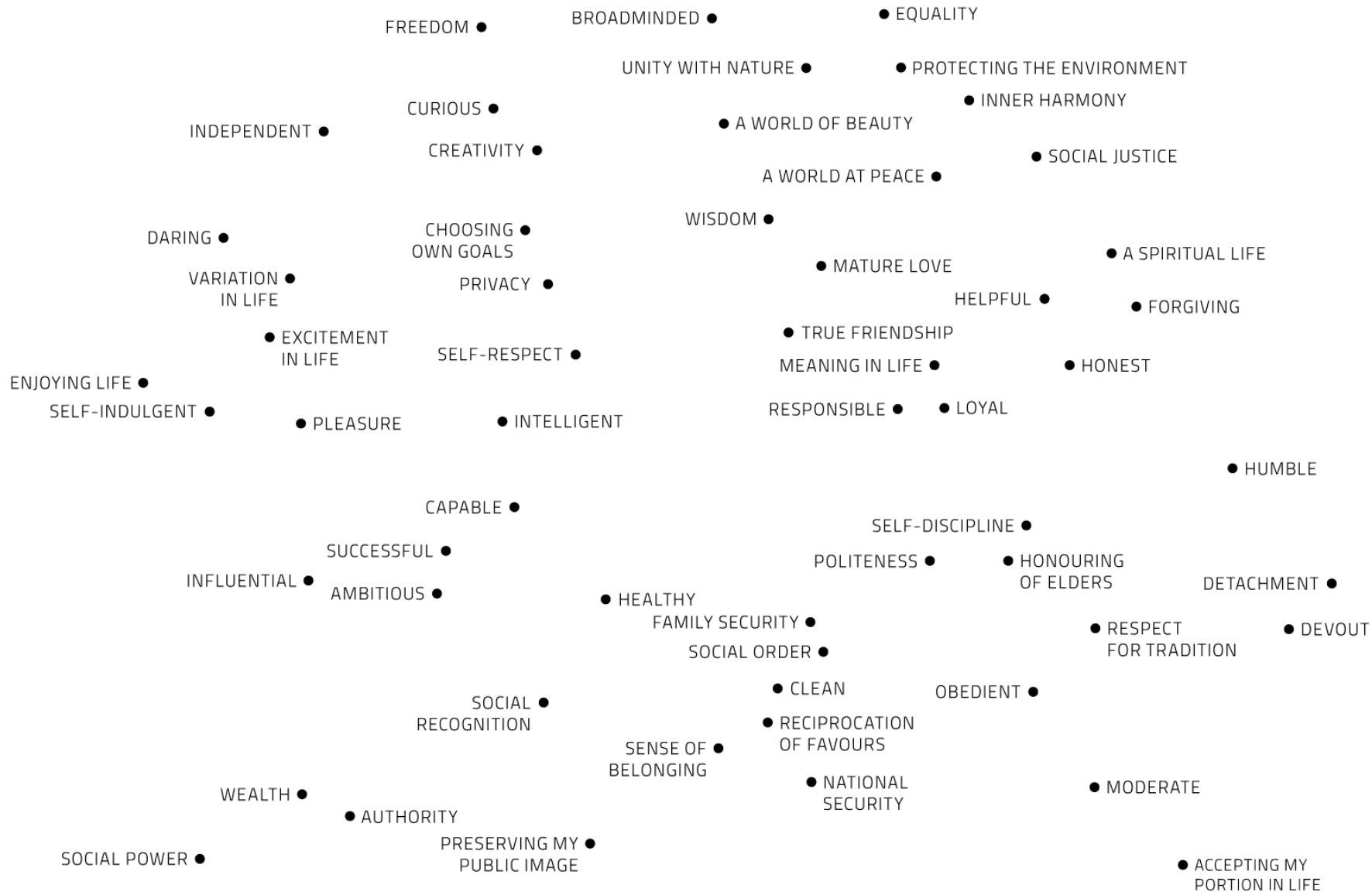


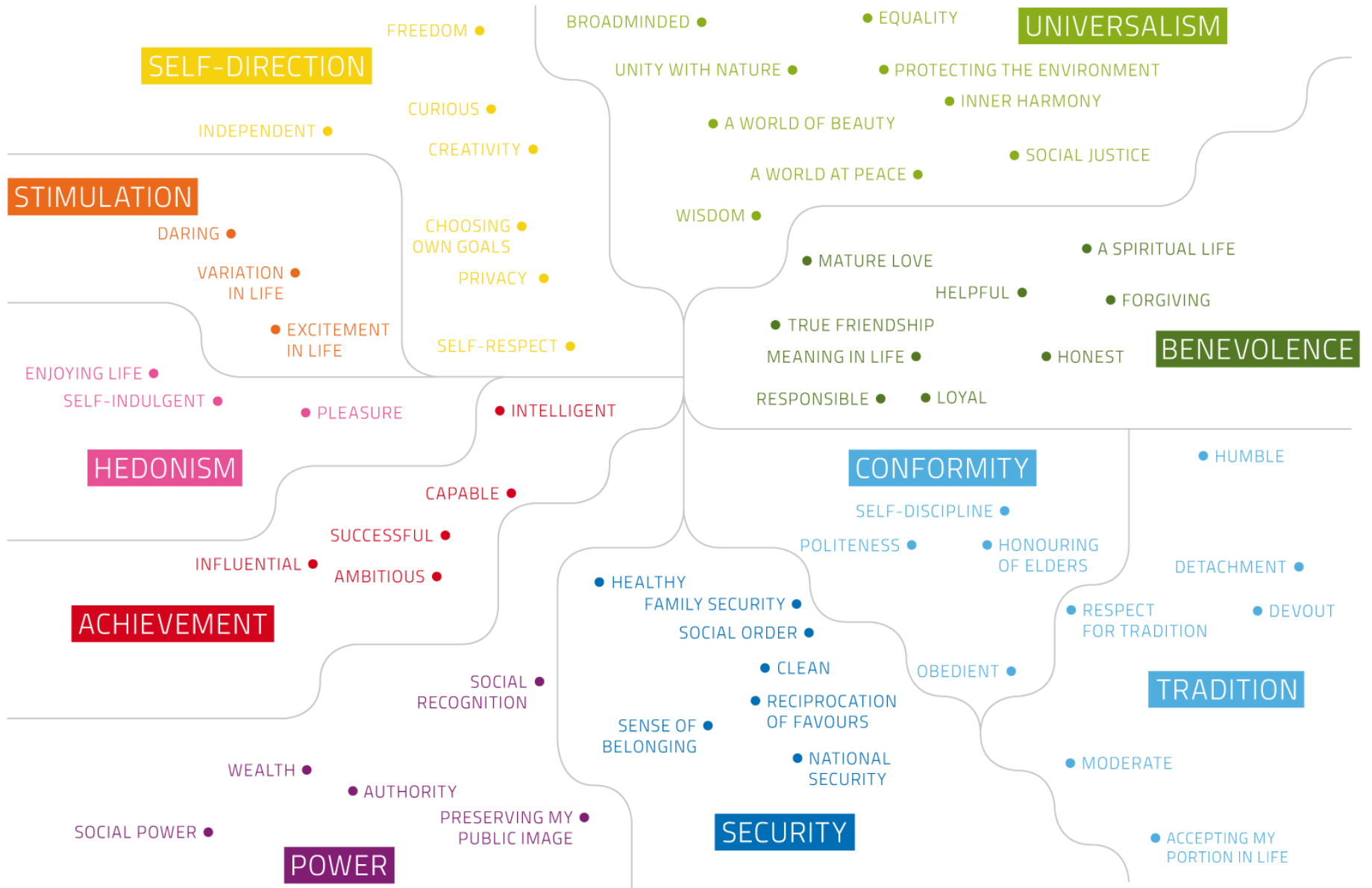


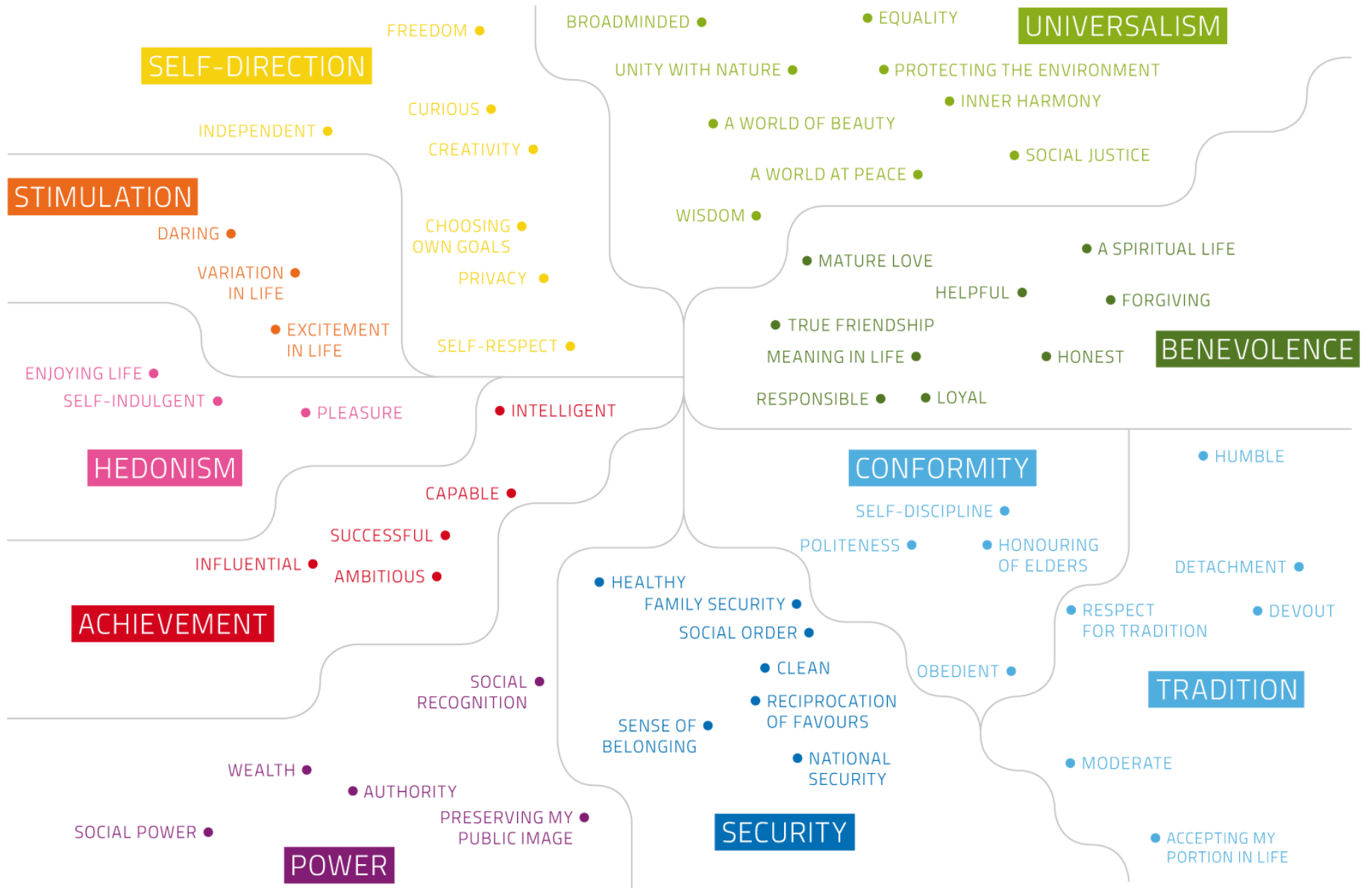
Handwritten notes in the top left corner, possibly including a date and a name.

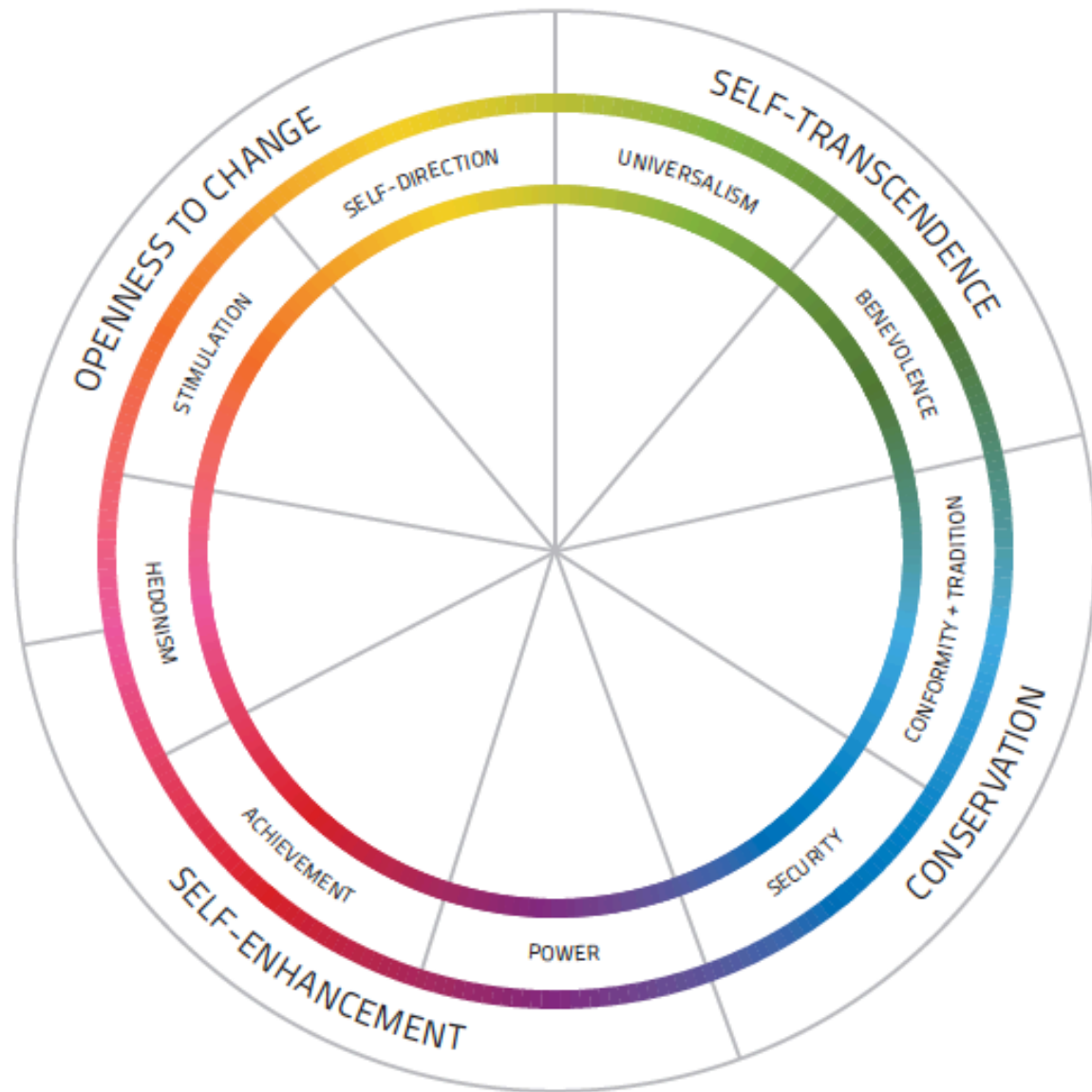




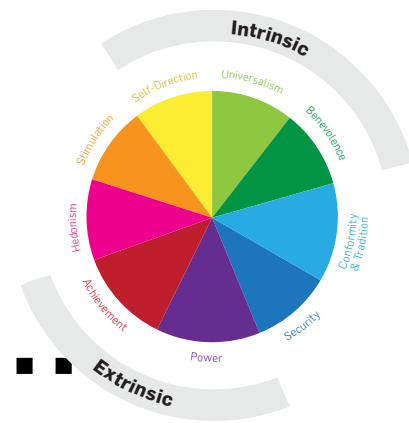








# Self-transcendent values associated with...



Greater empathy Sheldon & Kasser (1995); Myyry & Helkama (2001)

Greater civic and democratic engagement Schwartz (2006); Augemberg (1999)

Greater support and action for human rights Cohrs et al. (2007); Spini & Doise (1998)

Lower prejudice Duriez et al. (2007); Roets et al. (2006); Feather and McKee (2008); Sagiv and Schwartz (1995); Sawyerr et al. (2005)

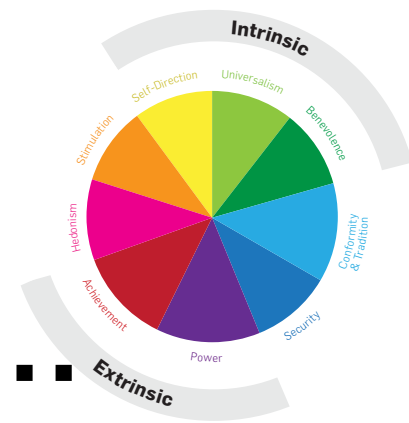
Cooperation vs. competition Schwartz (1996); Sheldon et al. (2000)

Lower anti-social behaviour Schwartz (2010); Cohen & Cohen (1996); McHoskey (1999); Kasser & Ryan (1993)



# Self-transcendent

# values associated with...

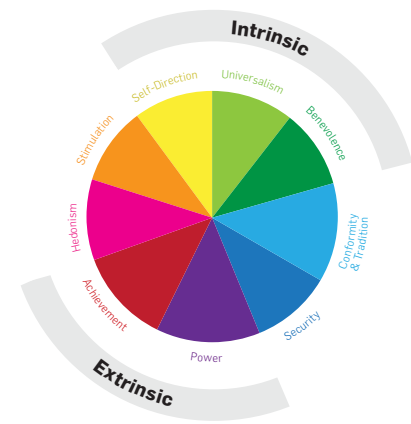


Concern about effects of environmental damage on other people, species, and generations (vs. self) Schultz et al. (2005)

More sustainable (and cooperative) behaviour in a resource management game Sheldon and McGregor (2000)

Higher frequency of donating to or volunteering for environmental organisations; voting for a 'green' political candidate; cycling; recycling; reusing; conserving energy; taking part in an environmentally-motivated political action etc. Gatersleben et al (2008); Kasser (2005); Richins & Dawson (1992); Karp (1996); Schultz et al (2005); Stern & Dietz (1996)

# Self-transcendent Values associated with Personal Well-being



Higher life satisfaction Richins & Dawson (1992)

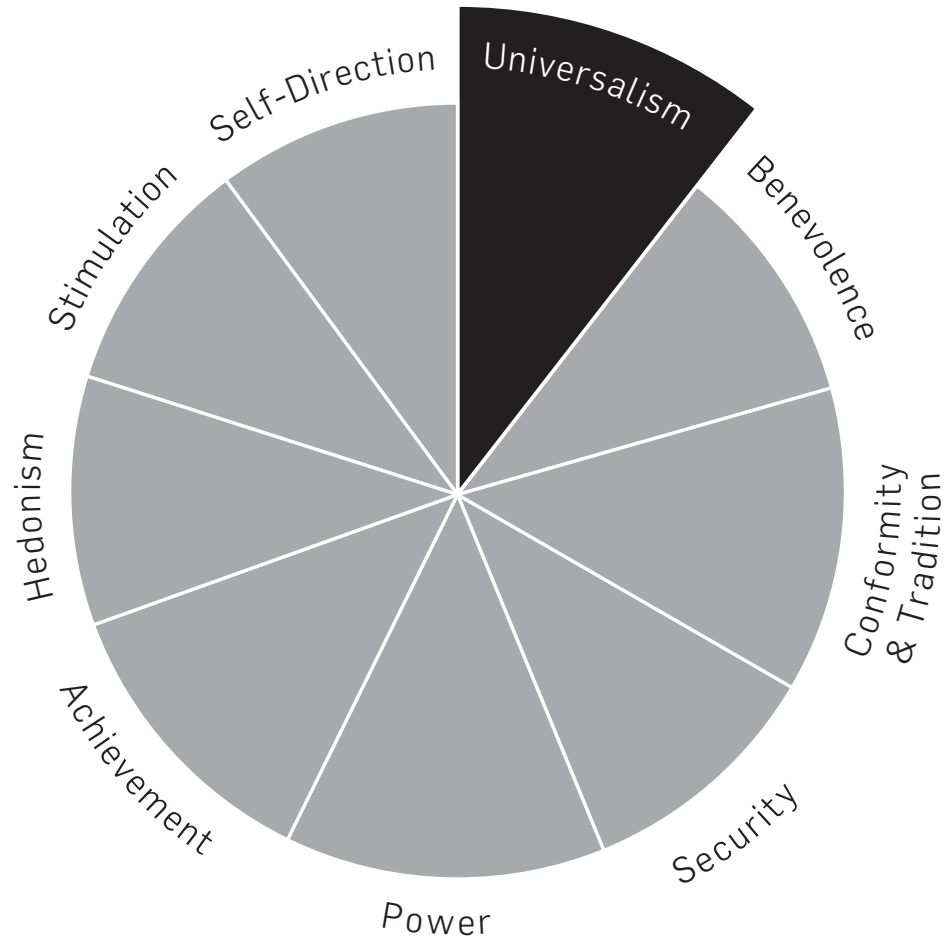
Higher self-actualization & vitality Kasser & Ryan (1993, 1996)

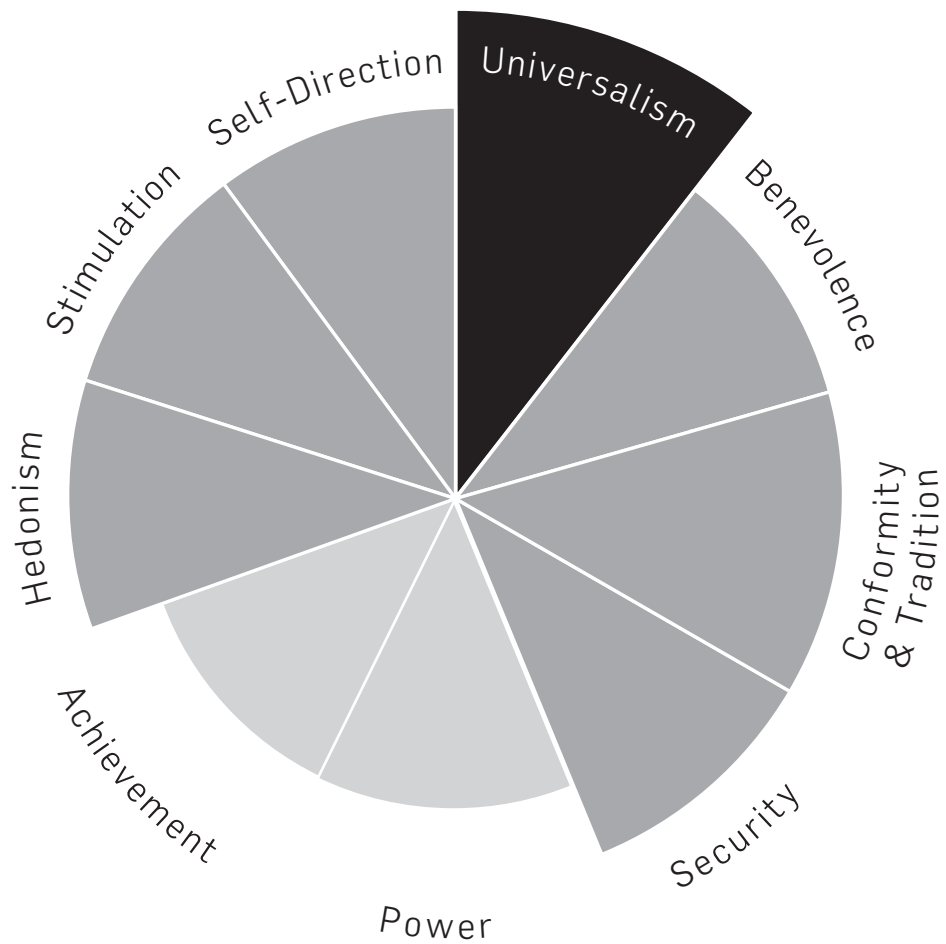
More positive vs. negative emotions Sheldon & Kasser (1995);  
Nelissen, Dijker and de Vries (2007)

Lower levels of depression & anxiety Ibid; Schor (2004)

Lower levels of personality disorders Cohen & Cohen (1996)

## Values can be engaged, with affects on other values



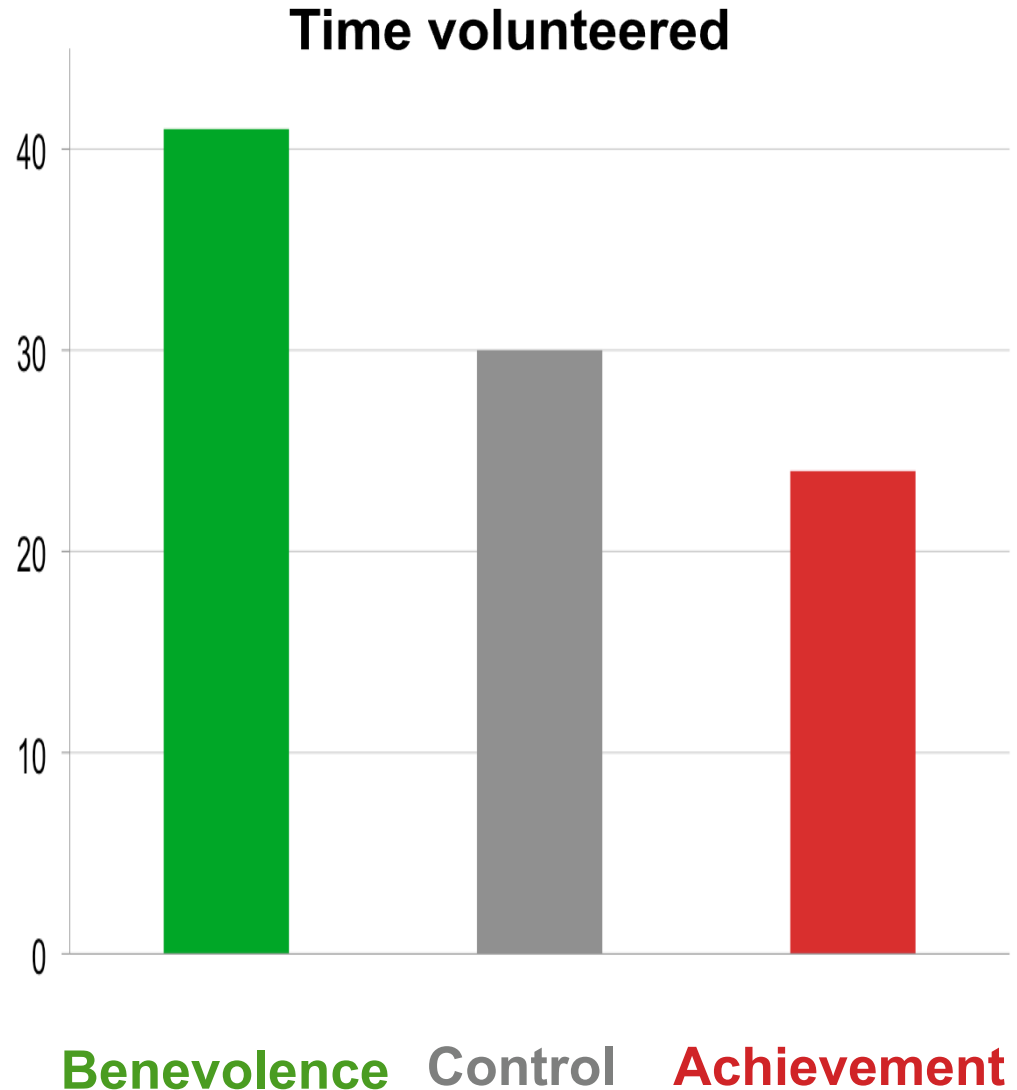


# Volunteering

Maio et al. (2009)

Subjects memorised  
adjectives, items of furniture  
and either:

- **Benevolence**-related words  
(forgiving, helpful, honest)
- **Achievement**-related words  
(ambitious, capable,  
successful)
- **Food** related words (control)



# Even subtle reminders about money have this impact (Vohs et al, 2006)



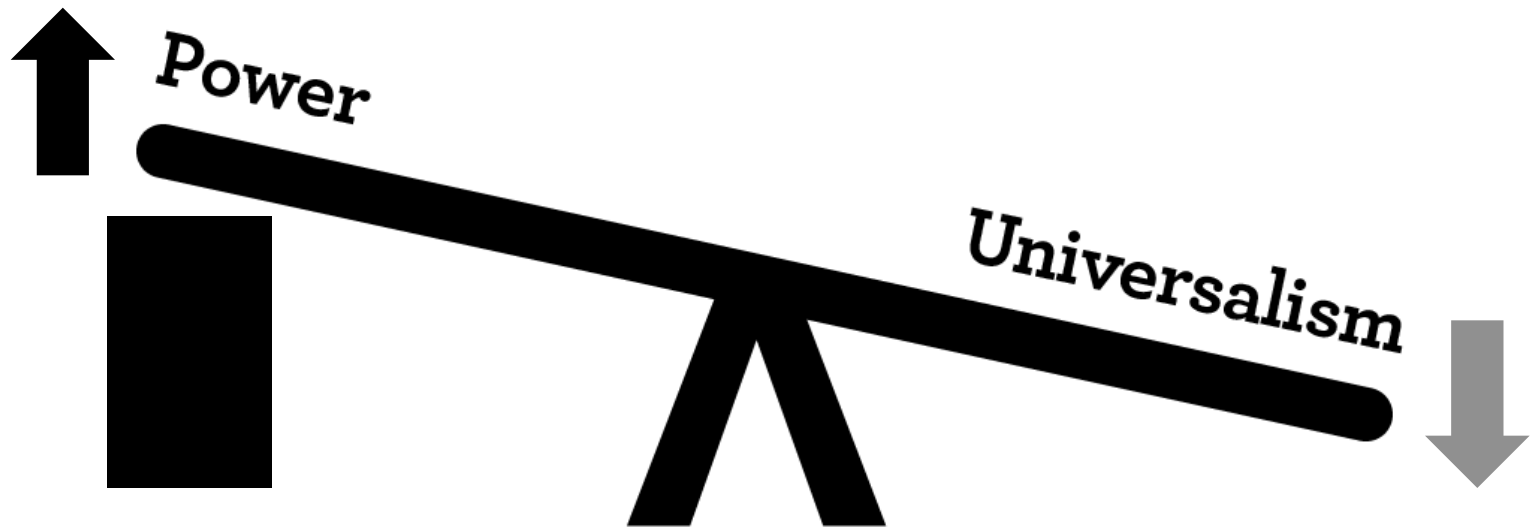
J S X M U X Q W C Y T S I M R Z Y W N V A R  
T B C N R H Y H N D J E W C P E M O E J M D  
F S M I L E J G E A Z A Q A J Q T A T U L E  
L W D P U M T I K S L L T E G I P H S F X N  
O E F B Q P S Y L N R A P I V H G Y N B A T  
R T L L G E K D W C Z N D Q A W R S U V E I  
X I S W U R Z S B A C T E R I A U L C D K S  
Y Y Q U E O P X F V J S N S H R Q E K P Z T  
L D H A F U R T S I Y Q T O D F O I O T J S  
S V P K C O D I G T P O A W Y V D N M H Y K  
J A H K T W U E D I N K L R G T W O F P B O  
Y G U E B S F R C E A D H C L U G B L A G P  
I R M h I X R A Y S I F Y K S A G A O R X T  
Q K I R L J B W P R E A G U X Z Q K S I O U  
W H O Q D H I E U T G C I G Y U M T S V Q P  
E Y T I V Z M A V Q O H E D E O E D I O T Y  
R Z D M S X B H T E L Z N K N V A M N E J W  
U P T O O T H B R U S H I Y T K F R G Y F I  
O F J L G Q W G I U X Y S B U S C X Q W B K  
P E N A M E L Z A O M E T A M D U H Y D S Y  
S Q E R O I R Q N B H G R V E B J D R M D E  
Y U A S F H A O V H W C U T N A C M A G H U

- 
- Toothbrush
  - Enamel
  - Sealants
  - Fluoride
  - Plaque
  - Flossing
  - Bacteria
  - Dentist
  - Dental hygienist
  - Smile
  - Xrays
  - Cavities
  - Molars

# Self-interest and proenvironmental behaviour (Evans et al, 2012)



# The see-saw effect





# The see-saw effect in real life: Nuclear waste dumps

- Early 1990s referenda in Switzerland about where to site its nuclear waste dumps. Two social scientists went door to door asking whether residents would be willing to have a waste dump in their community, despite potential dangers, and negative impact on value of property.
- Astonishingly **50% said yes!** People apparently felt an obligation as citizens
- But when people were offered an annual payment equivalent to **6 week's wages, 25% agreed.**
- *The prospect of a private payoff question into a pecuniary one.*

Frey, Oberholzer-Gee and Eichenberger (1996)





- Day care centre responded to problem of parents turning up late to collect their children by introducing fines.
- Late pick-ups increased!
- The fear of disapproval and of doing the wrong thing was based on non-monetary values, and was a stronger force than a cash disincentive.
- The day care centre went back to the old system but parents kept turning up late.
- The introduction of market values had killed the old ideas of collective responsibility.

Gneezy and Rustichini (2000)

# Richard Titmuss' famous study on Blood Donation

- Compared the voluntary British system favourably with the American one, in which payments were then widely made.
- Titmuss argued that the market for blood was inefficient and wasteful, and that it led to a contaminated supply of blood.

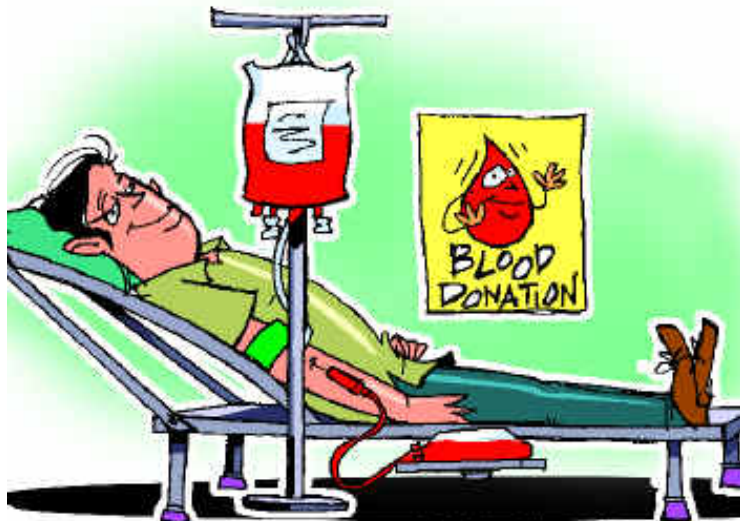


Illustration : Sathesh Vellinezhi

Paying for blood donations “erodes people’s sense of obligation to donate blood, diminishes the spirit of altruism, and undermines the ‘gift relationship’ as an active feature of social life”

Titmuss, 1970

# In light of this research, do you think that virtue & altruism are more like...

Scarce resources that are  
“used up”?

Larry Summers

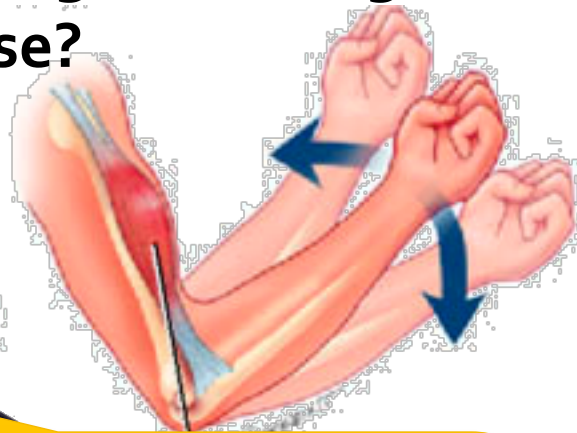


*We all have only so much altruism in us. Economists like me think of altruism as a valuable and rare good that needs conserving. Far better to conserve it by designing a system in which people's wants will be satisfied by individuals being selfish, and saving that altruism for our families, our friends, and the many social problems in this world that markets cannot solve.*

Muscles that grow stronger  
with exercise?

Michael Sandel

OR



*Think of a loving couple. If, over a lifetime, they asked little of one another, in hopes of hoarding their love, how well would they fare? Wouldn't their love deepen, rather than diminish the more they called upon it? Would they do better to treat one another in more calculating fashion, to conserve their love for the times they really needed it? (p. 128). To renew our public life we need to exercise [virtues] more strenuously. (p.130)*

# What's the alternative to pricing?

## DISCUSS!

Some ideas from Clive Spash (taken from a talk he gave in 2010)

- Recognise values cannot be reduced to single figure; refusing to trade is 'rational'
- Recognise that community interests are different from individual interests
- Acknowledge the need for judgment (often judgments are merely hidden; make judgment explicit, informed; accountable)
- Build institutions for deliberation (e.g. citizen's juries)
- Apply political representation instead of statistical representation
- Appeal to process of value formation rather than assume pre-formed preferences
- Empower silent voices (e.g. politically weak, poor, non-humans, future generations)
- Employ scientists/experts with accountability and transparency

See Spash, Stagl and Getzner "Exploring alternatives for environmental valuation" Chapter 1

From Alternatives for Environmental Valuation Getzner, Spash & Stagl (eds.)  
London: Routledge, 2005