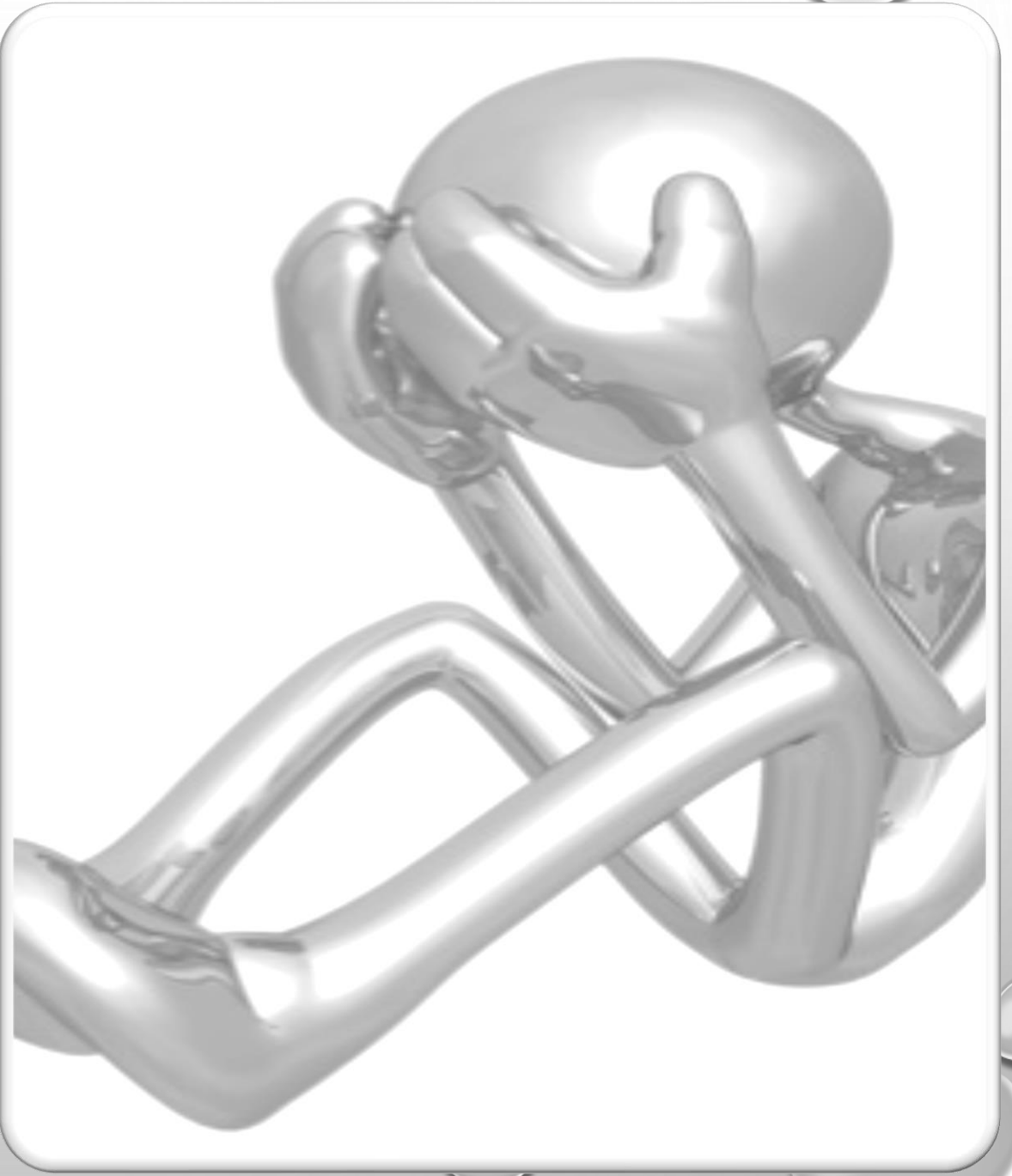
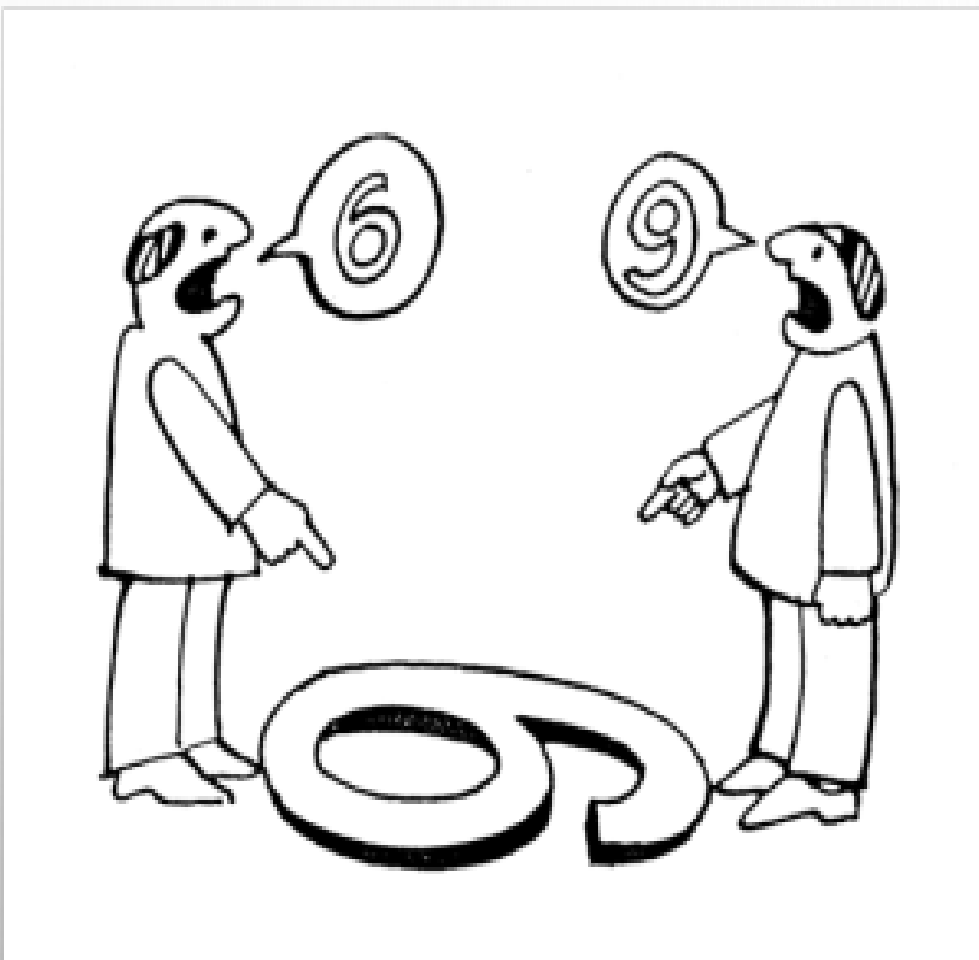


**MY MIND'S MADE
UP - DON'T
CONFUSE ME
WITH FACTS !**



NOT THIS !



BUT THIS !





FACTS

PERCEPTIONS

THE STATE OF THE WORLD





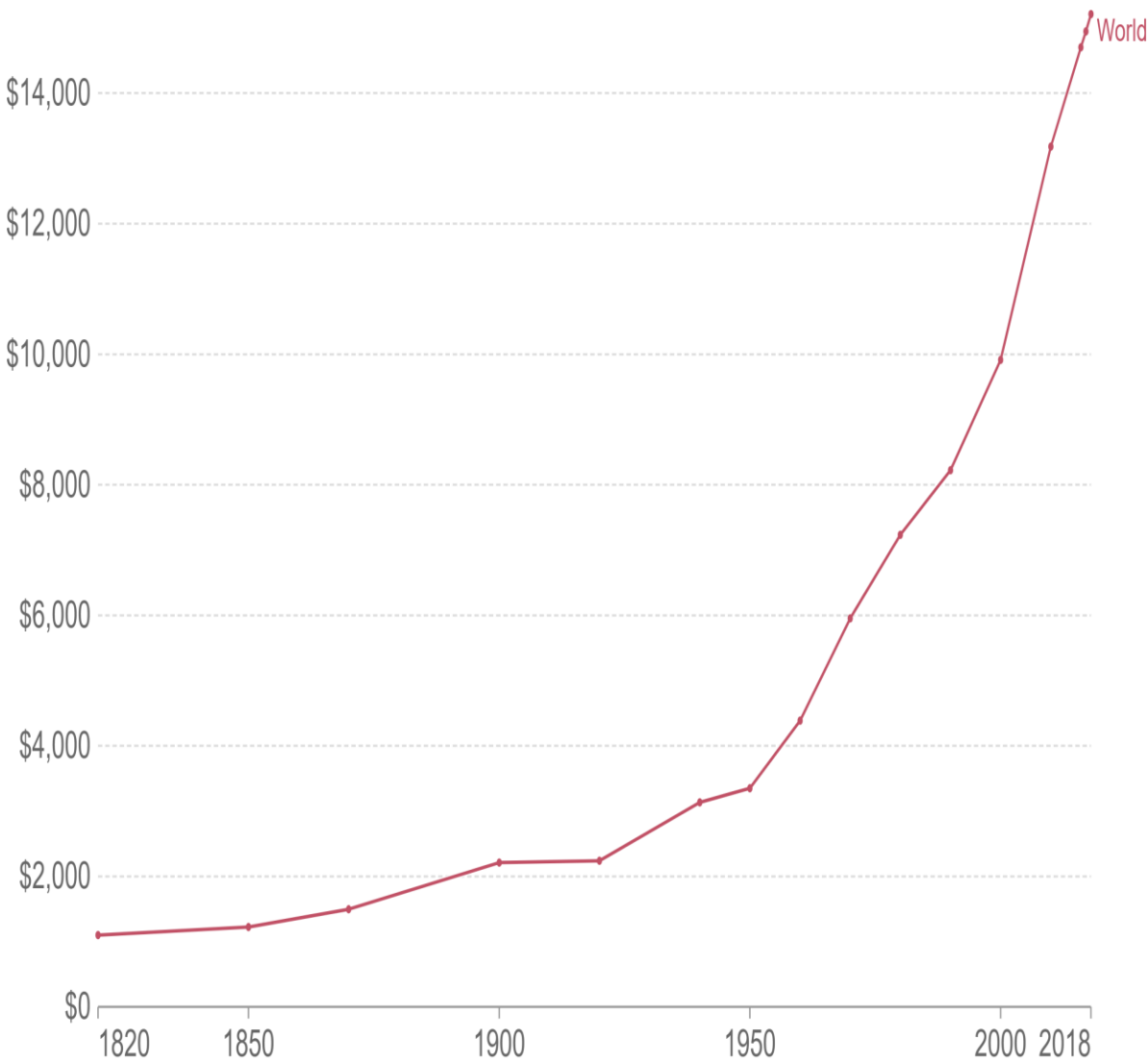
FACTS

PERCEPTIONS

GDP per capita, 1820 to 2018

This data is adjusted for differences in the cost of living between countries, and for inflation. It is measured in constant 2011 international-\$.

Our World
in Data

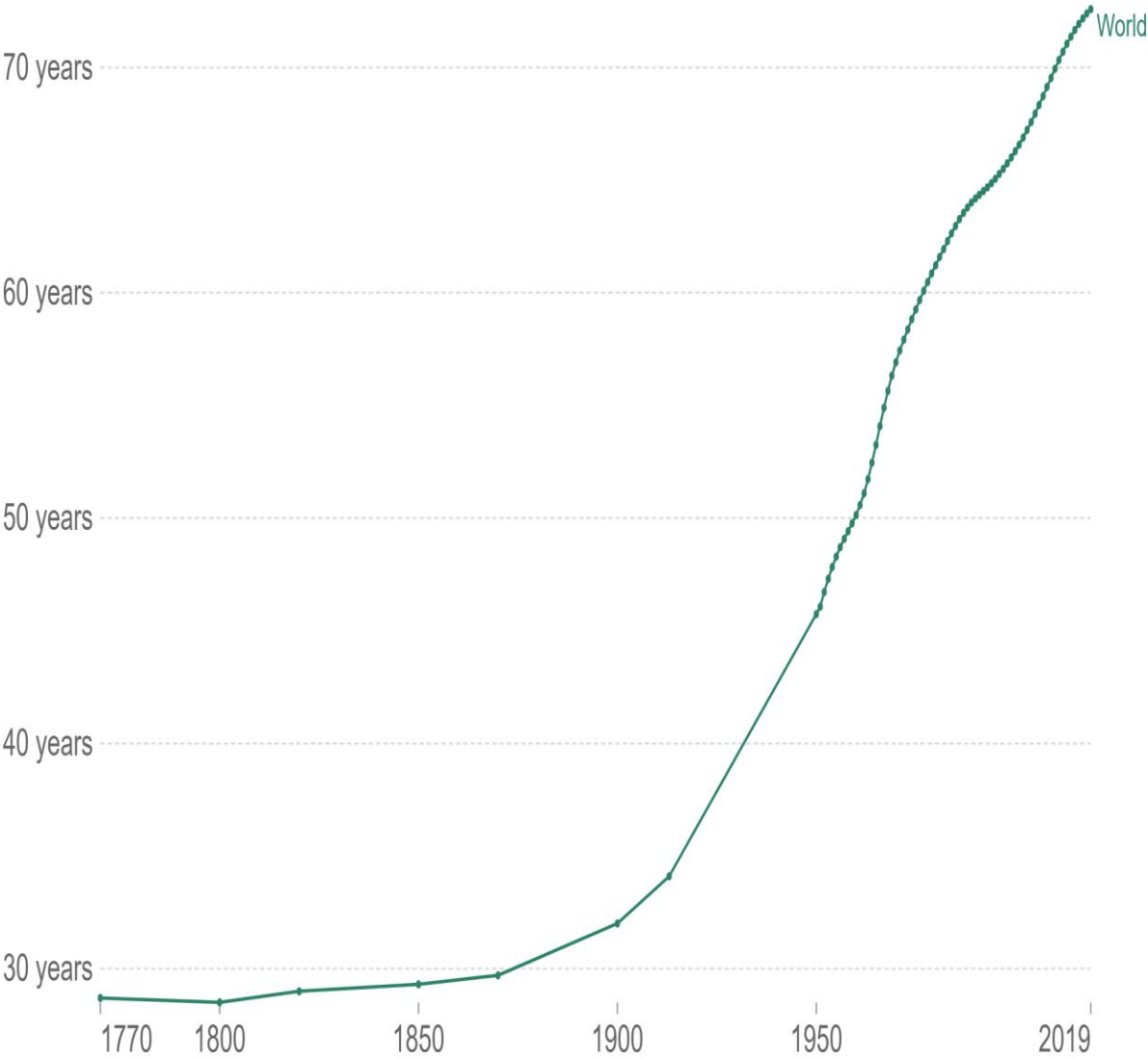


Source: Maddison Project Database 2020 (Bolt and van Zanden, 2020)

OurWorldInData.org/economic-growth • CC BY

Life expectancy, 1770 to 2019

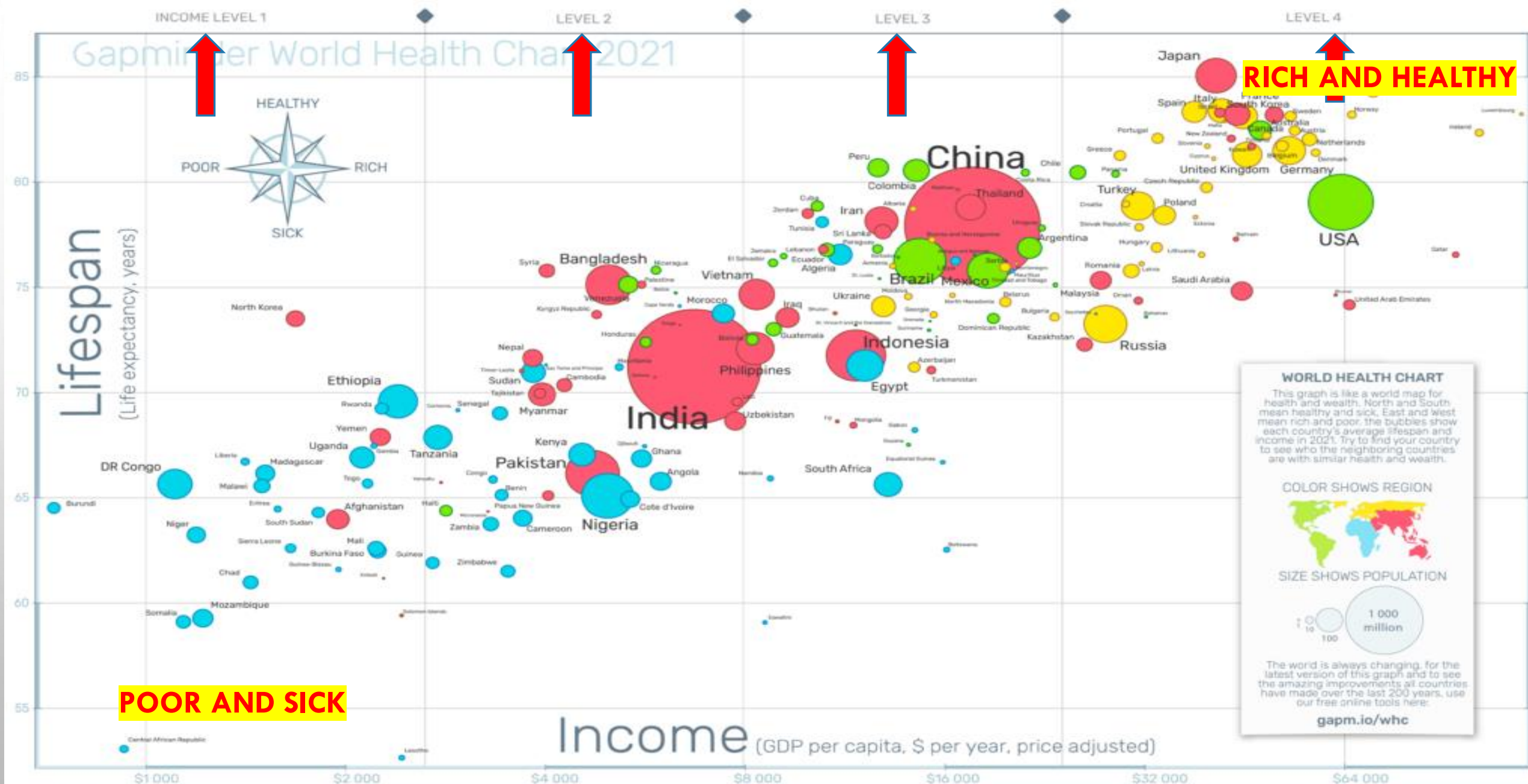
Our World
in Data



Source: Riley (2005), Clio Infra (2015), and UN Population Division (2019)

OurWorldInData.org/life-expectancy • CC BY

Note: Shown is period life expectancy at birth, the average number of years a newborn would live if the pattern of mortality in the given year were to stay the same throughout its life.



SOURCES - INCOME: World Bank's GDP per capita, PPP (2017 international \$) extended to 2021 with IMF's projections. X-axis uses log-scale to make a doubling income show the same distance on all levels.

POPULATION and LIFE EXPECTANCY: Data from UN Population Prospects 2019.

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Please copy, share, modify, integrate, and even sell them, as long as you mention: "Based on a free chart from www.gapminder.org".

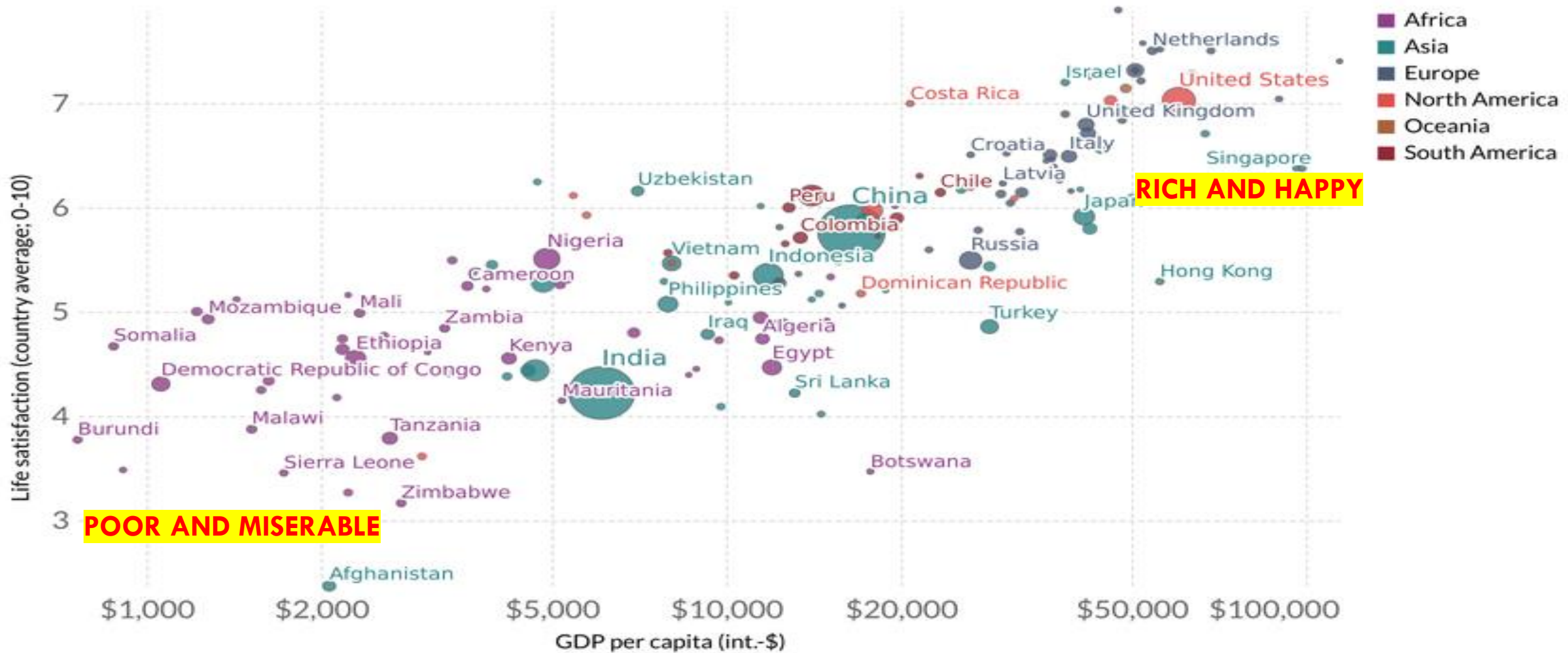


VERSION 2022.1

Self-reported Life Satisfaction vs GDP per capita, 2020

The vertical axis shows the national average of the self-reported life satisfaction on a scale ranging from 0-10, where 10 is the highest possible life satisfaction.

The horizontal axis shows GDP per capita adjusted for inflation and cross-country price differences.

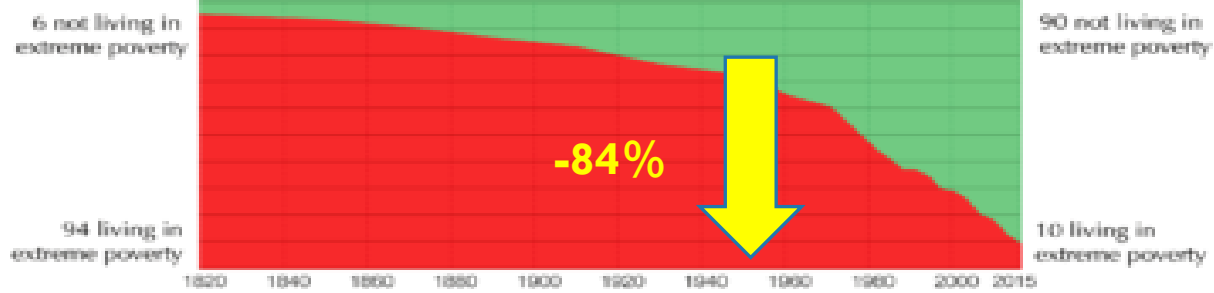


**HOW HAVE
THINGS
CHANGED IN
THE LAST 200
YEARS ?**

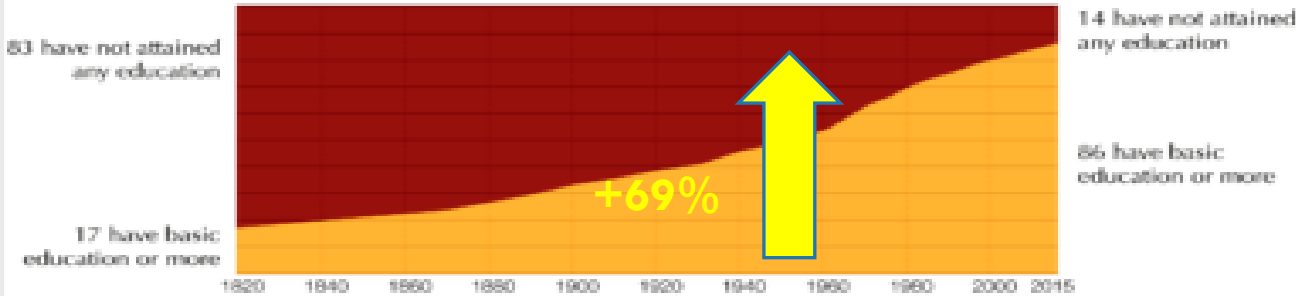


The World as 100 People over the last two centuries

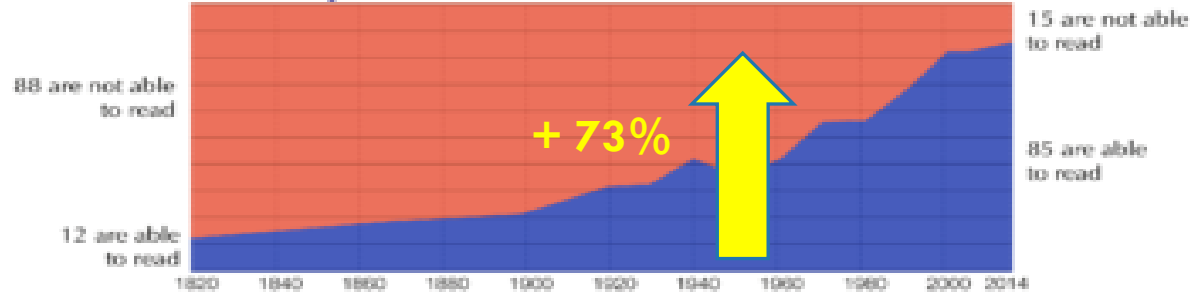
Extreme Poverty



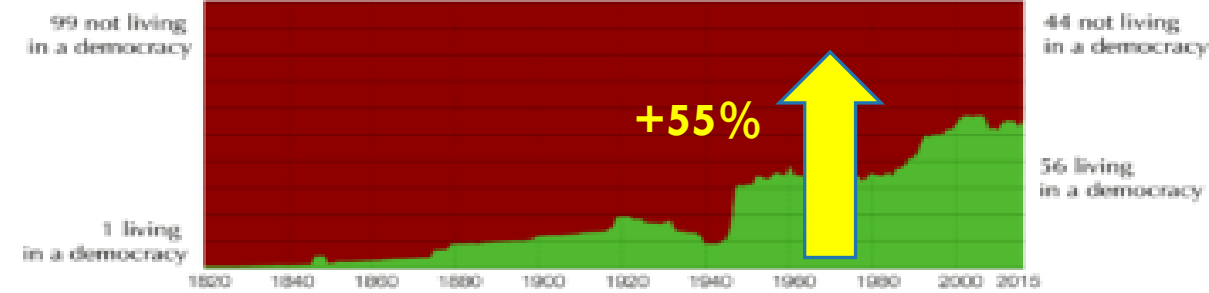
Basic Education



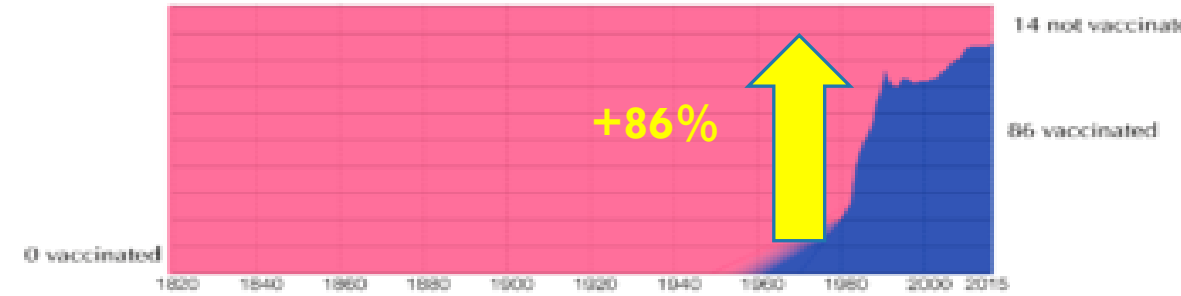
Literacy



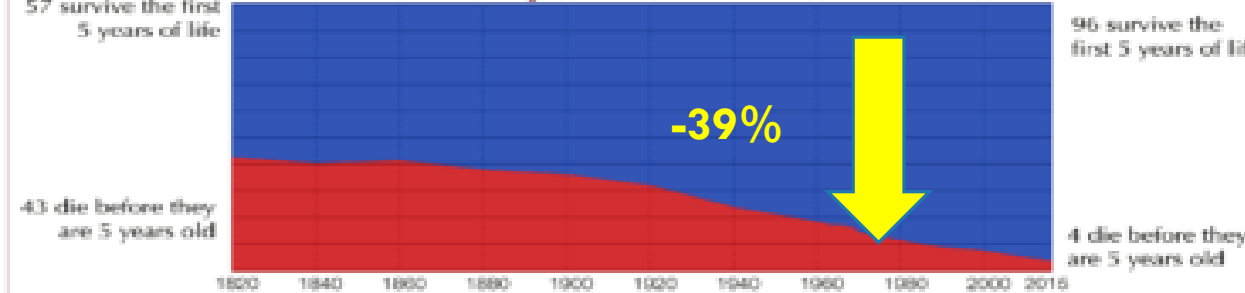
Democracy



Vaccination against diphtheria, pertussis (whooping cough), and tetanus



Child Mortality



All these visualizations are from OurWorldInData.org an online publication that presents the empirical evidence on how the world is changing.

Licensed under CC-BY-SA by the author Max Roser

Data sources:
 Extreme Poverty: Bourguignon & Morrison (2002) up to 1970 – World Bank; 1981 and later (2015 is a projection).
 Vaccination: WHO (Global data are available for 1980 to 2015 – the DPT3 vaccination was licensed in 1949).
 Education: OECD for the period 1820 to 1960. IEA for the time thereafter.
 Literacy: OECD for the period 1820 to 1990. UNESCO for 2004 and later.
 Democracy: Polity IV index (own calculation of global population share).
 Colonialism: Wimmer and Min (own calculation of global population share).
 Continent: HYDE database.
 Child mortality: up to 1960 own calculations based on Gapminder; World Bank thereafter.

THE WAR ON DEATH

PERCENT DECLINES IN THE NUMBER OF DEATHS SINCE 1990*

AIDS-
RELATED

24%

TUBERCULOSIS

~50%

MATERNAL

~50%

INFANT

~50%

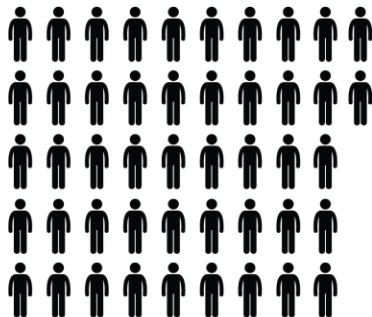
MEASLES

71%

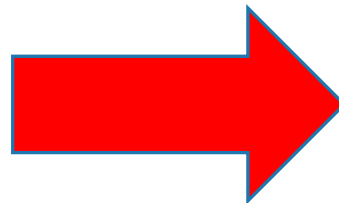
*AIDS FIGURE SINCE 2005

AS A RESULT, LIFE EXPECTANCY HAS JUMPED 50%

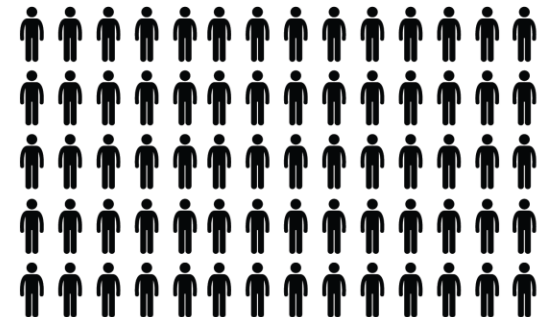
1950



47
YEARS



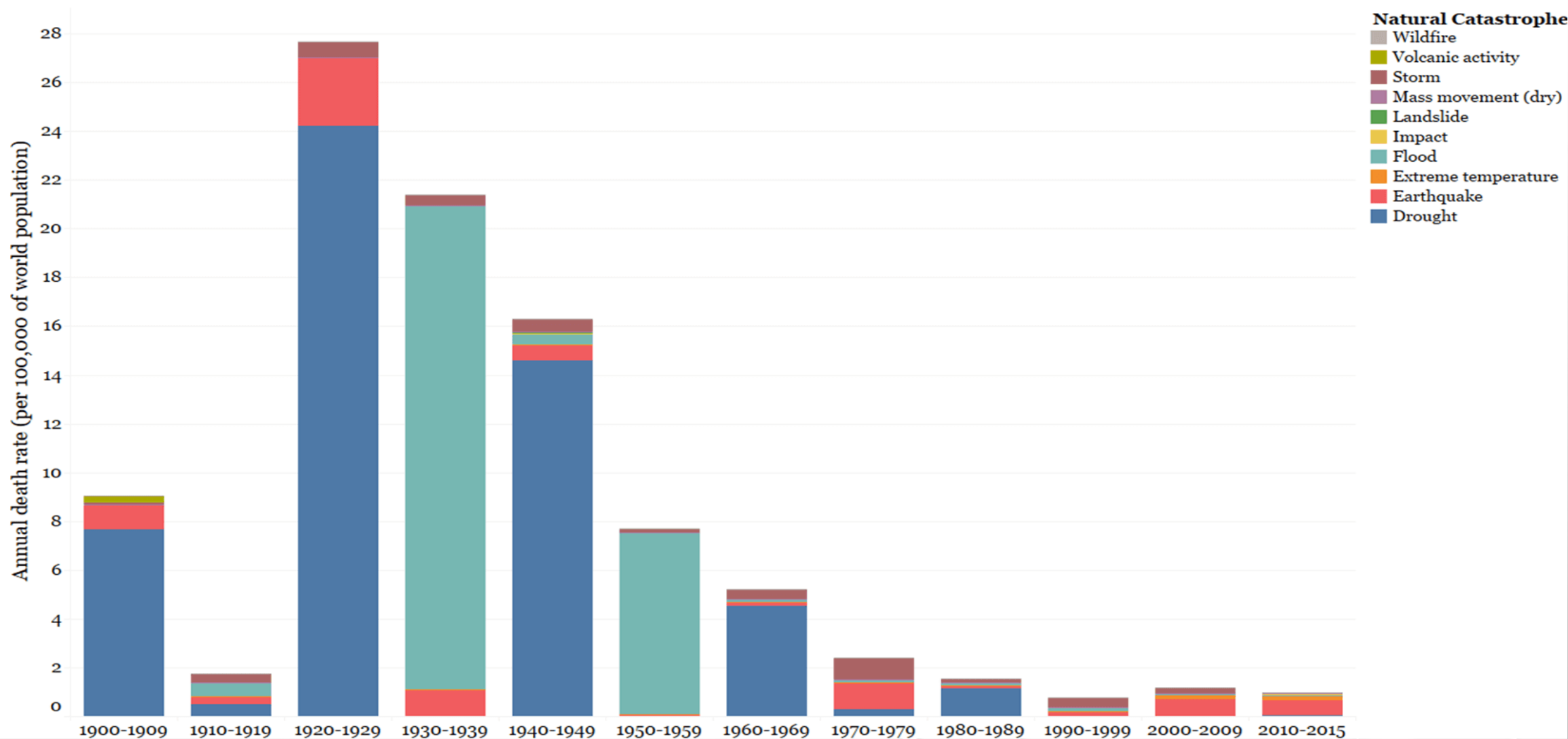
70
YEARS



2011

Global annual death rate from natural disasters

Global death rate measured as the number of deaths per 100,000 of the world population
(by decade 1900s to 2000s; and six years from 2010)



Data source: OFDA/CRED International Disaster Database – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium.

The author Max Roser licensed this visualisation under a CC-BY-SA licence. You are welcome to share but please refer to its source where you find more information: <https://ourworldindata.org/natural-catastrophes/>



ARE THINGS GETTING ?

Better



Same



Worse





FACTS

PERCEPTIONS

THE STATE OF THE WORLD





ARE THINGS GETTING ?



- **15,500** PEOPLE
- **31** COUNTRIES
- **18** QUESTIONS WHICH HAVE :
- **THREE** ANSWERS OF WHICH **ONE** IS CORRECT
- RANDOM CHOICE GIVES **33%** CHANCE OF SELECTING THE CORRECT ANSWER
- CONSISTENT VARIATION FROM **33%** SHOWS A PERCEPTUAL BIAS



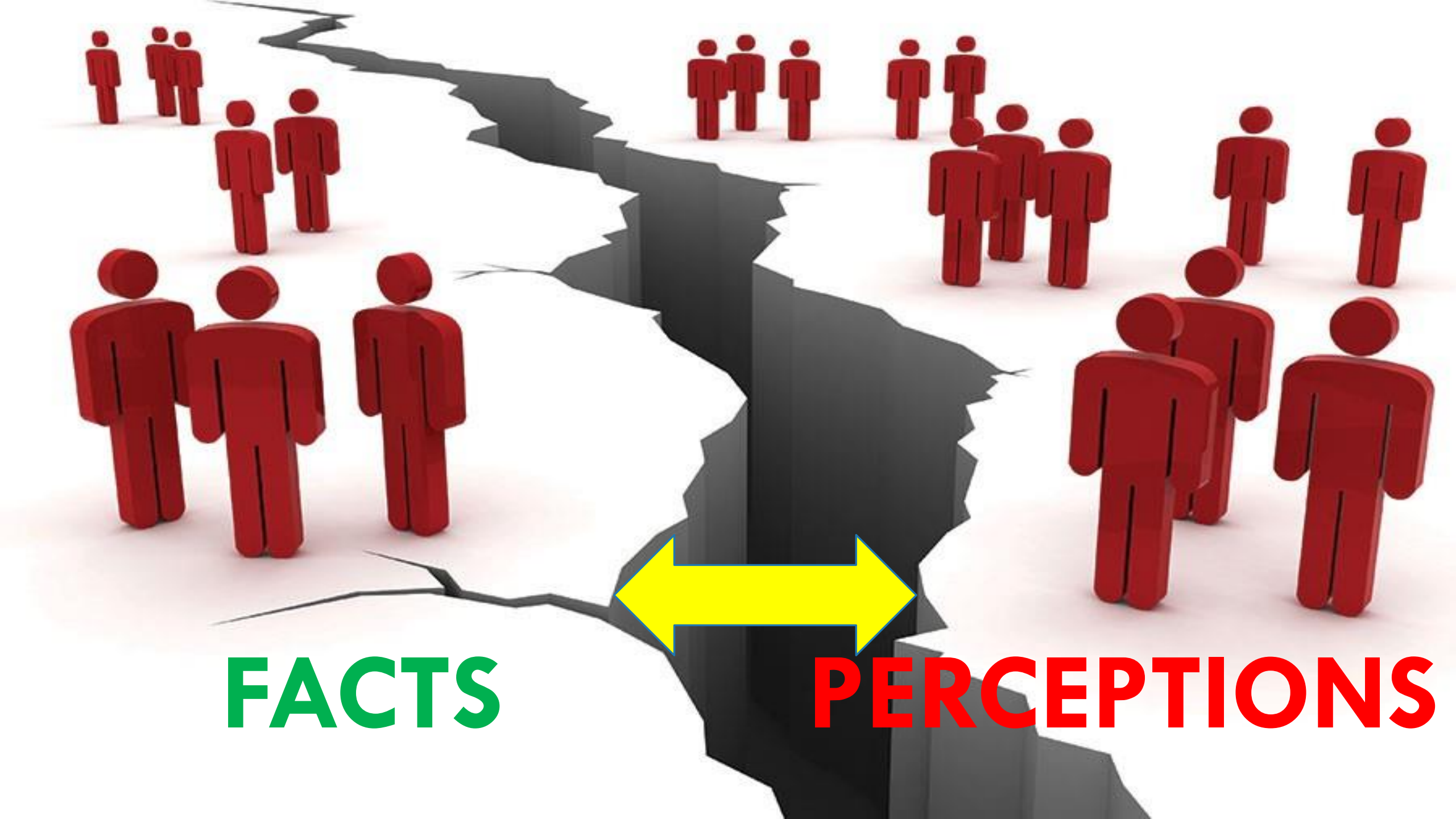
ARE THINGS GETTING ?

BETTER 6%

SAME 26%

WORSE 68%





FACTS

PERCEPTIONS

**LET'S DIG A
LITTLE
DEEPER !**



**...AND LOOK AT
THE EXTENT TO
WHICH
UNDERLYING
PERCEPTIONS
DIFFER FROM THE
FACTS!**



WHAT IS THE LIFE EXPECTANCY OF THE WORLD TODAY ?

- **A 50 YEARS**
- **B 60 YEARS**
- **C 70 YEARS**
- ***CORRECT ANSWER : C 70 YEARS***
- **HOW MANY GOT IT RIGHT ? 39%**

IN THE LAST TWENTY YEARS THE PROPORTION OF THE WORLD POPULATION LIVING IN EXTREME POVERTY HAS....

- **A ALMOST DOUBLED**
- **B REMAINED ABOUT THE SAME**
- **C ALMOST HALVED**
- ***CORRECT ANSWER : ALMOST HALVED***
- **HOW MANY GOT IT RIGHT ? 7%**

HOW DID THE NUMBER OF DEATHS FROM NATURAL DISASTERS CHANGE OVER THE LAST HUNDRED YEARS ?

- **A MORE THAN DOUBLED**
- **B DECREASED TO LESS THAN HALF**
- **C REMAINED ABOUT THE SAME**
- ***CORRECT ANSWER : DECREASED TO LESS THAN HALF***
- **HOW MANY GOT IT RIGHT ? 9%**

HOW MANY OF THE WORLD'S CHILDREN TODAY HAVE BEEN VACCINATED AGAINST SOME DISEASE ?

- **A 20%**
- **B 50%**
- **C 80%**
- ***CORRECT ANSWER : 80 %***
- **HOW MANY GOT IT RIGHT ? 13%**

WHAT PERCENTAGE OF THE ADULTS IN THE WORLD ARE LITERATE – CAN READ AND WRITE ?

- **A 60%**
- **B 80%**
- **C 40%**
- ***CORRECT ANSWER : 80%***
- **HOW MANY GOT IT RIGHT ? 15%**

**IN ALL LOW INCOME COUNTRIES ACROSS THE WORLD
TODAY HOW MANY GIRLS FINISH PRIMARY SCHOOL ?**

- **A 60%**
- **B 40%**
- **C 20%**
- ***CORRECT ANSWER : 60%***
- **HOW MANY GOT IT RIGHT ? 7%**

**UP TO 1990 17 COUNTRIES HAD BEEN LED BY A
FEMALE HEAD OF STATE/GOVERNMENT . WHAT
WAS THAT NUMBER IN 2019?**

- **A 29**
- **B 53**
- **C 76**
- ***CORRECT ANSWER : 76***
- **HOW MANY GOT IT RIGHT ? 4%**

**TIGERS GIANT PANDAS AND BLACK RHINOS WERE LISTED
AS ENDANGERED IN 1996. HAVE ANY SINCE THEN
BECOME ENDANGERED ?**

- **A NONE OF THEM**
- **B ONE OF THEM**
- **C TWO OF THEM**
- **CORRECT ANSWER NONE OF THEM**
- **HOW MANY GOT IT RIGHT ? 9%**

WHAT SHARE OF ALL PLASTIC PRODUCED IN THE WORLD ENDS UP IN THE OCEANS ?

- **A 6%**
- **B 36%**
- **C 66%**
- **CORRECT ANSWER 6%**
- **HOW MANY GOT IT RIGHT ? 14%**

**IN 1990 3% OF THE WORLD'S POPULATION LIVED
IN A DIFFERENT COUNTRY FROM THAT WHERE THEY
WERE BORN . WHAT IS THAT FIGURE TODAY ?**

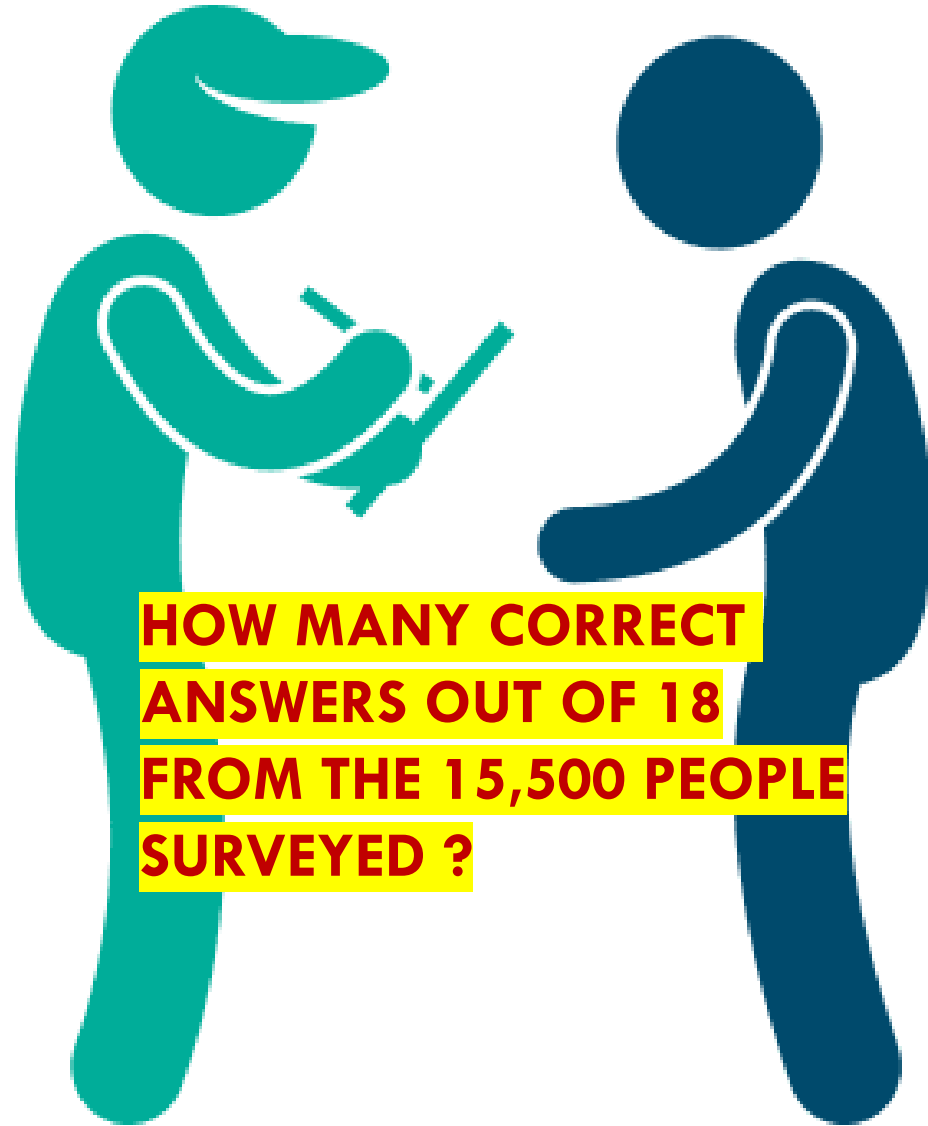
- **A 4%**
- **B 14%**
- **C 24%**
- **CORRECT ANSWER 4%**
- **HOW MANY GOT IT RIGHT ? 12%**

WHICH OF THE FOLLOWING CAUSES MOST DEATHS IN AFRICA ?

- A CONFLICT AND WAR
- B HEART DISEASE AND STROKE
- C HIV/AIDS
- CORRECT ANSWER HEART DISEASE AND STROKE
- HOW MANY GOT IT RIGHT ? 11%

**IT TOOK 12 YEARS FOR THE WORLD'S POPULATION
TO GROW FROM 6 TO 7 BILLION . HOW LONG DID
IT TAKE TO GROW FROM 7 TO 8 BILLION ?**

- **A 2 YEARS**
- **B 7 YEARS**
- **C 12 YEARS**
- **CORRECT ANSWER 12 YEARS**
- **HOW MANY GOT IT RIGHT ? 26%**



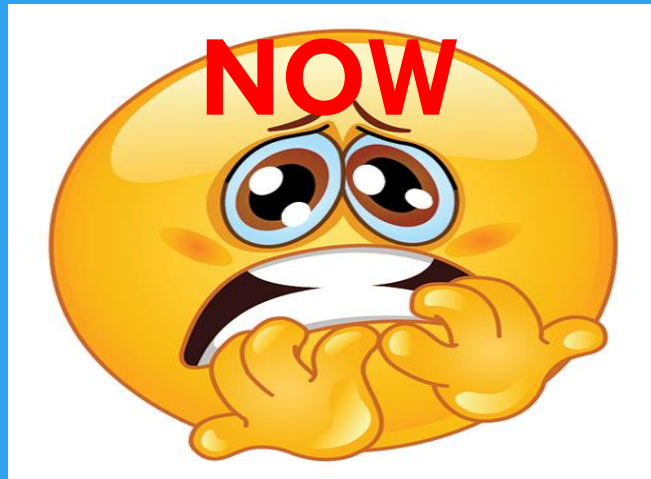
**HOW MANY CORRECT
ANSWERS OUT OF 18
FROM THE 15,500 PEOPLE
SURVEYED ?**

- **8%** GOT NONE
- **NO ONE** GOT MORE THAN 13
- THE AVERAGE WAS **2.9**
- RANDOM CHOICE WOULD HAVE BEEN **6**
- **SO SIGNIFICANT NEGATIVE BIAS !**

**SO WHAT'S
GOING ON ?**



**The Good
Old Days !**



**The Scary
Forecast
Future !**

**“NOTHING IS
MORE
RESPONSIBLE
FOR THE **GOOD**
OLD DAYS
THAN A BAD
MEMORY!”**



THE SCARY FORECAST FUTURE !



- **POPULATION GROWTH AND FAMINE 1798**
- **TIMBER FAMINE ECONOMIC THREAT 1865**
- **FLUORIDE IN DRINKING WATER 1945**
- **POPULATION GROWTH AND FAMINE 1968**
- **GLOBAL COOLING 1970**
- **POPULATION GROWTH AND RESOURCES 1972**
- **ACID RAIN AND FORESTS 1974**
- **ELECTROMAGNETIC FIELDS AND CANCER 1979**
- **MAD COW DISEASE 1996**
- **CHILDHOOD INOCULATIONS AND AUTISM 2005**
- **MOBILE PHONE TOWERS AND CANCER 2008**
- **ETC, ETC**
- **FROM A HISTORY OF SCIENTIFIC ALARMS BY DR KESTEN GREEN
UNIVERSITY OF SOUTH AUSTRALIA**

What we
are told
Biased

What we
know
Limited

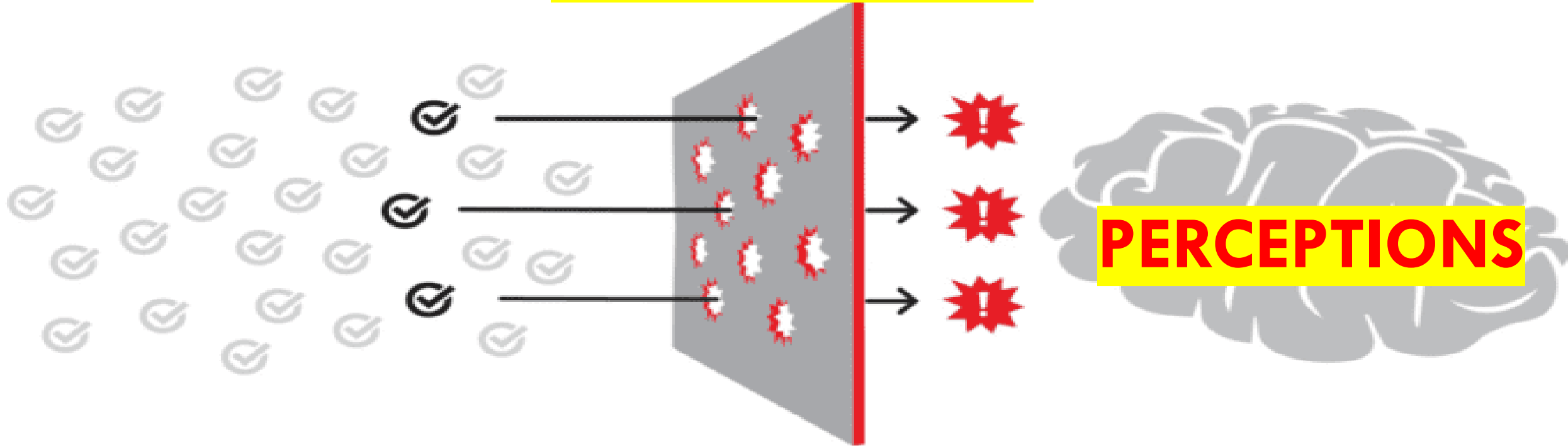
What we
feel
Personal

**OUR
MENTAL
MAP**

```
graph TD; A["What we are told  
Biased"] --> D((OUR MENTAL MAP)); B["What we know  
Limited"] --> D; C["What we feel  
Personal"] --> D;
```

The dramatic attention filter

From all facts in the world - **OUR MENTAL MAP** selects the most dramatic.



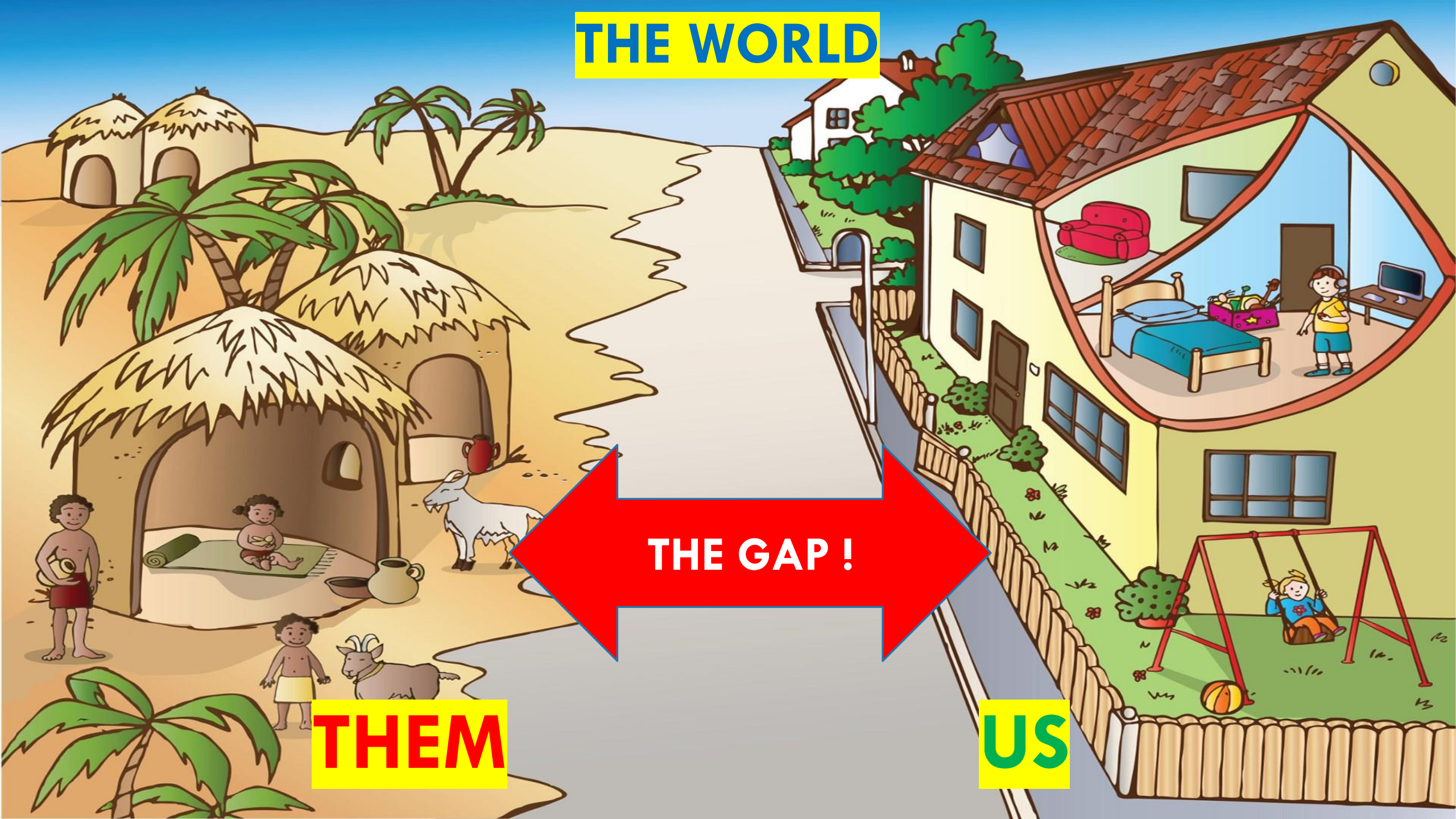
makes the world look
more dramatic than it is

THE **GAP** PERCEPTION



- DIVIDES THINGS INTO **DISTINCT** AND OFTEN **CONFLICTING** GROUPS
- ENVISIONS A **GAP** BETWEEN THEM
- GOOD/BAD
- LOCAL/FOREIGN
- DEVELOPING/DEVELOPED
- RICH/POOR
- BLACK/WHITE
- **US/THEM**

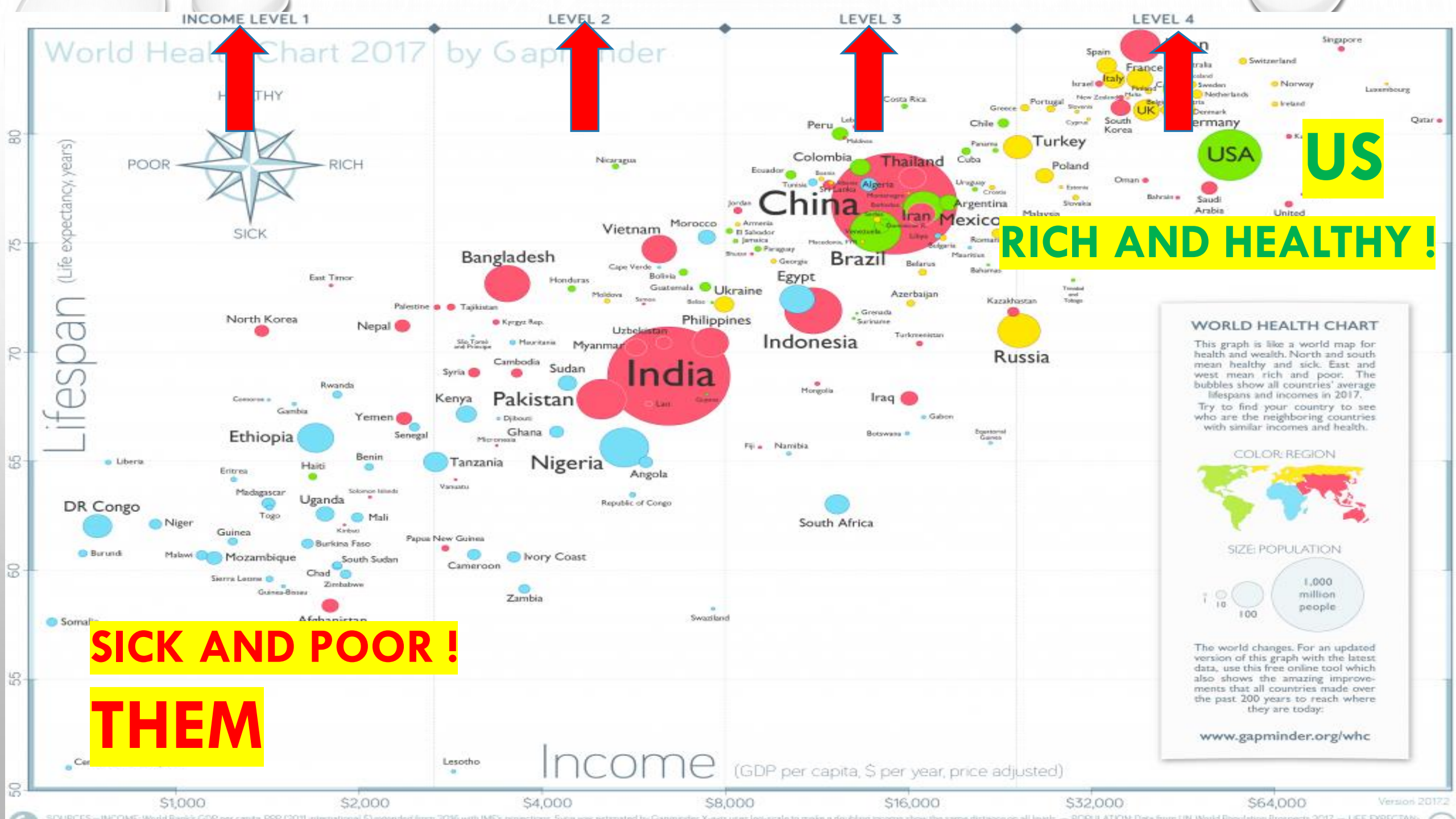
THE WORLD



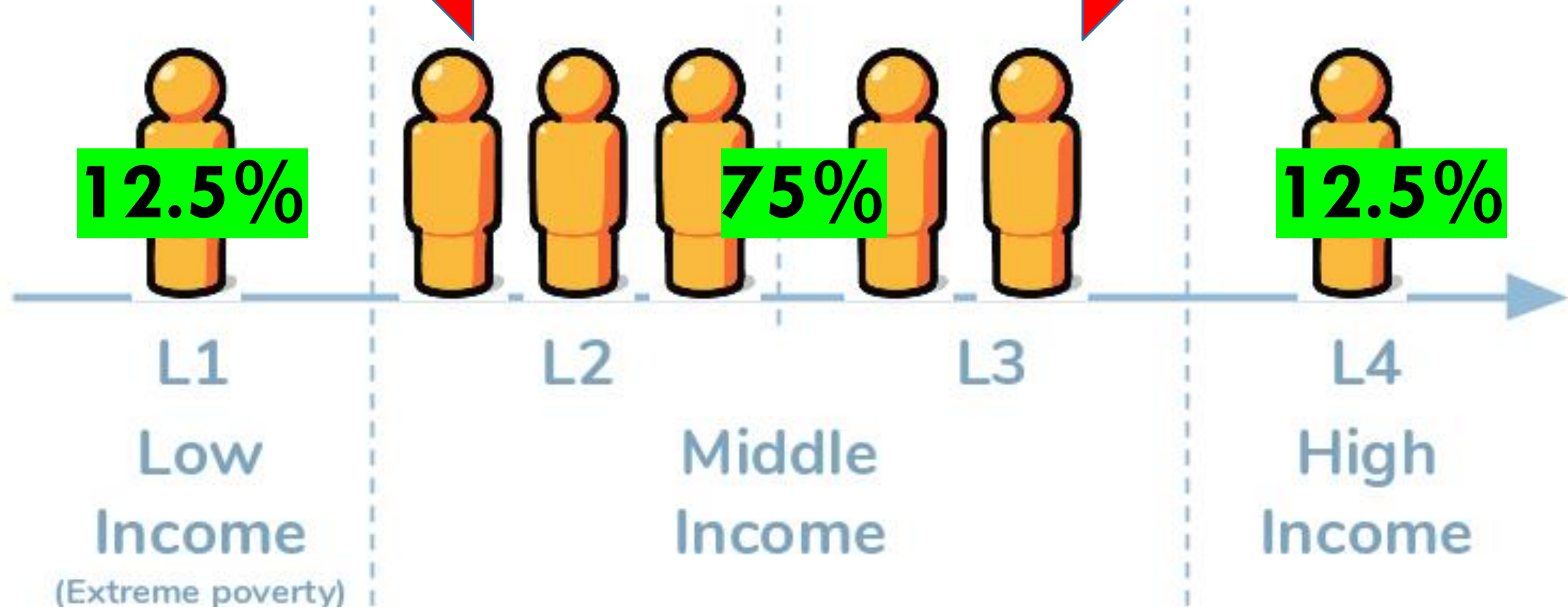
THEM

THE GAP !

US



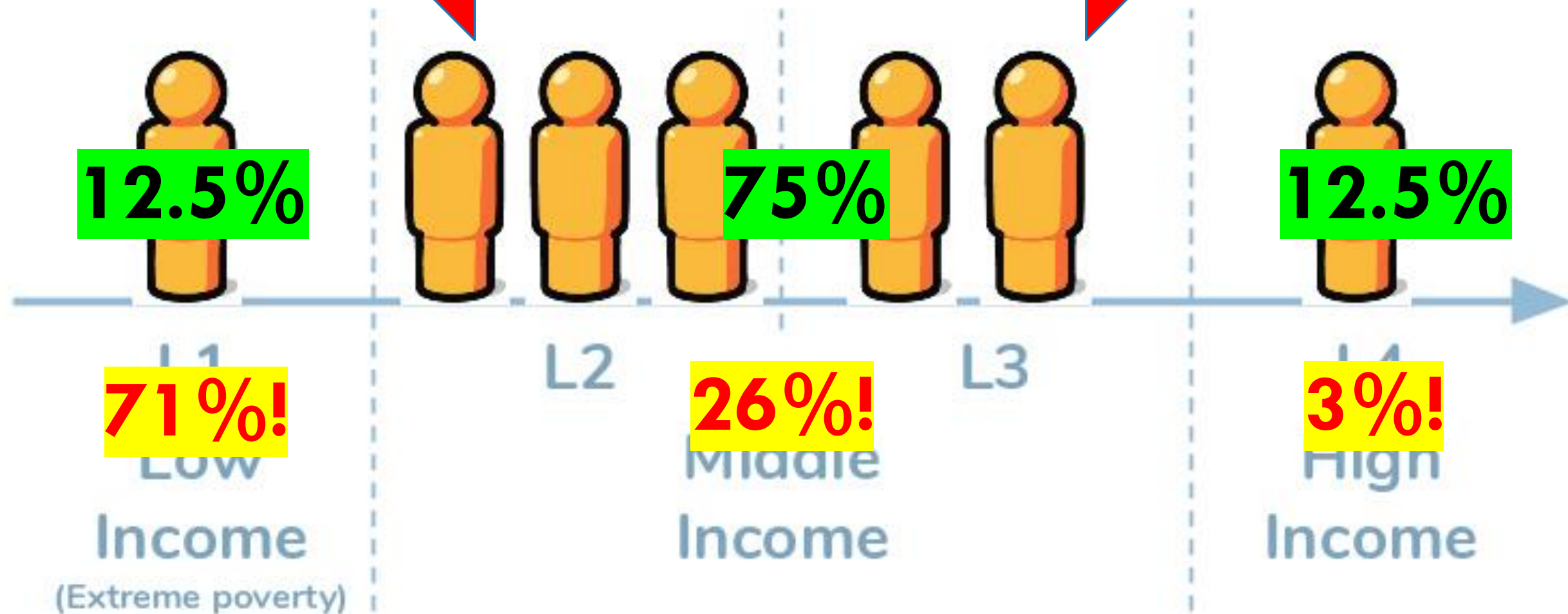
WORLD POPULATION (billion) by four income levels





- **10,024** PEOPLE
- **12** COUNTRIES
- WHERE DOES THE MAJORITY OF THE WORLD POPULATION LIVE
- **LOW INCOME** COUNTRIES ?
- **MIDDLE INCOME** COUNTRIES ?
- **HIGH INCOME** COUNTRIES ?

WORLD POPULATION (billion) by four income levels



**WHY SHOULD WE
WORRY ABOUT
THE DIFFERENCE
BETWEEN **FACTS**
AND
PERCEPTIONS ?**





*Decisions,
Decisions.*

PERCEPTIONS

FACTS

.....OUR DECISION THINKING

FAST

- **DRIVEN BY PERCEPTIONS**
- **WORKS AUTOMATICALLY
THROUGH SHORT CUTS
IMPULSES AND INTUITION**
- **USING AS APPROPRIATE
RELEVANT COGNITIVE BIASES**
- **QUICK BUT ERROR PRONE**

SLOW

- **DRIVEN BY FACTS**
- **USED FOR PROBLEMS WHOSE
SOLUTION IS NOT IMMEDIATELY
OBVIOUS**
- **REQUIRES ANALYSIS OF
LOGICAL RELATIONSHIPS**
- **SLOW BUT RELIABLE**

**“A bat and a ball cost \$1.10
in total. The bat costs \$1.00
more than the ball. How much
does the ball cost?”**

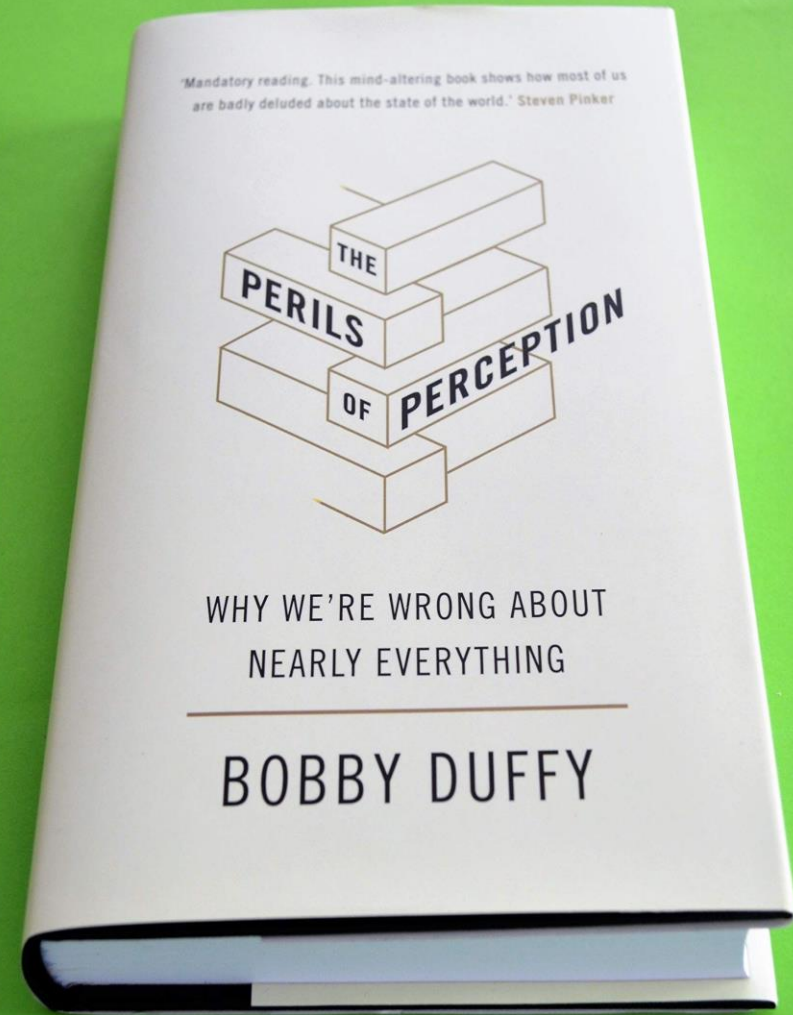
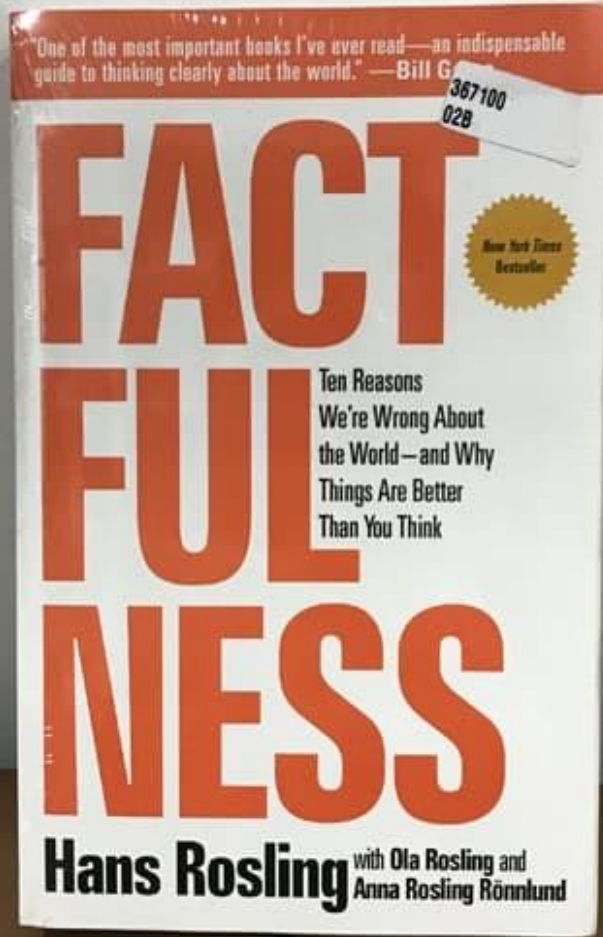
**“INCREASINGLY WE BECOME SO
SECURE IN OUR BUBBLES THAT WE
START ACCEPTING ONLY
INFORMATION, WHETHER IT’S TRUE
OR NOT, THAT FITS OUR
PERCEPTIONS , INSTEAD OF
BASING OUR PERCEPTIONS ON
THE FACTS THAT ARE OUT THERE”**



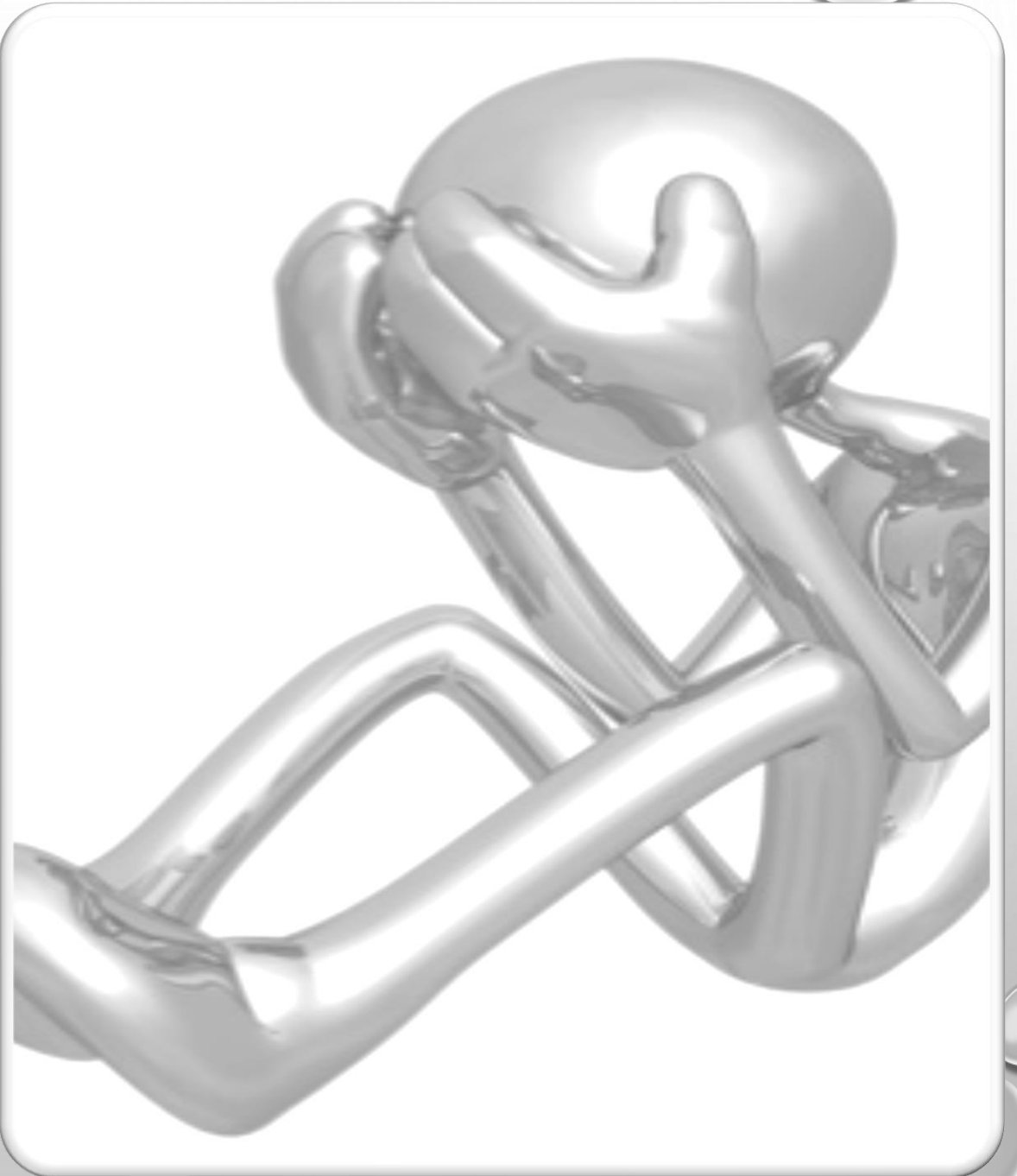


FACTS

- **GAPMINDER** WHICH USES VISUALLY POWERFUL PRESENTATIONS OF GLOBAL AND LOCAL **FACTS** AND **PERCEPTIONS**
- **OUR WORLD IN DATA** WHICH PRESENTS AUTHORITATIVE RESEARCH AND DATA ON A WIDE VARIETY OF GLOBAL **FACTS**
- **HUMAN PROGRESS** WHICH PROVIDES **FACTS** ON GLOBAL PROGRESS IN A WIDE VARIETY OF AREAS
- **IPSOS** WHICH ANALYSES GLOBALLY AND LOCALLY **MISPERCEPTIONS** AND THE REASONS FOR THEM



**MY MIND'S MADE
UP; DON'T
CONFUSE ME
WITH NEW FACTS !**





"When the facts change, I change my mind.
What do you do, sir?"

- John Maynard Keynes

**“NOTHING IN LIFE IS
TO BE *FEARED*, ONLY
TO BE *UNDERSTOOD* .
NOW IS THE TIME TO
UNDERSTAND *MORE*
THAT WE MAY FEAR
LESS”**

**MARIE CURIE 1867-
1934**



Thanks for listening
and watching
Any questions?