

## "A Defense of Food Science - considering the importance of networks in the modern food system"

According to 2016-17 IFT President John Coupland, “One of the privileges of serving as president of IFT is the opportunity to meet so many members all working in some aspect of the food system. I’m struck by both how diverse their job roles are yet how personally connected they remain – there is rarely more than two degrees of separation between people working in food! This network is an important part of the dominant industrial food system where goods and services are traded globally to provide safe, nutritious foods for sale to consumers.” In this talk, John will examine the nature of this global system, consider some of the ways it has been criticized, and offer some suggestions that we as working food scientists can implement to make it better.

# A Defense of Food Science - Considering the importance of networks in the modern food system

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President, IFT

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food magazine. more at: [www.lky.ph](http://www.lky.ph)

Sep 10, 2014 · 12 min read

## The End of the World as We Know It

Why reimagining the way we live is the only way we'll survive. Rachel Khong interviews Michael Pollan.



Photograph by Dark Igloo | Cookies by Sugarbuilt Cookies

<https://medium.com/lucky-peach/the-end-of-the-world-as-we-know-it-c9a0c05b243d#.i9v8prbi9>

**I sometimes find myself wondering whether we can posit or imagine a food science that is actually improving food in the way that cooking for most of its history succeeded in doing.**

**Theoretically we should be able to do this. We came up with fermentation; we came up with cooking with fire. We've had food science and food technology now for a hundred and fifty years, and so far, not so good.**

**So far we haven't done anything that useful. But we understand a lot more, and we should be able to improve on things, not just make money and entertain people.**

— Michael Pollan



**“Don’t eat anything your  
great-grandmother  
wouldn’t recognize as  
food.” Michael Pollan**

“2014-08-02-Garlic harvest” by Flickr user Martin Delisle used under a Creative Commons License





Image: <http://rusholmearchive.org/birch-fire-station>

- 
- **Sunday:** small roast with boiled and roast potatoes, gravy, veg (brassica of some kind, carrots, turnips), plus appropriate sauces/condiments (apple, sage and onion, mint) plus pudding (milk pudding, steamed pudding)
  - **Monday & Tuesday:** leftover roast plus boiled potatoes fried plus veg as before, or stewed, or made into shepherd's pie or rissoles plus pudding
  - **Wednesday & Thursday:** Some kind of offal perhaps (liver and onions, braised heart) or meat pie or meat pudding (steak and kidney, roly poly), or Lancashire hot pot plus boiled potatoes plus veg. And pudding
  - **Friday:** Fish, usually white plus parsley sauce plus boiled potatoes plus veg. And pudding
  - **Saturday:** Sausage and mashed potato plus the usual

(menu suggestion  
from Rachel Lauden)

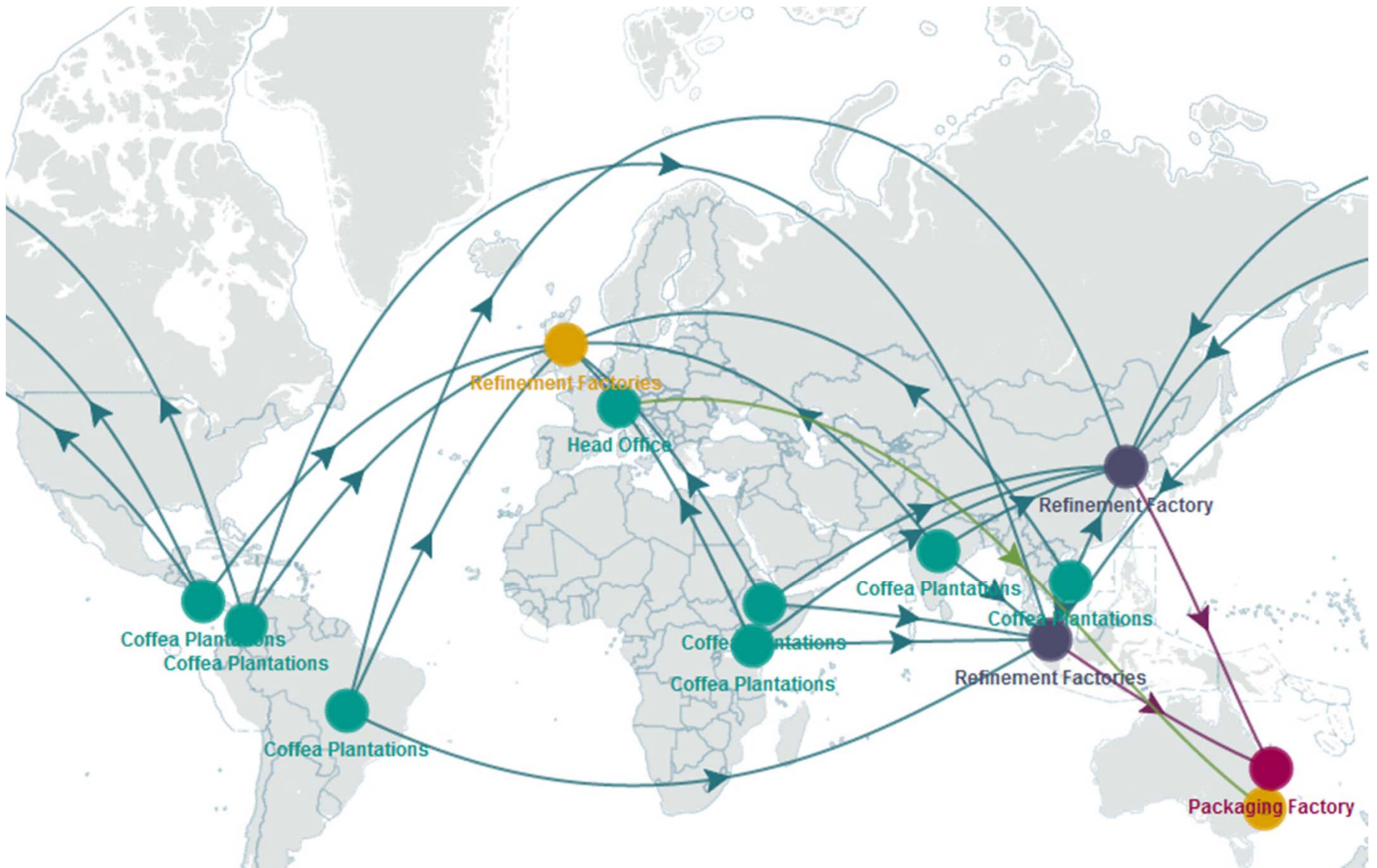
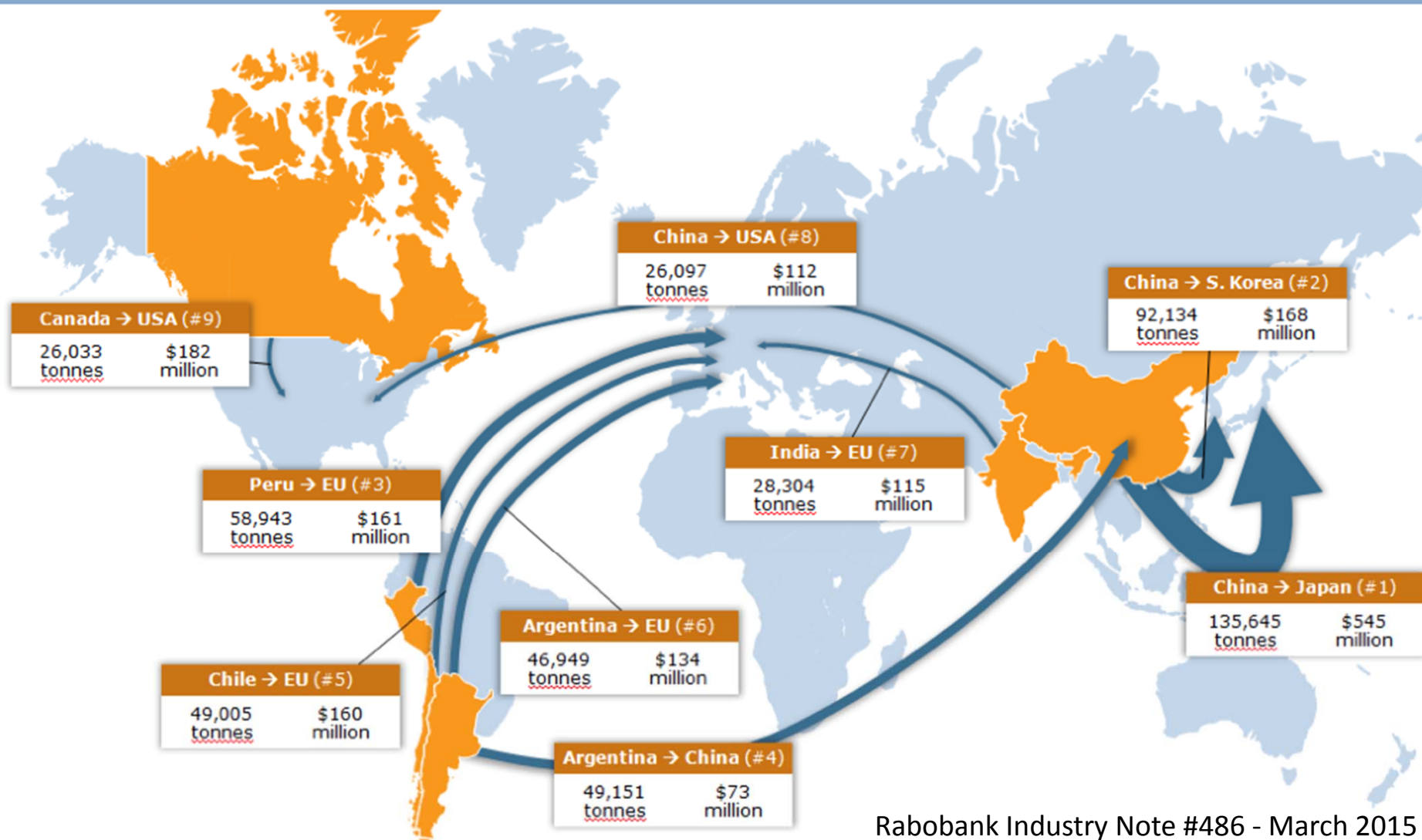


Figure 10: Global mollusc trade







“The power of population is indefinitely greater than the power in the earth to produce subsistence for man.”

- Thomas Malthus, *An Essay on the Principle of Population*, 1798

# Population by country, 1500 to 2000

Total Population in the last five centuries (Clio-Infra Data)

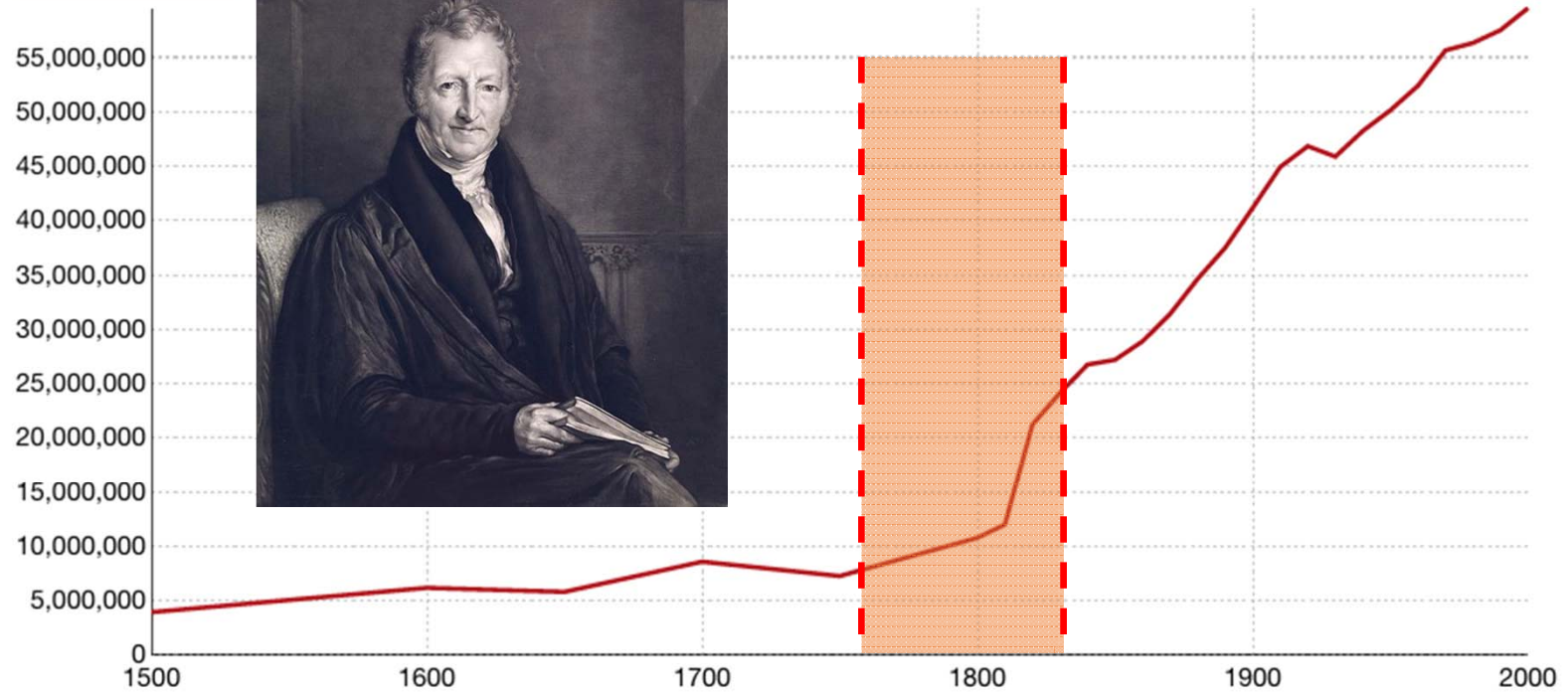


CHART

DATA

SOURCES

United Kingdom



Data source: [Population by Country \(Clio Infra\)](#)

[OurWorldInData.org/world-population-growth/](https://OurWorldInData.org/world-population-growth/) • CC BY-SA

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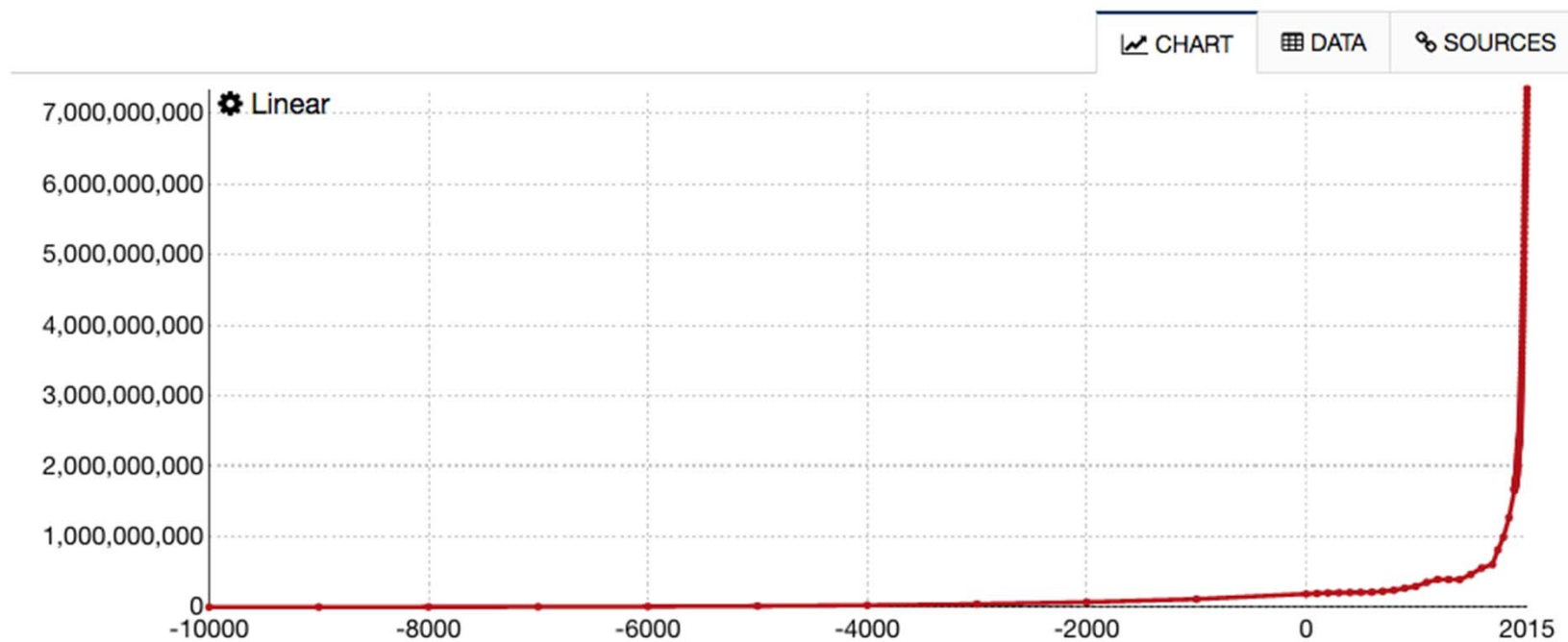
## World population since 10,000 BCE (OurWorldInData series)



You can download the full annual dataset here: [bit.ly/AnnualWorldPop](https://bit.ly/AnnualWorldPop)

Data sources:

- Before 1900: History Database of the Global Environment (HYDE).
  - Between 1900 and 1940: the UN publication 'The World at Six Billion'.
  - Between 1950 and 2015: the UN's World Population Prospects: The 2015 Revision.
- (the annual series is interpolated using splines)



Data source: [World Population over 12000 years \(various sources\)](#)

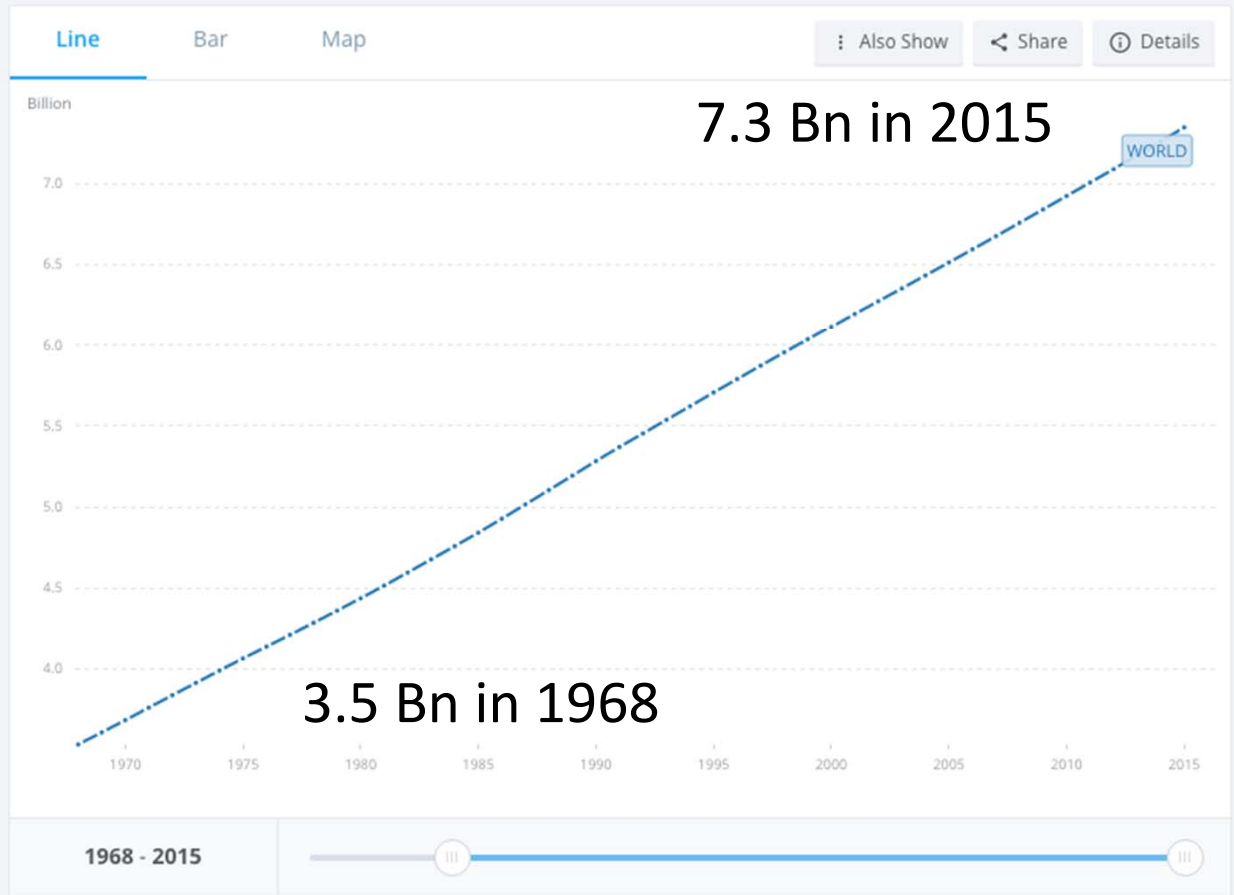
[OurWorldInData.org/world-population-growth/](https://OurWorldInData.org/world-population-growth/) • CC BY-SA

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# Population, total

( 1 ) United Nations Population Division. World Population Prospects, ( 2 ) Census reports and other statistical publications from national statistical offices, ( 3 ) Eurostat: Demographic Statistics, ( 4 ) United Nations Statistical Division. Population and Vital Statistics Report ( various years ), ( 5 ) U.S. Census Bureau: International Database, and ( 6 ) Secretariat of the Pacific Community: Statistics and Demography Programme.

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World  
population  
change in my  
lifetime

# Per person food consumption in India and Great Britain

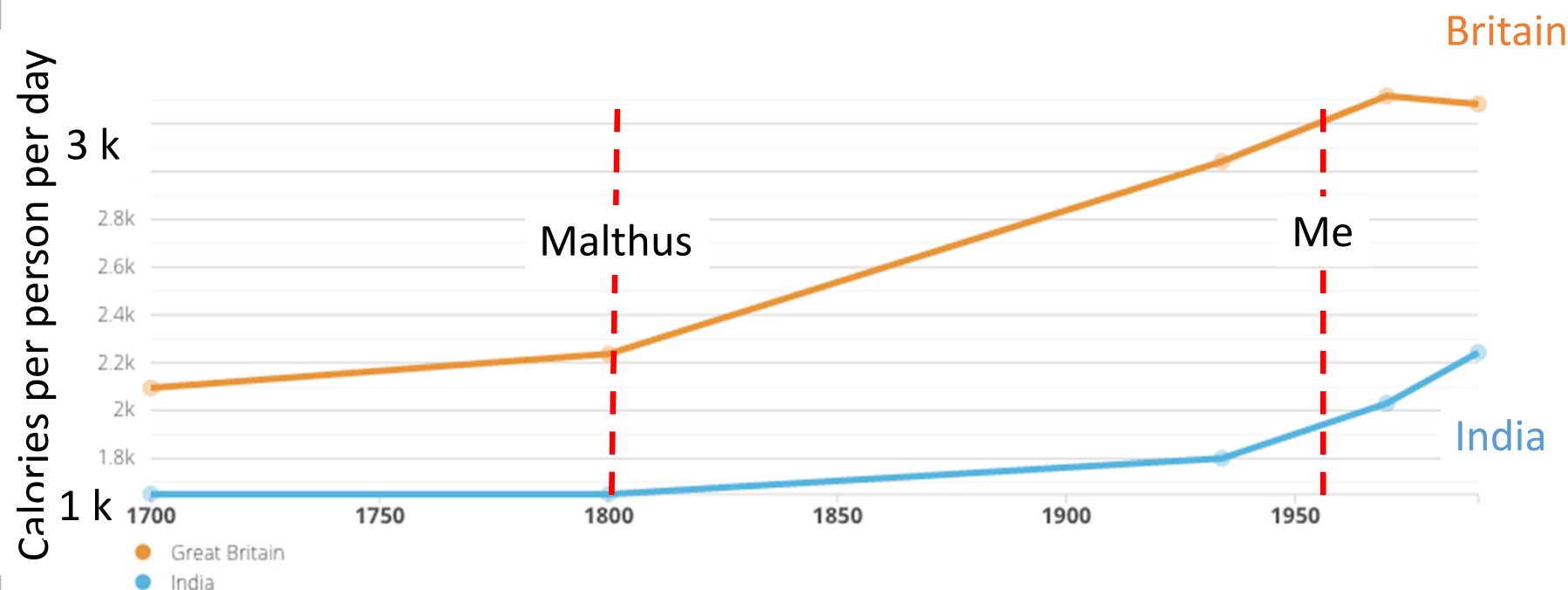


HumanProgress

Explore the state of humanity with data, charts & maps

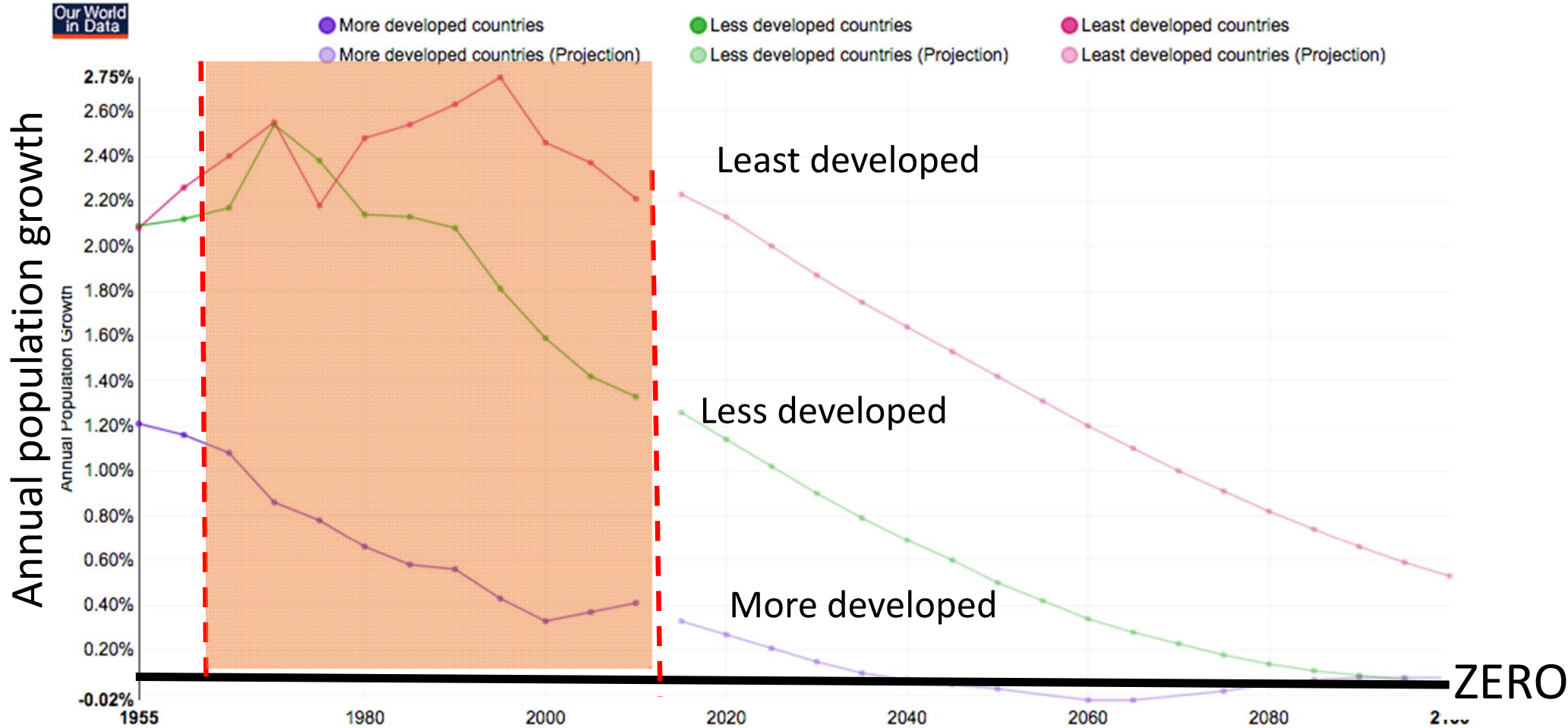


CALORIES



Source: Deepak Lal, Poverty and Progress, Cato, 2013, Updated: September 22, 2014 ?

# Annual population growth rate by world regions, 1955-2010 and projections until 2100<sup>8</sup>



The author Max Roser licensed this visualisation under a [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license. You are welcome to share but please refer to its source where you find more information: [www.OurWorldinData.org/data/population-growth-vital-statistics/world-population-growth](https://www.OurWorldinData.org/data/population-growth-vital-statistics/world-population-growth)  
Data source: United Nations Population Division (projections show the 'medium variant')

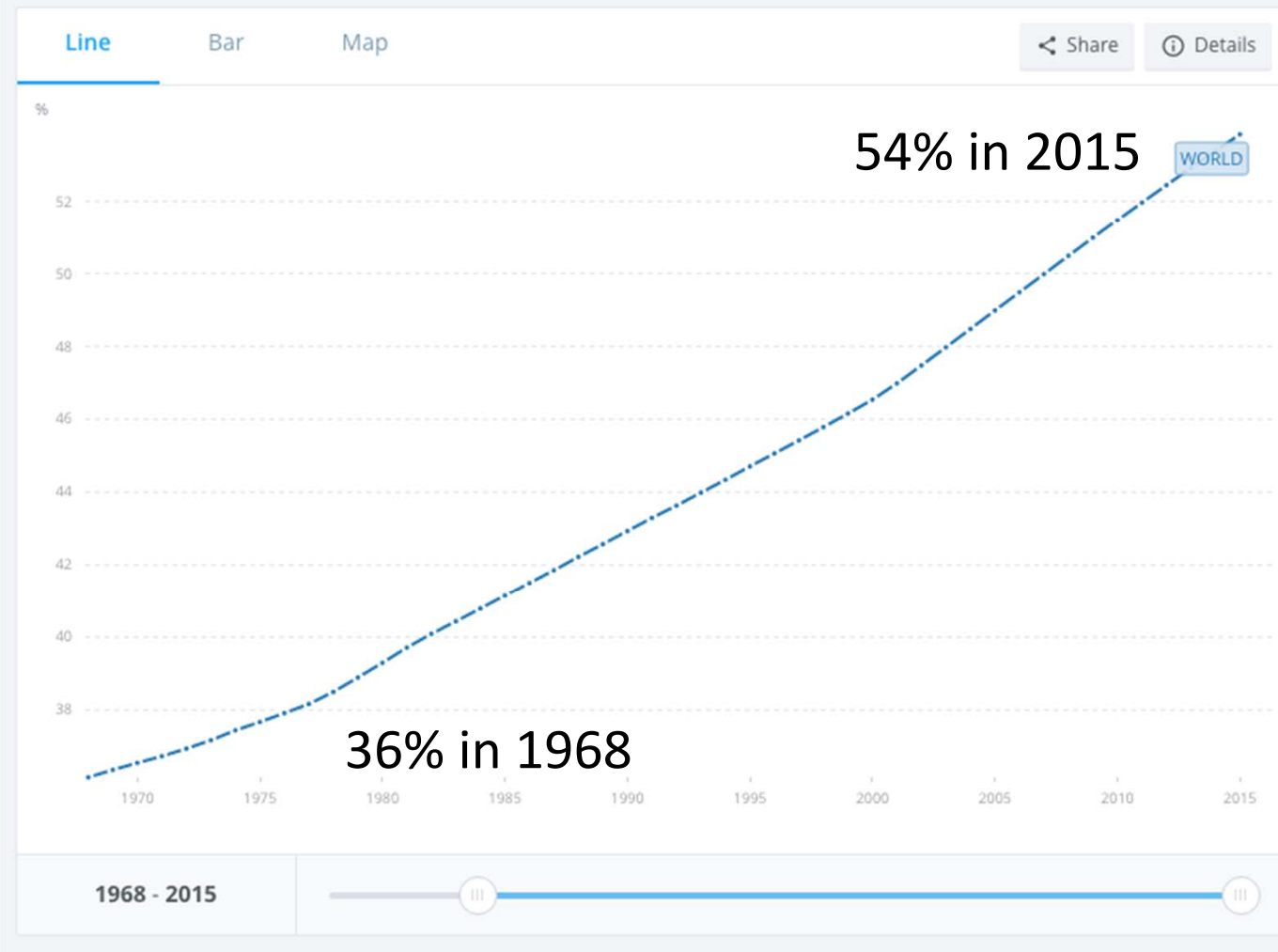
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## Urban population (% of total)

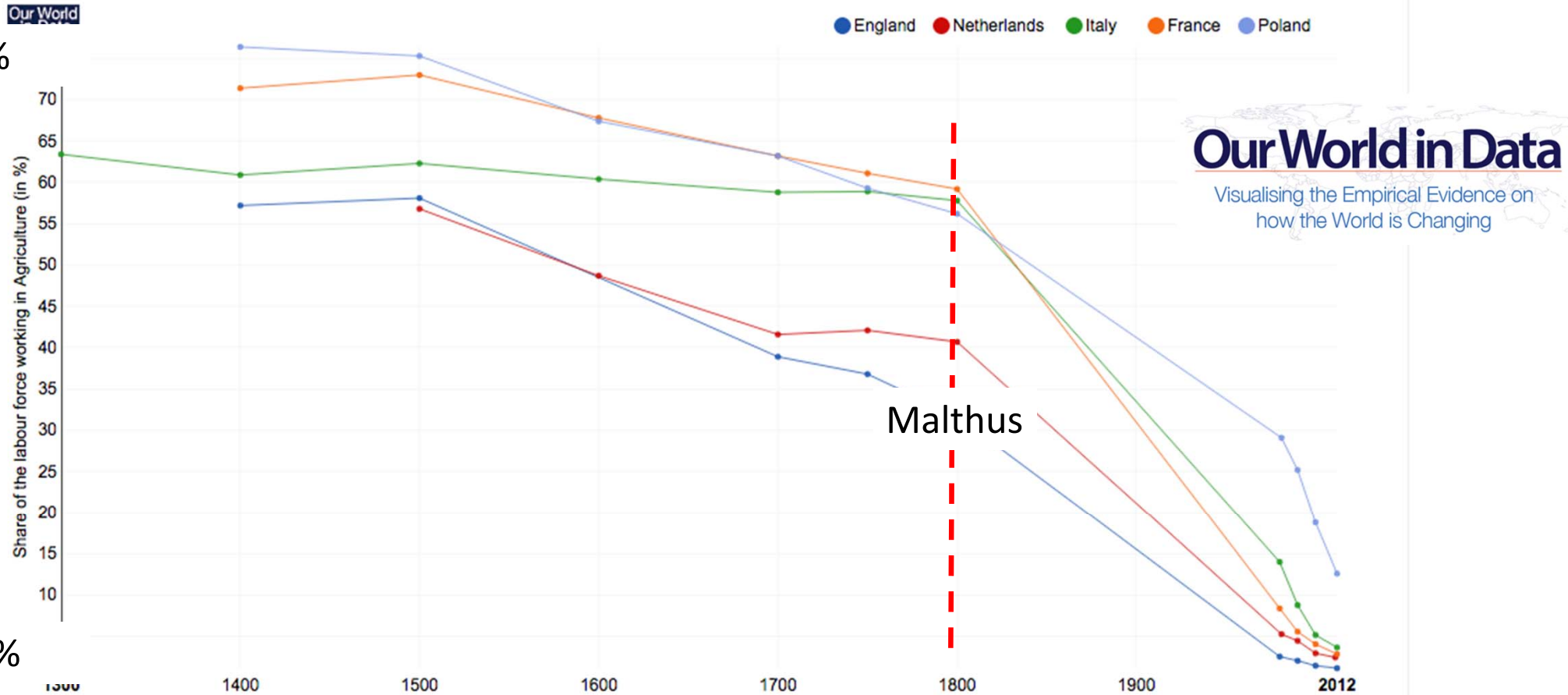
United Nations, World Urbanization Prospects.

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Urban  
population  
change in my  
lifetime

# Share of the labor force working in agriculture 1300-2012



The author Max Roser licensed this visualisation under a [CC BY-SA license](#). You are welcome to share but please refer to its source where you find more information: [www.OurWorldinData.org/data/food-agriculture/agricultural-employment](http://www.OurWorldinData.org/data/food-agriculture/agricultural-employment)  
Data Sources: before 1800: Broadberry & Gardner (2013) – after 1980: World Bank

[Full screen view](#)

[Download Data](#)

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# World population living in extreme poverty, 1820-2015

OurWorld  
in Data

Extreme poverty is defined as living at a consumption (or income) level below 1.90 "international \$" per day. International \$ are adjusted for price differences between countries and for price changes over time (inflation).

CHART

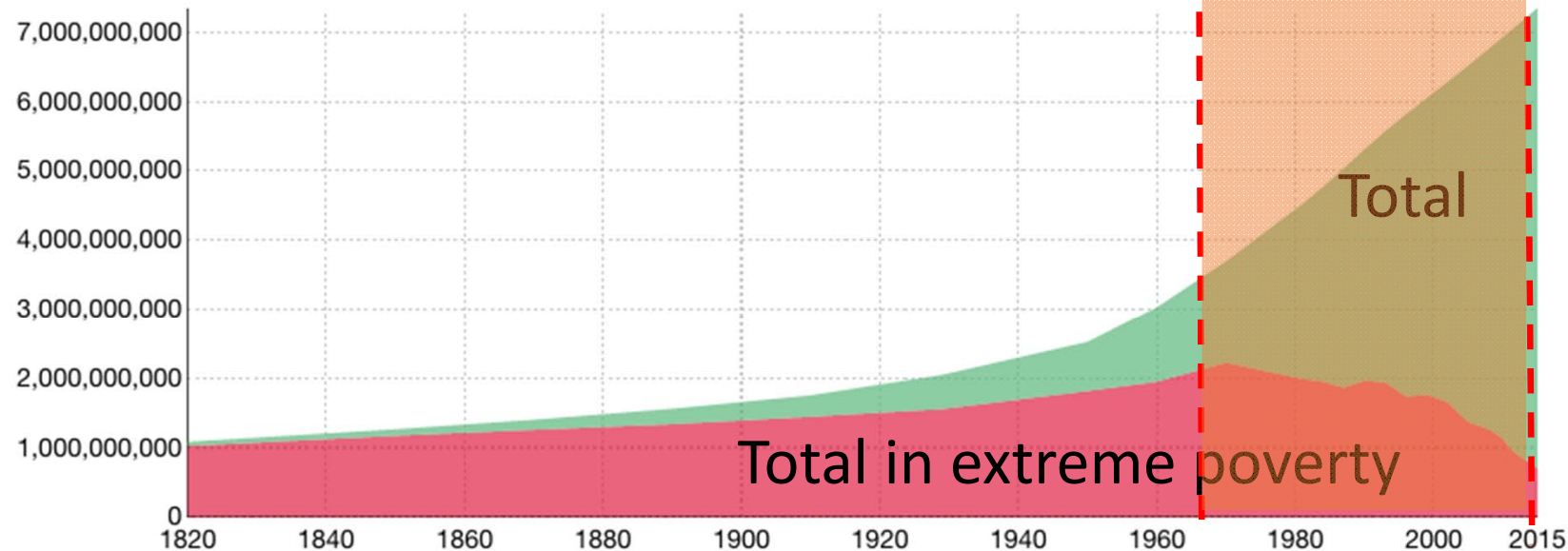
DATA

SOURCES

World - Number of people living in extreme poverty

World - Number of people not in extreme poverty

● Absolute ○ Relative



Data source: World Poverty in absolute numbers (Max Roser based on World Bank and Bourguignon and Morrisson (2002))

[OurWorldInData.org/world-poverty/](https://OurWorldInData.org/world-poverty/) • CC BY-SA



As enunciated today, "progress" is simply a comparative of which we have not settled the superlative.

- GK Chesterton, "On the negative spirit", 1905

“Progress” has done great things but what about...

- The environment (sustainability, the future)
- Animals
- Exploited poor
- Regional (rural) cultures/communities
- Health
- Our relationships to one another
- Our relationships with God
- Appropriateness of new foods (ritual pollution)

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THE WORLD

## Rethinking the Meat-Guzzler



**HERE'S THE BEEF** This feed lot in in California can accommodate up to 100,000 head of cattle.

By MARK BITTMAN

Published: January 27, 2008

an for The New York Times

Hampton Creek's Just Mayo. Credit: Business Wire

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# Capitalism has done great things but what about...

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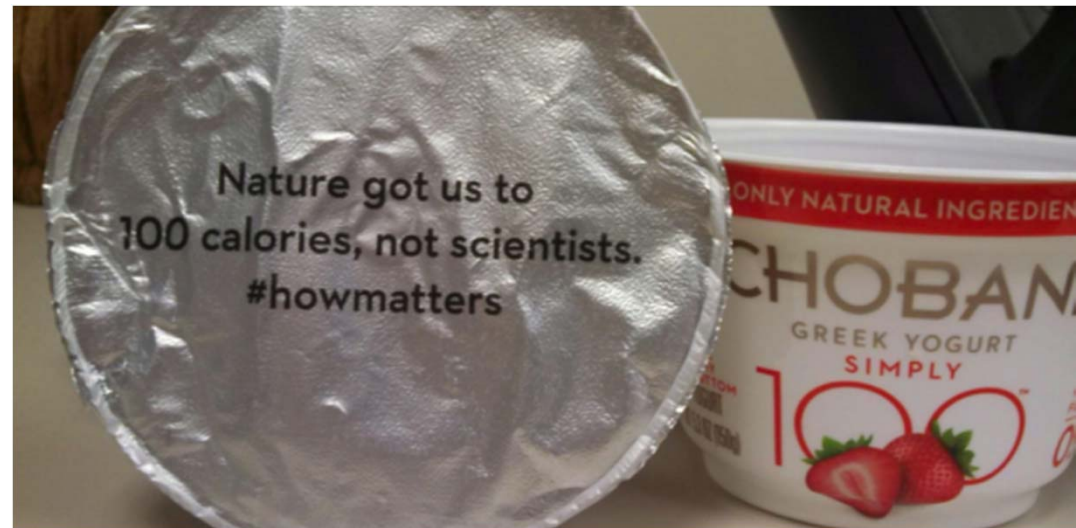
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**SUBWAY: Stop Using Dangerous Azodicarbonamide in Your Bread!**



**Azodicarbonamide is the same chemical used to make yoga mats and shoe rubber.** It's banned all over the globe because it's linked to respiratory issues, allergies and asthma. **This is not eating fresh!**

**North America** **VS** **UK, EU, Australia**

Subway uses **Azodicarbonamide** in their 9-Grain Wheat, 9-Grain Honey Oat, Italian White, Italian Herbs & Cheese, Parmesan/Oregano, Roasted Garlic, Sourdough, and Monterrey Cheddar breads.

Subway **does not** use Azodicarbonamide in other countries.



**We deserve the same safe ingredients that Subway uses around the world.**

**SIGN THE PETITION:** [foodbabe.com/subway](http://foodbabe.com/subway)  
#NoWaySubway

“Issues” are concerns;  
“Cases” are specific technologies

- The **issues** overlap in different ways in different **cases**
- The **issues** are valued in different ways by different people
- Food companies adopt **cases** to respond to perceptions of people’s concerns about **issues**
- Food scientists have a useful perspective on **issues** based on specific expertise in the **cases**
- Food scientists have a duty to their employers
- Most food scientists are good people who want to make the world better by addressing **issues**



# Division Networking Reception #IFTConnect



Image: IFT