

Great Urban Divides

Houston Futures Spring Gathering

13 April 2013

HOW CAN CITIES ACCOMMODATE
BILLIONS
OF NEW URBAN DWELLERS?

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To the Houston Futures Gathering Participants:

As cities grow bigger and more complex, the gaps between least and most are increasing:

- Economically... More income divide
- Technologically, the more tech stretches upwards, others are left behind
- Greater differences culturally, re: what's important, esp at lower incomes

When population change is out of sync with development, slums or ghost towns emerge. Cities are failing, not adapting to needs quickly enough. But change is hard and takes decades.

I hope you left the gathering wearing a new set of urban futures glasses, with a greater sense of issues and what you bring to the table as a futurist. Work with governments, think tanks, universities, and consultancies. Become active in your community, urge them to see beyond today's development plan. Envision future cities as if legacies matter.

Was this event the most futurists to gather on the future of cities? Certainly in North America, maybe anywhere. Thanks for your engagement, it was a blast!

Cindy Frewen
@urbanverse

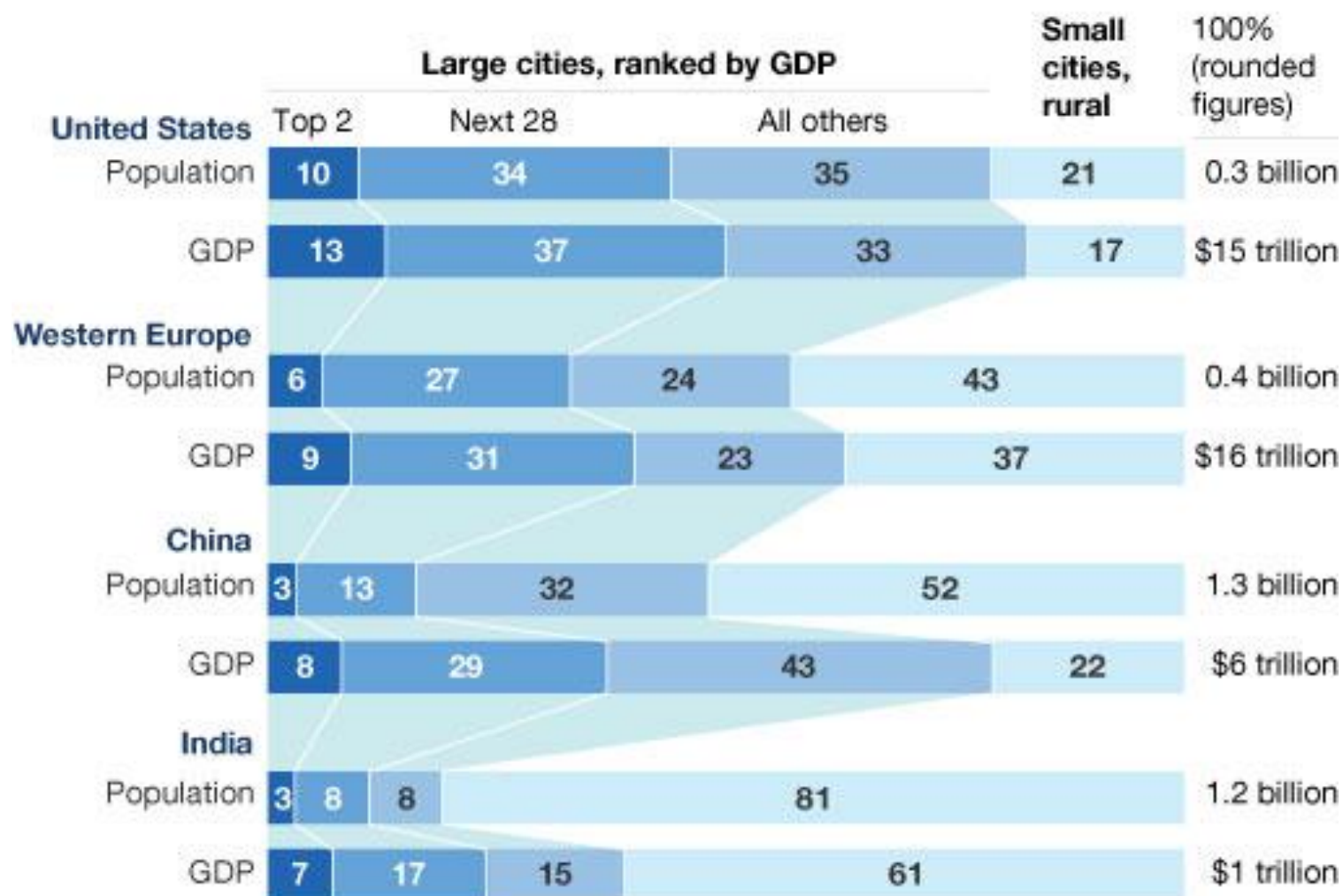
THE WORLD'S POPULATION, CONCENTRATED

If the world's 6.9 billion people lived in one city, how large would that city be if it were as dense as...



The strength of the US economy rests on a broad base of large cities.

Cities segmented by contribution to total GDP, 2010, cumulative % of total¹



¹GDP measured at real exchange rate; some figures may not sum to 100%, because of rounding.

Source: McKinsey Global Institute analysis

URBAN IDENTITIES

What is type is your city, neighborhood, building, house?

Ecotopia

Nature
Conserve
Planet first
Environmental

Utopia

Community
Shared
All together, love
Social

Fortress

Separation
Tribal, barriers
Fear, avoidance
Politics

Hi Tech

Progress, BAS
Competition, winning
Efficient, convenient
Techonomics

An aerial photograph of San Luis Obispo, California, in the 1970s. The image shows a dense urban area with a mix of residential and commercial buildings. A prominent feature is a large, curved road that runs through the center of the city. To the left, there is a large, rectangular building, possibly a school or government building. In the bottom left corner, there is a large, oval-shaped area that appears to be a sports field or stadium. The overall layout of the city is somewhat irregular, with buildings and roads following a winding path. The text "Happiness Gap Turnaround Cities" is overlaid in the top left corner, and "San Luis Obispo, CA 1970s" is overlaid in the bottom left corner.

Happiness Gap Turnaround Cities

San Luis Obispo, CA
1970s

San Luis Obispo

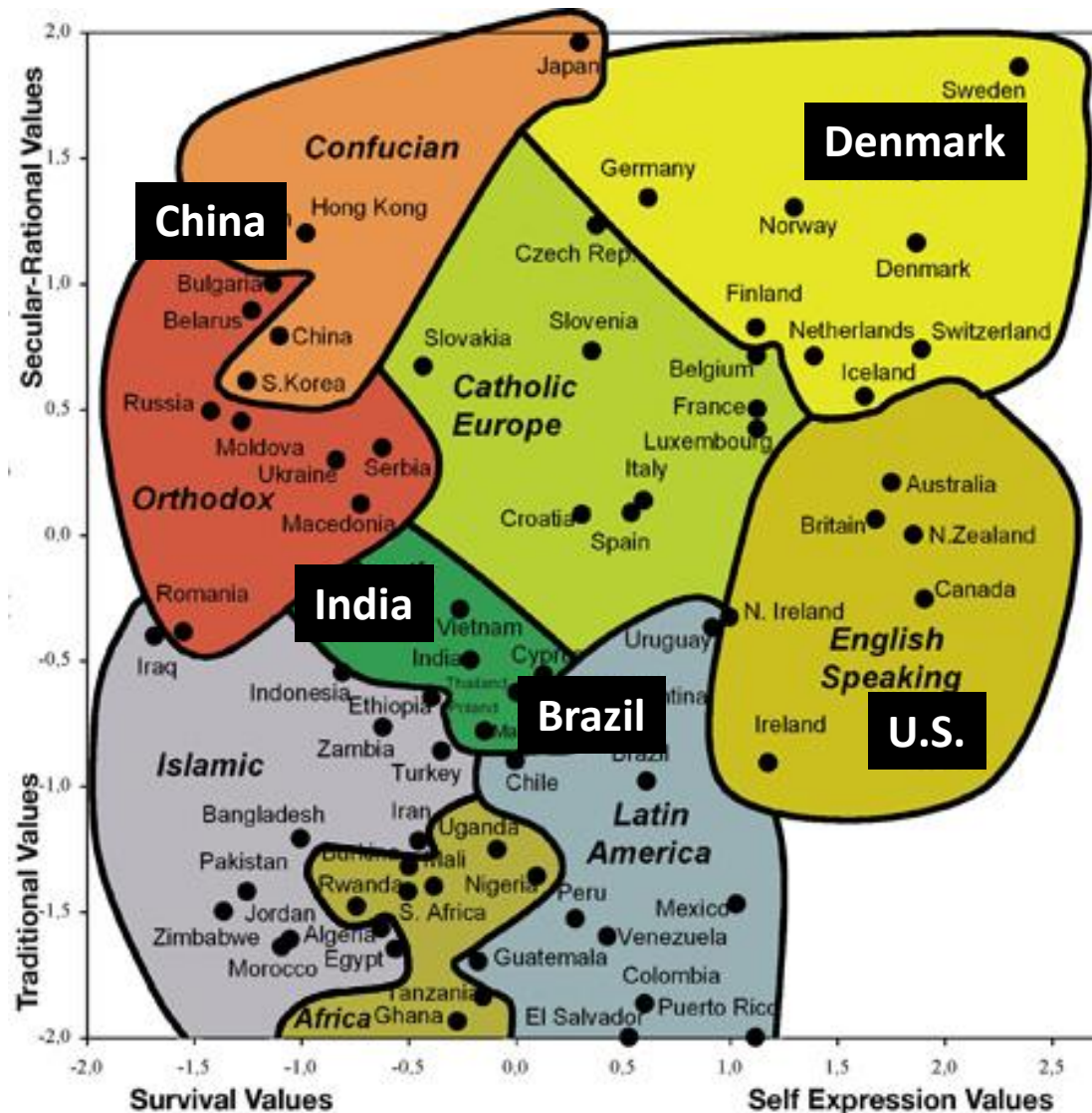
Happiest City in America





San Luis Obispo
No commutes, cool place

Ask about identity first, it's in the place, buildings, and stories



Hofstede's Cultural Dimensions



LOS ANGELES

INDIVIDUALISM

EGALITARIAN

SHORT-TERM ORIENTATION



MUMBAI

COLLECTIVISM

HIGH POWER DISTANCE

LONG-TERM ORIENTATION

LOS ANGELES



MUMBAI INDIA





LOS ANGELES

INDIVIDUALISM

EGALITARIAN

SHORT-TERM ORIENTATION

Institutional public housing
filled with hate, crime



MUMBAI

COLLECTIVISM

HIGH POWER DISTANCE

LONG-TERM ORIENTATION

Strong communities,
terrible infrastructure

Causal Layered Analysis (CLA)



litany

2m in slums; illegal immigrants; high crime/gangs

systems

Fear of deportation; low wages; property rights, taxes, utility/rent payments

worldview

Individuals fault vs. deserve better = disenfranchised

myth/metaphor

Hollywood, bright lights, opportunity = Temporary visitors, better future



litany

6m in slums; rural migrants; high unemployment; desperate poverty and sanitation; safe

systems

Farms ruined; families strong; building community thru collective industry

worldview

Best they can do; future better through education

myth/metaphor

Gateway and “goddess of water” = continuity; connected to place & people

Growth Gap + Shrink Gap

More population, not enough city

Less population, too much city



MUMBAI WILL
OVERTAKE
TOKYO AS THE WORLD'S
LARGEST CITY
BY 2050 WITH NEARLY

40
MILLION
INHABITANTS

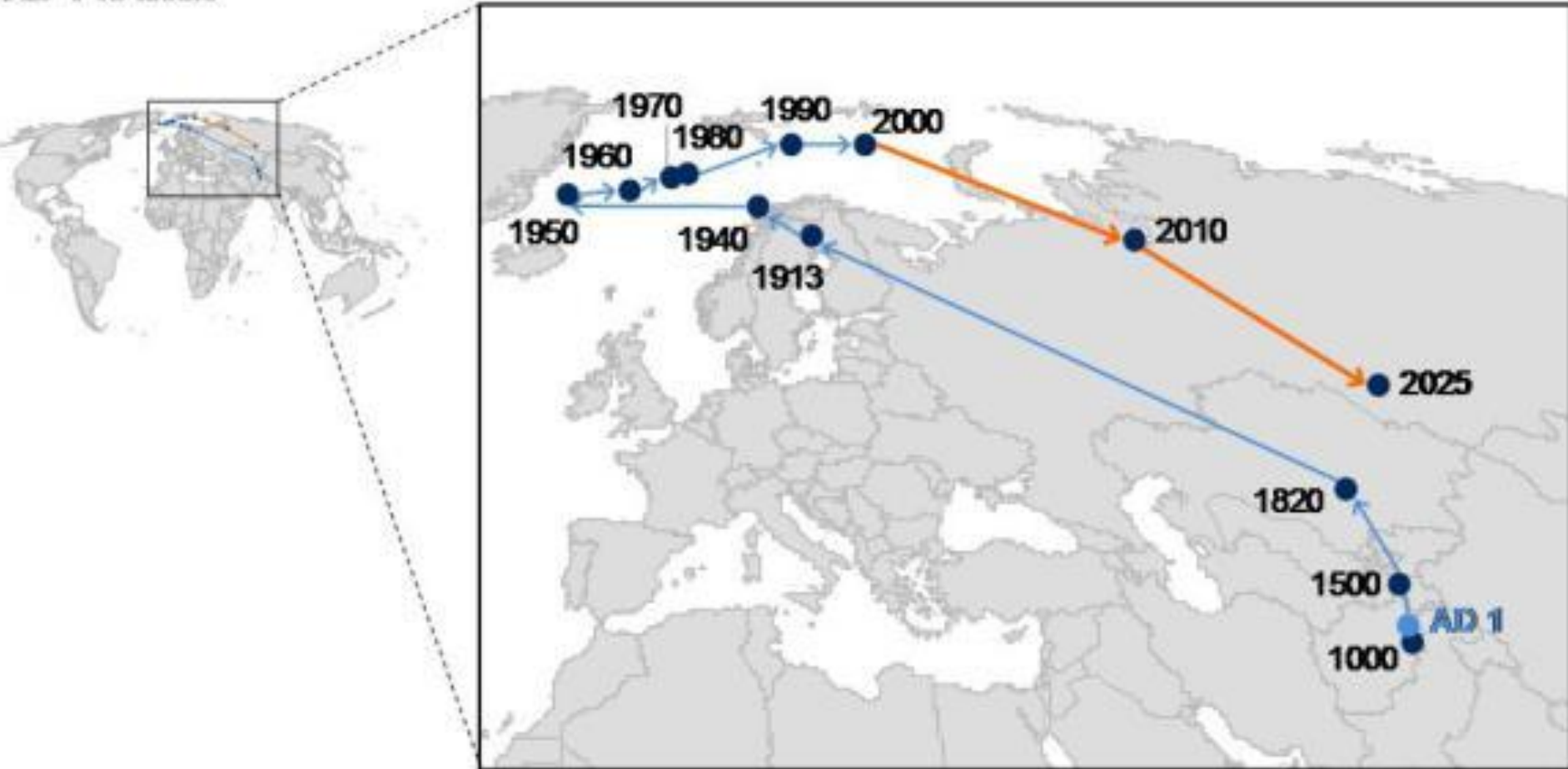
LARGEST CITIES OVER TIME

- 100 AD ROME 450,000
- 1000 CORDOVA SPAIN 450,000
- 1500 BEIJING 675,000
- 1800 BEIJING 1,100,000
- 1900 LONDON 6,500,000
- 1950 NEW YORK CITY 12,500,000
- 2000 TOKYO 26,400,000
- 2050 NEW DELHI 45,000,000
Or Mumbai

By far the most rapid shift in the world's economic center of gravity happened in 2000–10, reversing previous decades of development

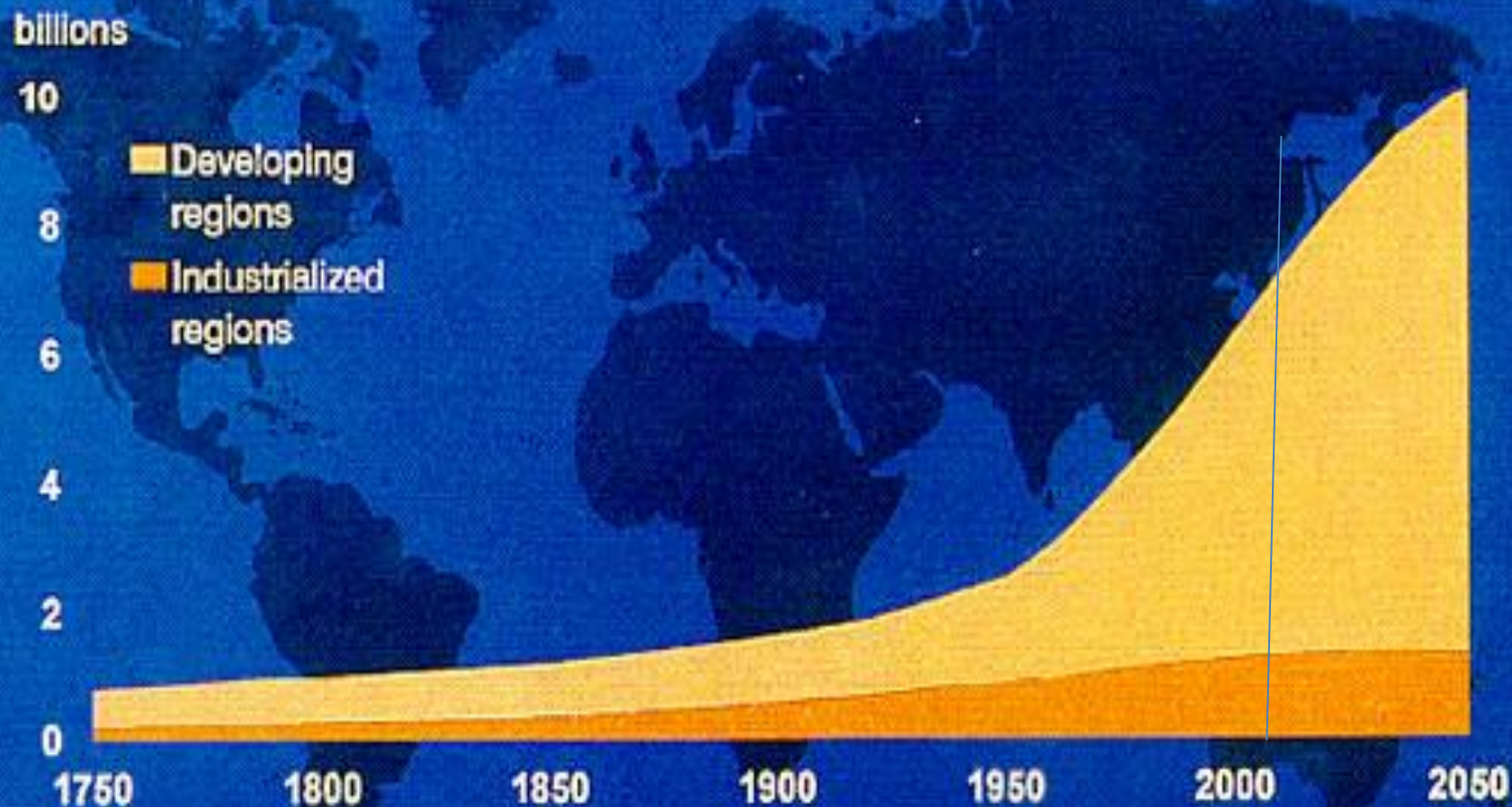
Evolution of the earth's economic center of gravity¹

AD 1 to 2025



¹ Economic center of gravity is calculated by weighting locations by GDP in three dimensions and projected to the nearest point on the earth's surface. The surface projection of the center of gravity shifts north over the course of the century, reflecting the fact that in three-dimensional space America and Asia are not only "next" to each other, but also "across" from each other.

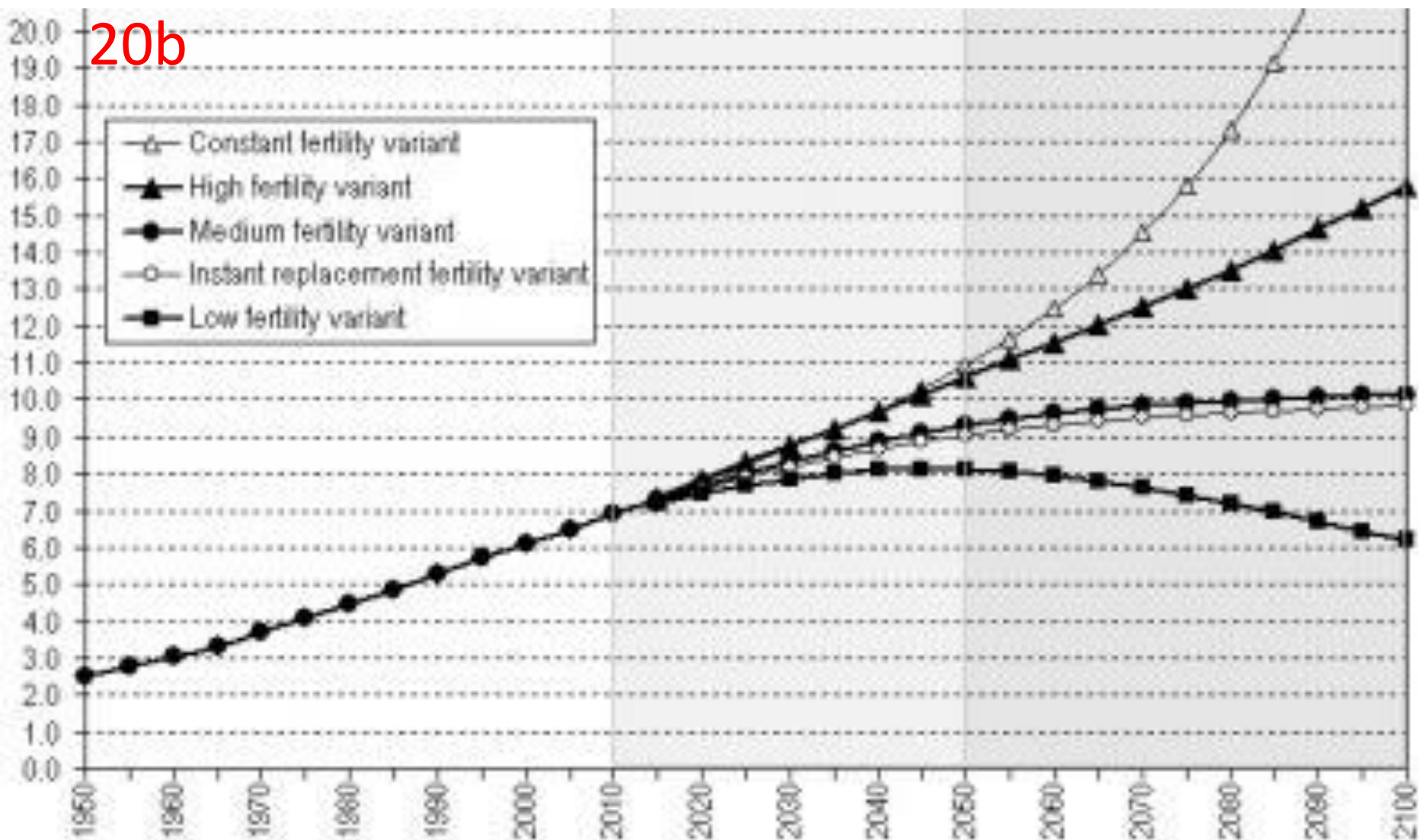
World Population Growth



World
Resources
Institute

Sources: United Nations Population Division and Population Reference Bureau, 1993.

20b



1950

2013

2050

2100

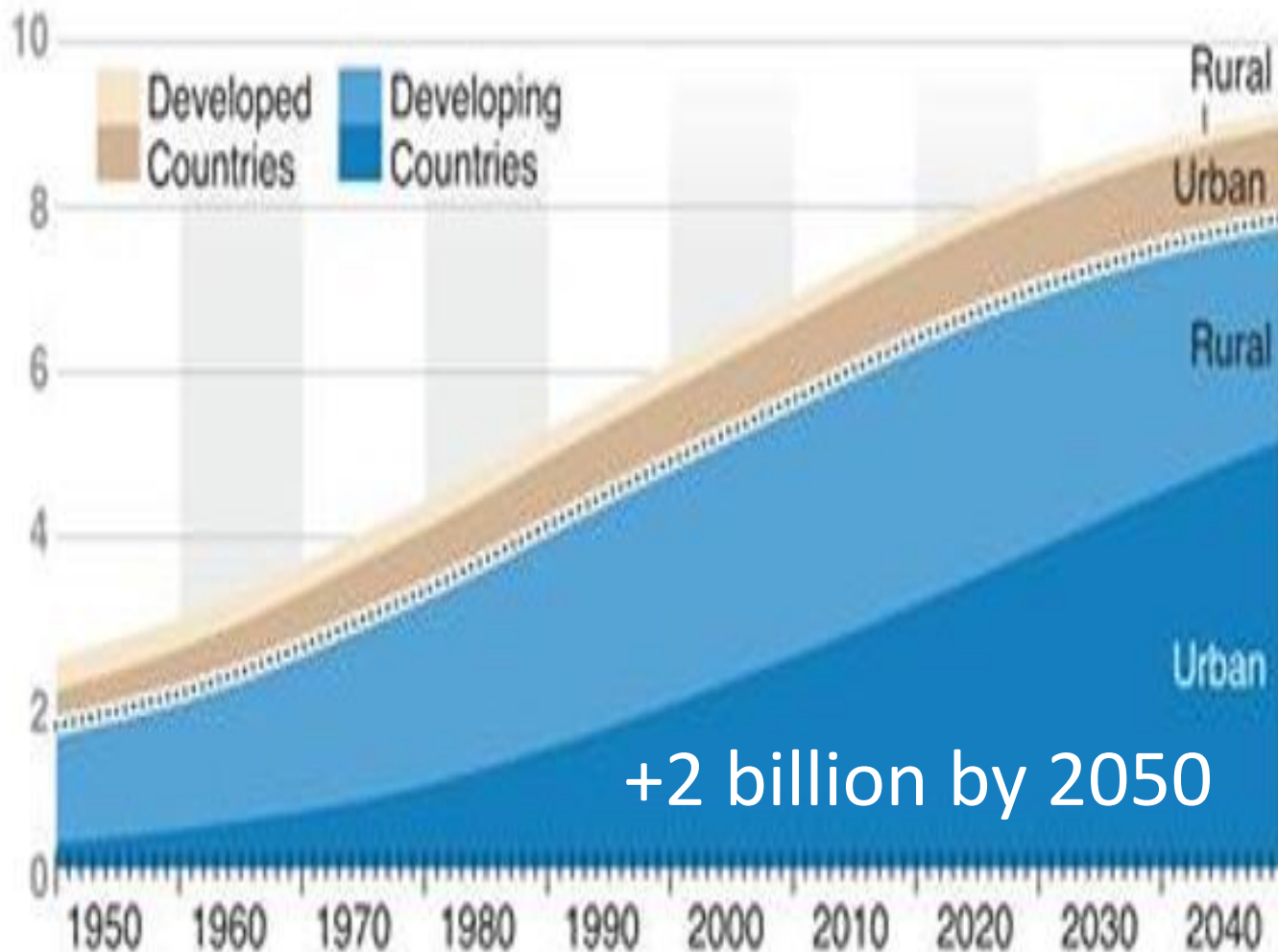
THE WORLD AT SEVEN BILLION

Reuters

URBANISATION

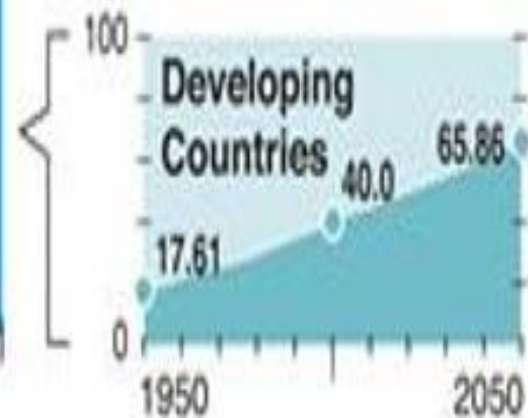
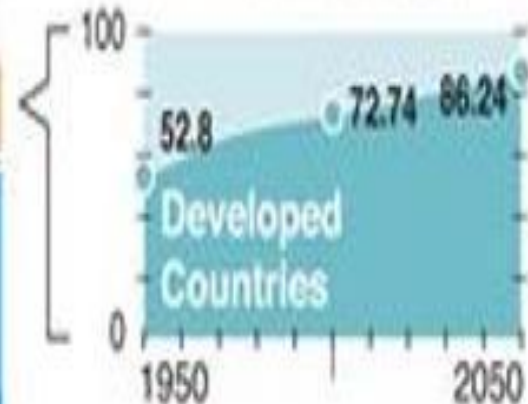
Almost all population growth in the next 40 years will be absorbed by cities in the developing world

GLOBAL URBAN-RURAL POPULATION Billions



+2 billion by 2050

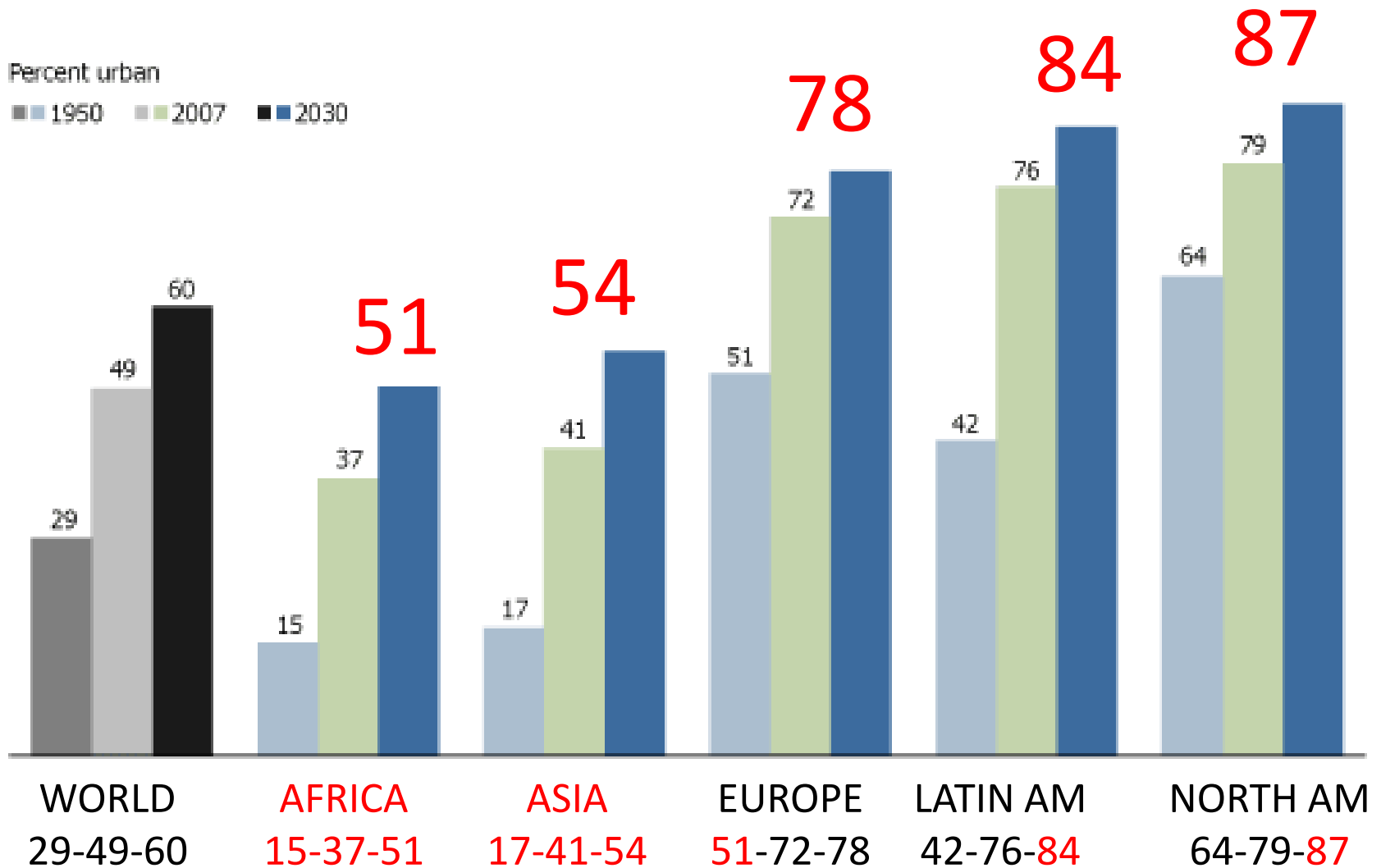
GLOBAL URBANISATION (%)



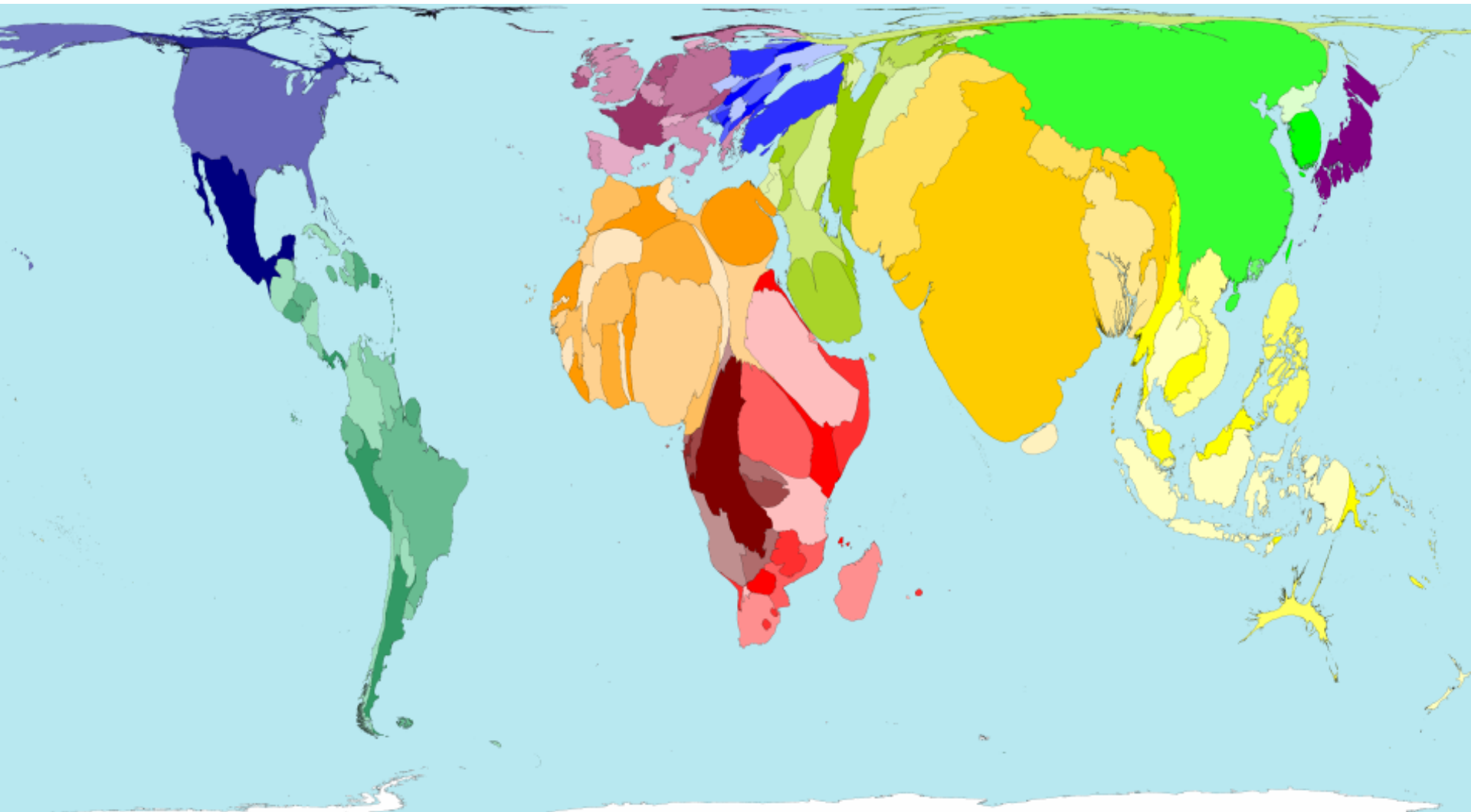
URBANIZATION 1950 – 2007 - 2030

Percent urban

■ 1950 ■ 2007 ■ 2030



WORLD POPULATION 2300



Shanghai 1990



Shanghai today



A Modern Ghost Town

Ordos China

Creating Construction, Not Culture



Rio de Janeiro



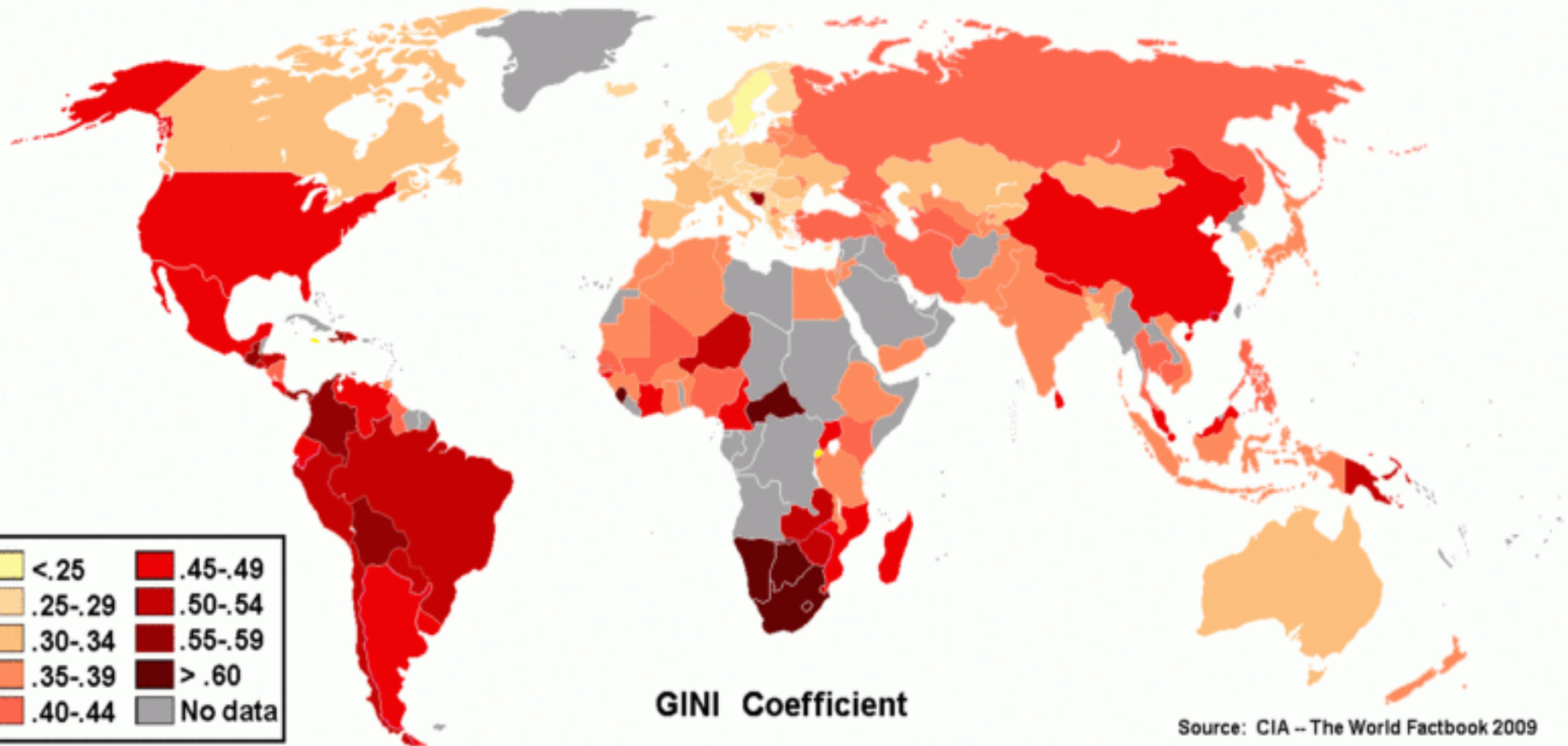
Equality Gap

CAN CITIES PROMOTE
SOCIAL JUSTICE AND GREATER
EQUALITY?

International curators

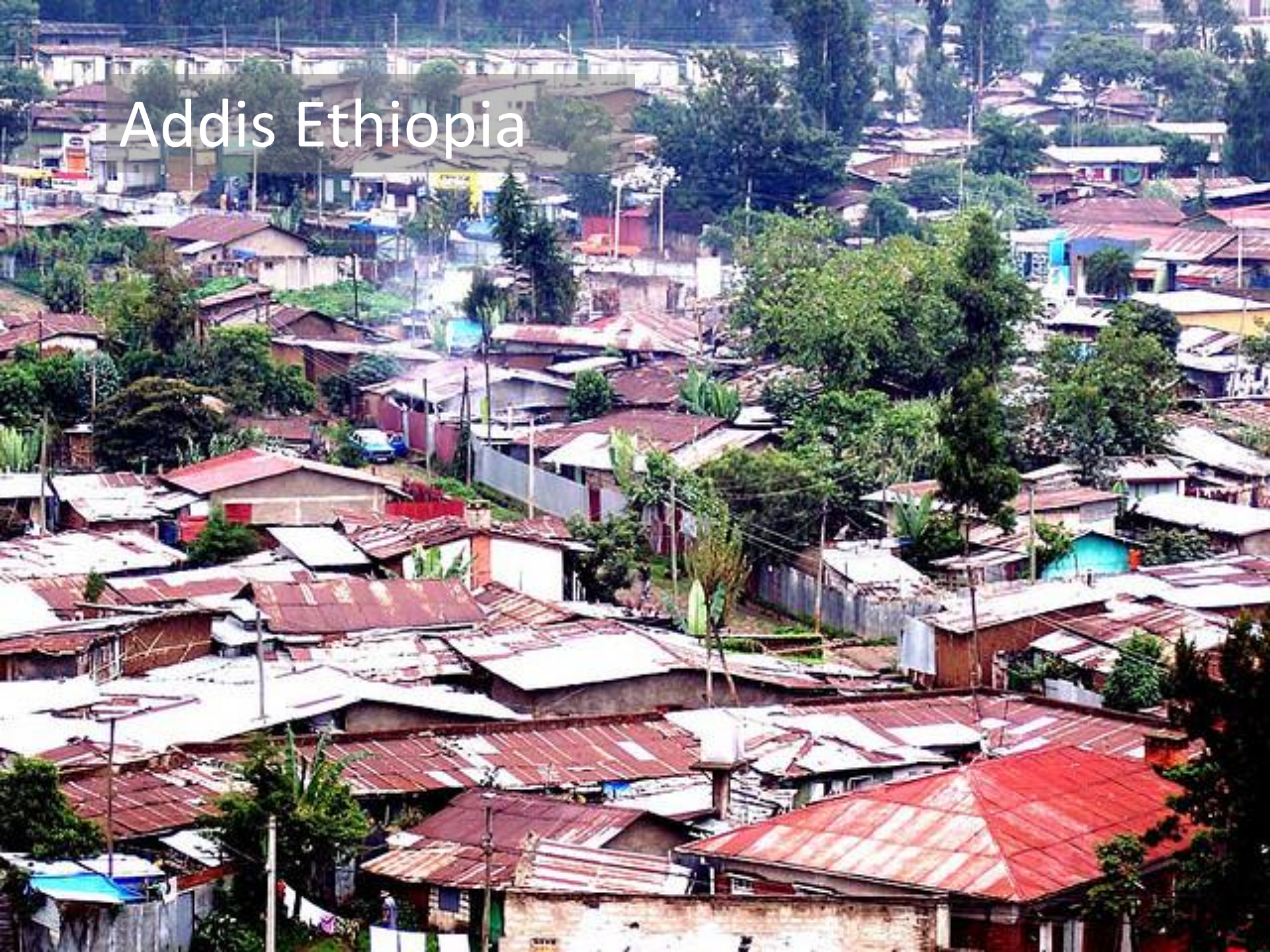
Tate Modern

INCOME DISTRIBUTION GAP



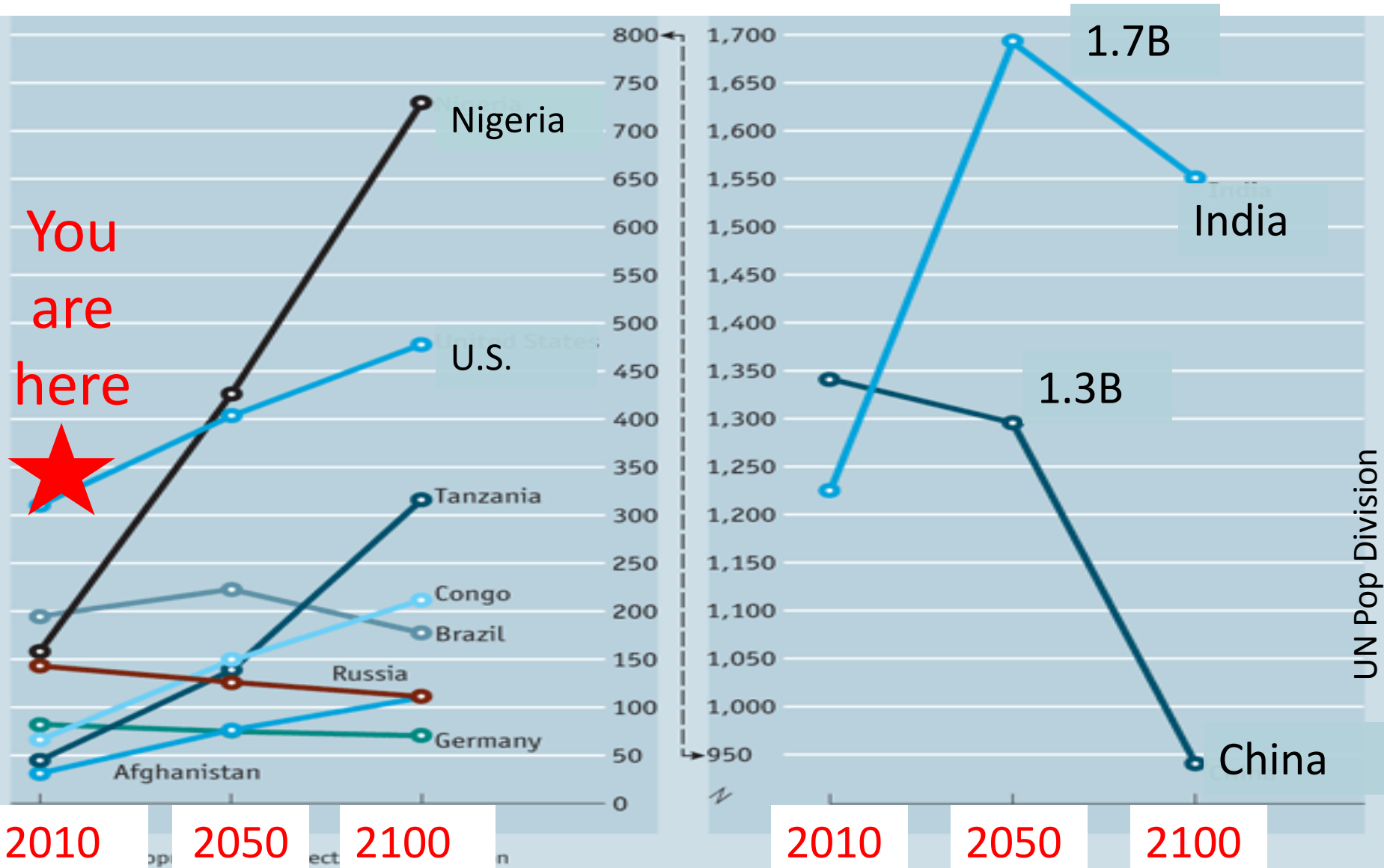
Gini Coefficient describes income inequality; 0 = all have equal income; 1 = one person has all the income.

Addis Ethiopia

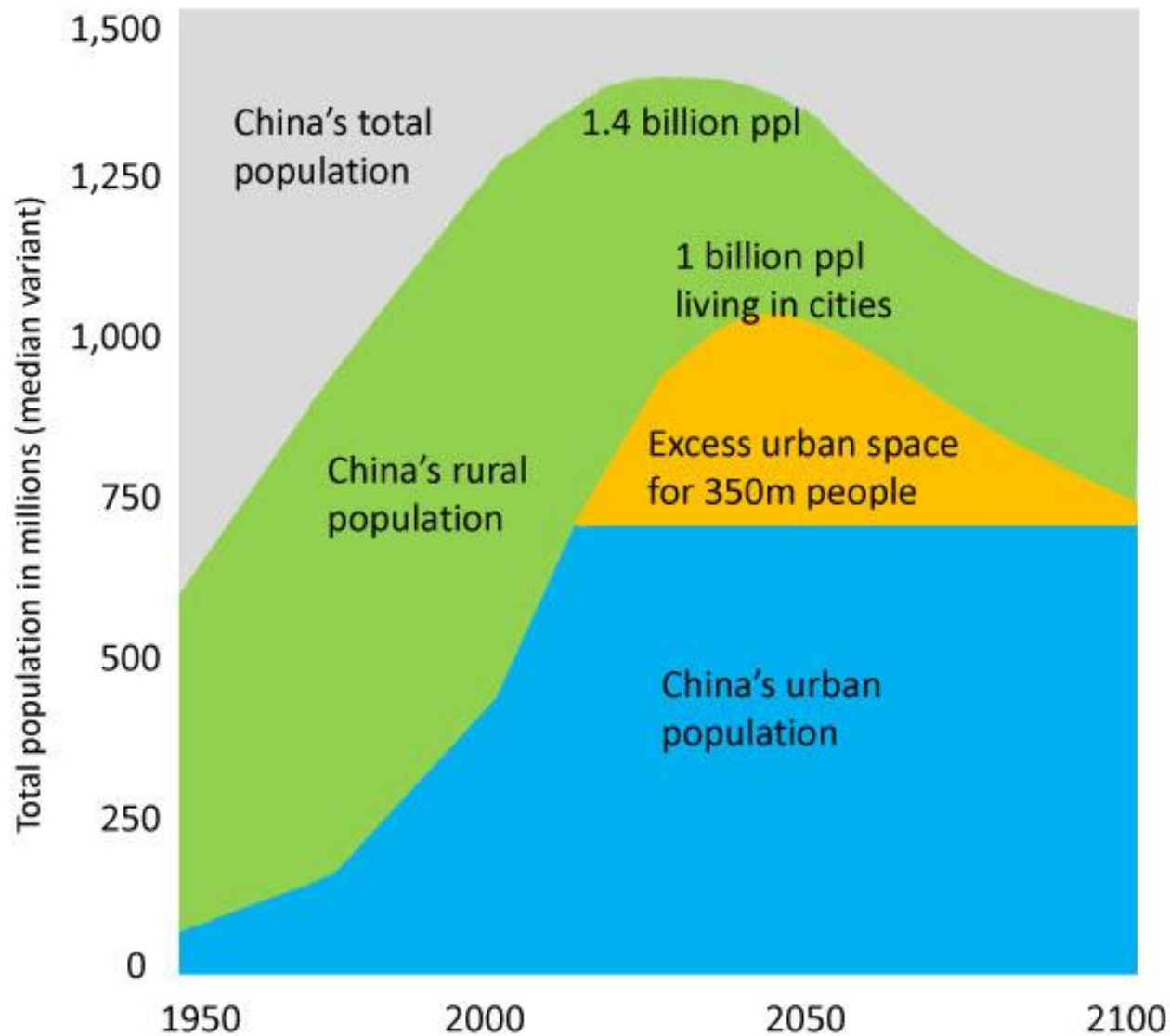


Future Gap – Peak Urban?

2010 - 2100



PEAK URBAN – SHRINKING CITY GAP



Source: UN Population Div. 2010 rev., Urbanization 2009 rev.

CINDY FREWEN 2012



Vision and Leadership
Innovation Gap

CAN CITIES BE IMPROVED
BY DESIGN?

Tate Modern

Riverview Redevelopment

Kansas City Missouri



Riverview Redevelopment

FREWEN ARCHITECTS INC

Curitiba Brazil

Turnaround Cities





Tech Divide
High tech cities
Low tech cities





Makers

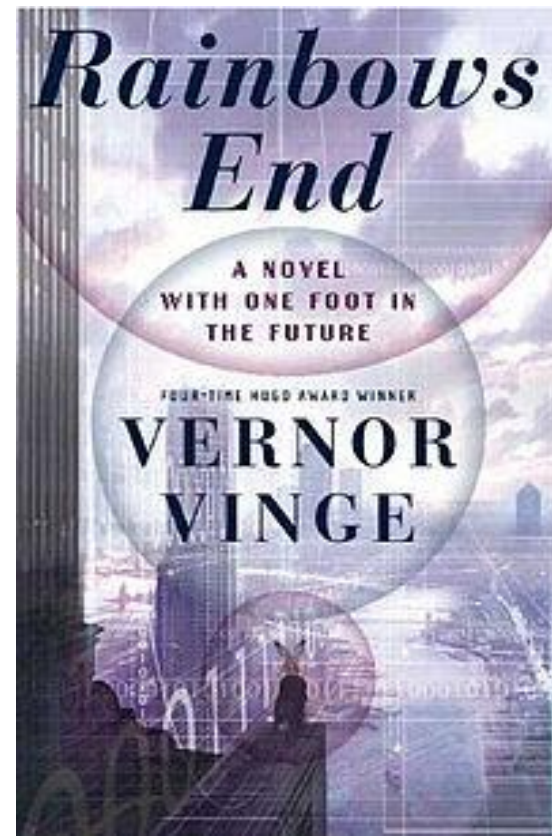
Cory Doctorow

Maker cities, DIY cities,
Informal economies, Mesh

Rainbows End

Vernor Vinge

Hybrid Cities, Wearables,
Augmented Reality, Sentient City,
IOT, Big Data



Heads Up display wearable lenses



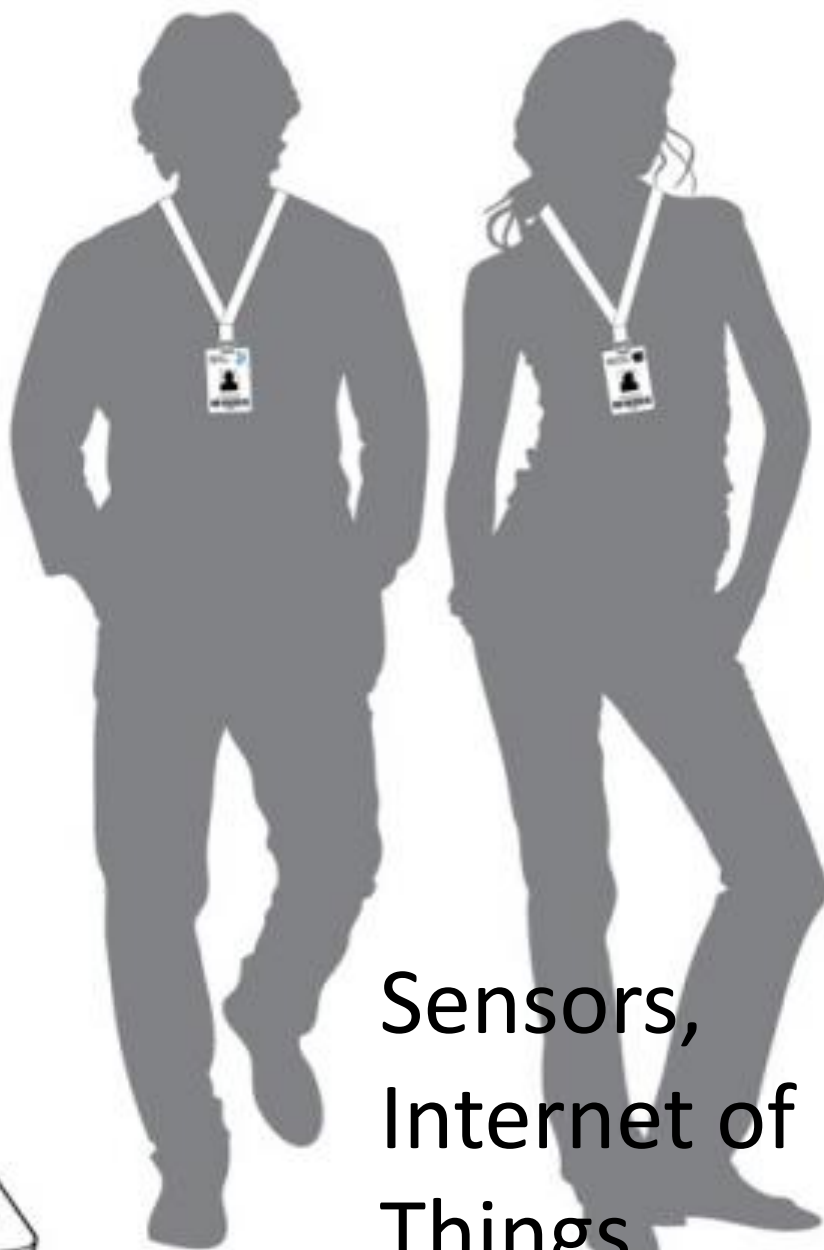
Digital Cities, For design futures, Simulating ideas



Sentient City

Augmented Reality





Sensors,
Internet of
Things

Big Urban Data: Mapping



High school students in the United States are confronted by a curriculum through education systems that are a product of a fragmented, chaotic, economic, social, and political environment. The United States is a country that is geographically located in the center of the largest land body for twenty-first century globalism; the population is highly concentrated in geographic regions that should be different, not only in the 21st-century industry and construction industry, but also in the nature of design research and theory. With globalization, from both the undergraduate and graduate perspectives, is an opportunity for interdisciplinary cross-industry design from multiple disciplines to be utilized in a collaborative, multi-disciplinary fashion of scientific, artistic, and engineering disciplines, and not a chaotic, chaotic

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Autonomous Cars
Road Trains
Volvo experiment

Tech Divide

Automation, Robotics



Low Tech Innovation

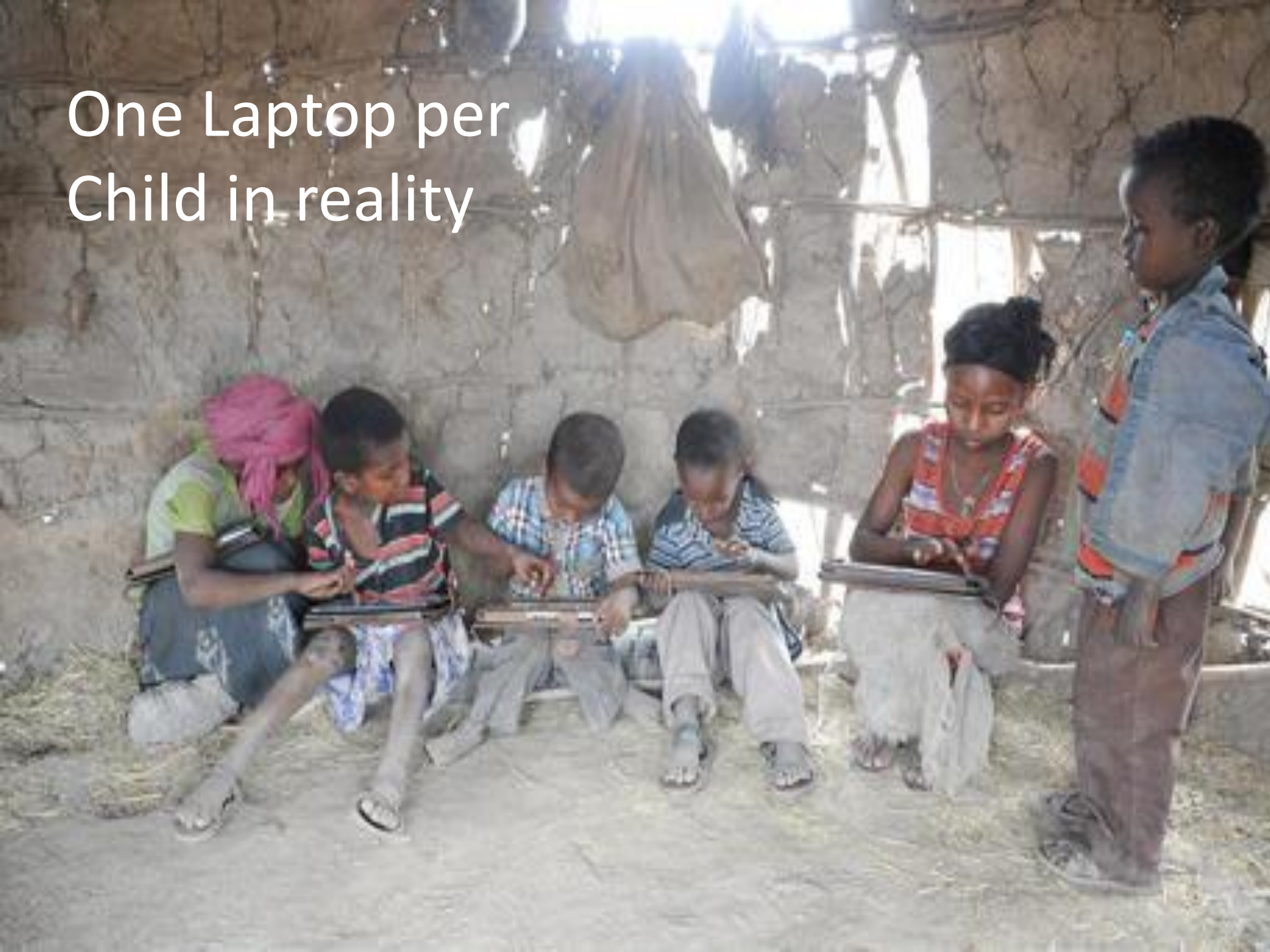
Recycled bottles
solar lights





One Laptop Per Child

One Laptop per
Child in reality



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Arcosanti AZ, Paolo Soleri
Flickr cc alterscape feb 2013