

# Worlds Apart: Measuring International and Global Inequality

Carnegie Endowment for International Peace

Washington, September 28, 2005

1. Inequality today
2. Inequality between world citizens today
3. Does global inequality matter?
4. What is to be done?

# 1. Inequality today

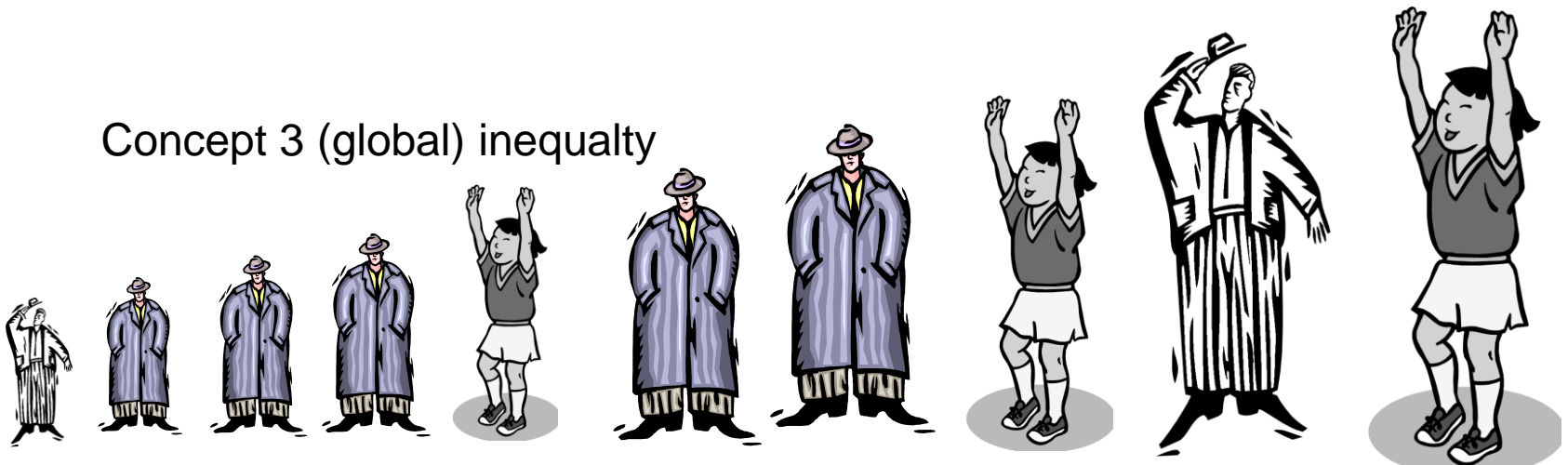
# Three concepts of inequality defined



Concept 1 inequality

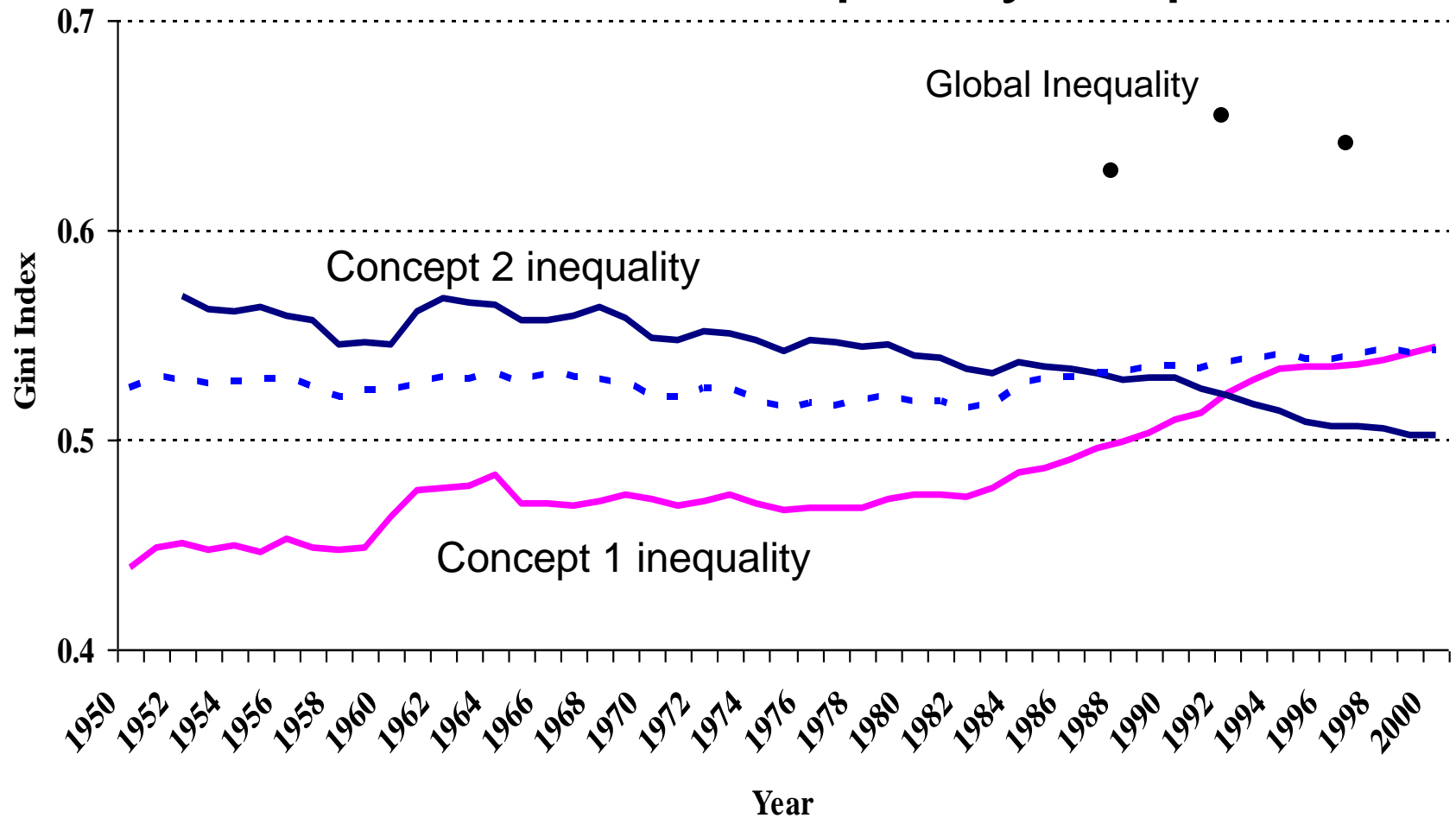


Concept 2 inequality



Concept 3 (global) inequality

# Inequality, 1950-2000: The mother of all inequality disputes



Global Inequality

Concept 2 inequality

Concept 1 inequality

— World unweighted — World population-weighted - - - World weighted except China

# Focus first on inequality **between countries:**

Discontinuity in development trends around  
1978-80

- ***The watershed years*** (Bairoch)
- Tripling of oil prices
- Increase in real interest rates (from  $-1\%$  to  $+5\%$  in the USA and the world)
- Debt crisis
- China's responsibility system introduced
- Latin American begins its "lost decade", E. Europe/USSR "stagnate"

# The outcome:

- Middle income countries declined (Latin America, EEurope/former USSR)
- China and India pulled ahead
- Africa's position deteriorated further
- Developed world pulled ahead
- World growth rate decreased by about 1 % (compared to the 1960-78 period)

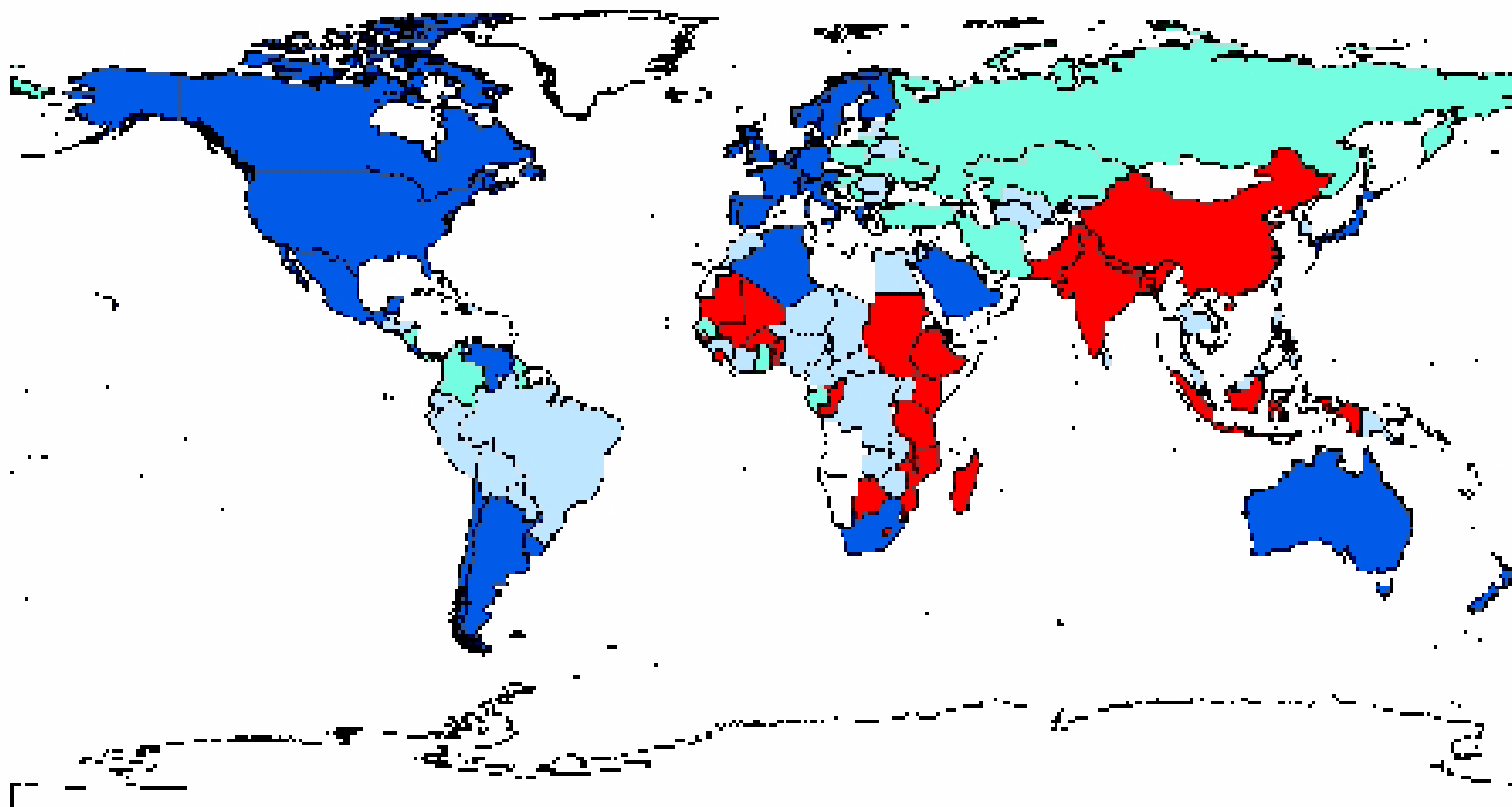
# Annual per capita growth rates 1980-2002

|                         | Mean | Median | Percentage negative |
|-------------------------|------|--------|---------------------|
| “Old OECD”              | 1.9  | 2.0    | 17                  |
| Middle income countries | 1.0  | 1.8    | 33                  |
| LLDC                    | 0.1  | 0.8    | 43                  |

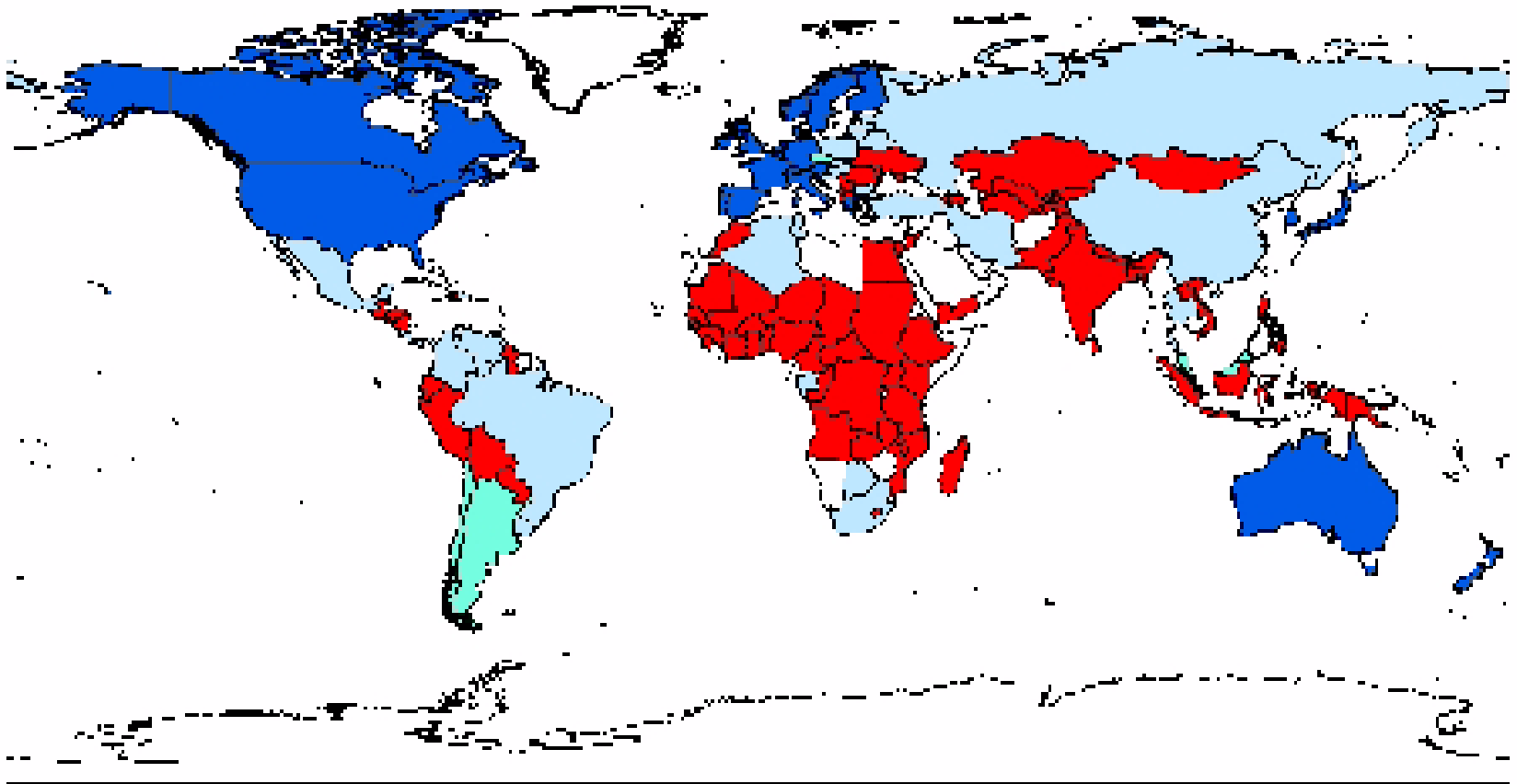
# Define four worlds:

- **First World:** The West and its offshoots
- Take the poorest country of the First World (e.g. Portugal)
- **Second world (the contenders):** all those less than  $1/3$  poorer than Portugal.
- **Third world:** all those  $1/3$  and  $2/3$  of the poorest rich country.
- **Fourth world:** more than  $2/3$  below Portugal.

## Four Worlds 1960



## Four Worlds 2003

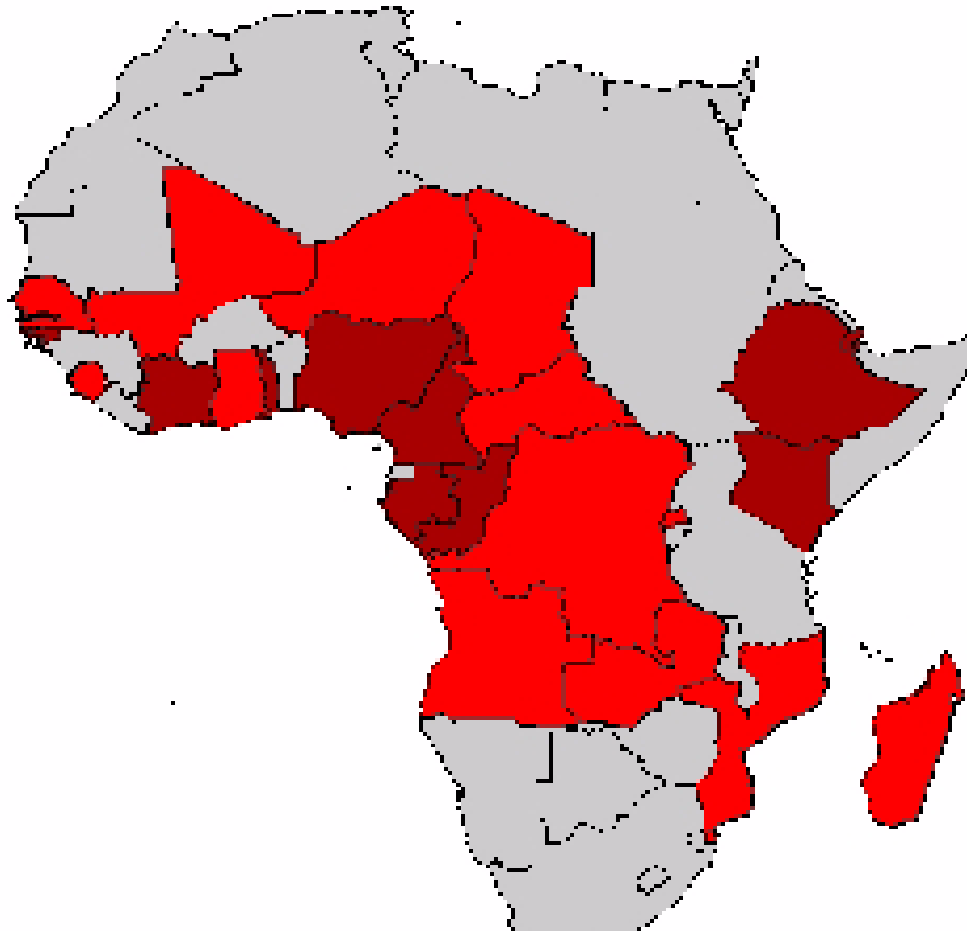


# Four worlds in 1960 and 2003

|        | 1960                |                 | 2003                |                 |
|--------|---------------------|-----------------|---------------------|-----------------|
|        | Number of countries | % of population | Number of countries | % of population |
| First  | 41                  | 26              | 27                  | 16              |
| Second | 22                  | 12              | 7                   | 2               |
| Third  | 39                  | 13              | 29                  | 37              |
| Fourth | 25                  | 49              | 72                  | 46              |

# Poorer than during Carter

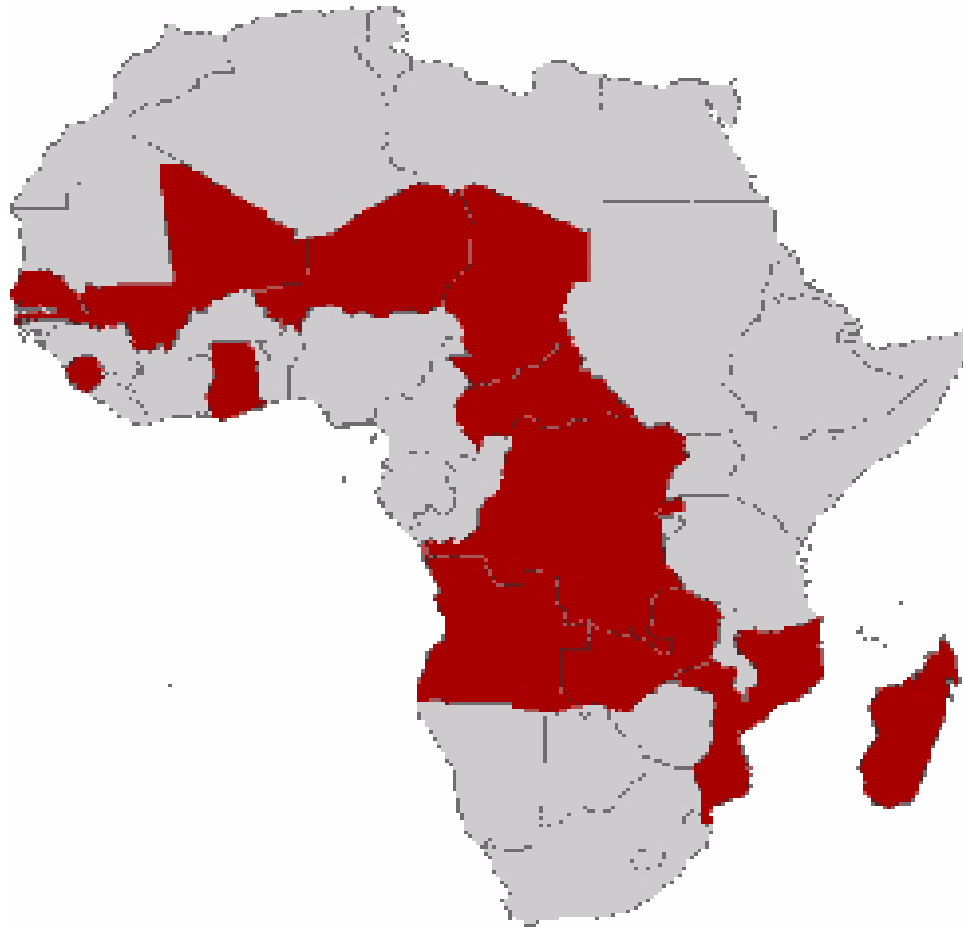
Parts of Africa where 2000 GDI per capita is less than in 1980 (350m people )



US GDI per capita in the meantime increased 50%

# Poorer than during J.F. Kennedy

Parts of Africa where 2000 GDI per capita is less than in 1963 (180m people )

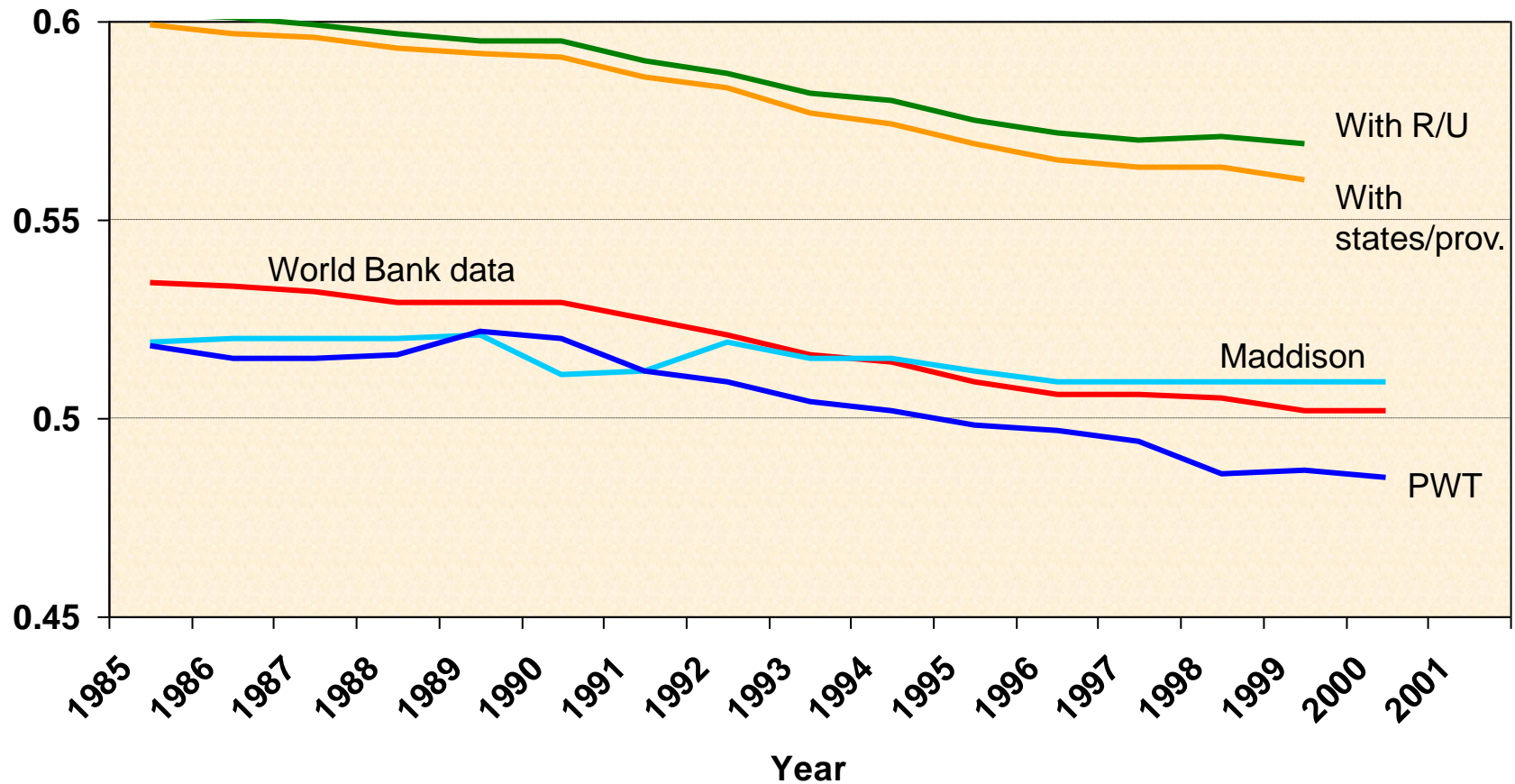


US GDI per capita in the meantime doubled

## Now look at Concept 2 inequality, population-weighted international inequality

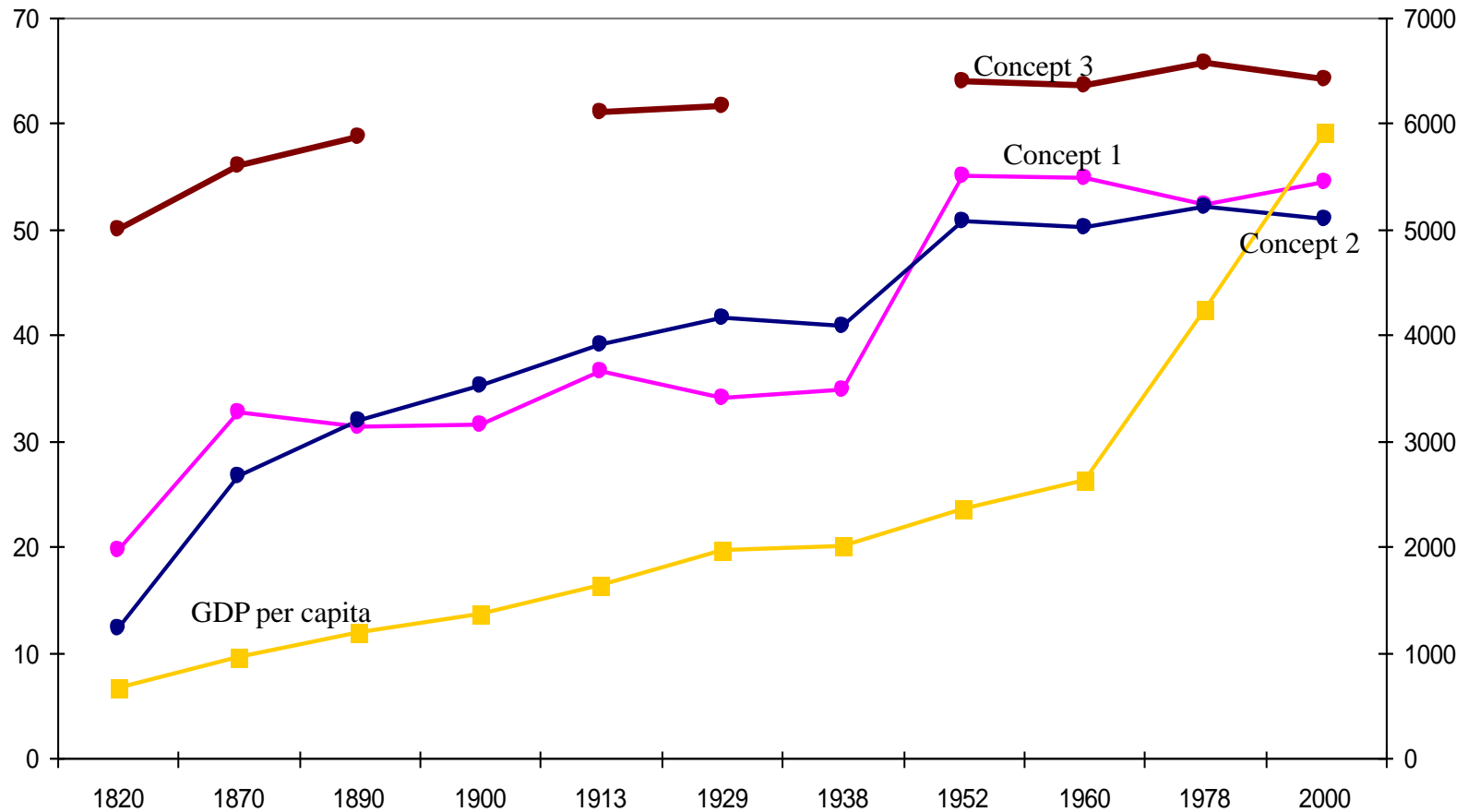
- What do alternative data sources say?
- Breaking large countries into their states or rural/urban areas
- Using alternative GDI per capita data for China
- Expanding sample size to “failed” countries (*i.e.* using Maddison’s data)

# Concept 2 inequality based on different data and partitions



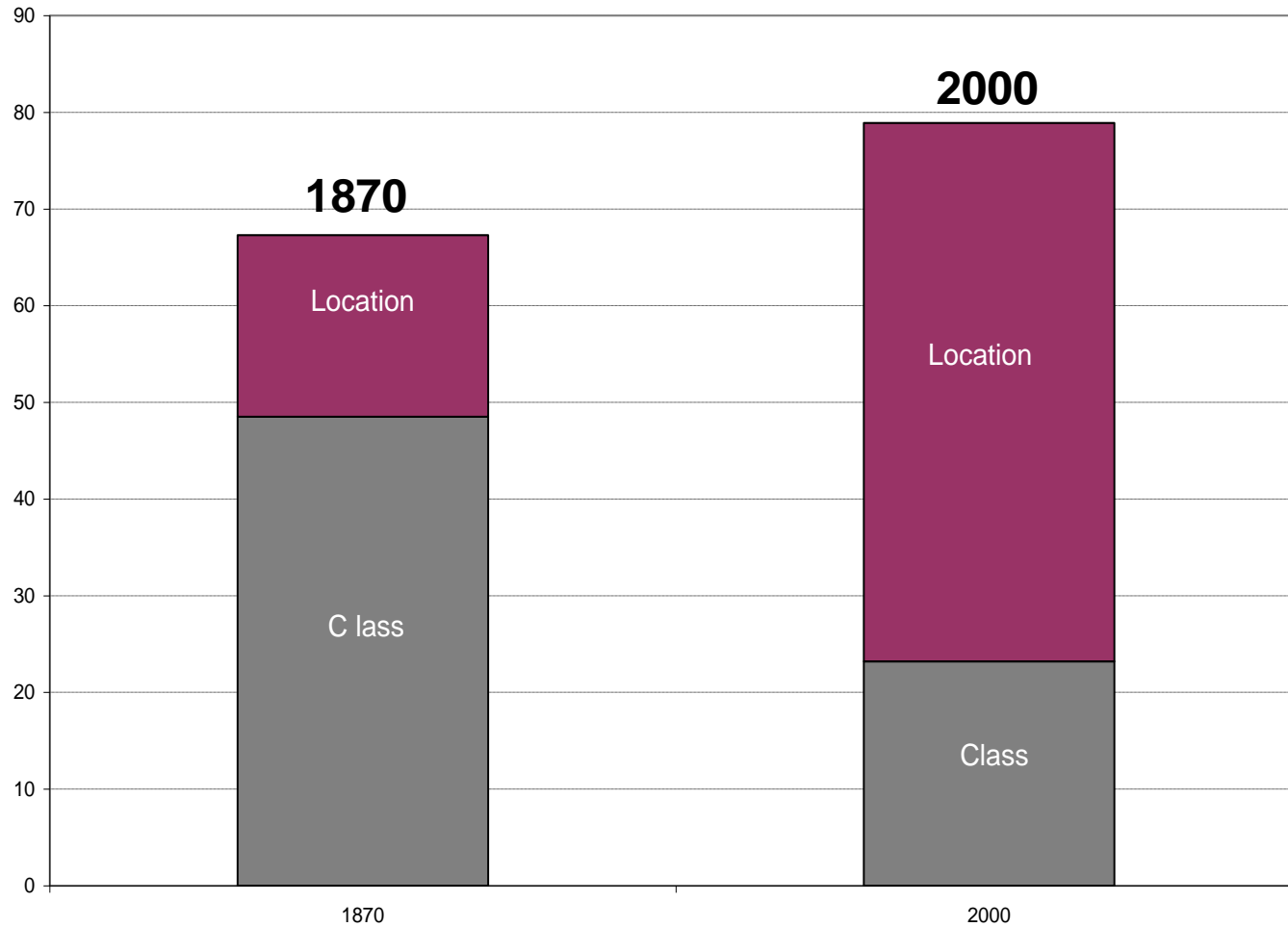
# Excursus: Historical perspective

# Three concepts of inequality in history: Global Gini values, 1820-2000



Based on Maddison, Bourguignon and Morrisson, and Milanovic

# Size and composition of global inequality in 1870 and 2000



# A literary comparison: Elizabeth's dilemma

|                    | Income in 1820 (£ pa) | Approx. position in 1820 income distribution | Income in 2000 (£ pc pa) |
|--------------------|-----------------------|--|--------------------------|
| Mr. Darcy          | 10,000                | Top 1%                                       | 130,000                  |
| Elizabeth's family | 3000/7~430            | Top 10%                                      | 37,000                   |
| Elizabeth alone    | 50                    | Bottom 10%                                   | 2,600                    |
| Gain               | 100 to 1              |  | 50 to 1                  |

## 2. Inequality between world citizens today

# The difficulty stems from contradictory movements

- Greater inequality within nations
- Greater differences between countries' mean incomes (think of US vs. Africa)
- But catching up of large and poor countries
- All of these forces determine what happens to GLOBAL INEQUALITY

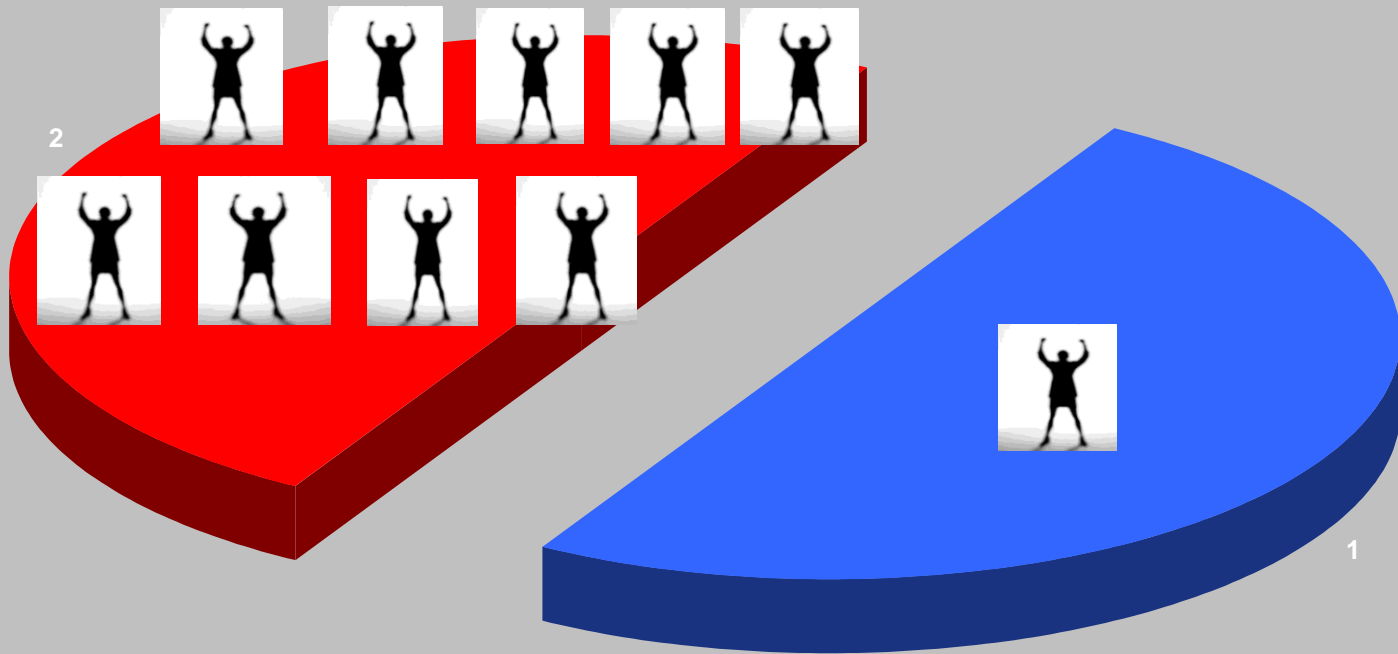
# Global inequality

**World international dollar inequality in 1988, 1993 and 1998**  
(distribution of persons by \$PPP and \$ income per capita)

|                                     | 1988                 | 1993                 | 1998                 |
|-------------------------------------|----------------------|----------------------|----------------------|
| <b><i>International dollars</i></b> |                      |                      |                      |
| Gini index                          | <b>61.9</b><br>(1.8) | <b>65.2</b><br>(1.8) | <b>64.2</b><br>(1.9) |
| <b><i>US Dollars</i></b>            |                      |                      |                      |
| Gini index                          | <b>77.3</b><br>(1.3) | <b>80.1</b><br>(1.2) | <b>79.5</b><br>(1.4) |

Note: Gini standard errors given between brackets.

# A brotherly world



# A 90-10 world: fifty-fifty

| Cumulative % of world population | Cumulative % of PPP world income/consumption | In a single country (UK) |
|----------------------------------|--|--------------------------|
| 5                                | 0.2  |                          |
| 10                               | 0.7  | 2.0                      |
| 25                               | 2.9  |                          |
| 50                               | 9.6  | 25.0                     |
| 75                               | 24.7   |                          |
| <b>90</b>                        | <b>50.4</b>                                  | 71.5                     |
| <b>Top 10</b>                    | <b>49.6</b>                                  | 28.5                     |
| Top 5                            | 32.7   | 18.4                     |

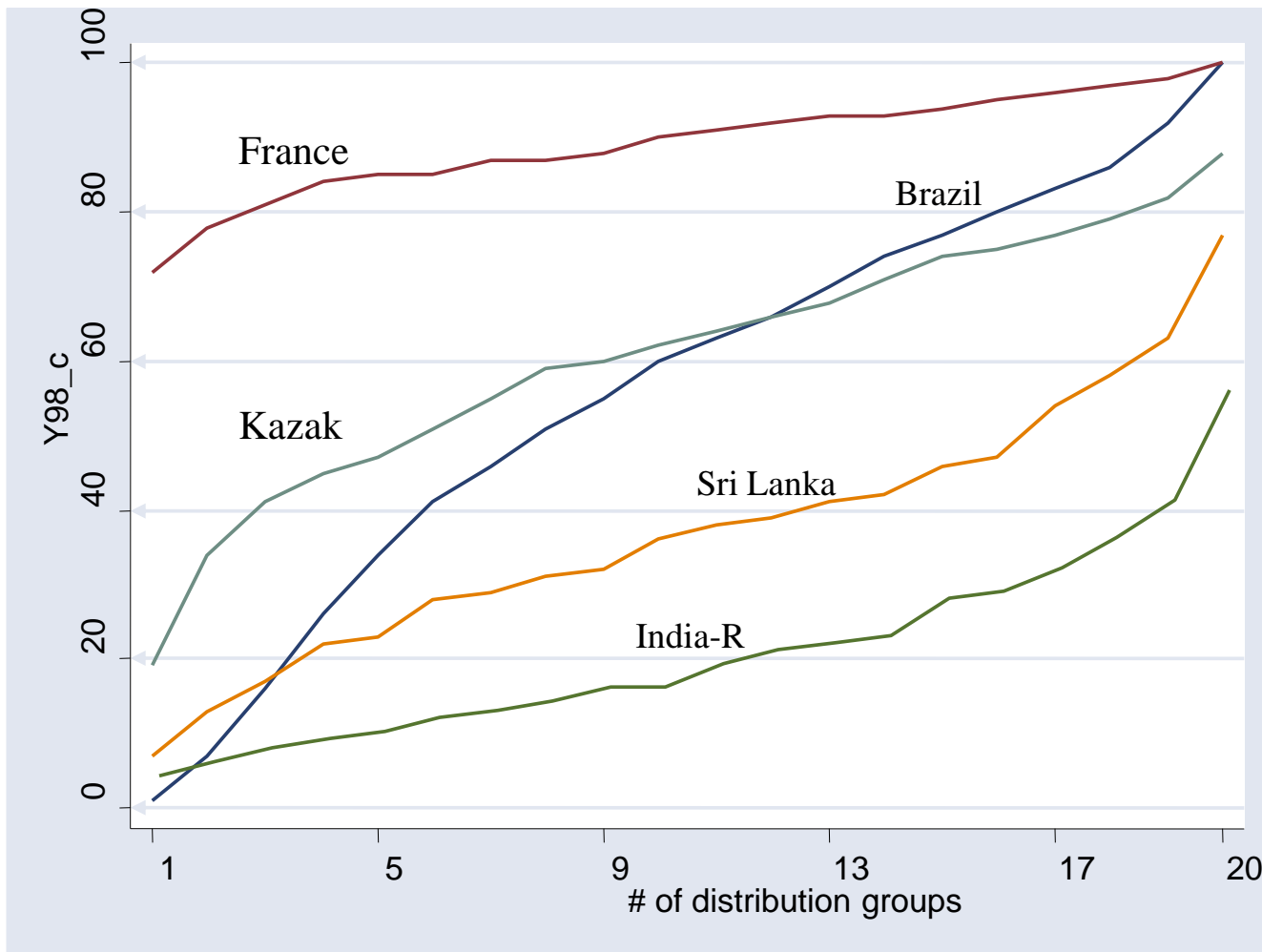
What is a Gini of 64-66; how big is it?

|                  | Top    | Bottom | Ratio |
|------------------|--------|--------|-------|
| In \$PPP: 5%     | 33%    | 0.2%   | 165-1 |
| 10%              | 50%    | 0.7%   | 70-1  |
| In US\$: 5%      | 45%    | 0.15%  | 300-1 |
| 10%              | 67.5%  | 0.45%  | 150-1 |
| 5 top countries  | 31,850 | 580    | 55-1  |
| 10 top countries | 28,066 | 660    | 42-1  |

# The bottom line

- In PPP terms, the top decile controls **one-half** of world income.
- In dollar terms, the top decile controls **two-thirds** of world income.

# First order dominance (year 1998) expressed in terms of percentile of world income distribution



twoway (line Y98\_v group if year==1998 & contcod=="BRA") (line Y98\_v group if year

# Note...

- Not even richest people in rural India intersect with poorest people in France
- Almost no intersection between people in Sri Lanka and France
- But this is not true for Brazil: about a third of the population is better off than the poorest decile in France
- Important later for rules re. global transfers

# Conclusion: “The age of inequality”?

**Within-country** inequalities have increased in many countries including in the largest (US, UK, China, India, Russia)

Inequalities **between countries** have increased

**Population weighted** inequality **between countries** went down thanks to fast growth in China and India (Caveat: acc. to Maddison it is almost stable + R/U differences in China and India have global implications)

Inequality among **people in the world** is very high (Gini between 62 and 66) but its direction of change is not clear

# 3. Does Global Inequality Matter?

- No one in “charge” of it; there is no global government
- No one can do much about it
- No global taxation authority

# Why it might matter?

- Globalization increases awareness of differences in living standards
- Leads to migration
- At country level, inequality linked with conflict
- At world level, likely to lead to conflict too (Jennifer Government)

- **What is the correct utility function?**
- Is it simply:  $U_i = fct(X_i)$  where  $X$  is a vector of consumption?
- Or is it  $U = fct(X_i, X_i/X_{mean})$  where relative consumption matters too?
- If the latter, then with globalization the relevant (mean or median) consumption increases as people get to know more about each other
- Then even if  $X_i$  increases, one's relative income ( $X_i/X$ ) may go down and people may be unhappy.

# Simply: $U_i = fct(X_i)$ ?

- **YES**, according to Ann Krueger (2002):

“Poor people are desperate enough to improve their material conditions in absolute terms rather than to march up the income distribution. Hence it seems far better to focus on impoverishment than on inequality.”

- **NO**, according to Kuznets (1954)  
“...one could argue that the reduction of physical misery associated with low income and consumption levels...permit[s] an increase rather than a diminution of political tensions”

## **BECAUSE**

“the *political misery* of the poor, the tension created by the observation of the much greater wealth of other communities...may have only increased.”

# Feedback effect of globalization on perception of inequality

- With globalization the relevant (mean or median) consumption may increase as people get to know more about each other
- *Hypothesis:* The process itself influences the perception (differentiate between the objective reality and its perception)

## 4. What can be Done?

# Possible changes in global rules of the game

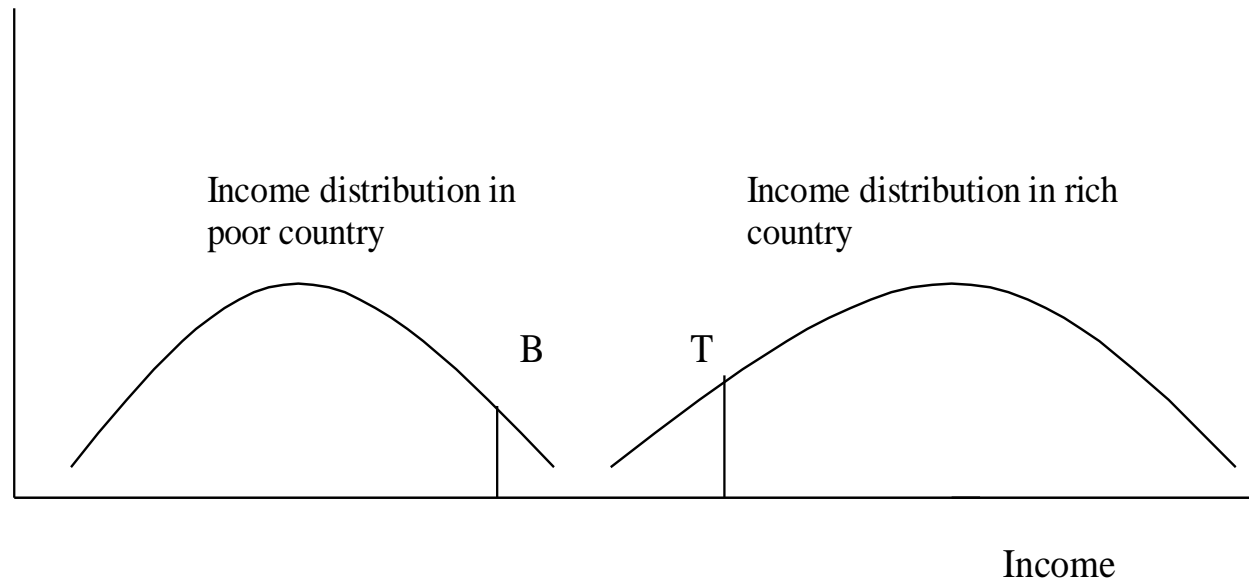
- Stanley Fischer: “The international trading system is biased against the poor countries”
- Removal of agro subsidies; free trade in textiles, steel (sensitive products) etc
- Change in WTO rules: less emphasis on intellectual property rights, financial liberalization
- But how about **global transfers** (something akin to **a global safety net**)?

# We need some rules for global transfers

- They should satisfy Progressivity 1 condition  
=> They flow from a rich to a poor country  
(Concept 1 inequality is less). That is easy.
- But they have to satisfy the same rules as at the national level =>
- Transfers should be globally progressive, that is flow from a richer **person** to a poorer **person**

In addition transfers have national income inequality implications too

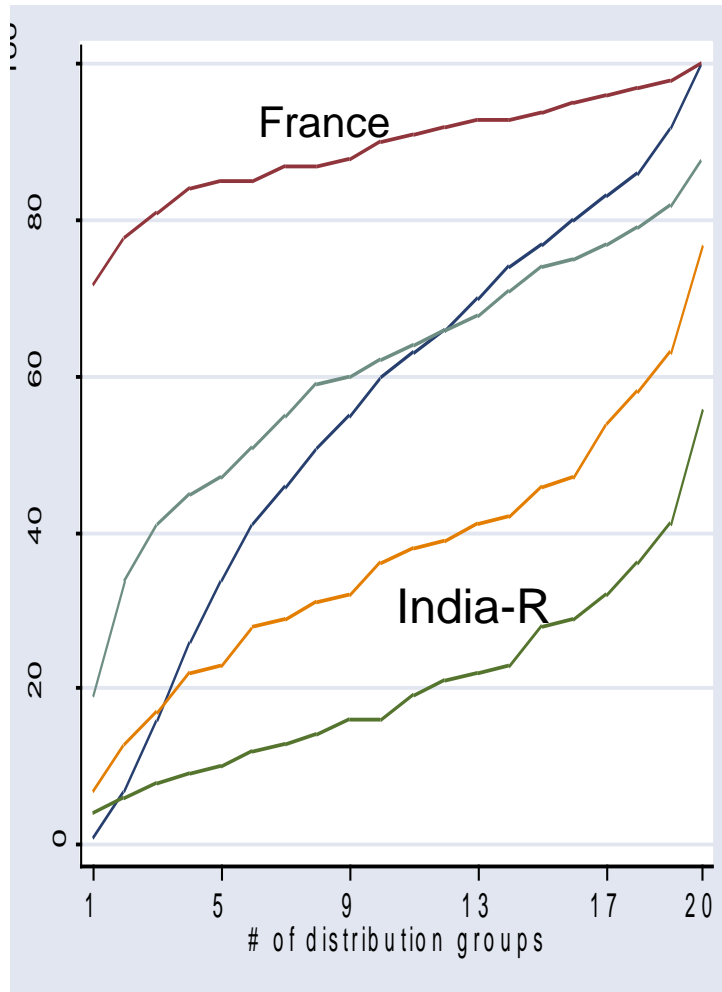
Progressive transfer at the global level and worsening national distributions (may not be sustainable)



# Thus transfers have to satisfy

- **Progressivity 1**: reduce mean income differences between the countries
- **Global progressivity**: tax payers should be richer than beneficiaries
- **National progressivities**: in rich country, tax payers should be rich (reduce rich country inequality) and in poor country, beneficiaries should be poor (reduce poor country inequality)

# Go back to the example of non-overlapping distributions



The probability that a transfer from France to rural India will be globally regressive is extremely slight. Even if the beneficiaries are randomly selected, global progressivity is assured (but not national progressivities).

Or differently, one needs to treat more favorably poor countries with low inequality since globally progressive transfers are then more likely.

# Idea of global transfers

- Transfers are no longer from **state to state**, or from **inter-state organization** to a **state**, but from **global authority to citizens** (change in paradigm)
- A natural complement to global tax authority is relationship with (poor) citizens, not (poor) states

And in cash...