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<http://freakonometrics.hypotheses.org/>

Université de Rennes 1, January 2016

Welfare, Inequality & Poverty # 1

References

This course will be on [income distributions](#), and the [econometrics of inequality and poverty indices](#). For more general thoughts on inequality, equality, fairness, etc., see

- Atkinson & Stiglitz [Lectures in Public Economics](#), 1980
- Fleurbaey & Maniquet [A Theory of Fairness and Social Welfare](#), 2011
- Kolm [Justice and Equity](#), 1997
- Sen [The Idea of Justice](#), 2009

(among others...). For this very first part, references are

- Norton & Ariely [Building a Better America—One Wealth Quintile at a Time](#), 2011 [[Income](#)]
- Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014 [[Comparisons](#)]

References

- Atkinson *Inequality: What Can Be Done*, 2015 [*Inequalities*]
- Piketty *Capital in the Twenty-First Century*, 2014 [*Wealth*]
- Guélaud, *Le nombre de pauvres a augmenté de 440.000 en France en 2010*, 2012 [*Poverty*]
- Burricand, Houdré & Seguin *Les niveaux de vie en 2010*
- Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012
- Jank & Owens *Inequality in the United States*, 2013 [*Welfare*]

Those slides are inspired by Emmanuel Flachaire's *Econ-473* slides, as well as Michel Lubrano's *M2* notes.

Wealth Distribution, Perception vs. Reality

Norton & Ariely [Building a Better America—One Wealth Quintile at a Time](#), 2011

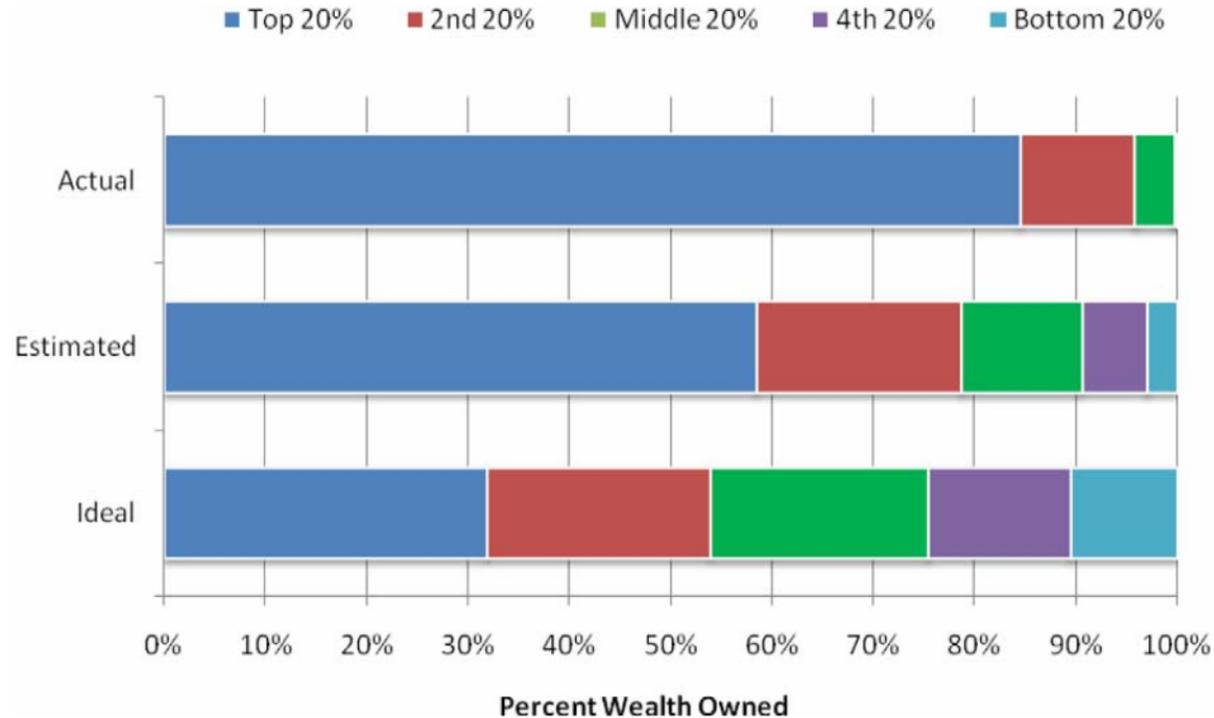


Fig. 2. The actual United States wealth distribution plotted against the estimated and ideal distributions across all respondents. Because of their small percentage share of total wealth, both the “4th 20%” value (0.2%) and the “Bottom 20%” value (0.1%) are not visible in the “Actual” distribution.

data (Actual) from Wolf [Recent Trends in Household Wealth](#), 2010.

Wealth Distribution, Perception vs. Reality

Norton & Ariely *Building a Better America—One Wealth Quintile at a Time*, 2011

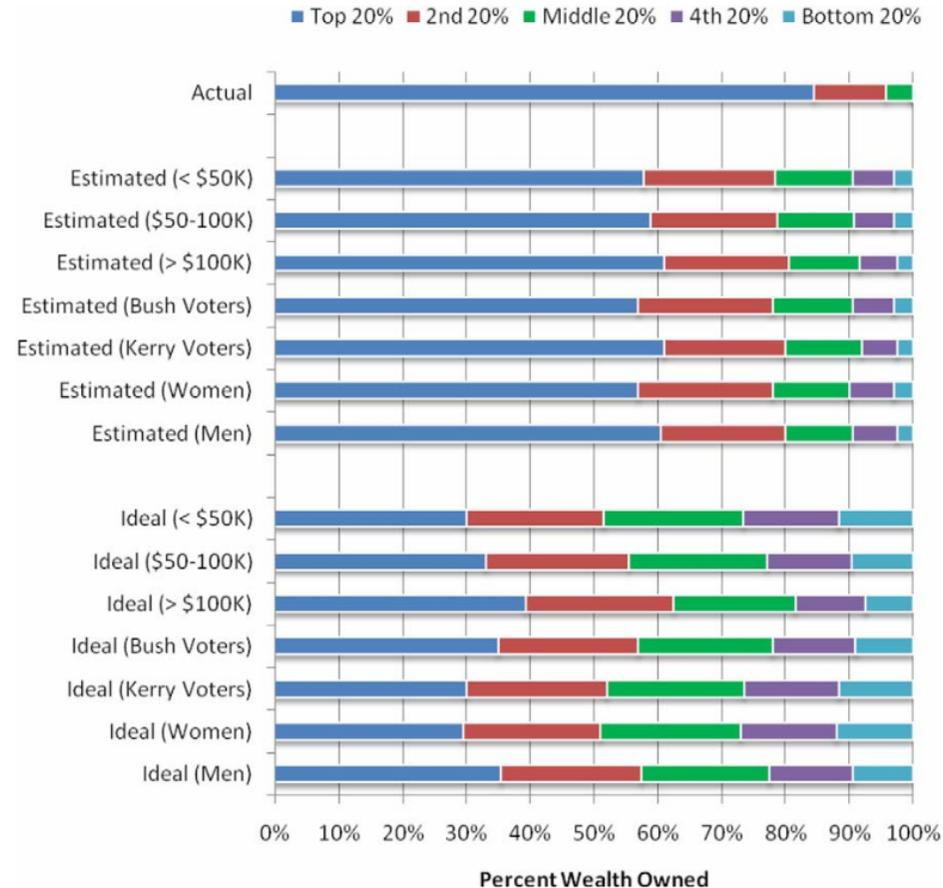
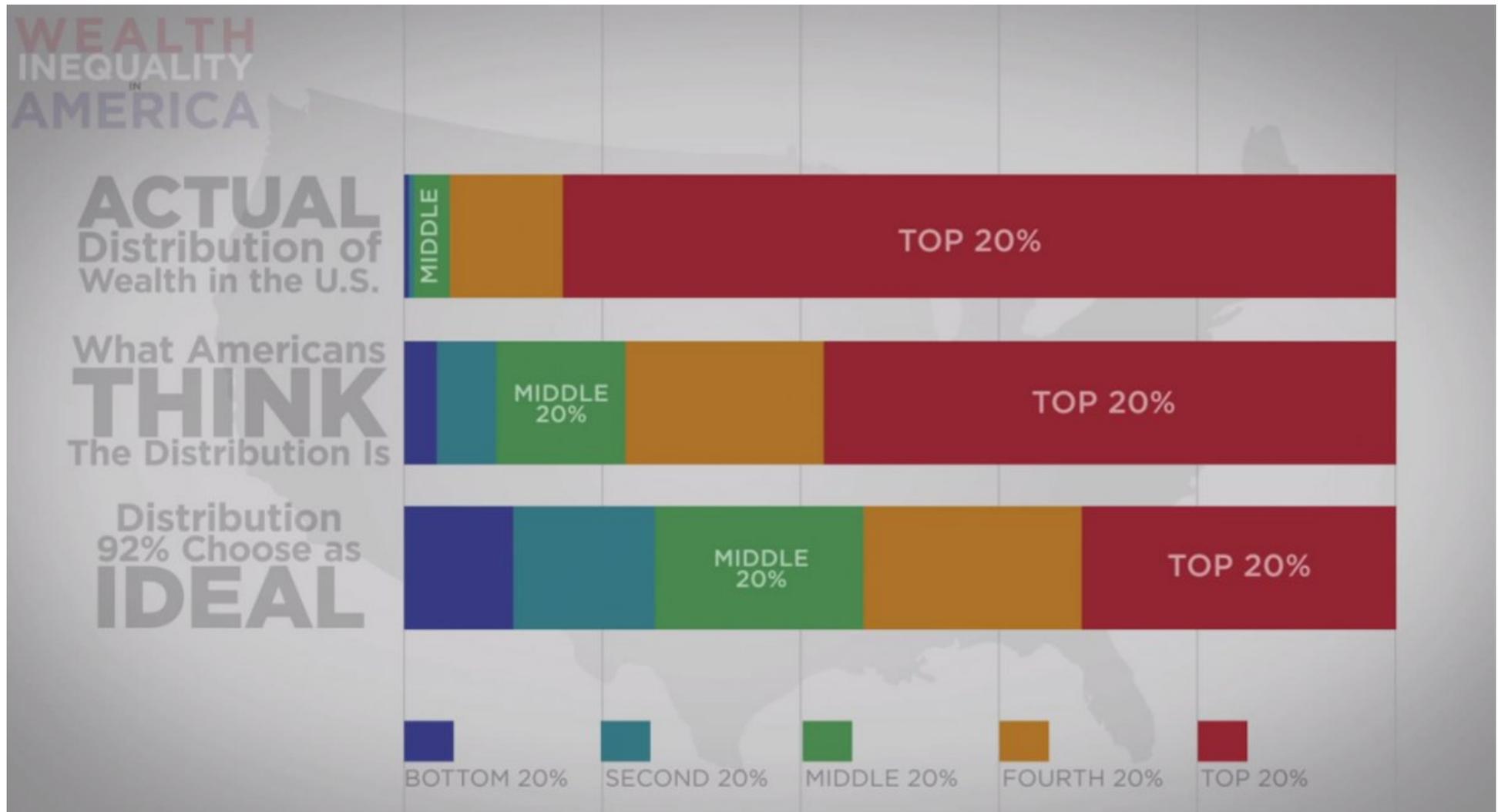


Fig. 3. The actual United States wealth distribution plotted against the estimated and ideal distributions of respondents of different income levels, political affiliations, and genders. Because of their small percentage share of total wealth, both the “4th 20%” value (0.2%) and the “Bottom 20%” value (0.1%) are not visible in the “Actual” distribution.

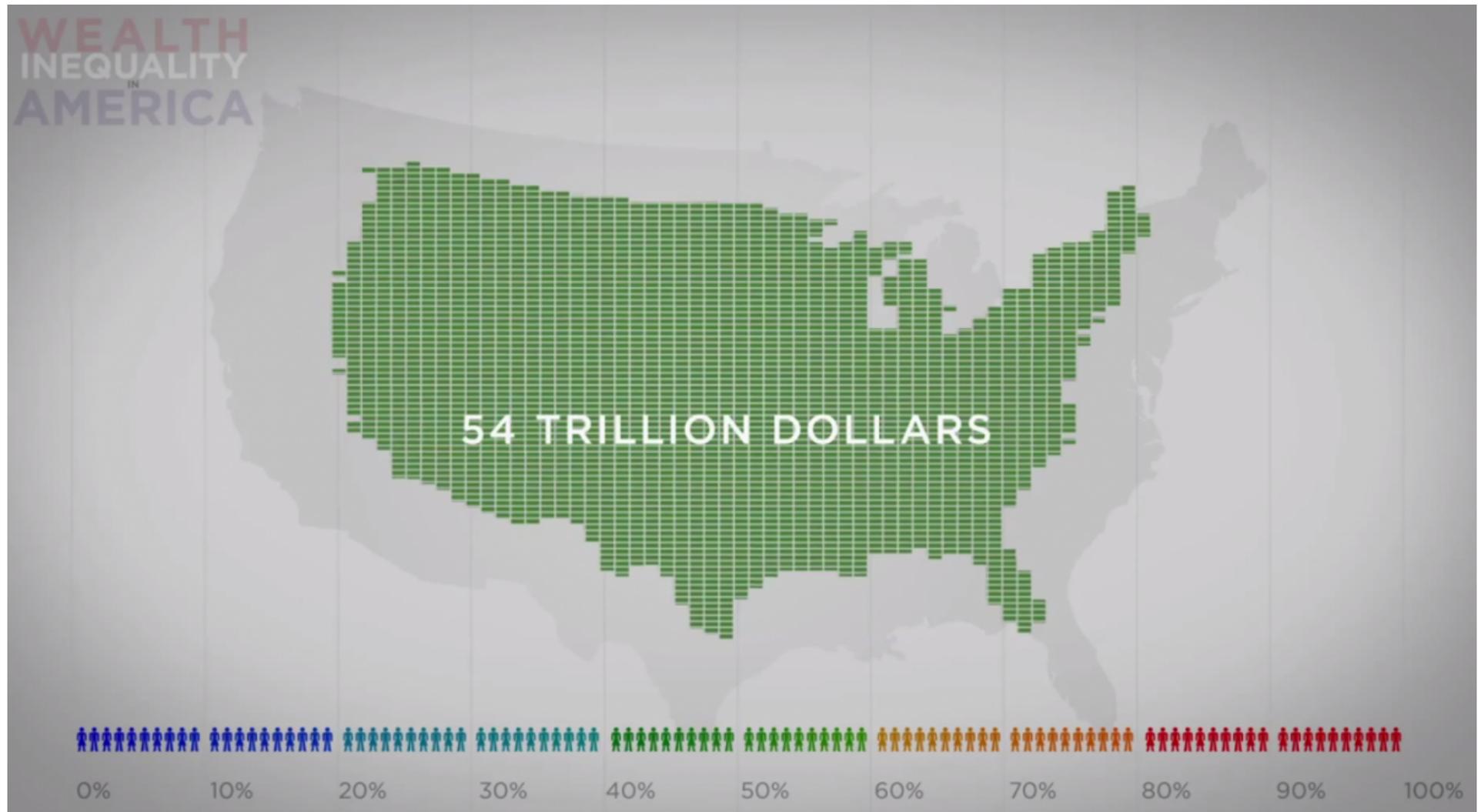
Wealth Distribution, Perception vs. Reality

Watch <https://www.youtube.com/watch?v=QPKKQnijnsM>



Wealth Distribution, Perception vs. Reality

Watch <https://www.youtube.com/watch?v=QPKKQnijnsM>



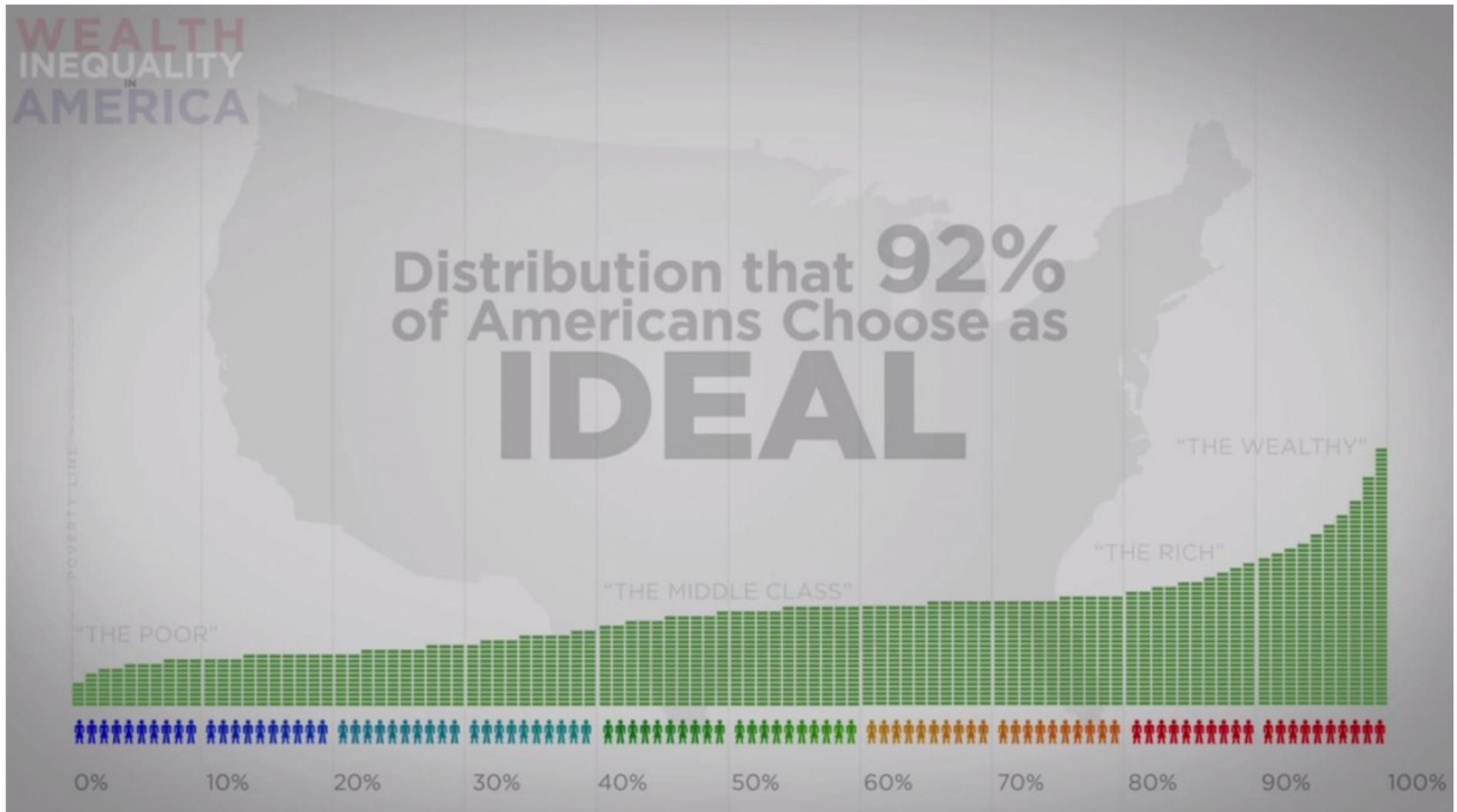
Wealth Distribution, Perception vs. Reality

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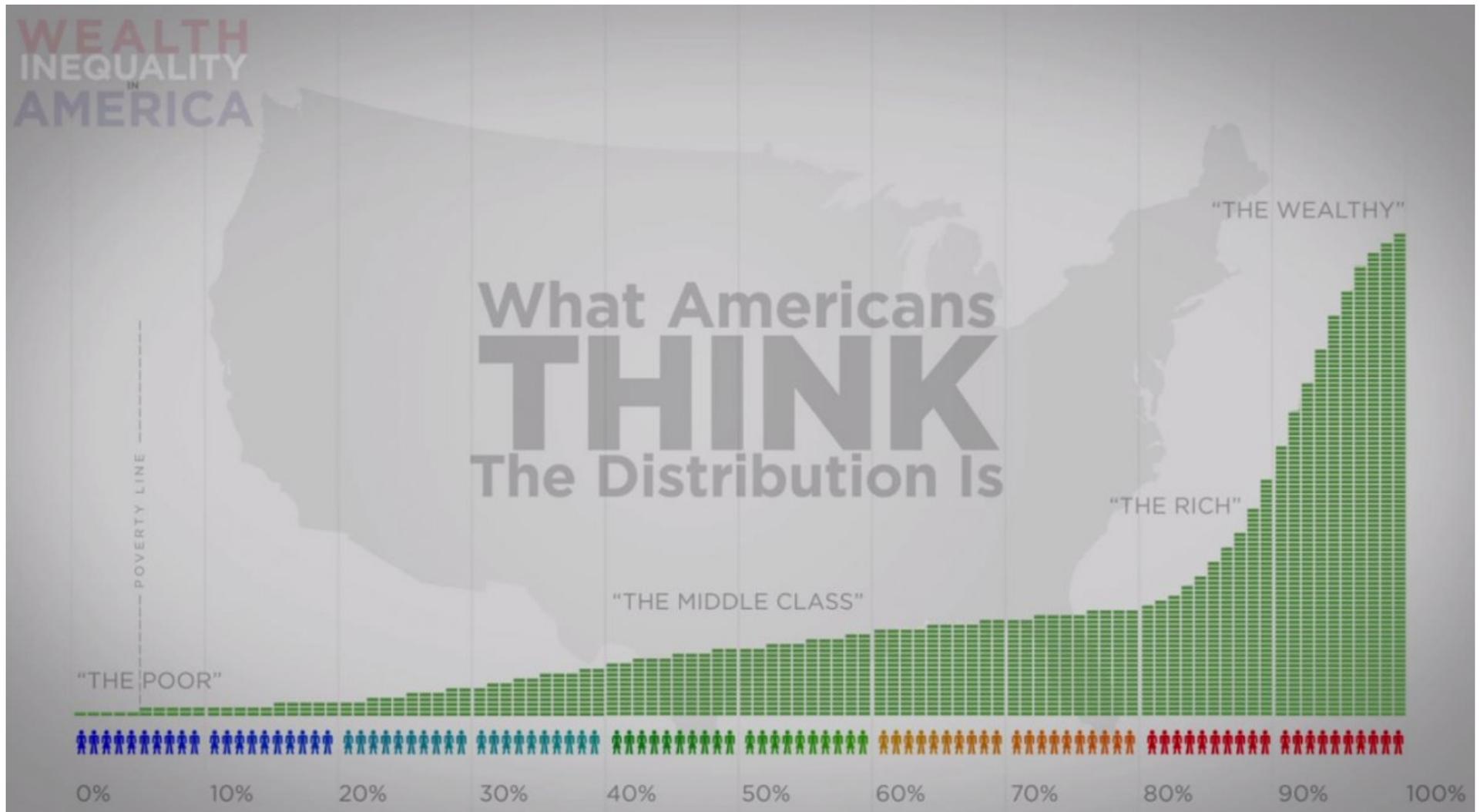
Wealth Distribution, Perception vs. Reality

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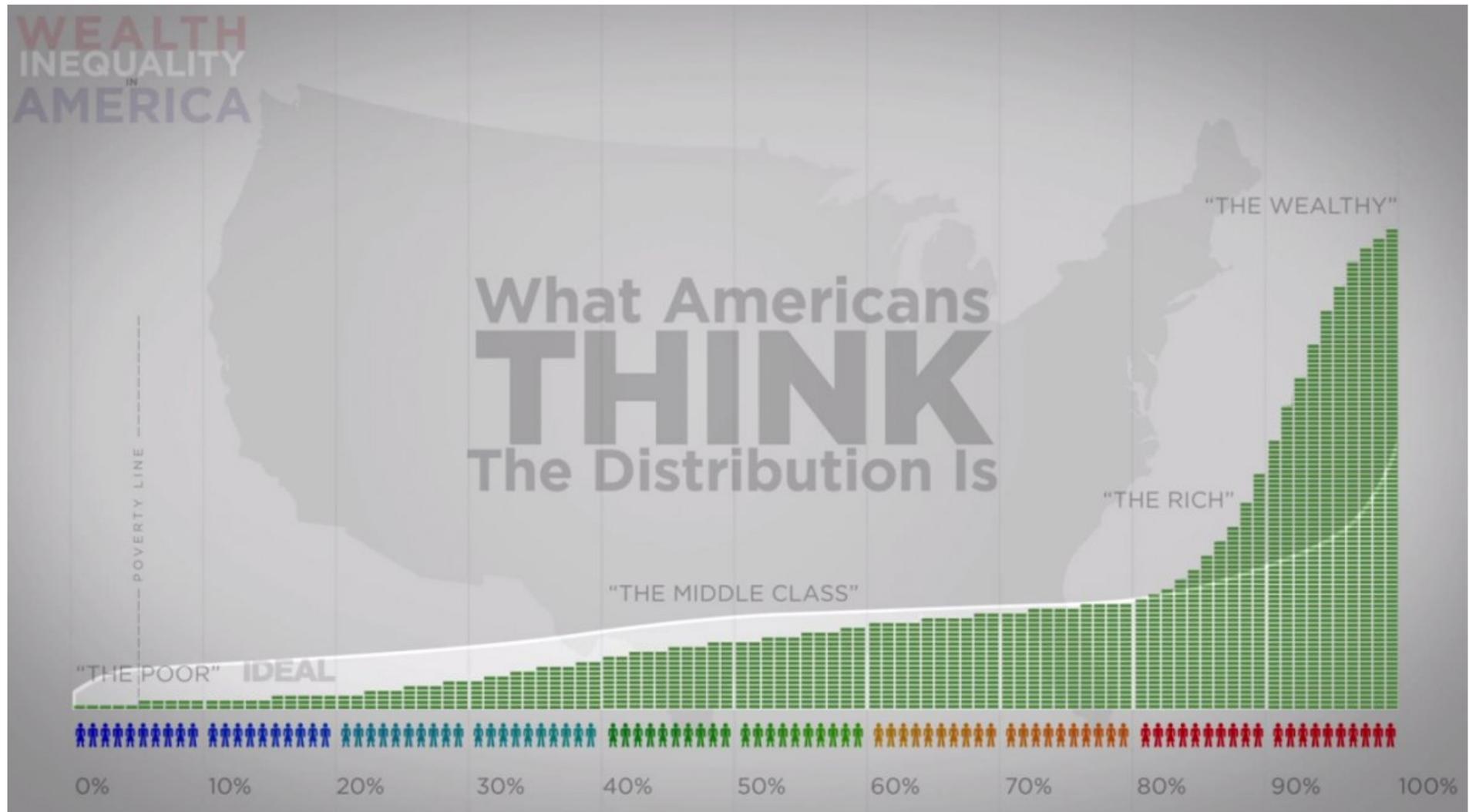
Wealth Distribution, Perception vs. Reality

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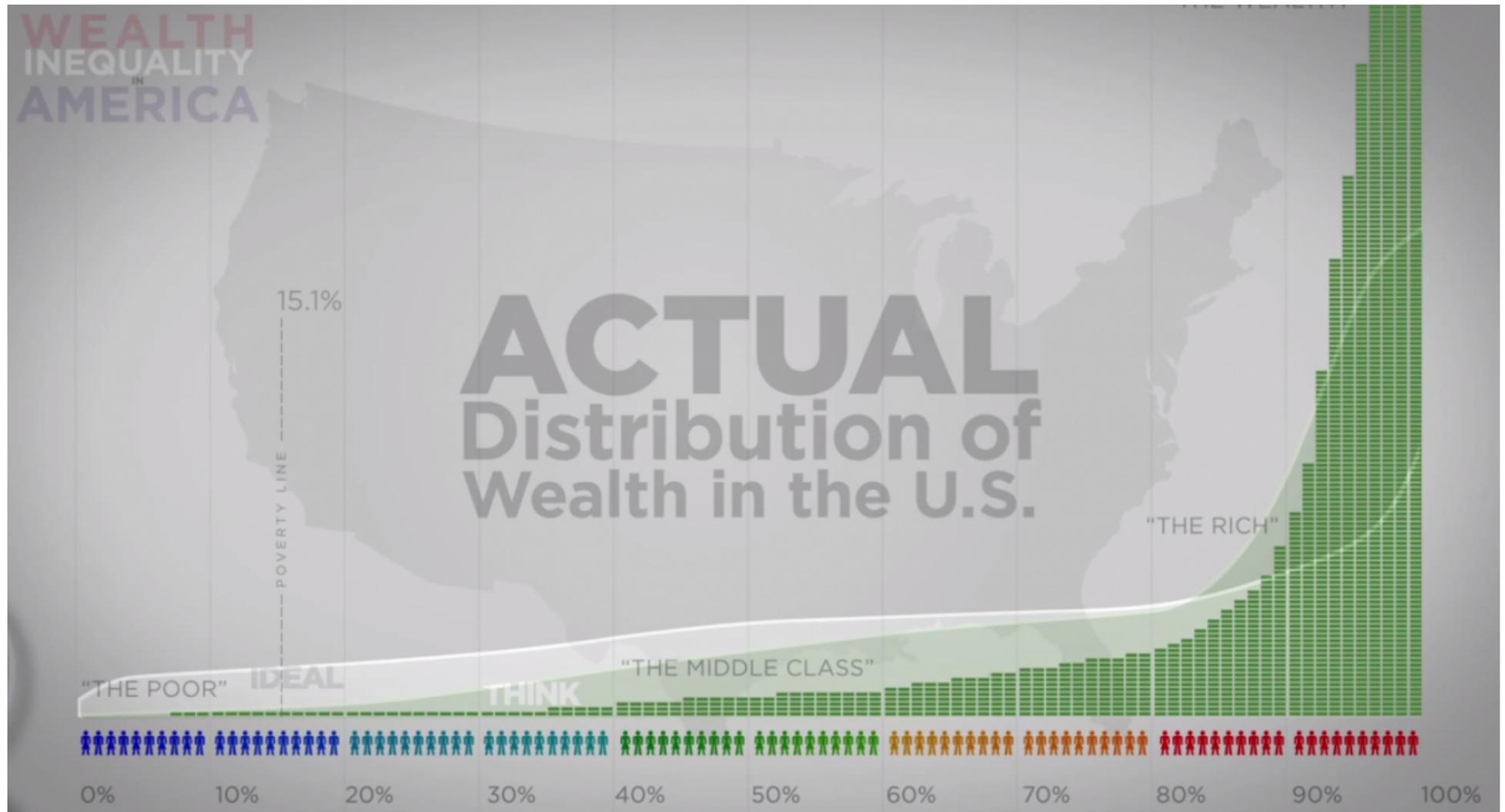
Wealth Distribution, Perception vs. Reality

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Wealth Distribution, Perception vs. Reality

Watch <https://www.youtube.com/watch?v=QPKKQnijnsM>



Comparing Inequalities in several countries

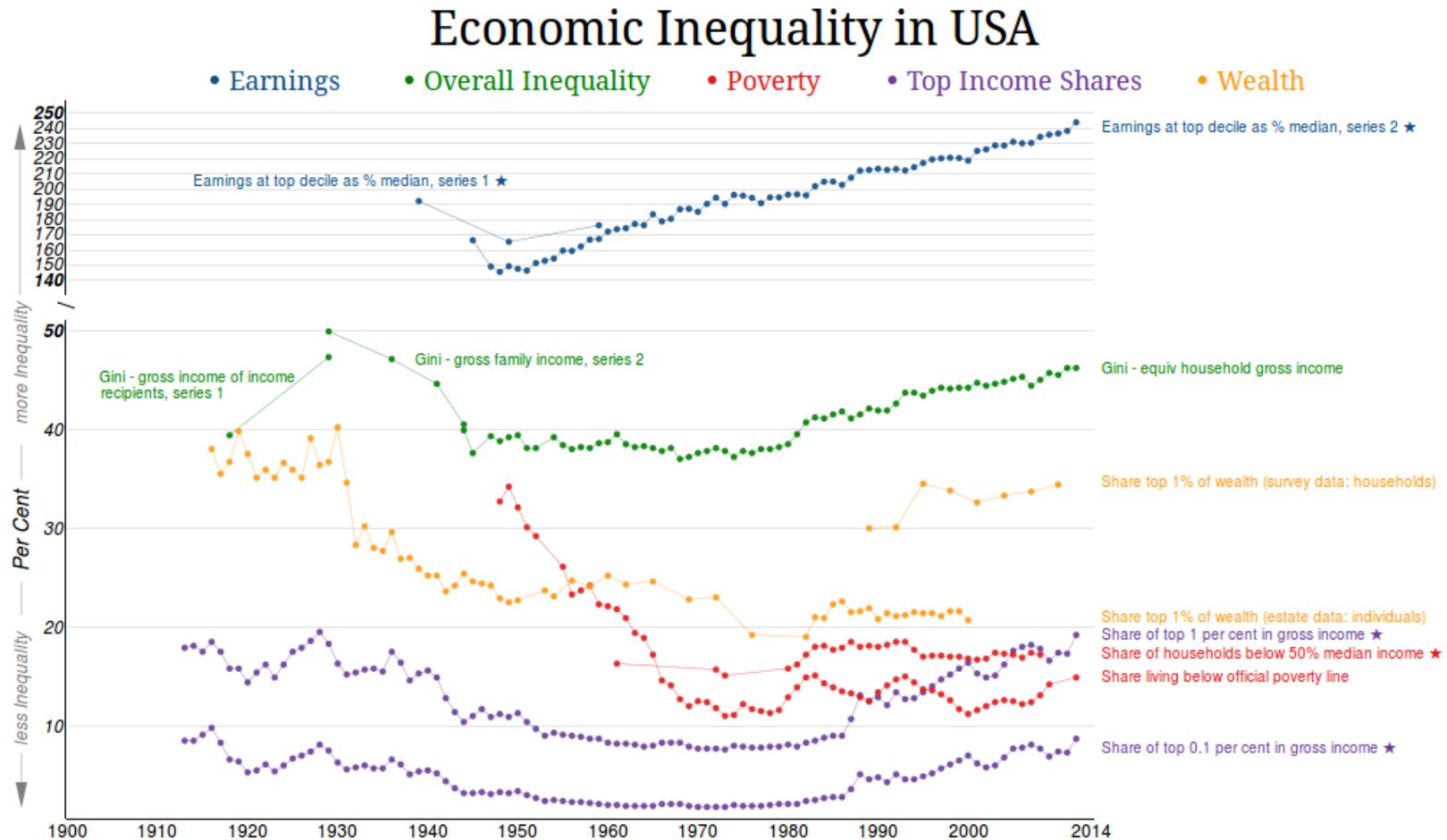
Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014

in Argentina, Brazil, Australia, Canada, Finland, France, Germany, Iceland, India, Indonesia, Italy, Japan, Malaysia, Mauritius, Netherlands, New Zealand, Norway, Portugal, Singapore, South Africa, Spain, Sweden, Switzerland, the UK and the US, five indicators covering on an annual basis:

- Overall income inequality;
- Top income shares
- Income (or consumption) based poverty measures;
- Dispersion of individual earnings;
- Top wealth shares.

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [U.S.A.](#)



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 You are welcome to share but please refer to A. B. Atkinson and S. Morelli (2014) – 'The Chartbook of Economic Inequality' at www.ChartbookOfEconomicInequality.com

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [U.S.A.](#)

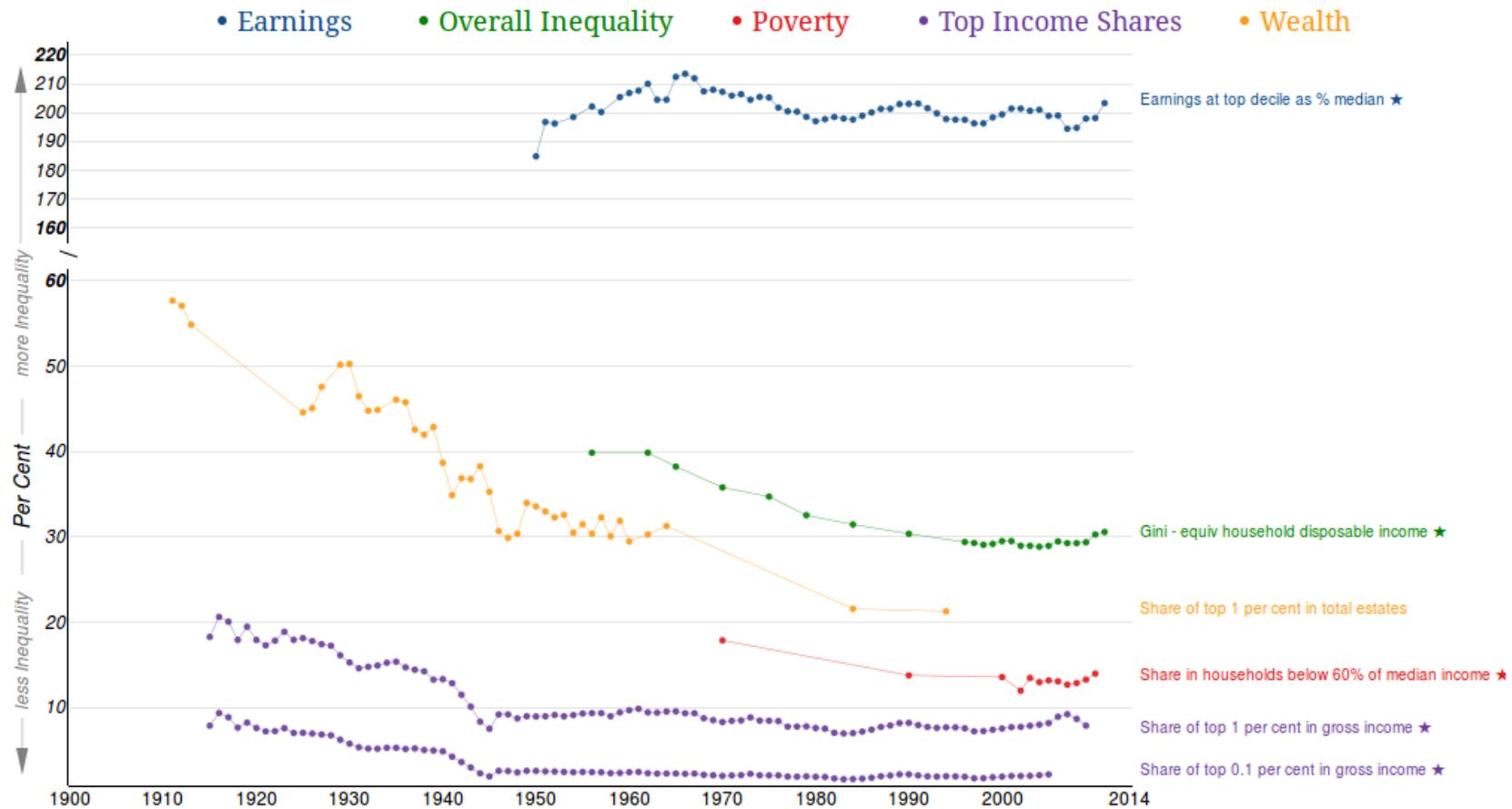
Overview of Trends of Economic Inequality in the USA

Has the dispersion of earnings been increasing in recent decades?	Yes, the top decile of earnings has risen from 150 per cent of median in 1950 to 244 per cent in 2012.
Has overall inequality increased in recent years?	Yes, the Gini coefficient for gross income now 7 percentage points higher than in 1980.
Have there been periods when overall inequality fell for a sustained period?	Yes, from 1929 to 1945.
Has poverty been falling or rising in recent decades?	Official poverty measure fell from 1948 to 1970s, since then cyclical variation about constant level.
Has there been a U-pattern for top income shares over time?	Yes, top gross income shares fell from 1928 to the 1970s; since mid-1970s have more than doubled.
Has the distribution of wealth followed the same pattern as income?	Top wealth shares generally decreased till 1982 but have not followed the upward trend in top incomes.
Additional noteworthy features	Earnings dispersion widened during the Period from 1950 to 1970 but overall income inequality did not increase.

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. **France**

Economic Inequality in France



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Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [France](#)

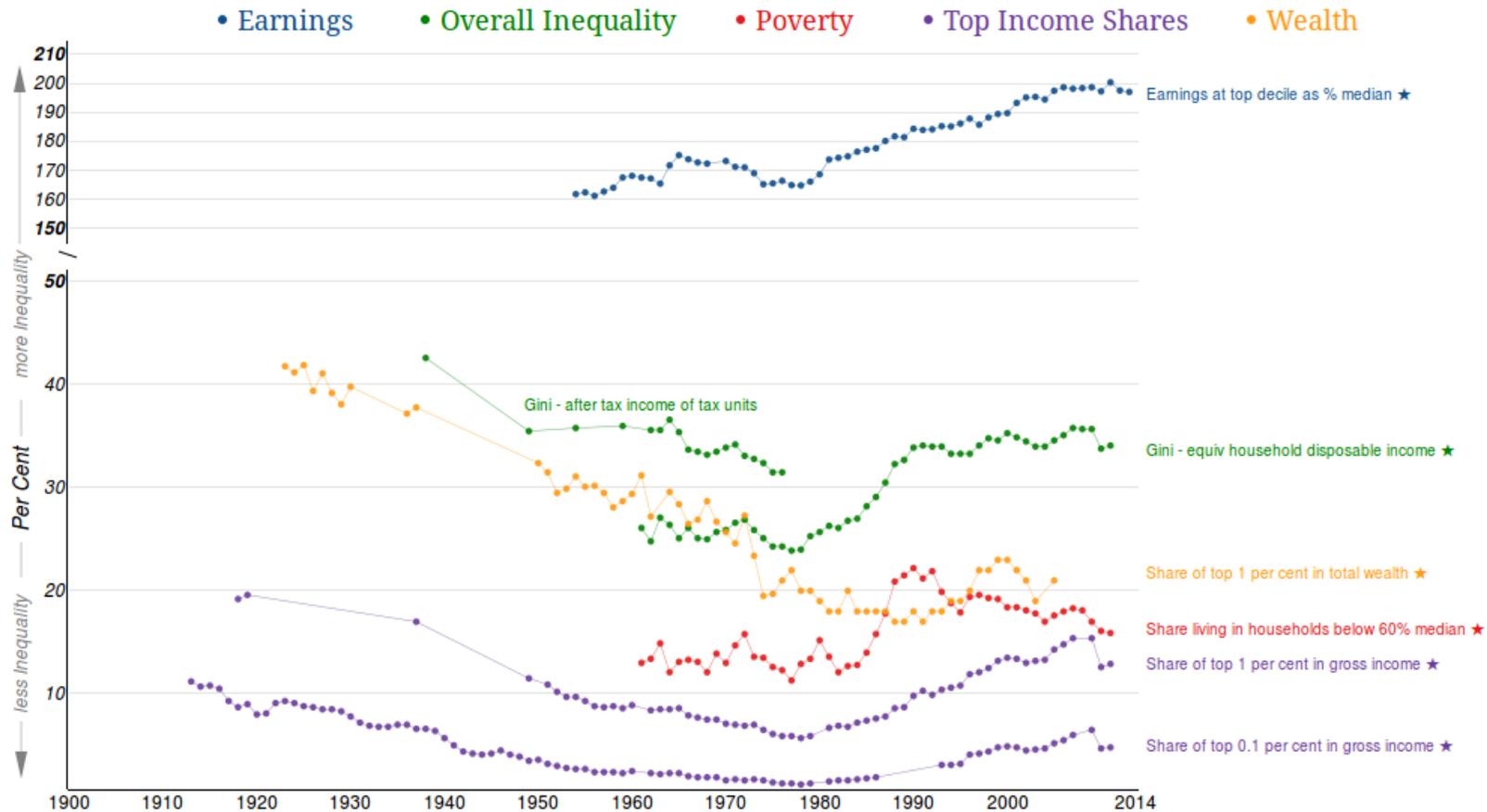
Overview of Trends of Economic Inequality in France

Has the dispersion of earnings been increasing in recent decades?	No, earnings dispersion shows no apparent trend.
Has overall inequality increased in recent years?	No, Gini coefficient relatively stable since 1990s.
Have there been periods when overall inequality fell for a sustained period?	Yes, overall inequality (as well as wealth inequality and poverty) fell from the 1960s to the 1990s.
Has poverty been falling or rising in recent decades?	Fell from 1970 to 2000.
Has there been a U-pattern for top income shares over time?	No, top gross income shares fell from 1916 to 1945 and then stable over post-war period.
Has the distribution of wealth followed the same pattern as income?	Yes, top wealth share fell in post-war period while little change in top income shares.
Additional noteworthy features	Overall stability of inequality in recent years.

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [U.K.](#)

Economic Inequality in the United Kingdom



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Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [U.K](#)

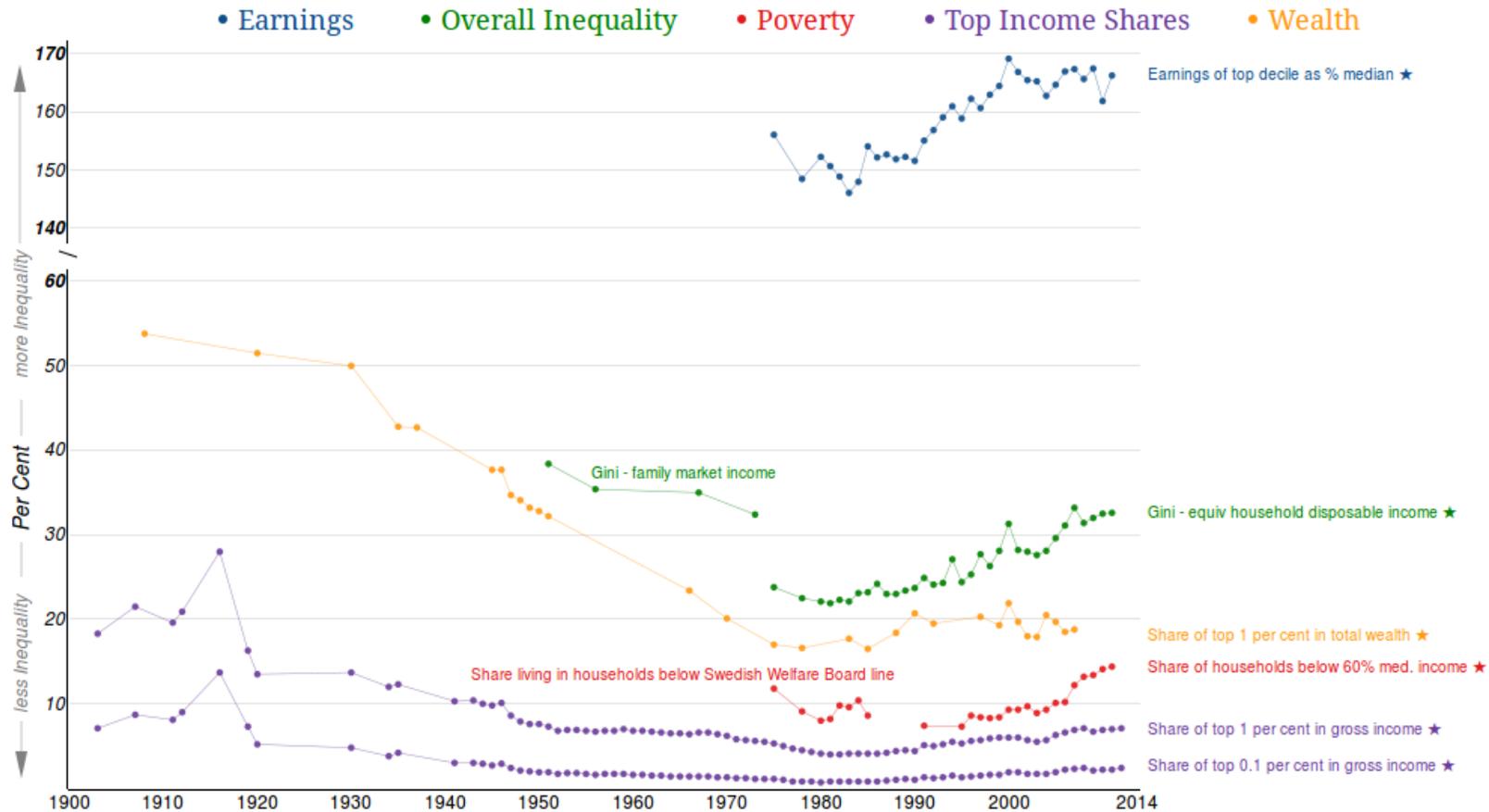
Overview of Trends of Economic Inequality in the UK

Has the dispersion of earnings been increasing in recent decades?	Yes, the top decile of earnings has increased from 165 per cent of median in 1978 to 197 per cent in 2013.
Has overall inequality increased in recent years?	Yes, the Gini coefficient for equivalised disposable income is now around 10 percentage points higher than in 1980, but most of the increase took place in the 1980s.
Have there been periods when overall inequality fell for a sustained period?	Yes, during the Second World War and in late-1960s and 1970s.
Has poverty been falling or rising in recent decades?	Relative poverty rate in 1990 twice that in 1977; However, overall the poverty rate has been falling since the 1990s.
Has there been a U-pattern for top income shares over time?	Yes, top gross income shares fell from 1914 to the 1970s; since 1979 have more than doubled.
Has the distribution of wealth followed the same pattern as income?	Downward trend in top wealth shares from 1923 to end of 1980s; now levelled off.
Additional noteworthy features	Increase in income inequality and poverty in the 1980s proportionately much larger than increase in earnings dispersion. The top shares series have a break in 1990 (change in tax units from family to individual basis). The top income shares estimates for 2009-10 were affected by a significant bringing forward in that year in advance of the introduction of the 50 per cent top tax rate; the shares for the following years were correspondingly reduced.

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [Sweden](#)

Economic Inequality in Sweden



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Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [Sweden](#)

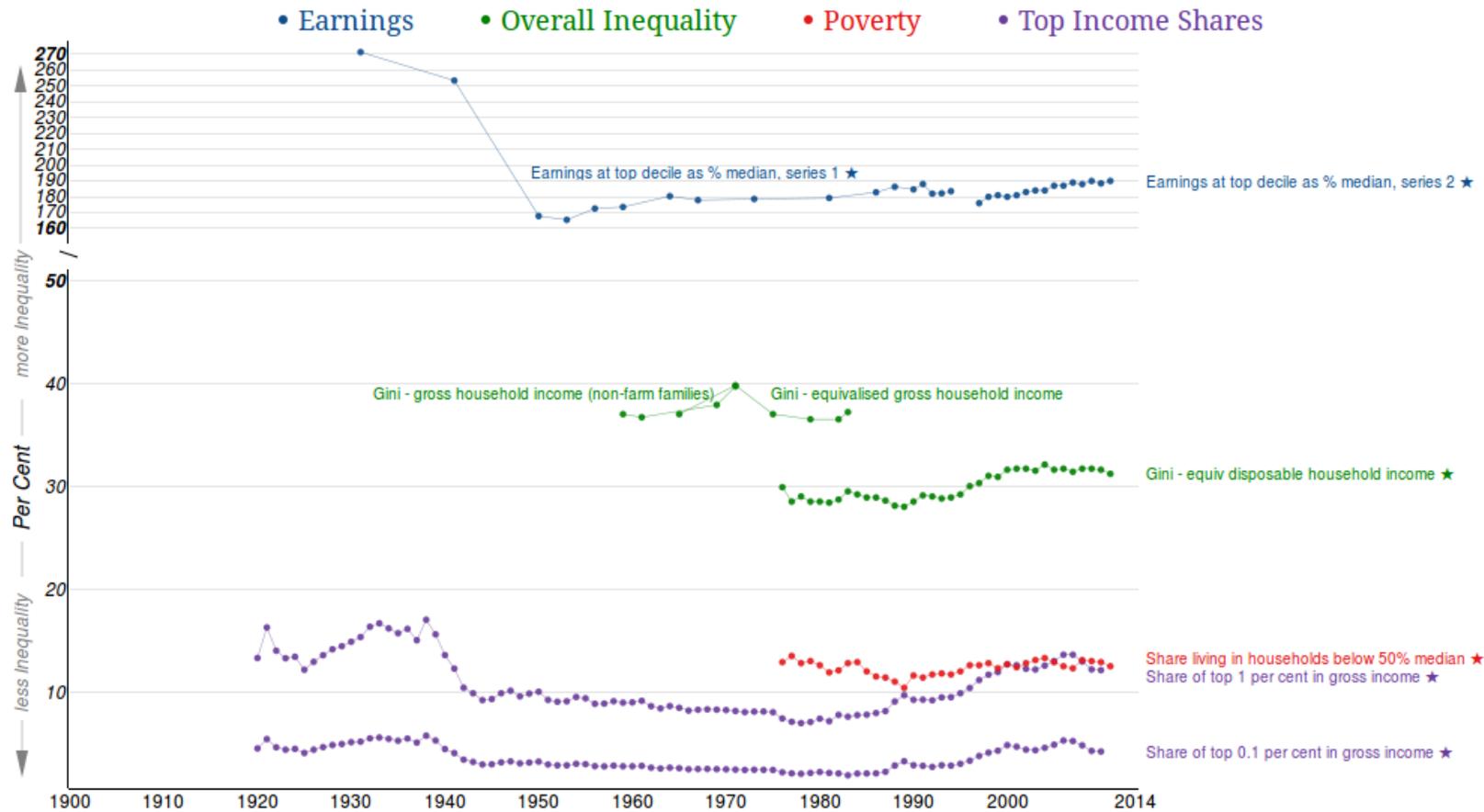
Overview of Trends of Economic Inequality in Sweden

Has the dispersion of earnings been increasing in recent decades?	Yes, the top decile of earnings has risen from 146 per cent of median in 1983 to 166 per cent in 2011.
Has overall inequality increased in recent years?	Yes, the Gini coefficient for equivalised disposable income is 10 percentage points higher in 2011 than in 1982.
Have there been periods when overall inequality fell for a sustained period?	Yes, much of twentieth century up to 1980s.
Has poverty been falling or rising in recent decades?	Rising. Relative poverty rate has doubled since 1995.
Has there been a U-pattern for top income shares over time?	Yes, top gross income shares fell from 1916 to 1980 and then rose.
Has the distribution of wealth followed the same pattern as income?	Similar till the end of 1980s. Top wealth shares show a downward trend from 1923 to end of 1980s; now levelled off.
Additional noteworthy features	Increase in overall inequality: during 1990s the average Gini was 25.5 while in the first decade of the twenty first century the average of Gini rose to 30. Top shares series have a break in 1971 (change in tax unit definition).

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [Canada](#)

Economic Inequality in Canada



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Comparing Inequalities in several countries

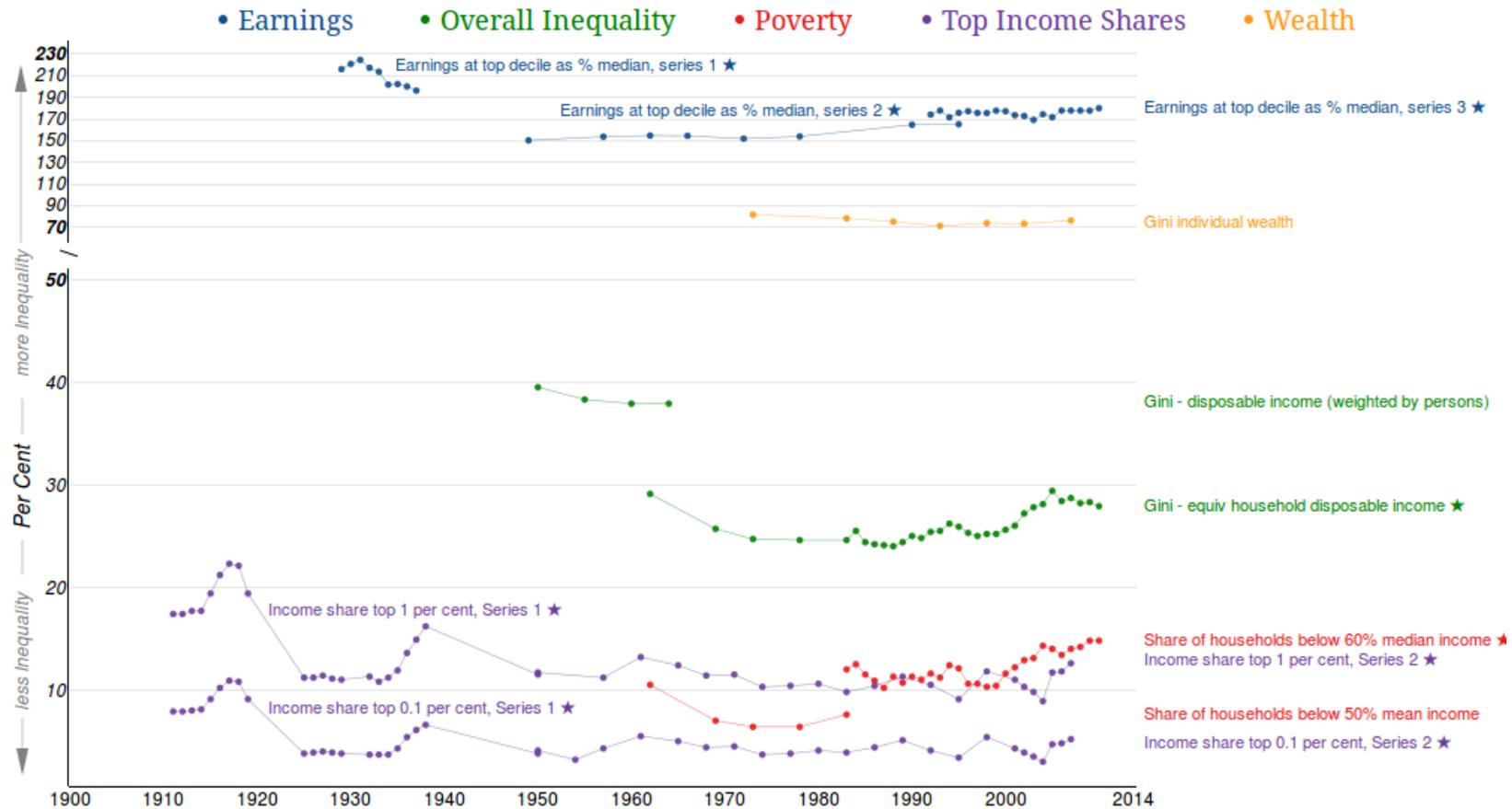
See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [Canada](#)

Has the dispersion of earnings been increasing in recent decades?	Yes, top decile of earnings has been rising relative to the median since early 1950s.
Has overall inequality increased in recent years?	Yes, Gini coefficient is around 3 percentage points higher than in 1989 but most of the increase took place in the 1990s.
Have there been periods when overall inequality fell for a sustained period?	Incomplete evidence.
Has poverty been falling or rising in recent decades?	Poverty fell in the 1980's and then rose.
Has there been a U-pattern for top income shares over time?	Yes, top gross income shares fell from 1938 until the mid-1980s and then began to rise.
Has the distribution of wealth followed the same pattern as income?	No evidence.
Additional noteworthy features	

Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. **Germany**

Economic Inequality in Germany



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Comparing Inequalities in several countries

See Atkinson & Morelli [Chartbook of Economic Inequality](#), 2014, e.g. [Germany](#)

Has the dispersion of earnings been increasing in recent decades?	Yes, top decile has risen from 150 per cent of median in 1950s to 190 per cent at end of 2000s.
Has overall inequality increased in recent years?	Yes, the Gini coefficient in 2010 was 3 percentage points higher than in 1998.
Have there been periods when overall inequality fell for a sustained period?	Overall inequality (and poverty) fell over the 1960s and 1970s.
Has poverty been falling or rising in recent decades?	Poverty rate increased from 10 per cent to 15 per cent between 1998 and 2010.
Has there been a U-pattern for top income shares over time?	No, top gross income shares were relatively stable over post-war period.
Has the distribution of wealth followed the same pattern as income?	Yes, Gini coefficient of individual wealth fell 10 percentage points from 1973 to 1993 and then began to rise.
Additional noteworthy features	

Comparing Inequalities in several countries

But one should be cautious about international comparisons,

- Inequality: Gini index based on gross income for U.S.A. and based on disposable income for Canada, France and U.K.
- Top income shares: Share of top 1 percent in gross income, for all countries
- Poverty: Share in households below 50% of median income for U.S.A. and Canada and below 60% of median income for France and U.K.

	USA	Canada	France	UK	Sweden	Germany
inequality	46.3	31.3	30.6	30.6	32.6	28.0
top income	19.3	12.2	7.9	7.9	7.1	12.7
poverty	17.3	12.6	14	14.0	14.4	14.9

Inequality

Atkinson Inequality: What Can Be Done,

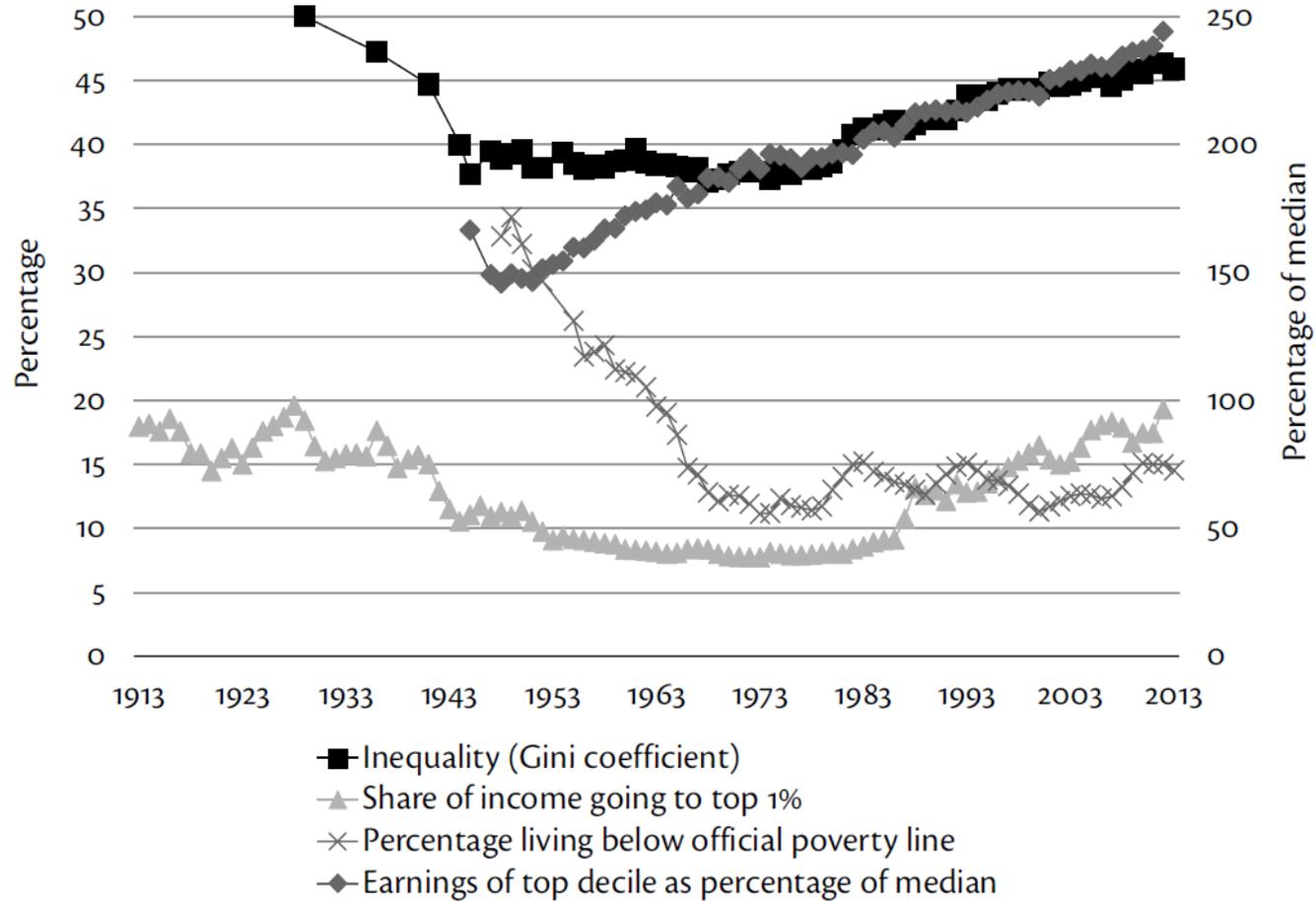


FIGURE 1.1: Inequality in the US, 1913–2013

Inequality

Atkinson Inequality: What Can Be Done,

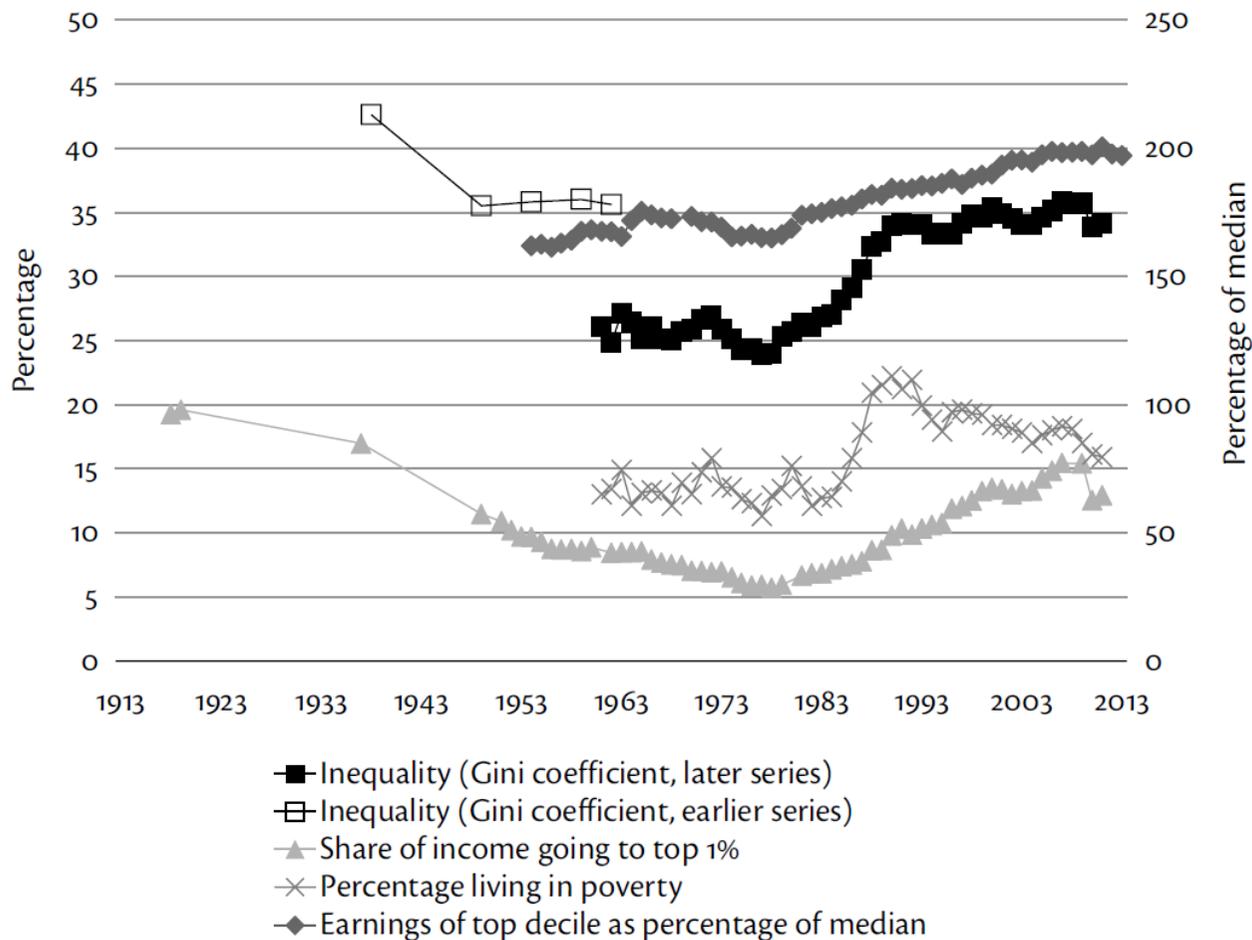


FIGURE 1.2: Inequality in the UK, 1913–2013

Inequality

Atkinson **Inequality: What Can Be Done,**

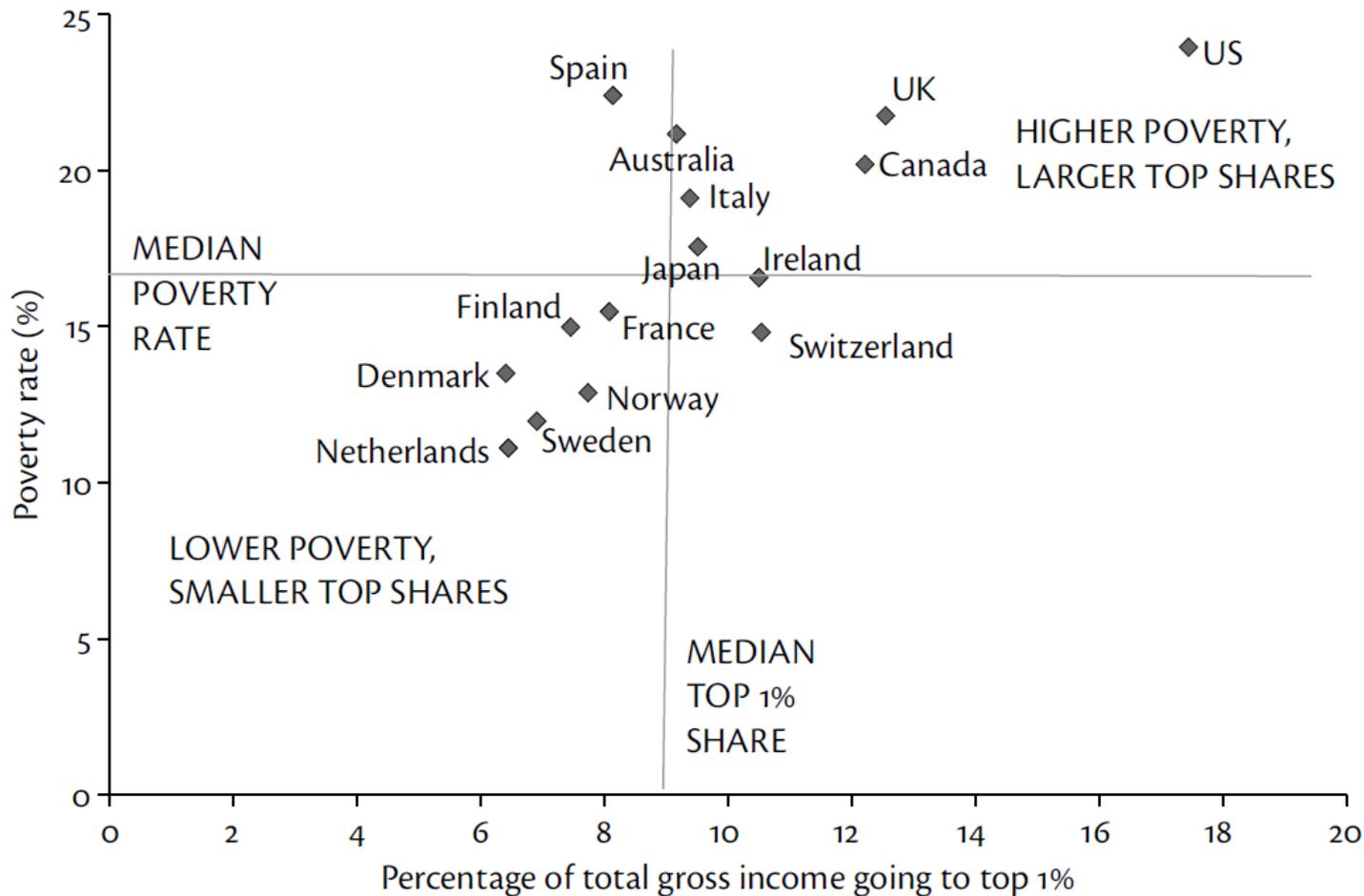


FIGURE 1.4: Poverty and top income shares in selected countries, c. 2010

Inequality

Atkinson *Inequality: What Can Be Done,*

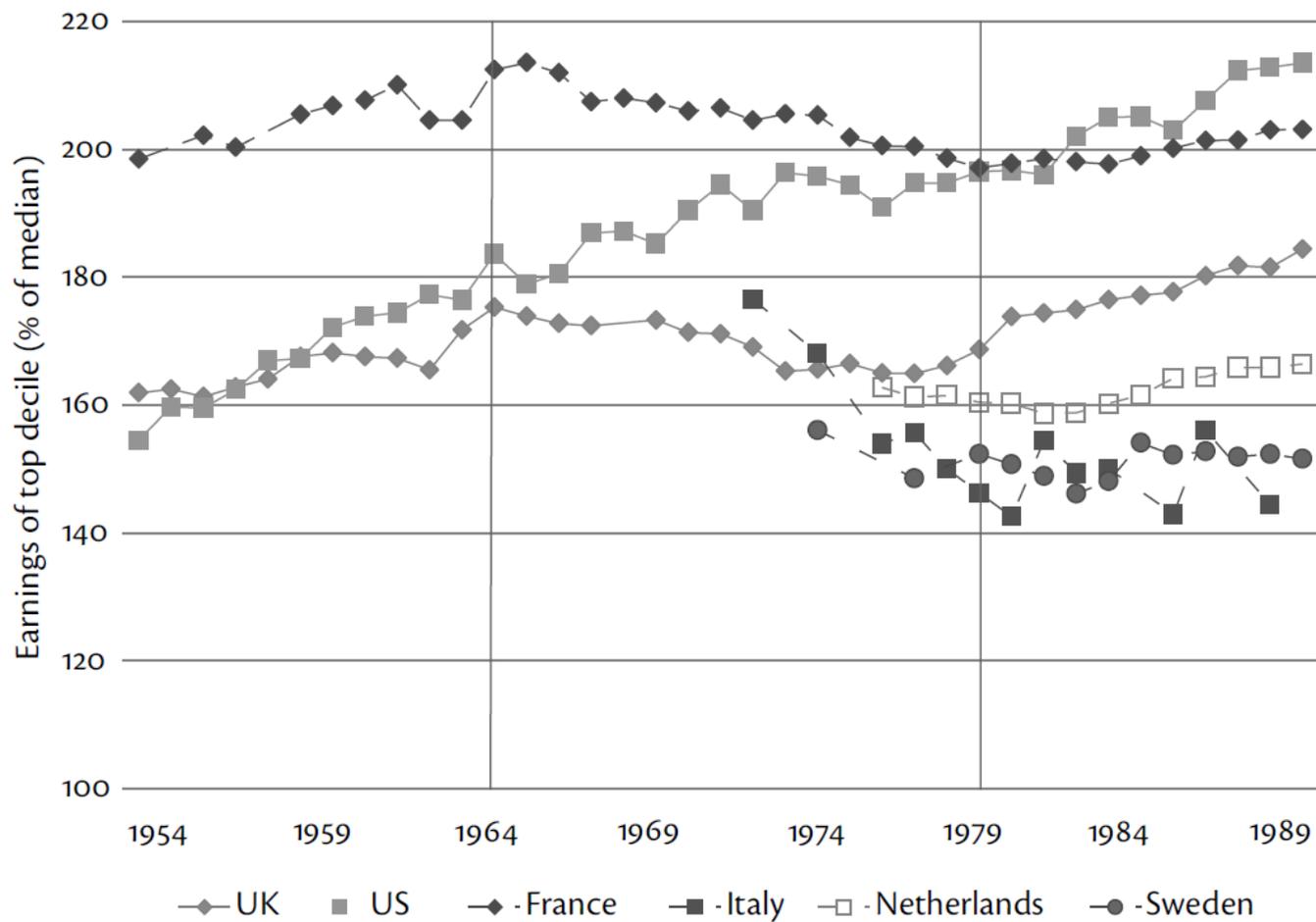


FIGURE 2.5: Earnings dispersion in US and Europe, 1954–1990

Inequality

Atkinson *Inequality: What Can Be Done,*

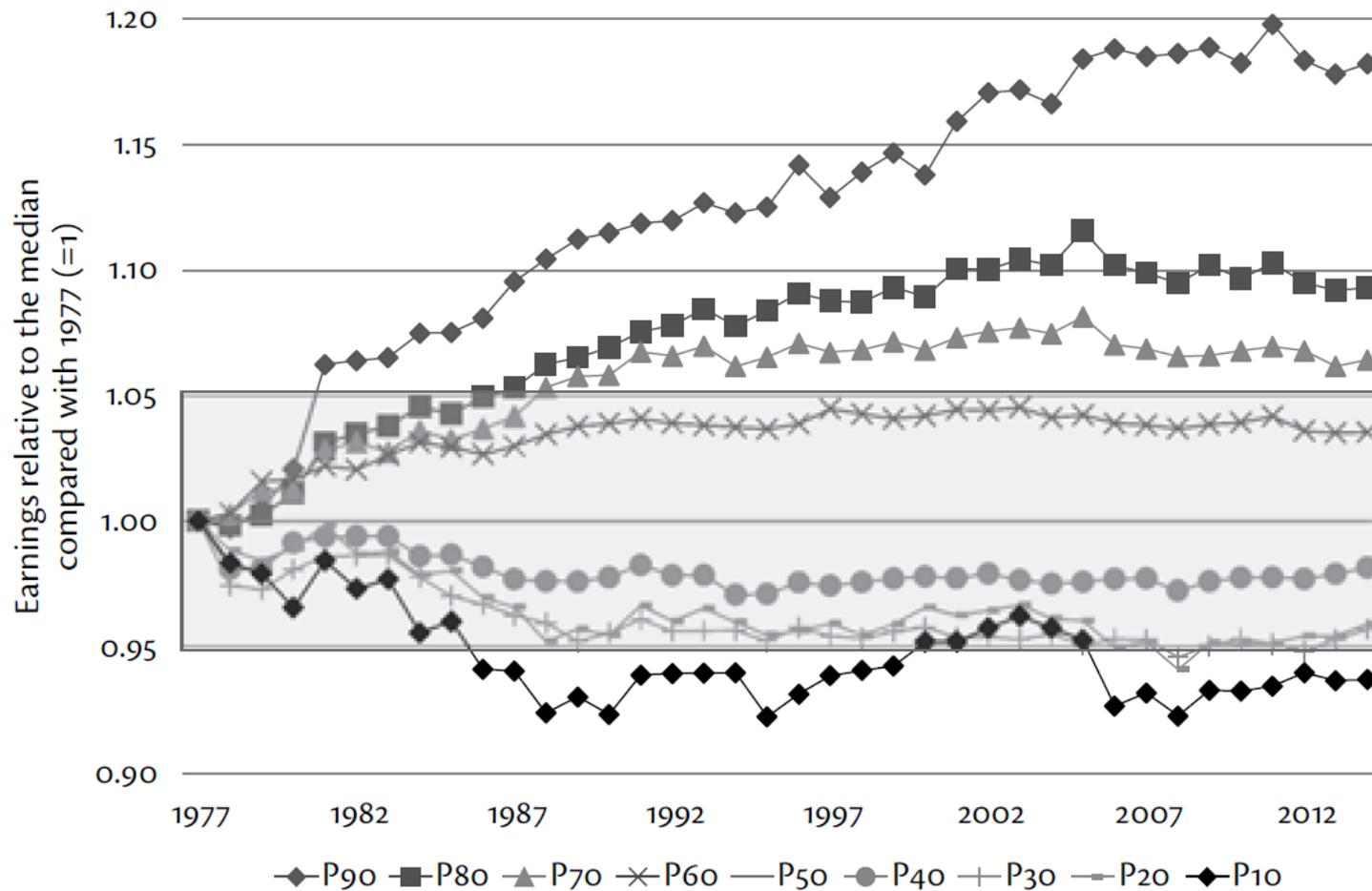
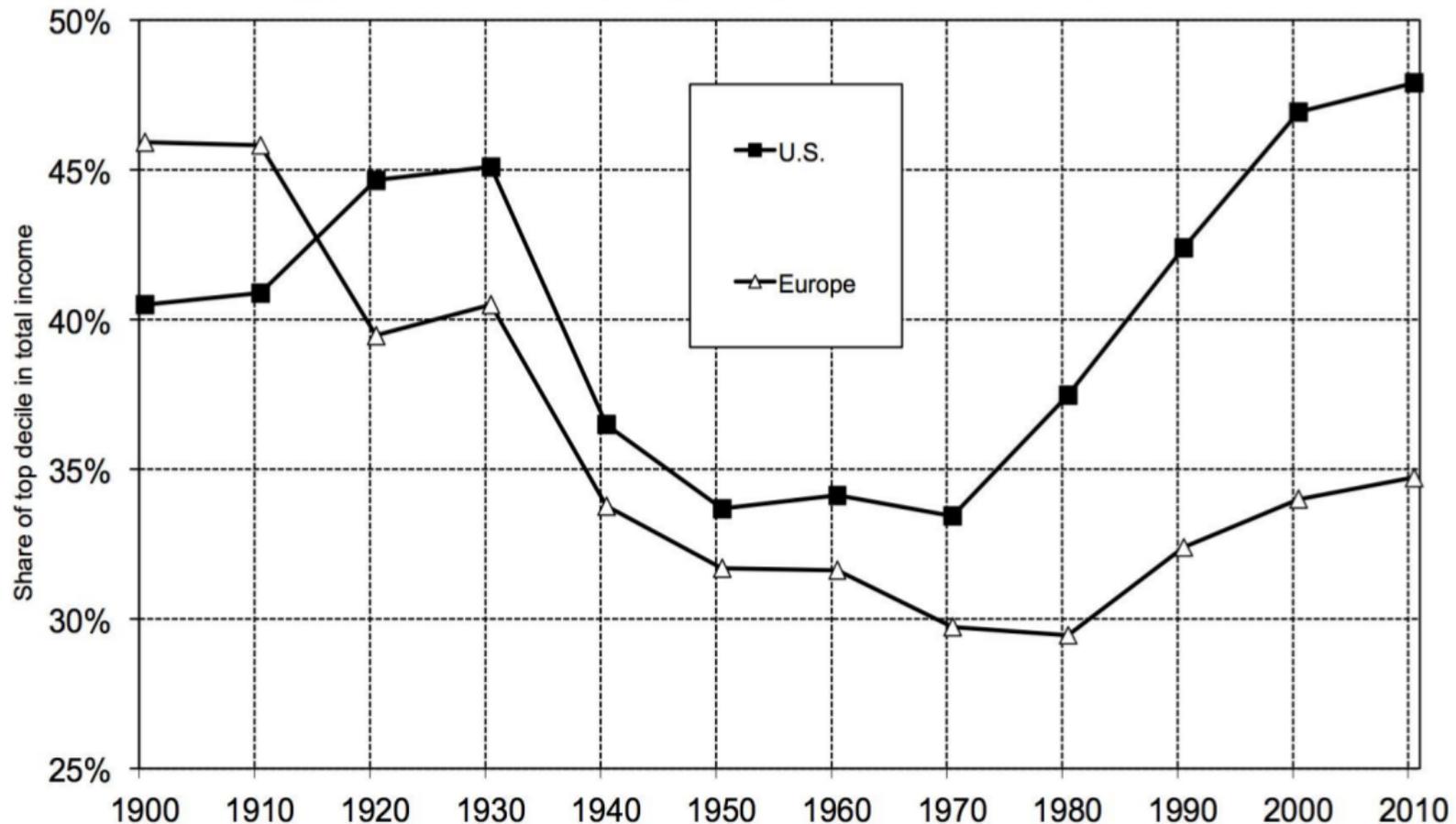


FIGURE 3.2: Change in earnings in the UK since 1977

Top Income Shares

Piketty *Capital in the Twenty-First Century*, 2014

Figure 9.8. Income inequality: Europe vs. the United States, 1900-2010

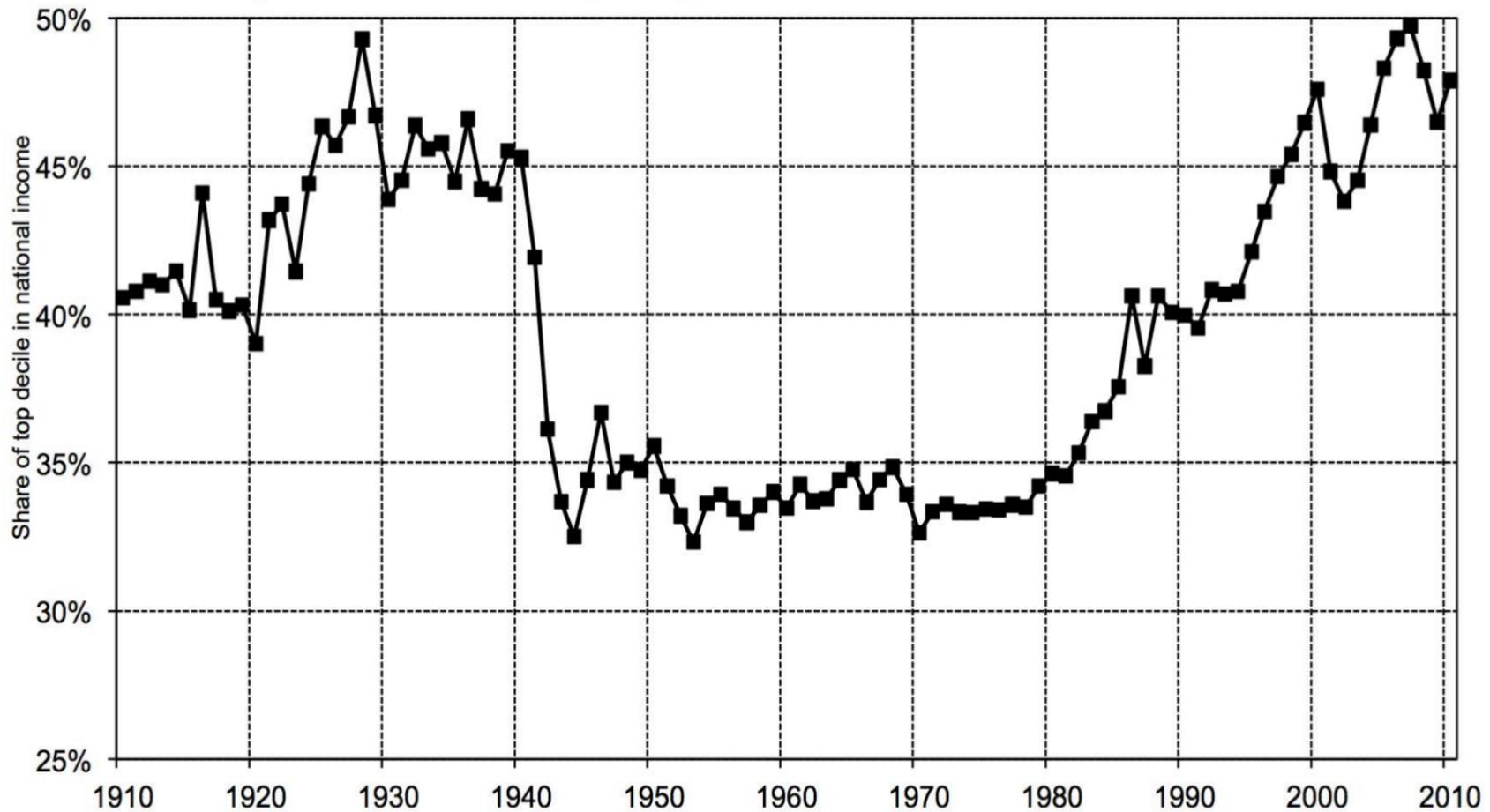


The top decile income share was higher in Europe than in the U.S. in 1900-1910; it is a lot higher in the U.S. in 2000-2010. Sources and series: see piketty.pse.ens.fr/capital21c.

Top Income Shares

Piketty *Capital in the Twenty-First Century*, 2014

Figure I.1. Income inequality in the United States, 1910-2010

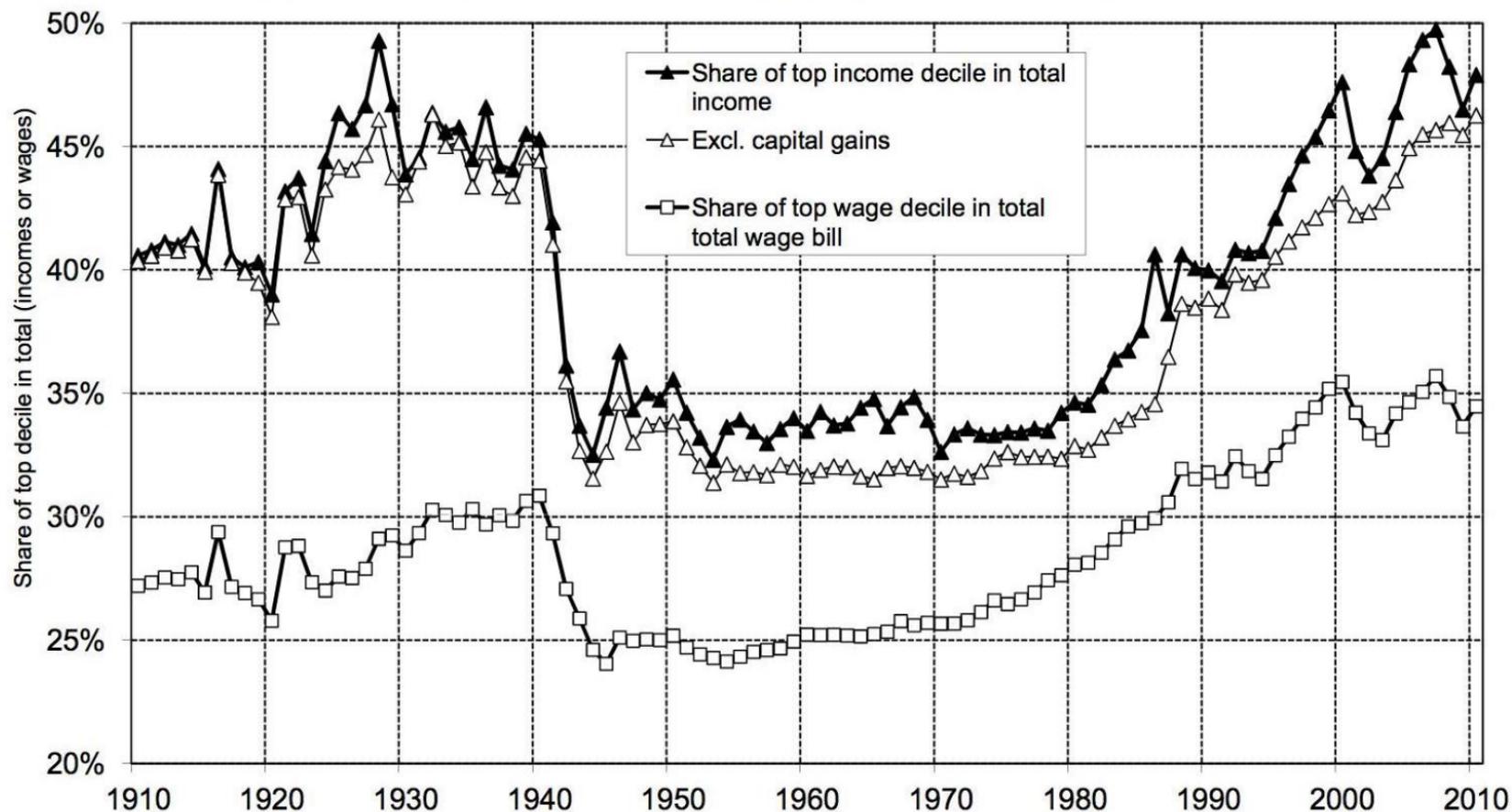


The top decile share in U.S. national income dropped from 45-50% in the 1910s-1920s to less than 35% in the 1950s (this is the fall documented by Kuznets); it then rose from less than 35% in the 1970s to 45-50% in the 2000s-2010s. Sources and series: see piketty.pse.ens.fr/capital21c.

Top Income Shares

Piketty *Capital in the Twenty-First Century*, 2014, wealth, income, wage

Figure 8.7. High incomes and high wages in the U.S. 1910-2010

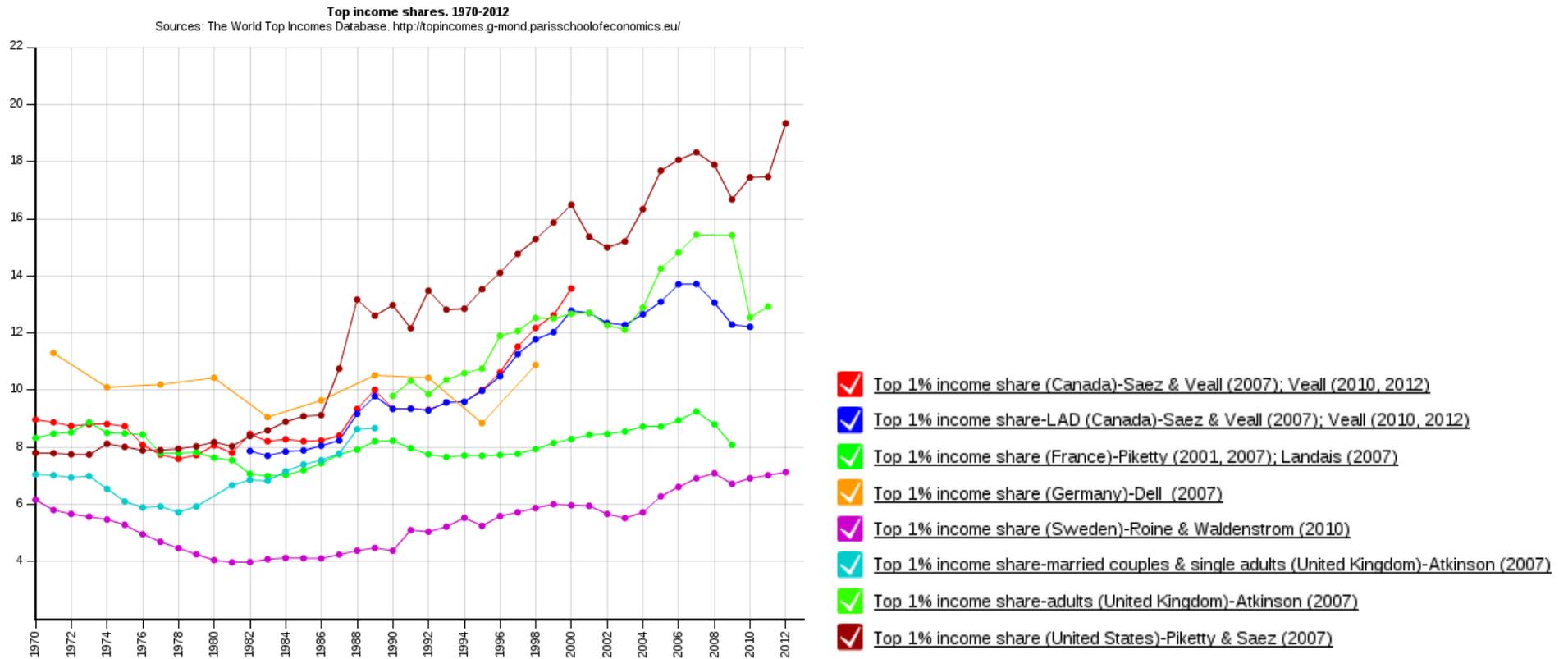


The rise of income inequality since the 1970s is largely due to the rise of wage inequality.

Sources and series: see piketty.pse.ens.fr/capital21c.

Top Income Shares

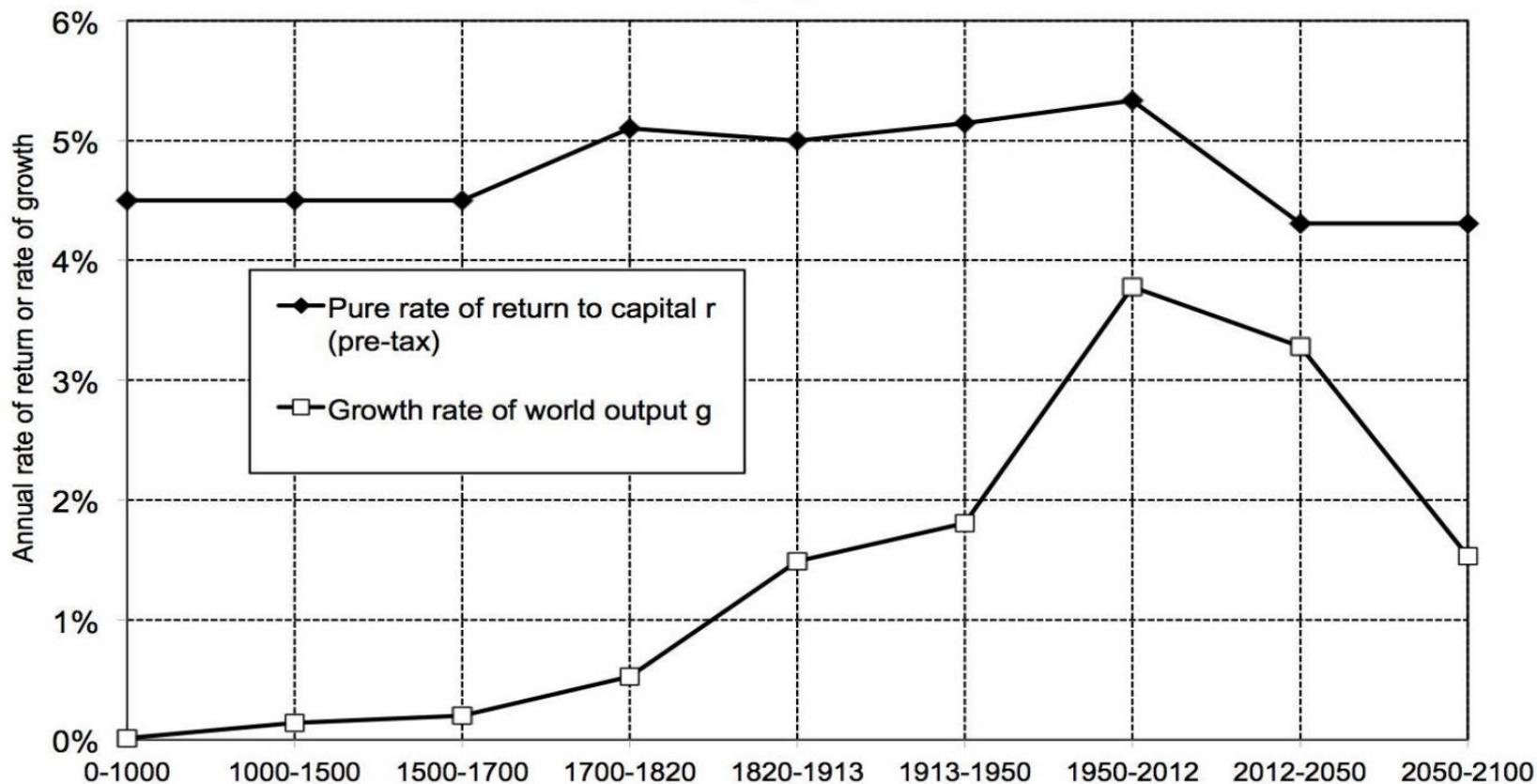
Piketty Capital in the Twenty-First Century, 2014



Fundamental Force of Divergence, $r > g$

Piketty *Capital in the Twenty-First Century*, 2014

Figure 10.9. Rate of return vs. growth rate at the world level, from Antiquity until 2100



The rate of return to capital (pre-tax) has always been higher than the world growth rate, but the gap was reduced during the 20th century, and might widen again in the 21st century.

Sources and series: see piketty.pse.ens.fr/capital21c

Poverty, in France

See Guélaud, [Le nombre de pauvres a augmenté de 440.000 en France en 2010](#), 2012

La dernière enquête de l'Insee sur les niveaux de vie, rendue publique vendredi 7 septembre, est explosive. Que constate-t-elle en effet ? Qu'en 2010, le niveau de vie médian (19 270 euros annuels) a diminué de 0,5% par rapport à 2009, que seuls les plus riches s'en sont sortis et que la pauvreté, en hausse, frappe désormais 8,6 millions de personnes, soit 440 000 de plus qu'un an plus tôt.

Avec la fin du plan de relance, les effets de la crise se sont fait sentir massivement. En 2009, la récession n'avait que ralenti la progression en euros constants du niveau de vie médian (+ 0,4%, contre + 1,7% par an en moyenne de 2004 à 2008). Il faut remonter à 2004, précise l'Insee, pour trouver un recul semblable à celui de 2010 (0,5%).

Poverty, in France

La timide reprise économique de 2010 n'a pas eu d'effets miracle, puisque pratiquement toutes les catégories de la population, y compris les classes moyennes ou moyennes supérieures, ont vu leur niveau de vie baisser. N'a augmenté que celui des 5% des Français les plus aisés.

Dans un pays qui a la passion de l'égalité, la plupart des indicateurs d'inégalités sont à la hausse. L'indice de Gini, qui mesure le degré d'inégalité d'une distribution (en l'espèce, celle des niveaux de vie), a augmenté de 0,290 à 0,299 (0 correspondant à l'égalité parfaite et 1 à l'inégalité la plus forte). Le rapport entre la masse des niveaux de vie détenue par les 20 % les plus riches et celle détenue par les 20 % les plus modestes est passé de 4,3 à 4,5.

Poverty, in France

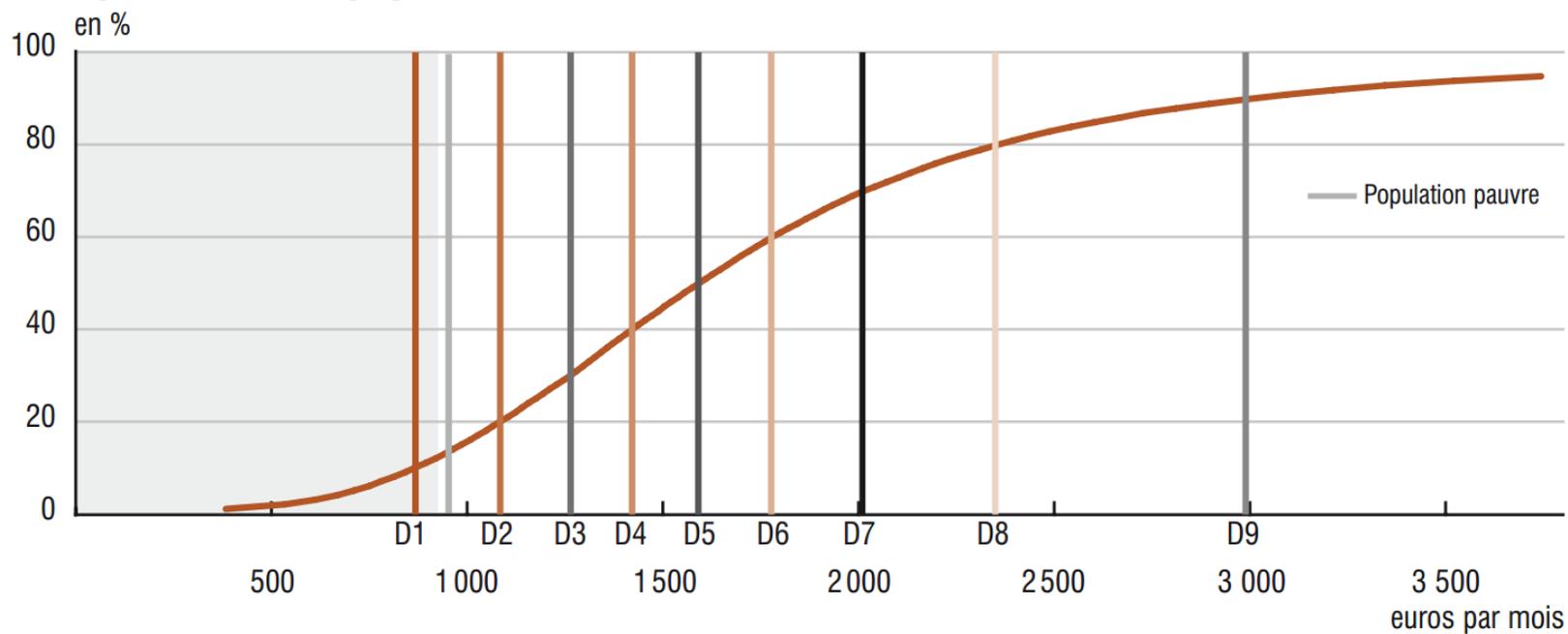
*Déjà en hausse de 0,5 point en 2009, le **taux de pauvreté monétaire** a augmenté en 2010 de 0,6 point pour atteindre 14,1%, soit son plus haut niveau depuis 1997. 8,6 millions de personnes vivaient en 2010 en-dessous du seuil de pauvreté monétaire (964 euros par mois). Elles n'étaient que 8,1 millions en 2009. Mais il y a pire : une personne pauvre sur deux vit avec moins de 781 euros par mois*

*En 2010, le chômage a peu contribué à l'augmentation de la pauvreté (les chômeurs **représentent à peine 4% de l'accroissement** du nombre des personnes pauvres). C'est du côté des inactifs qu'il faut plutôt se tourner : les retraités (11%), les adultes inactifs autres que les étudiants et les retraités (16%) - souvent les titulaires de minima sociaux - et les enfants. Les moins de 18 ans **contribuent** pour près des deux tiers (63%) à l'augmentation du nombre de personnes pauvres [...]*

Incomes in France

See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

1. Répartition de la population selon le niveau de vie en 2009



Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.
 Lecture : D1 à D9 désignent les 9 déciles de niveaux de vie, seuils qui partagent la population en 10 sous-populations d'effectifs égaux. 70 % des personnes vivent avec moins de 2010 euros par mois.

Sources : Insee ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquête Revenus fiscaux et sociaux 2009.

Incomes in France

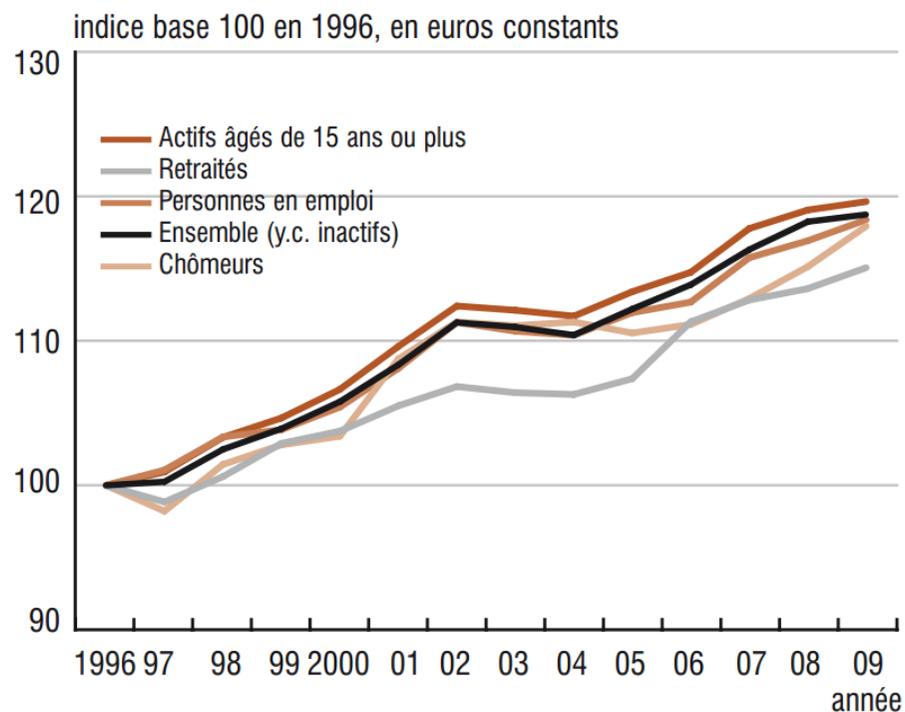
See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

2. Évolution du niveau de vie médian selon la situation sur le marché du travail

Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.

Lecture : de 1996 à 2009, le niveau de vie médian des personnes ayant un emploi augmente de 20 %, soit une progression de 1,4 % en moyenne par an.

Sources : Insee ; DGI, enquêtes Revenus fiscaux et sociaux rétrospectives 1996 à 2004 - Insee ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquêtes Revenus fiscaux et sociaux 2005 à 2009.



Incomes in France

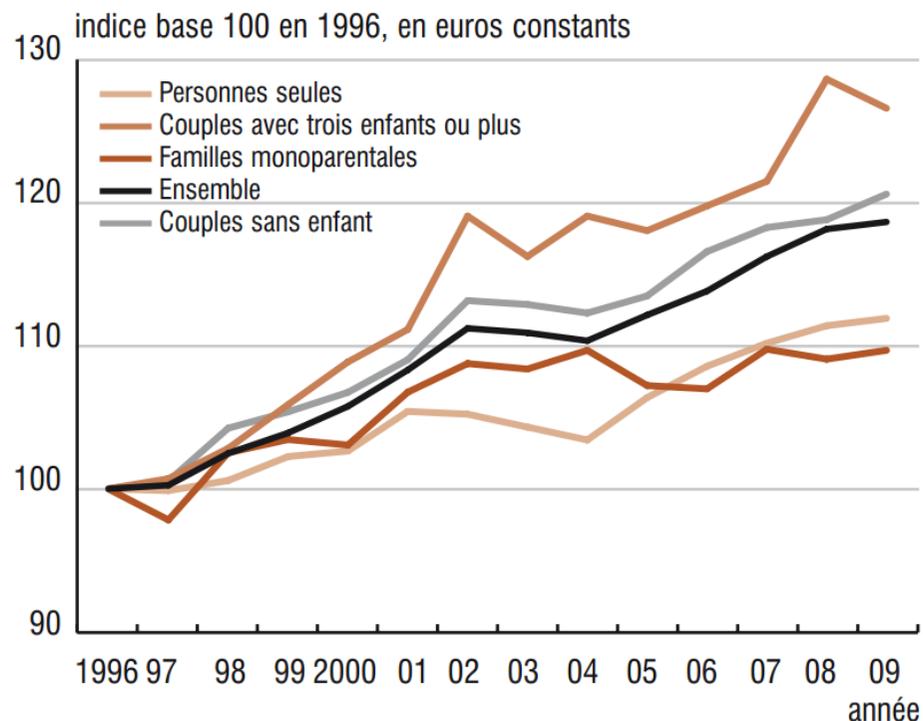
See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

3. Évolution du niveau de vie médian selon quelques configurations familiales

Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.

Lecture : de 1996 à 2009, le niveau de vie médian des personnes vivant en couple avec 3 enfants ou plus augmente de 26,7 %, soit une progression de 1,8 % en moyenne par an.

Sources : Insee ; DGI, enquêtes Revenus fiscaux et sociaux rétrospectives 1996 à 2004 - Insee ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquêtes Revenus fiscaux et sociaux 2005 à 2009.



Incomes in France

See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

4. Contribution à l'augmentation de la pauvreté selon l'activité des personnes

	2008			2009			Contribution à l'augmentation du nombre de personnes pauvres (%)
	Ensemble des personnes (milliers)	Pauvreté au seuil de 60 % de la médiane		Ensemble des personnes (milliers)	Pauvreté au seuil de 60 % de la médiane		
		Personnes pauvres (milliers)	Taux de pauvreté (%)		Personnes pauvres (milliers)	Taux de pauvreté (%)	
Actifs de 18 ans ou plus	27 687	2 634	9,5	27 726	2 796	10,1	48
Personnes en emploi	25 530	1 863	7,3	25 050	1 866	7,4	1
Chômeurs	2 156	772	35,8	2 677	930	34,7	47
Inactifs de 18 ans ou plus	19 063	2 873	15,1	19 278	2 990	15,5	34
Étudiants	1 789	324	18,1	1 726	351	20,3	8
Retraités	12 960	1 283	9,9	13 163	1 308	9,9	7
Autres inactifs	4 315	1 266	29,3	4 389	1 331	30,3	19
Enfants de moins de 18 ans	13 436	2 328	17,3	13 475	2 387	17,7	18
Ensemble de la population	60 186	7 836	13	60 479	8 173	13,5	100

Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.
Lecture : entre 2008 et 2009, le nombre d'actifs de 18 ans et plus en situation de pauvreté passe de 2,634 millions de personnes à 2,796 millions de personnes.
Cette évolution contribue à hauteur de 48 % à l'augmentation totale de la population pauvre.

Sources : Insee ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquêtes Revenus fiscaux et sociaux 2008 et 2009.

Incomes in France

See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

9. Décomposition du revenu disponible du ménage selon son groupe de niveau de vie en %

Type de revenus perçus ¹	Groupes de niveaux de vie						Ensemble
	Modestes		Intermédiaires		Aisés		
	1	2	3	4	5	6	
Salaires et allocations chômage	43,1	60,3	68,7	66,3	60,7	48,3	61,2
Revenus d'activité indépendants	2,3	2,2	2,9	5,7	12,5	18,4	5,5
Pensions et retraites	26,8	28,3	23,7	23,2	18,8	11,0	23,6
Revenus du patrimoine	3,2	4,4	6,4	11,3	20,0	44,6	10,8
Transferts et prélèvements ²	24,5	4,8	-1,7	-6,6	-12,1	-22,4	-1,0

1. Nets de CSG et de CRDS.

2. Prestations sociales nettes de CRDS (allocations familiales, allocations logement, minima sociaux) auxquelles sont retranchés les impôts directs suivants : impôts sur le revenu, taxe d'habitation, prélèvements libératoires sur valeurs mobilières.

Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.

Lecture : Les revenus du patrimoine représentent 6,4 % du revenu disponible des ménages du groupe 3.

Sources : Insee ; DGFIP ; Cnaf ; Cnav ; CCMSA, enquête Revenus fiscaux et sociaux 2009.

Incomes in France

See Houdré, Missègue & Seguin *Inégalités de niveau de vie et pauvreté*, 2012

2. Niveau de vie annuel et indicateurs d'inégalité de 1996 à 2009

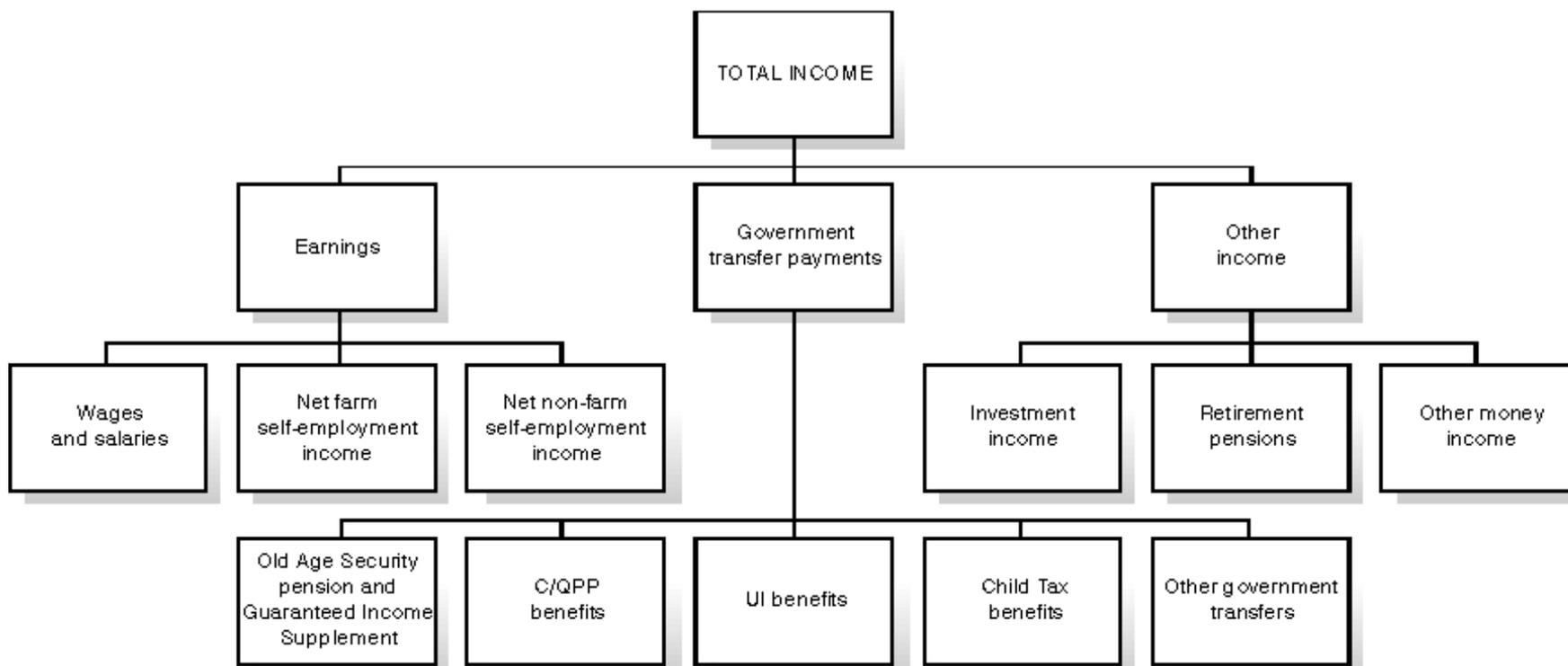
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Niveau de vie en euros 2009														
D5 (médian)	16 070	16 110	16 470	16 700	17 000	17 410	17 880	17 830	17 740	18 030	18 300	18 690	19 000	19 080
Indicateurs d'inégalité														
D9/D1	3,5	3,5	3,4	3,4	3,5	3,4	3,4	3,4	3,3	3,3	3,4	3,4	3,4	3,4
D9/D5	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9
D5/D1	1,9	1,9	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
S20 (%)	9,0	9,0	9,2	9,1	9,1	9,1	9,3	9,3	9,3	9,1	9,0	9,0	9,0	8,9
S50 (%)	31,1	31,0	31,2	30,9	30,8	30,8	31,1	31,2	31,2	31,0	30,7	30,7	30,9	30,7
S80 (%)	63,0	63,0	63,0	62,3	62,0	62,1	62,3	62,4	62,4	62,1	61,6	61,8	61,7	61,8
(100-S80)/S20	4,1	4,1	4,0	4,1	4,2	4,2	4,1	4,0	4,0	4,2	4,3	4,2	4,3	4,3
Indice de Gini	0,279	0,279	0,276	0,284	0,286	0,286	0,281	0,280	0,281	0,286	0,291	0,289	0,289	0,290

Champ : France métropolitaine, personnes vivant dans un ménage dont le revenu déclaré au fisc est positif ou nul et dont la personne de référence n'est pas étudiante.
Lecture : en 2009, la moitié des personnes disposent d'un niveau de vie annuel inférieur à 19 080 euros. Le rapport entre le niveau de vie plancher des 10 % des personnes les plus aisées et le niveau de vie plafond des 10 % les plus modestes s'élève à 3,4. Les 20 % les plus pauvres ont 8,9 % de la masse des niveaux de vie (S20). Les 20 % les plus aisées ont 38,2 % de la masse des niveaux de vie (1-S80).

Sources : Insee-DGI, enquêtes Revenus fiscaux et sociaux rétropolées 1996 à 2004 ; Insee-DGFIP-Cnaf-Cnav-CCMSA, enquêtes Revenus fiscaux et sociaux 2005 à 2009.

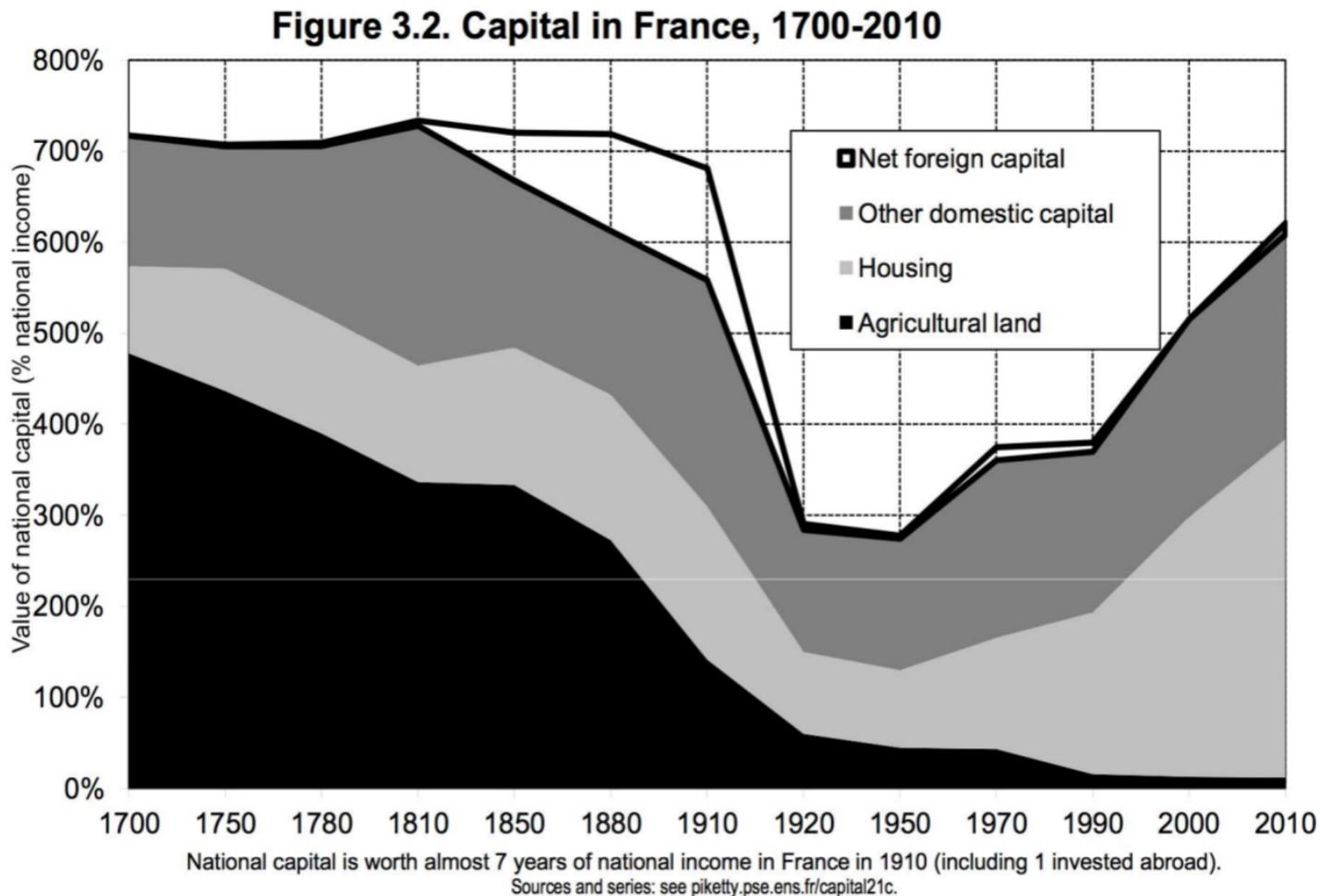
Income?

See Statistics Canada [Total Income](#), via Flachaire (2015).



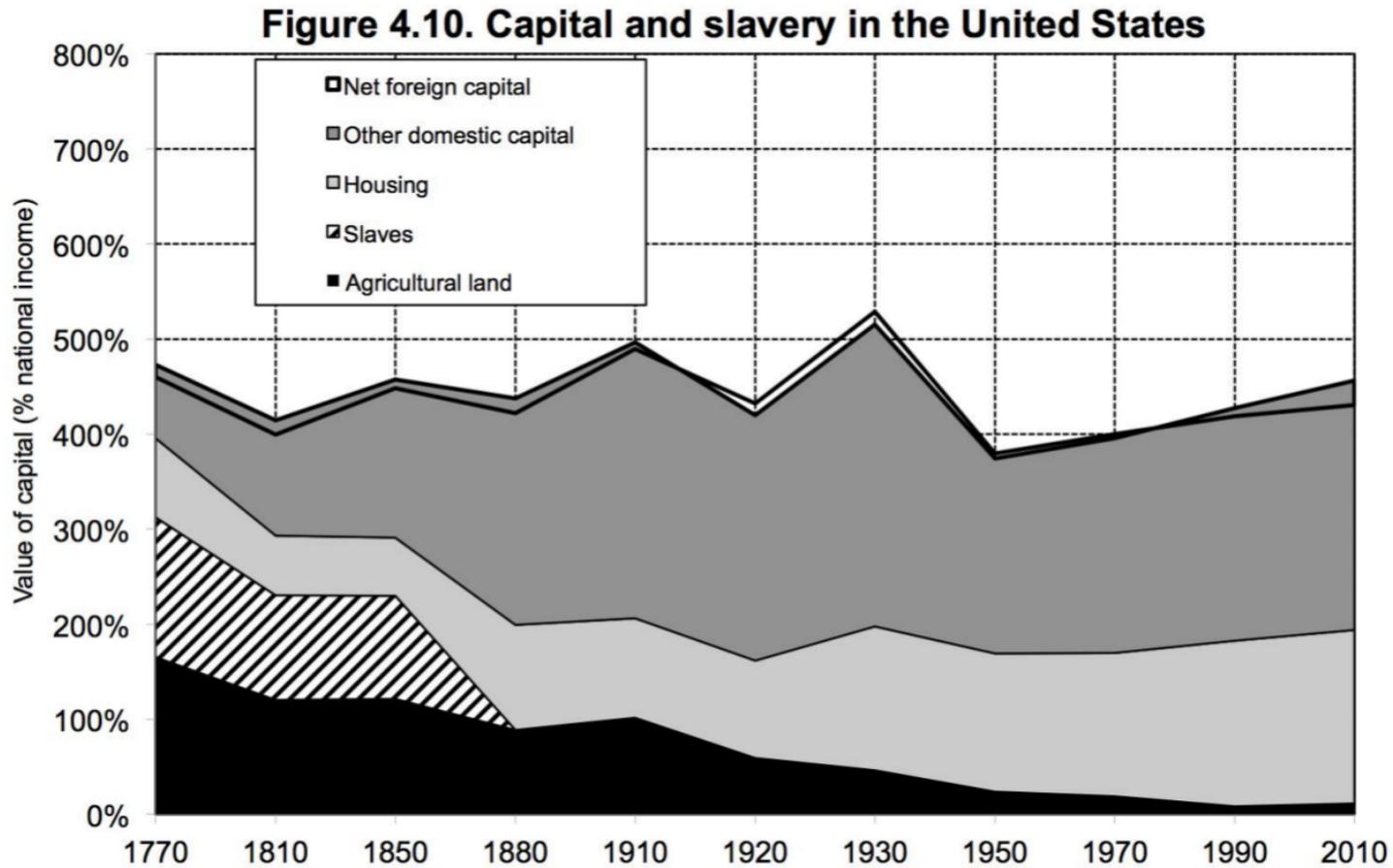
Income? Micro vs macro

Piketty Capital in the Twenty-First Century, 2014,



Income? Micro vs macro

Piketty Capital in the Twenty-First Century, 2014,



The market value of slaves was about 1.5 years of U.S. national income around 1770 (as much as land).

Sources and series: see piketty.pse.ens.fr/capital21c.

Income? Micro vs macro

To compare various household incomes

- Oxford scale (OECD equivalent scale)
 - 1.0 to the first adult
 - 0.7 to each additional adult (aged 14, and more)
 - 0.5 to each child
- OECD-modified equivalent scale (late 90s by eurostat)
 - 1.0 to the first adult
 - 0.5 to each additional adult (aged 14, and more)
 - 0.3 to each child
- More recent OECD scale

- square root of household size

Income? Micro vs macro

Household	OECD equivalent scale	OECD-modified scale	Square root scale
	$\frac{\text{income}}{1+0.7+3*0.5}$	$\frac{\text{income}}{1+0.5+3*0.3}$	$\frac{\text{income}}{\sqrt{5}}$
	$\frac{\text{income}}{1+0.7}$	$\frac{\text{income}}{1+0.5}$	$\frac{\text{income}}{\sqrt{2}}$
	$\frac{\text{income}}{1+0.7+0.5}$	$\frac{\text{income}}{1+0.5+0.3}$	$\frac{\text{income}}{\sqrt{3}}$
	$\frac{\text{income}}{1+0.7+2*0.5}$	$\frac{\text{income}}{1+0.5+2*0.3}$	$\frac{\text{income}}{\sqrt{4}}$

Income? Tax Issues

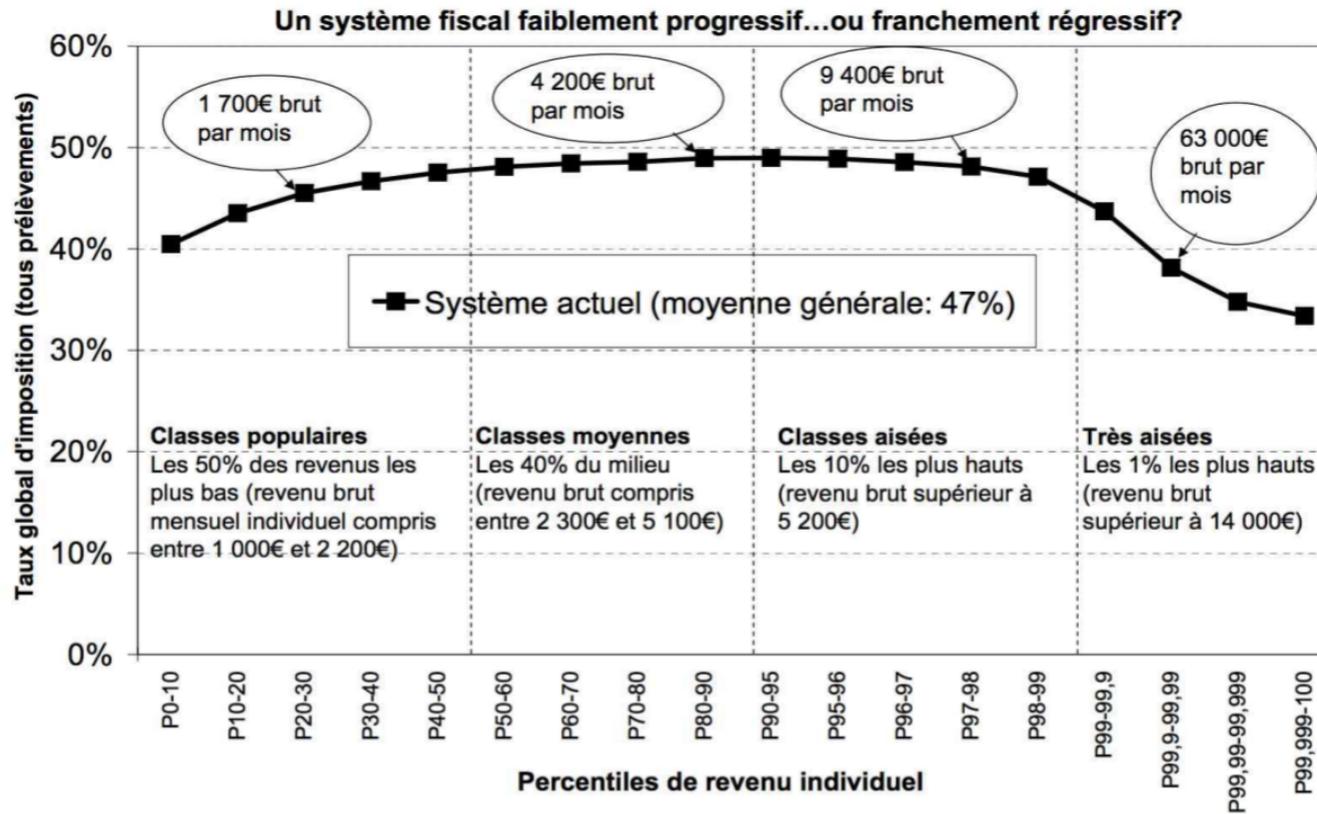
E.g. total taxes paid by total wage

Tax burdens around the world					
Country	Single, no kids	Married, 2 kids	Country	Single, no kids	Married, 2 kids
Australia	28.3%	16.0%	Korea	17.3%	16.2%
Austria	47.4%	35.5%	Luxembourg	35.3%	12.2%
Belgium	55.4%	40.3%	Mexico	18.2%	18.2%
Canada	31.6%	21.5%	Netherlands	38.6%	29.1%
Czech Republic	43.8%	27.1%	New Zealand	20.5%	14.5%
Denmark	41.4%	29.6%	Norway	37.3%	29.6%
Finland	44.6%	38.4%	Poland	43.6%	42.1%
France	50.1%	41.7%	Portugal	36.2%	26.6%
Germany	51.8%	35.7%	Slovak Republic	38.3%	23.2%
Greece	38.8%	39.2%	Spain	39.0%	33.4%
Hungary	50.5%	39.9%	Sweden	47.9%	42.4%
Iceland	29.0%	11.0%	Switzerland	29.5%	18.6%
Ireland	25.7%	8.1%	Turkey	42.7%	42.7%
Italy	45.4%	35.2%	United Kingdom	33.5%	27.1%
Japan	27.7%	24.9%	United States	29.1%	11.9%

Source: OECD, 2005 data

Income? Tax Issues

via Landais, Piketty & Saez *Pour une révolution fiscale*, 2011



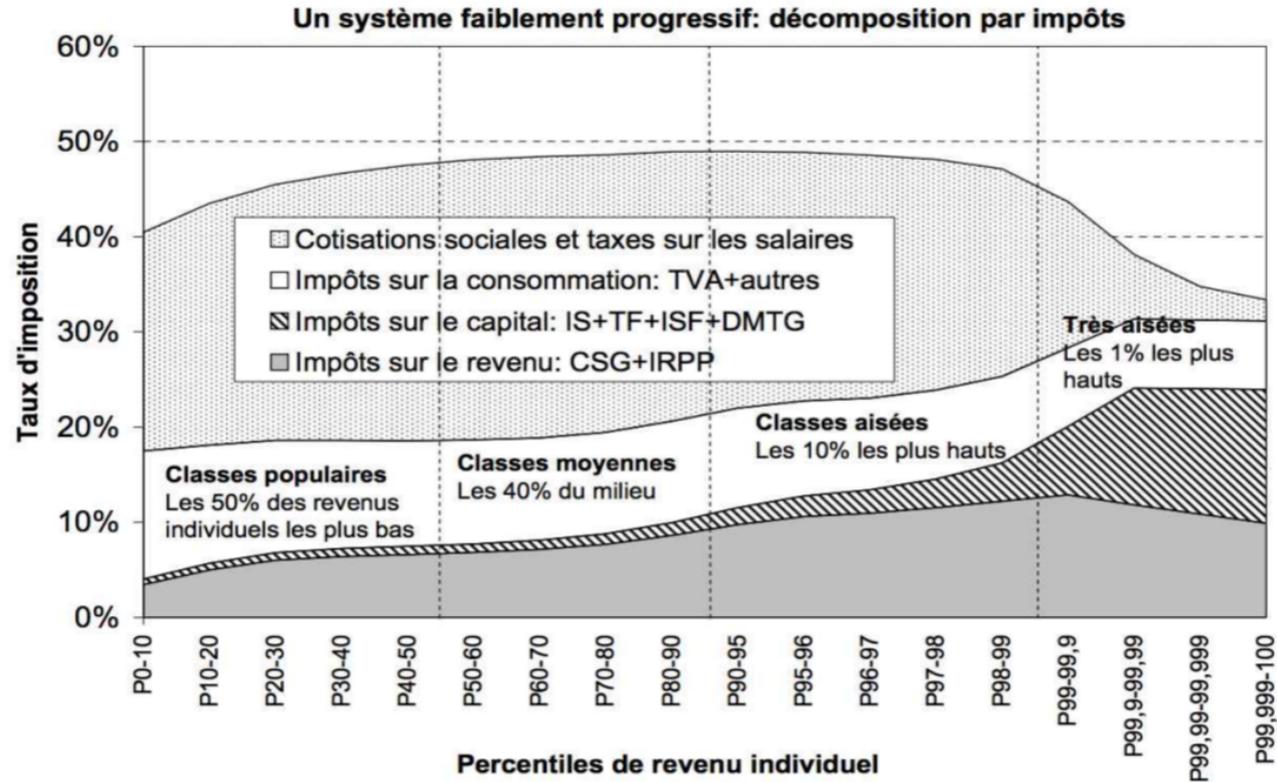
Lecture: le graphique montre le taux global d'imposition (incluant tous les prélèvements) par groupe de revenus au sein de la population 18-65 ans travaillant à au moins 80% du plein temps. P0-10 désigne les percentiles 0 à 10, c'est-à-dire les 10% des personnes avec les revenus les plus faibles, P10-20 les 10% suivants, ..., P99,999-100 désigne les .001% les plus riches. La moyenne générale d'imposition est de 47% en moyenne. Les taux d'imposition croissent légèrement avec le revenu jusqu'au 95e percentile puis baissent avec le revenu pour les 5% les plus riches.

Source: C. Landais, T. Piketty & E. Saez, *Pour une révolution fiscale*, chapitre 1, p.50

Voir www.revolution-fiscale.fr, annexe au chapitre 1 (où nous montrons aussi les chiffres pour la population adulte totale).

Income? Tax Issues

via Landais, Piketty & Saez *Pour une révolution fiscale*, 2011



Lecture: le graphique montre le taux global d'imposition (incluant tous les prélèvements comme dans le graphique précédant) et sa décomposition par groupe de revenus au sein de la population 18-65 ans travaillant à au moins 80% du plein temps. Groupes de revenus: P0-10 désigne les percentiles 0 à 10, c'est-à-dire les 10% des personnes avec les revenus les plus faibles, P10-20 les 10% suivants, ..., P99.999-100 désigne les .001% les plus riches.

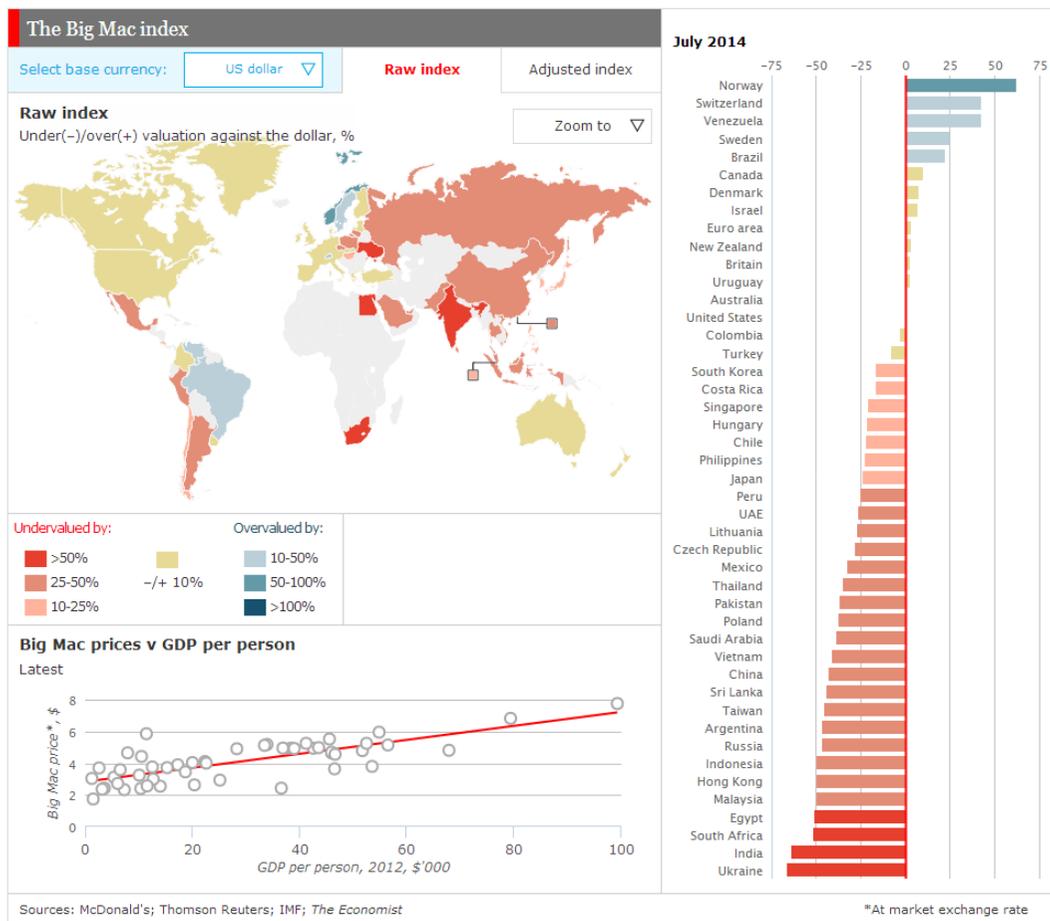
Le graphique décompose les impôts en quatre grandes catégories : cotisations sociales (et autres taxes sur les salaires), les impôts sur la consommation (TVA et autres impôts indirects), les impôts sur le capital (impôt sur les bénéfices des sociétés (IS), taxe foncière (TF), impôt sur la fortune (ISF) et droits de successions (DMTG)), et les impôts sur le revenu (CSG et IRPP).

Source: C. Landais, T. Piketty & E. Saez, *Pour une révolution fiscale*, chapitre 1, p.51

Source: Voir www.revolution-fiscale.fr, annexe au chapitre 1 (où nous montrons aussi les chiffres pour la population adulte totale).

International Comparisons, Purchasing Power Parity

See The Economist [The Big Mac index, 2014](#)



International Comparisons, Purchasing Power Parity

See The Economist [The Big Mac index](#), 2014, via Flachaire

	Price in local currency	exchange rate		PPP		Under(-)/over(+) valuation against the dollar, %
		Actual dollar exchange rate	Price in dollars [†]	Implied PPP of the dollars [‡]	Price in dollars	
United States	4.80	1.00	4.80	1.00	4.80	
Australia	5.10	1.06	4.81	1.06	4.80	0.40
Britain	2.89	0.59	4.93	0.60	4.80	2.71
Canada	5.64	1.07	5.25	1.18	4.80	9.51
China	16.90	6.20	2.73	3.52	4.80	-43.14
India	105	60.09	1.75	21.90	4.80	-63.56
Norway	48	6.19	7.76	10.01	4.80	61.79
South Africa	24.50	10.51	2.33	5.11	4.80	-51.41
Sweden	40.7	6.84	5.95	8.49	4.80	24.17
Switzerland	6.16	0.90	6.83	1.28	4.80	42.36
Ukraine	19	11.69	1.63	3.96	4.80	-66.09
France	3.90	0.74	5.25	0.81	4.80	9.51
Germany	3.67	0.74	4.94	0.77	4.80	3.05
Spain	3.65	0.74	4.91	0.76	4.80	2.49

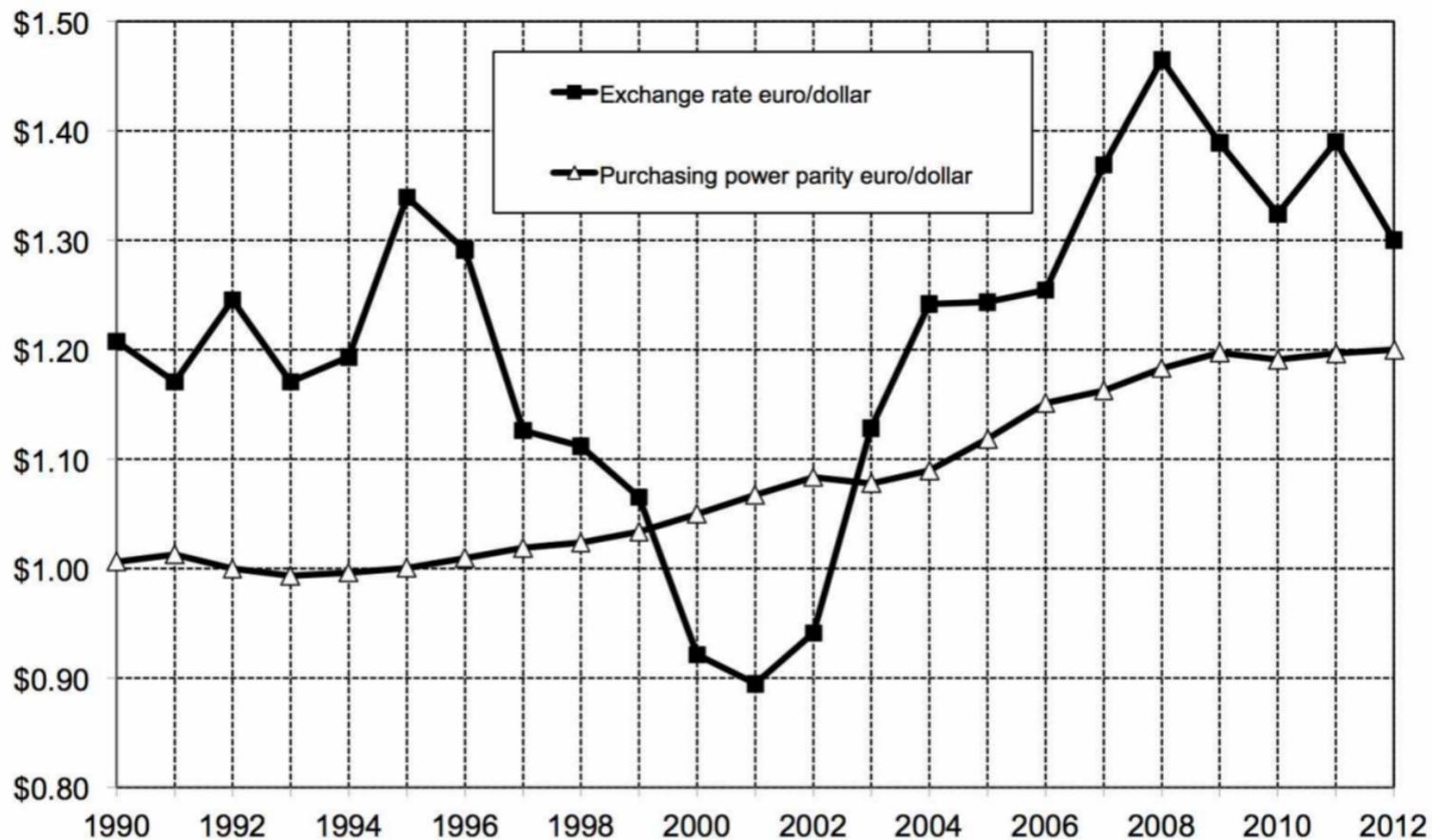
[†] Big Mac price in \$ = Big Mac price in local currency / actual \$ exchange rate

[‡] Implied PPP of the \$ = Big Mac price in local currency / Big Mac price in the U.S. (4.80)

International Comparisons, Purchasing Power Parity

Piketty *Capital in the Twenty-First Century*, 2014, wealth, income, wage

Figure 1.4. Exchange rate and purchasing power parity: euro/dollar



In 2012, 1 euro was worth 1.30 dollars according to current exchange rate, but 1.20 dollars in purchasing power parity. Sources and series: see piketty.pse.ens.fr/capital21c.

From Income and Wealth to Human Development

The [Human Development Index](#) (HDI, see [wikipedia](#)) is a composite statistic of life expectancy, education, and income indices used to rank countries into four tiers of human development. It was created by Indian economist [Amartya Sen](#) and Pakistani economist [Mahbub ul Haq](#) in 1990, and was published by the United Nations Development Programme.

The HDI is a composite index at value **between 0 (awful) and 1 (perfect)** based on the mixing of three basic indices aiming at representing on an equal footing measures of health, education and standard of living.

HDI Computation, new method (2010)

Published on 4 November 2010 (and updated on 10 June 2011), starting with the 2010 Human Development Report the HDI combines three dimensions:

- A **long and healthy life**: Life expectancy at birth
- An **education** index: Mean years of schooling and Expected years of schooling
- A **decent standard of living**: GNI per capita (PPP US\$)

In its 2010 Human Development Report, the UNDP began using a new method of calculating the HDI. The following three indices are used.

The idea is to define a x index as $x_{\text{index}} = \frac{x - \min(x)}{\max(x) - \min(x)}$.

1. **Health**, Life Expectancy Index (LEI) = $\frac{\text{LE} - 20}{85 - 20}$

where LE is Life Expectancy at birth

HDI Computation, new method (2010)

$$2. \text{ Education, Education Index (EI)} = \frac{\text{MYSI} + \text{EYSI}}{2}$$

$$2.1 \text{ Mean Years of Schooling Index (MYSI)} = \frac{\text{MYS}}{15}$$

where MYS is the Mean years of schooling (Years that a 25-year-old person or older has spent in schools)

$$2.2 \text{ Expected Years of Schooling Index (EYSI)} = \frac{\text{EYS}}{18}$$

EYS: Expected years of schooling (Years that a 5-year-old child will spend with his education in his whole life)

$$3. \text{ Standard of Living Income Index (II)} = \frac{\log(\text{GNIpc}) - \log(100)}{\log(75,000) - \log(100)}$$

where GNIpc: Gross national income at purchasing power parity per capita

Finally, the HDI is the geometric mean of the previous three normalized indices:

$$\text{HDI} = \sqrt[3]{\text{LEI} \cdot \text{EI} \cdot \text{II}}$$

Economic Well-Being

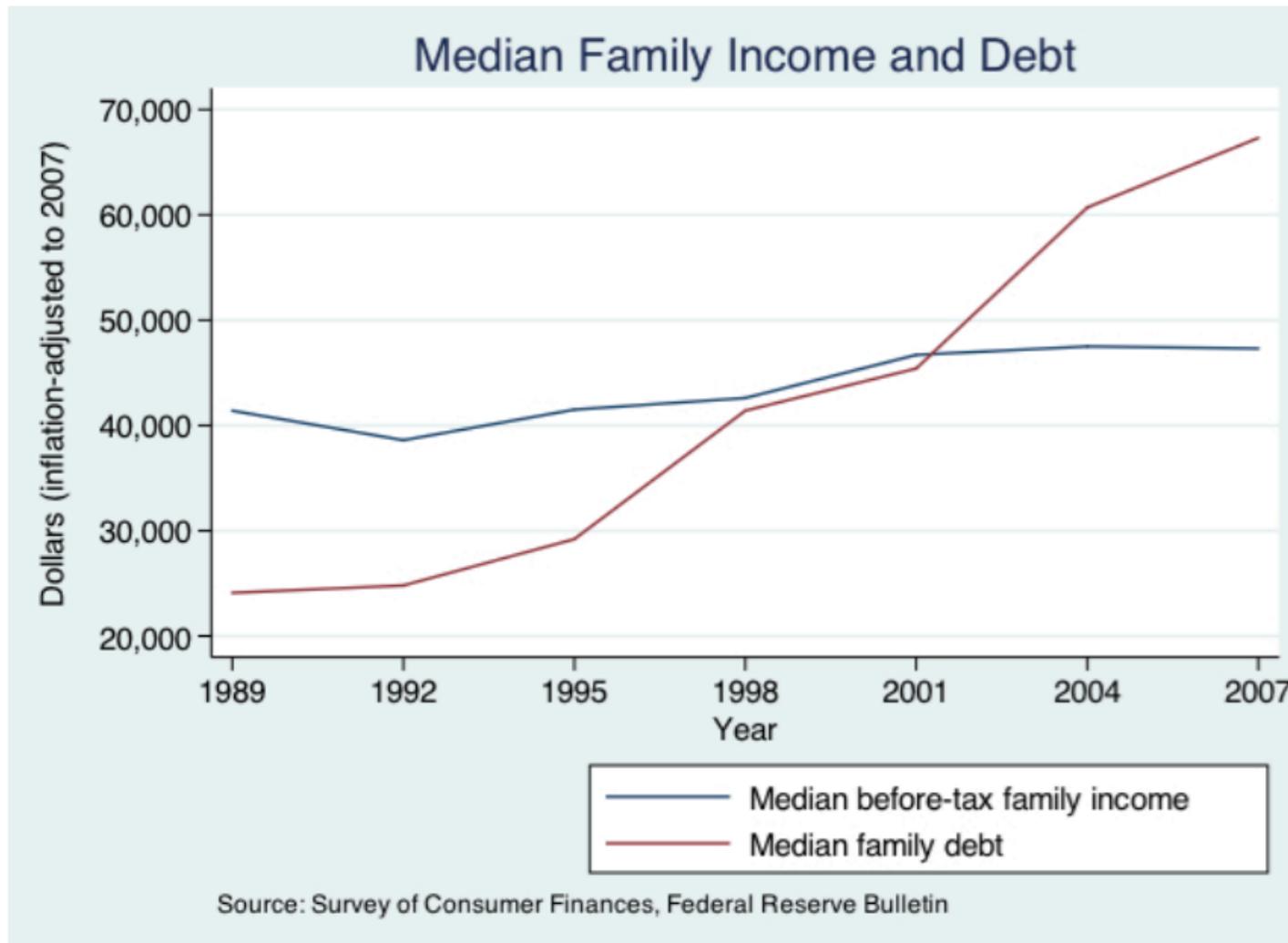
See Osberg [The Measurement of Economic Well-Being](#), 1985 and

Osberg & Sharpe [New Estimates of the Index of Economic Well-being](#), 2002

See also Jank & Owens [Inequality in the United States](#), 2013, for stats and graphs about inequalities in the U.S., in terms of health, education, crime, etc.

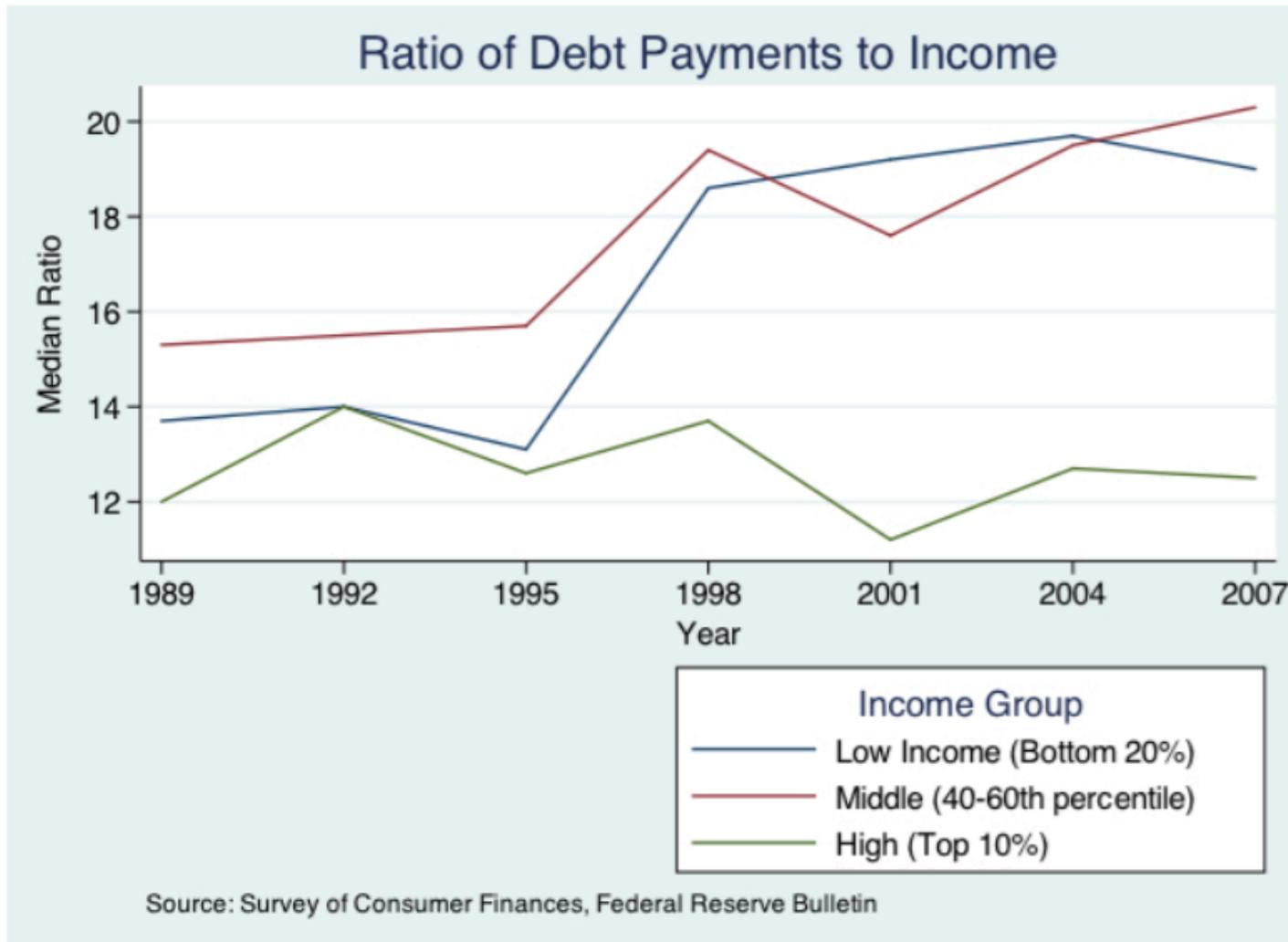
Various Aspects of Inequalities in the U.S.

Jank & Owens *Inequality in the United States*, 2013



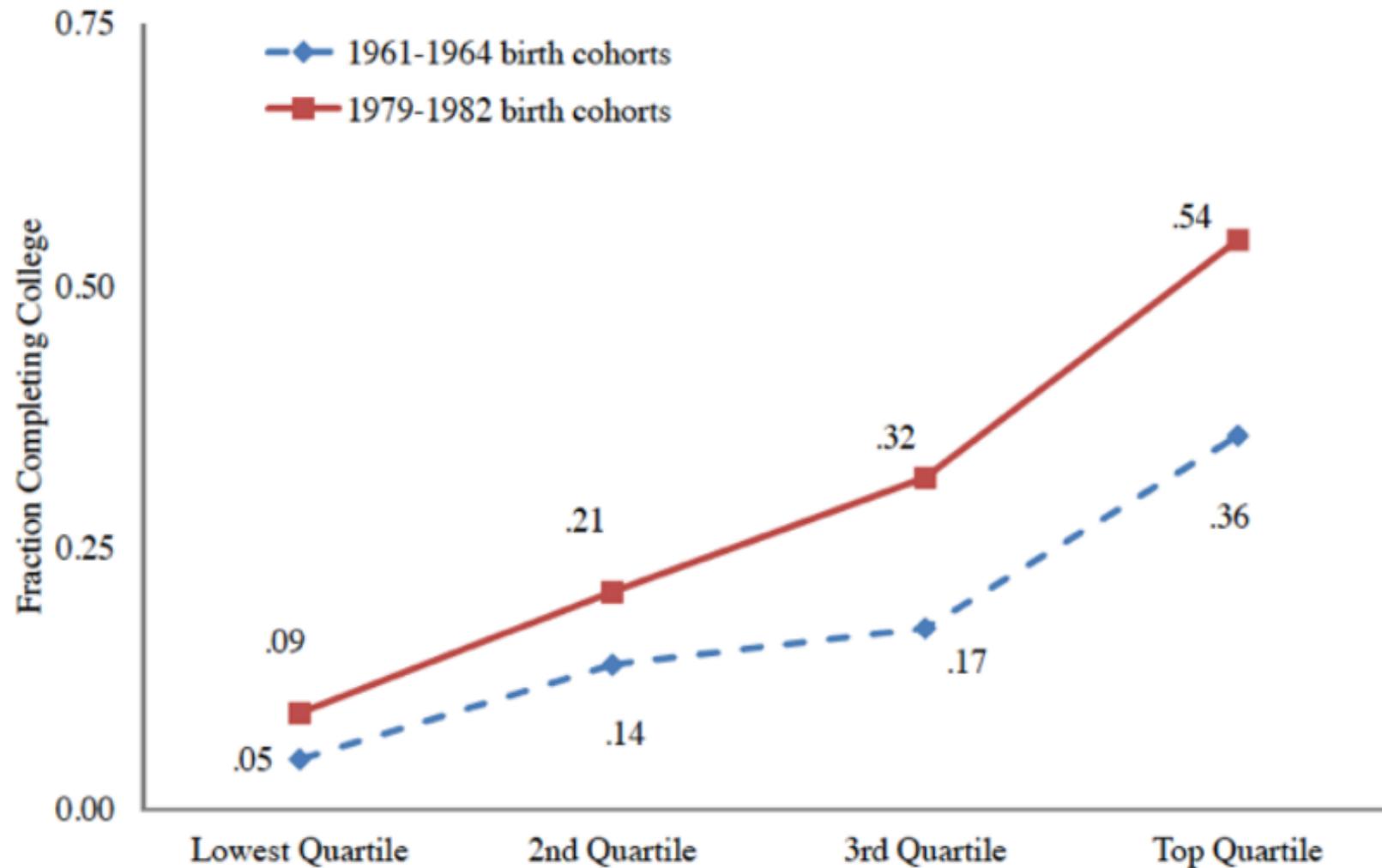
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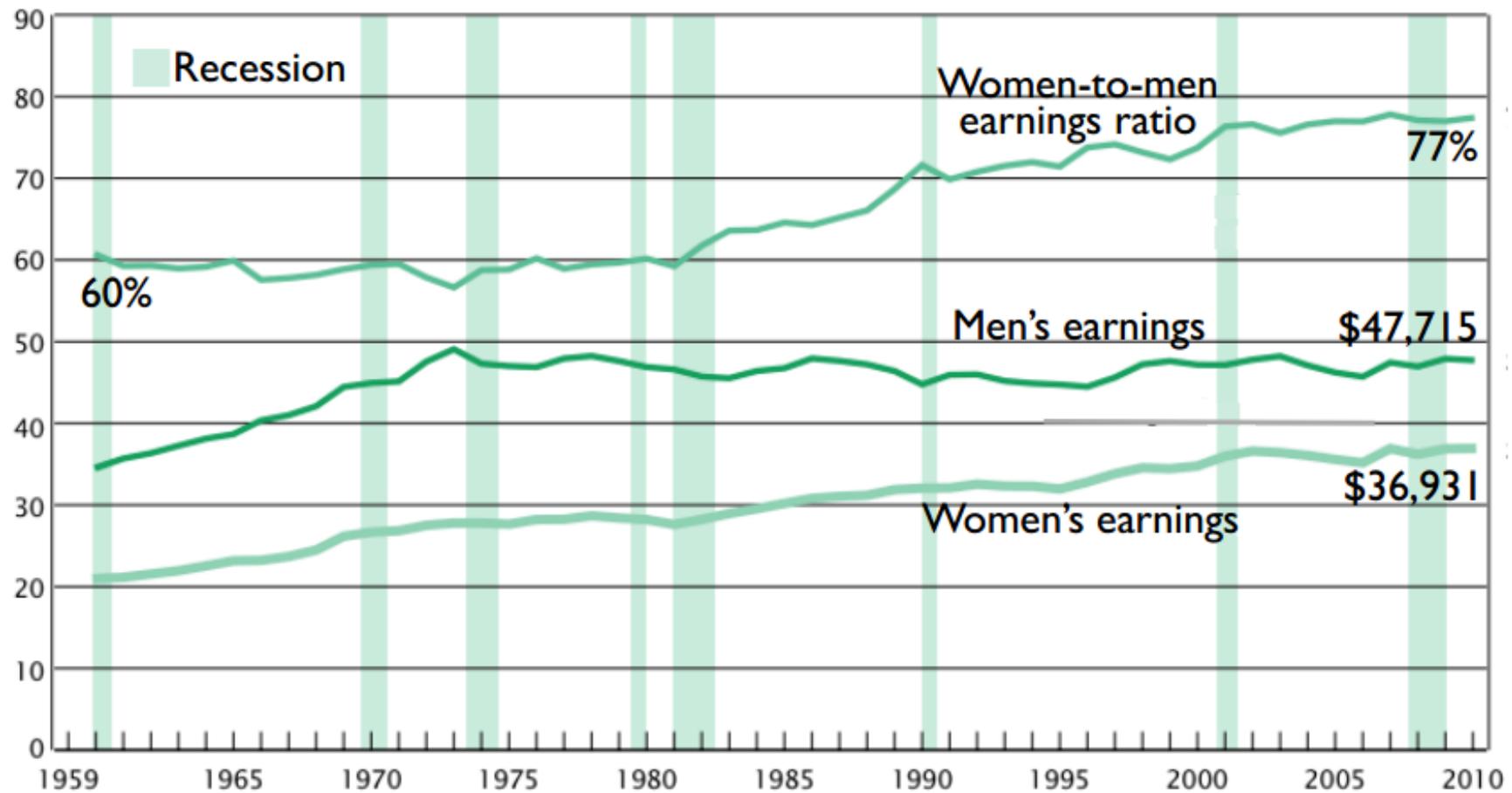
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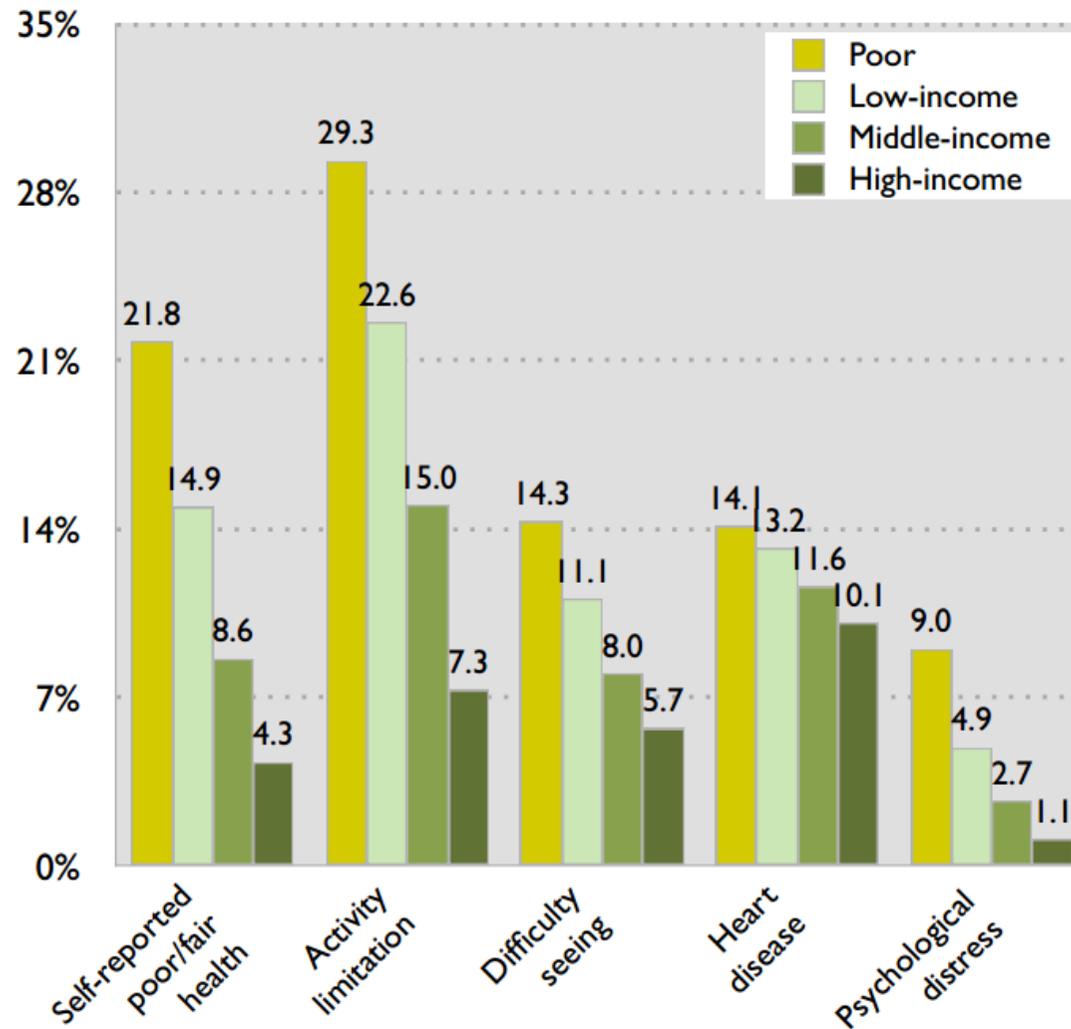
Jank & Owens *Inequality in the United States*, 2013

Women's Earnings as a Percentage of Men's Earnings



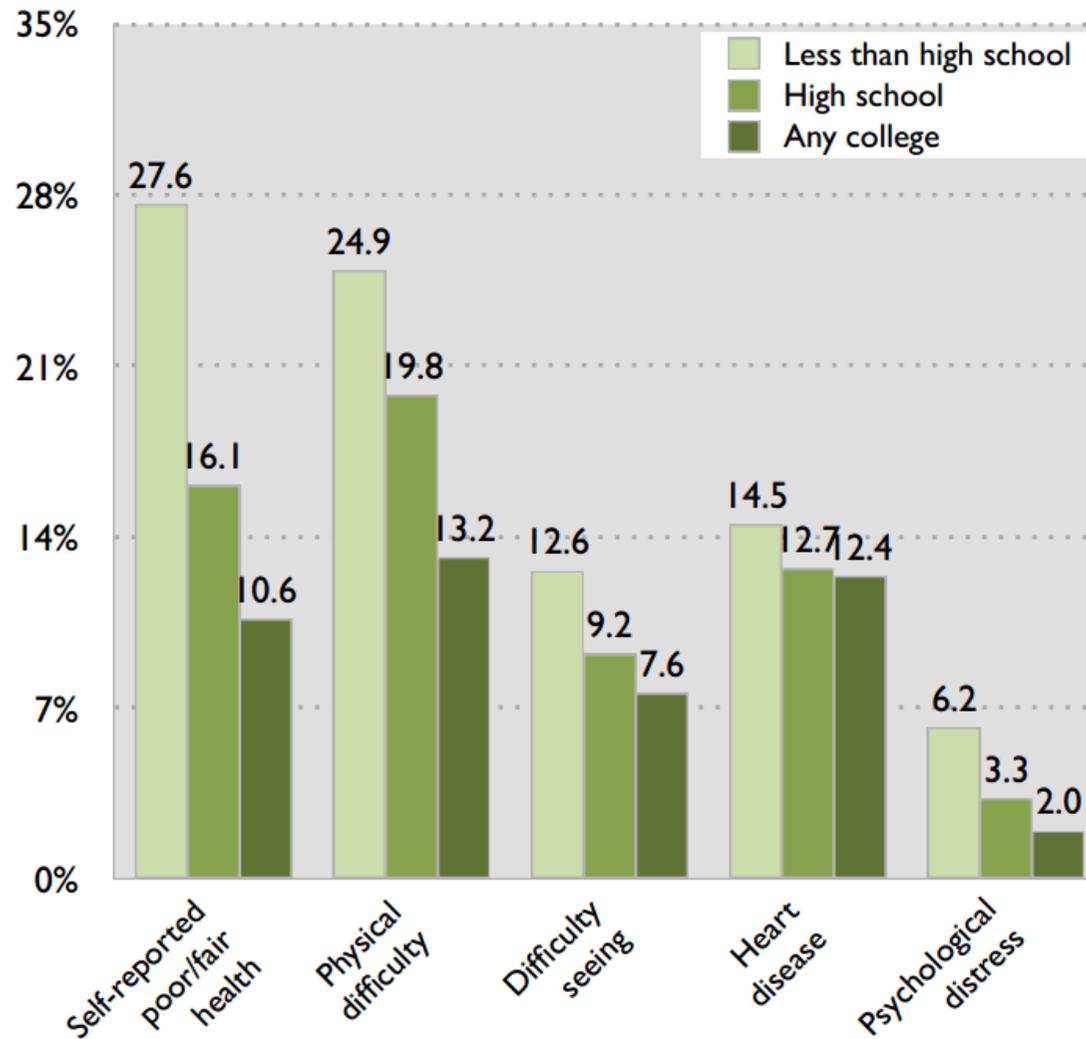
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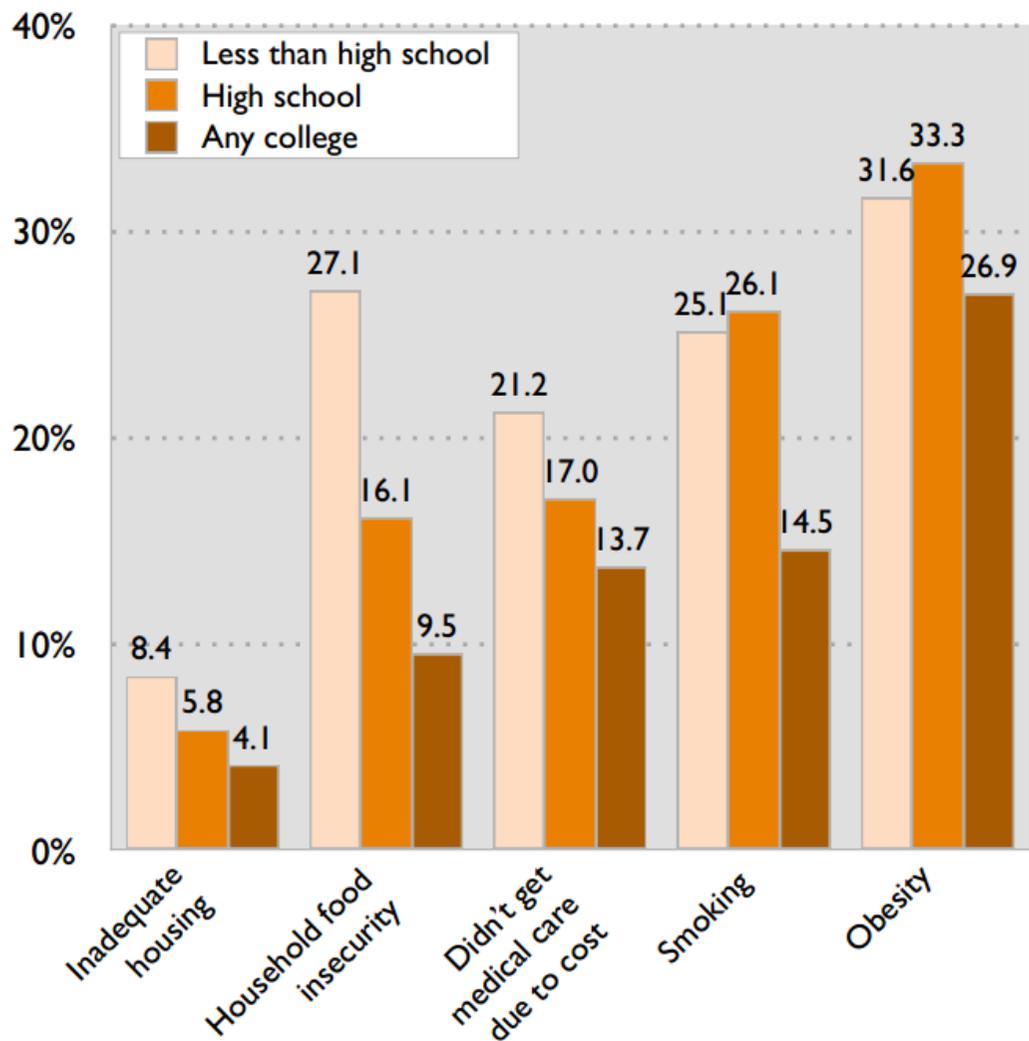
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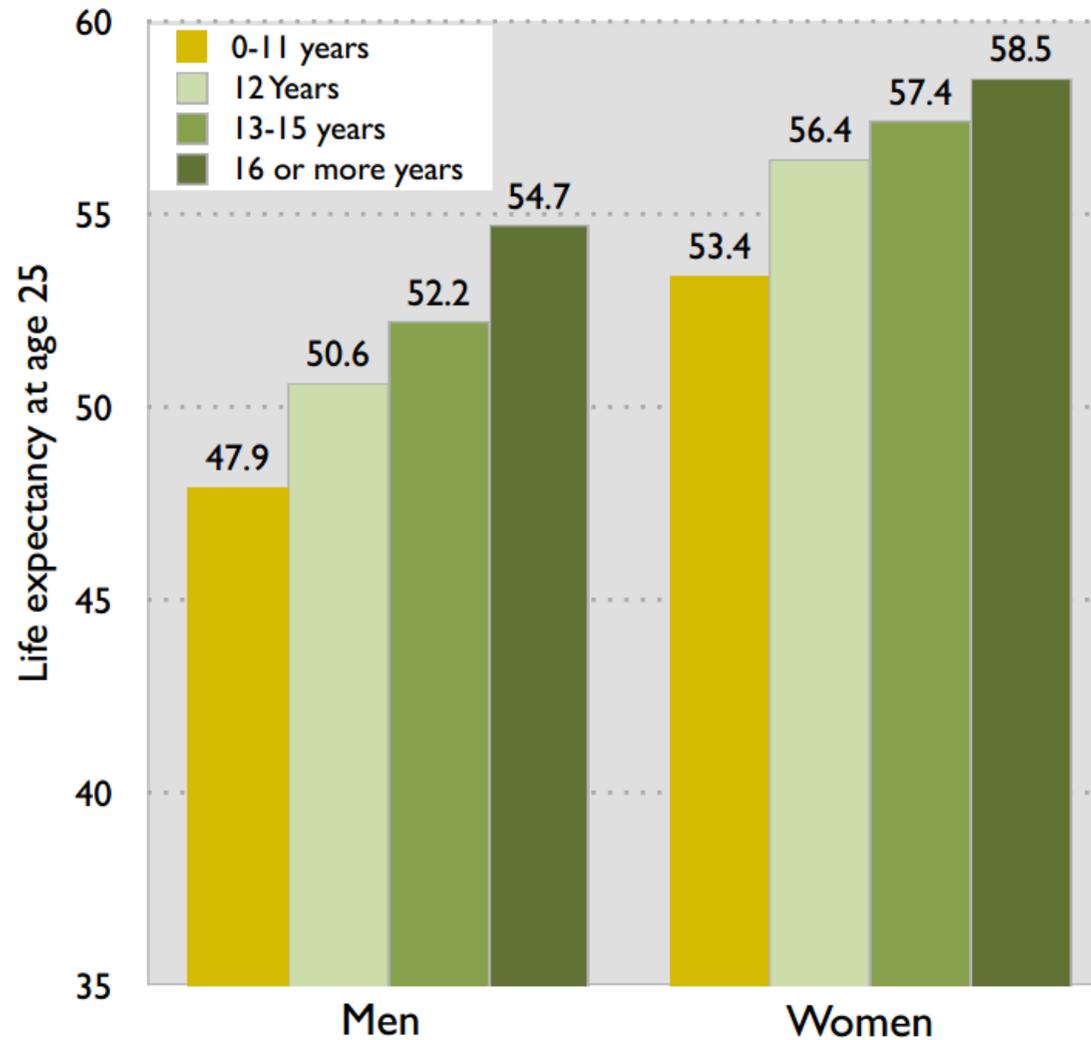
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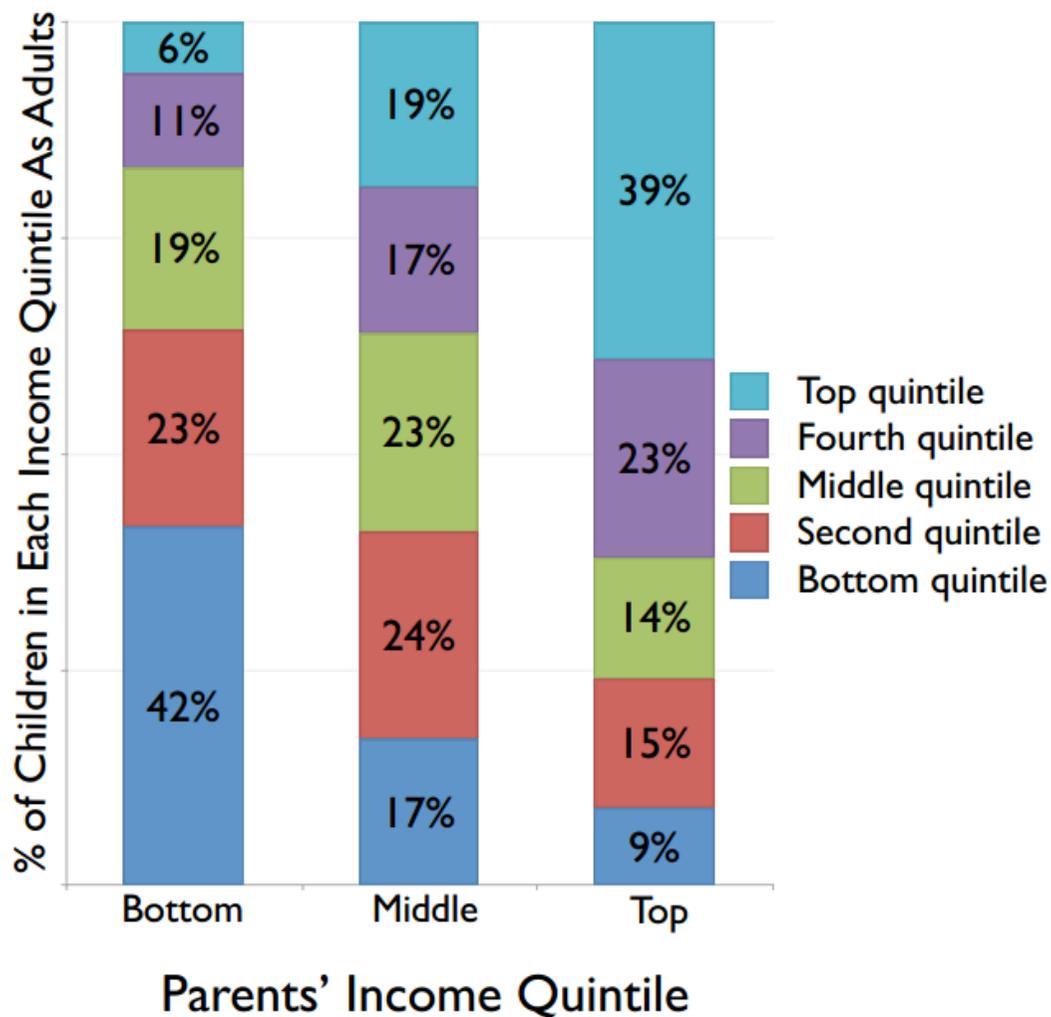
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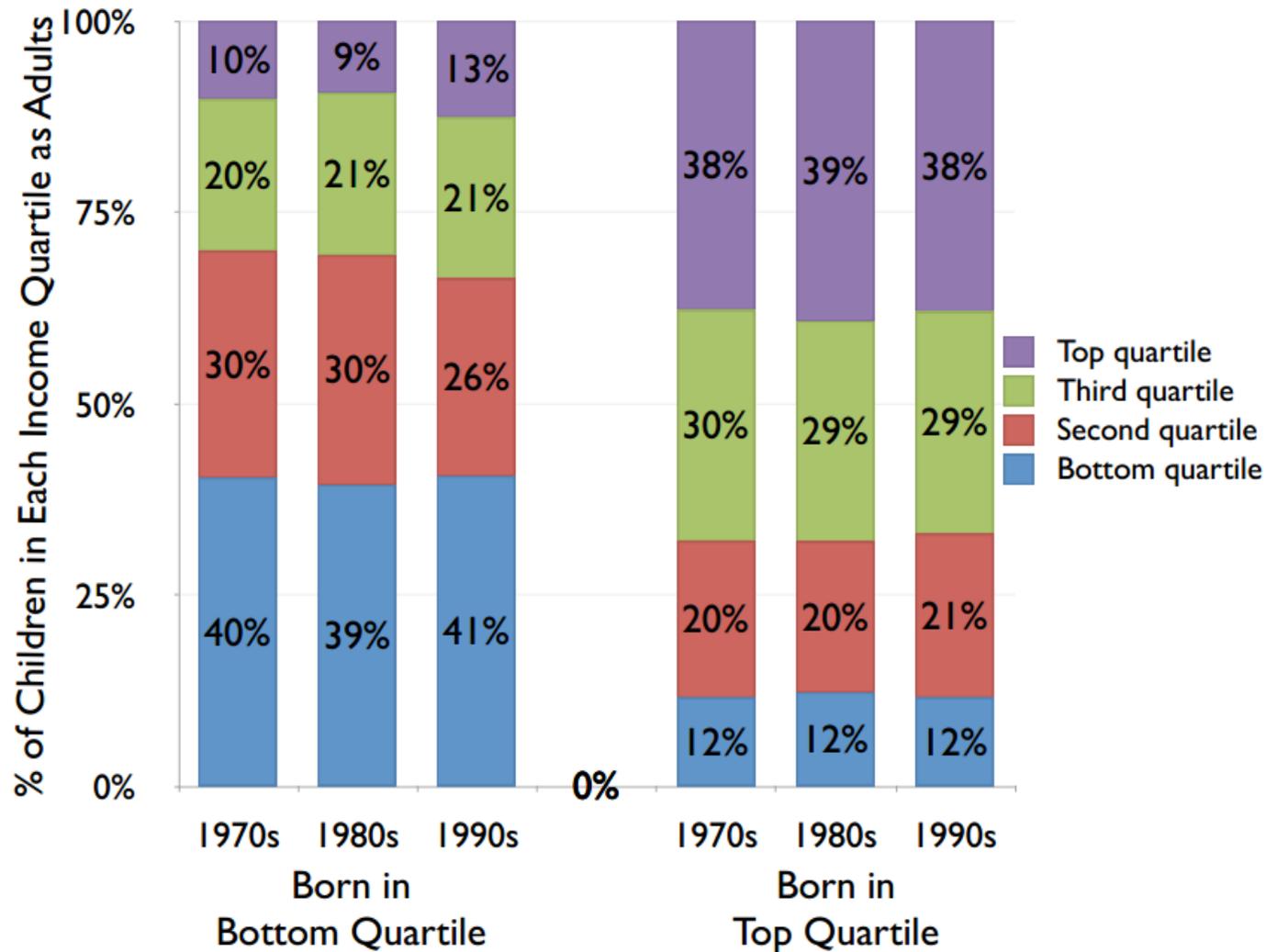
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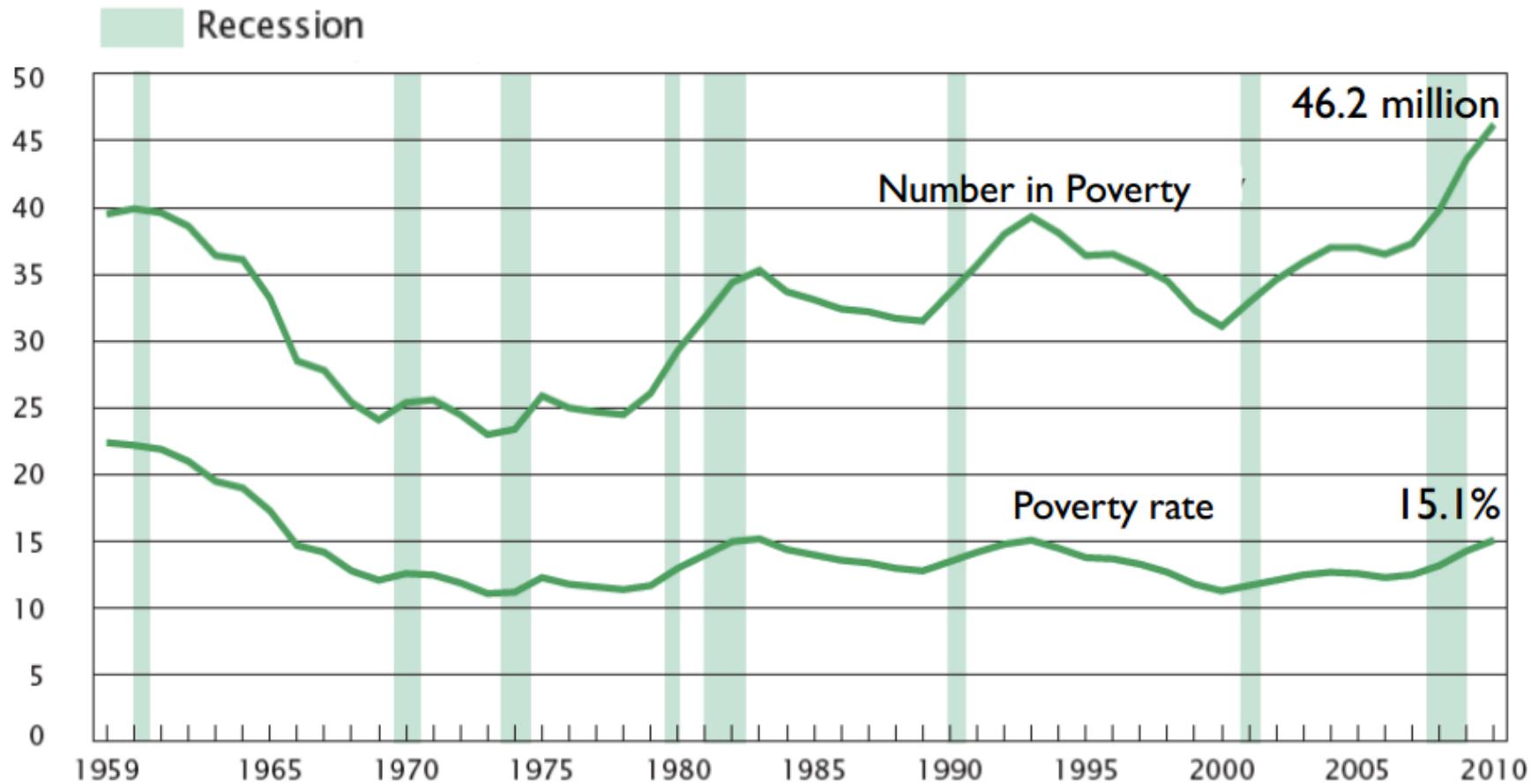
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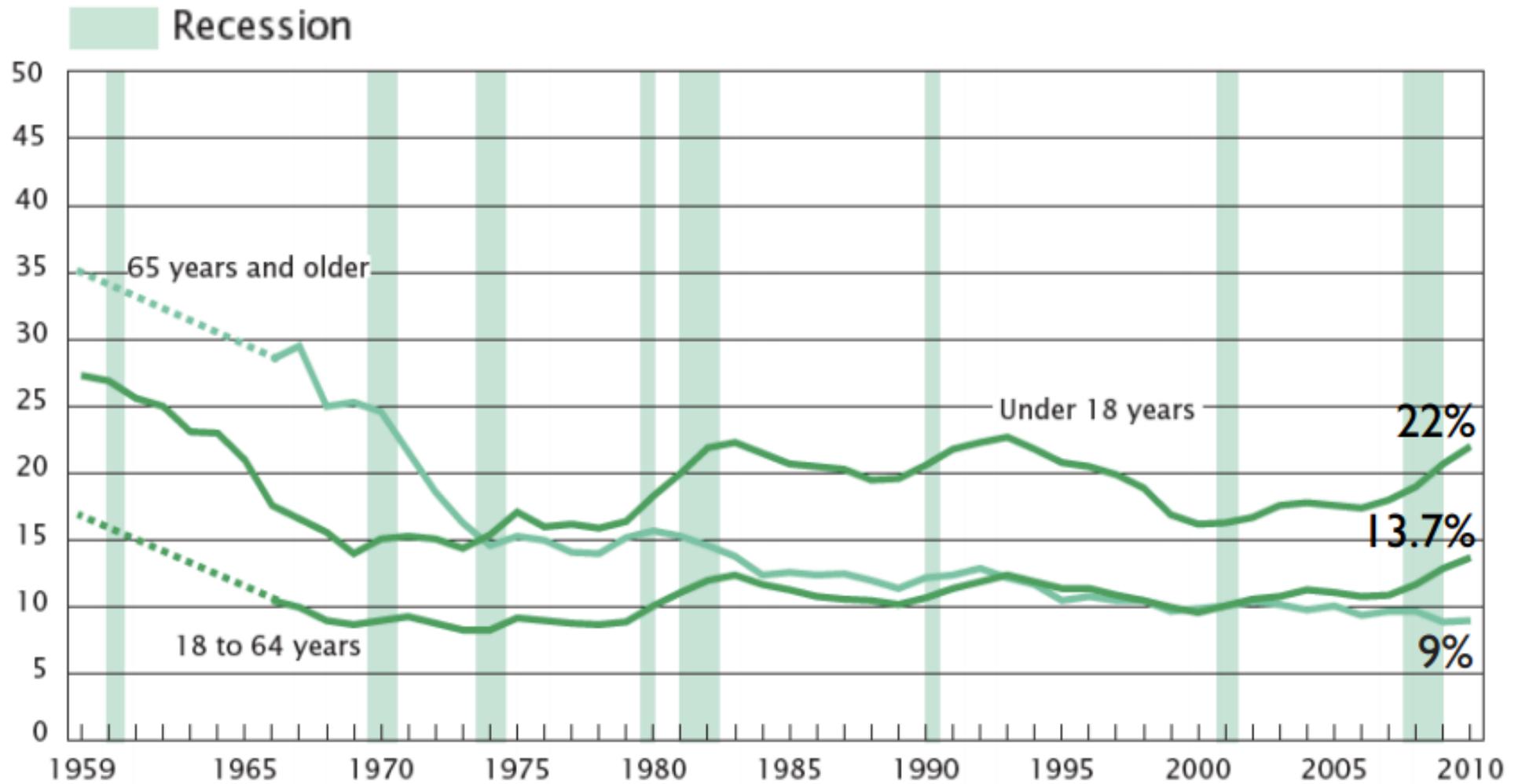
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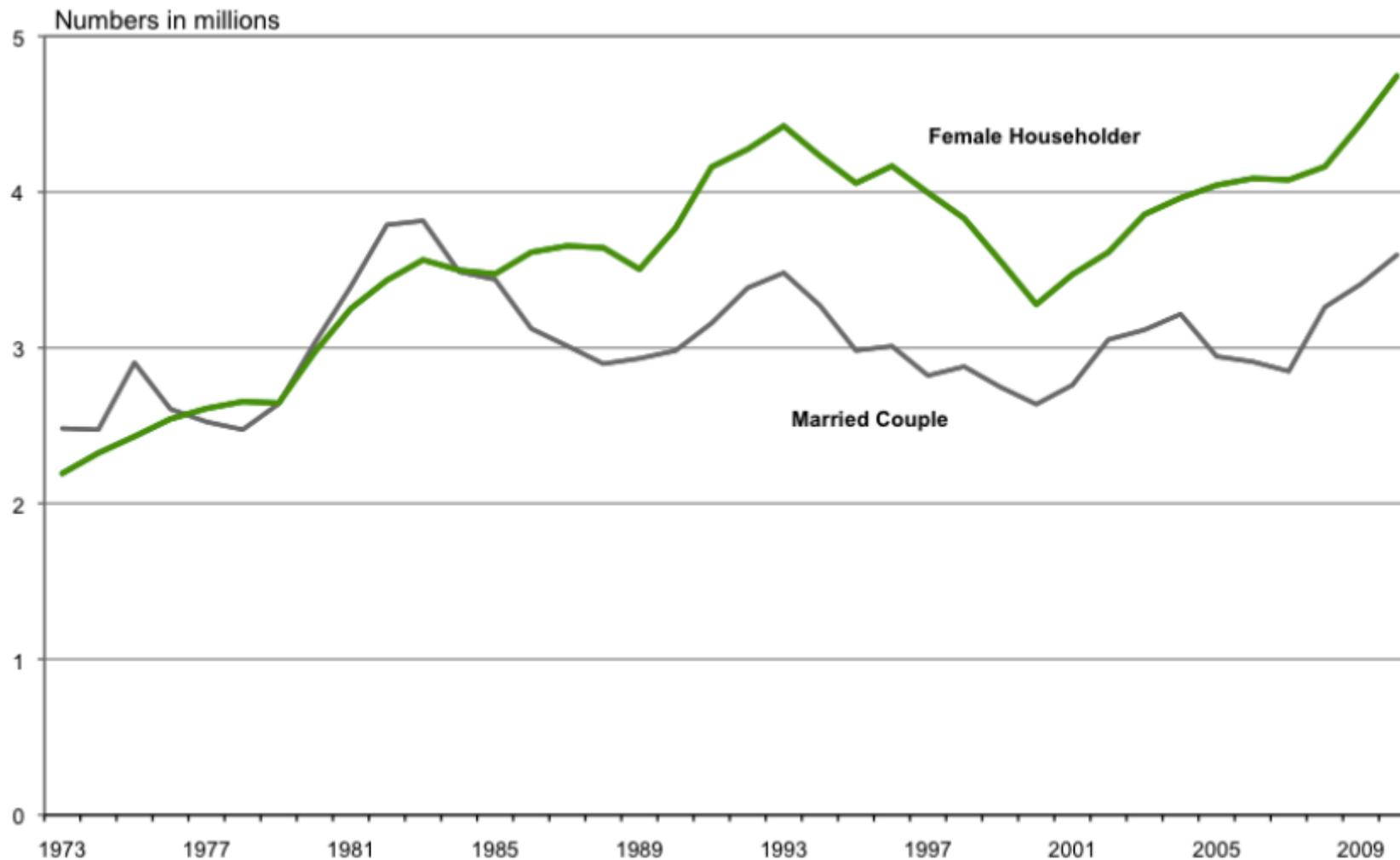
Various Aspects of Inequalities in the U.S.

Jank & Owens *Inequality in the United States*, 2013



Various Aspects of Inequalities in the U.S.

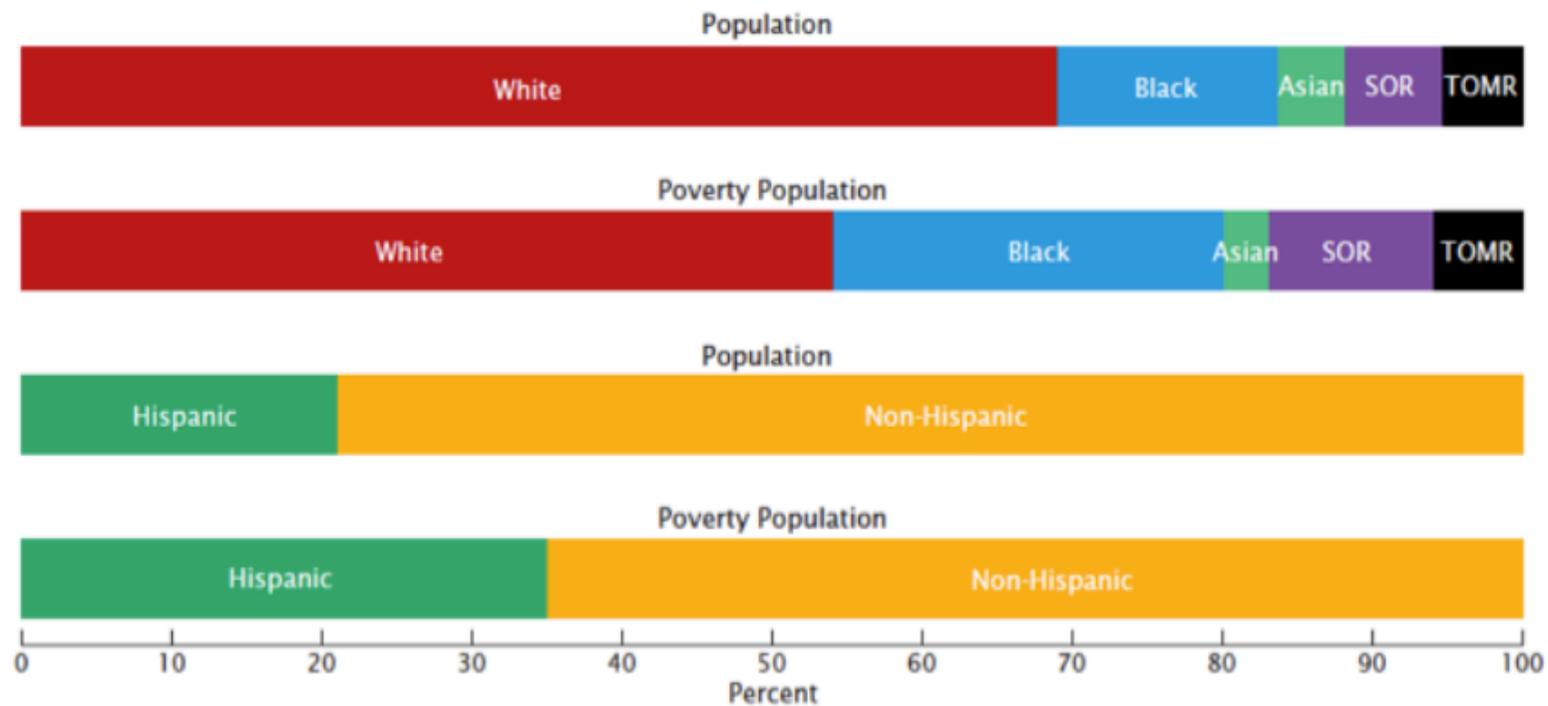
Jank & Owens **Inequality in the United States, 2013**



Various Aspects of Inequalities in the U.S.

Jank & Owens *Inequality in the United States*, 2013

Distribution of the U.S. Child Poverty Population by Race and Hispanic Origin: 2010



Various Aspects of Inequalities in the U.S.

Jank & Owens *Inequality in the United States*, 2013

