## The Psychology of Inequality: How Do People Think About Inequality? How Should People Think About Inequality?

## Christopher Chabris Associate Professor of Psychology 11/5/15



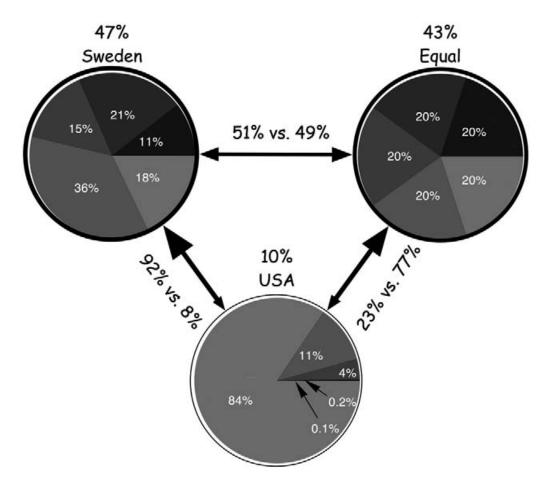
### Building a Better America—One Wealth Quintile at a Time

#### Michael I. Norton<sup>1</sup> and Dan Ariely<sup>2</sup>

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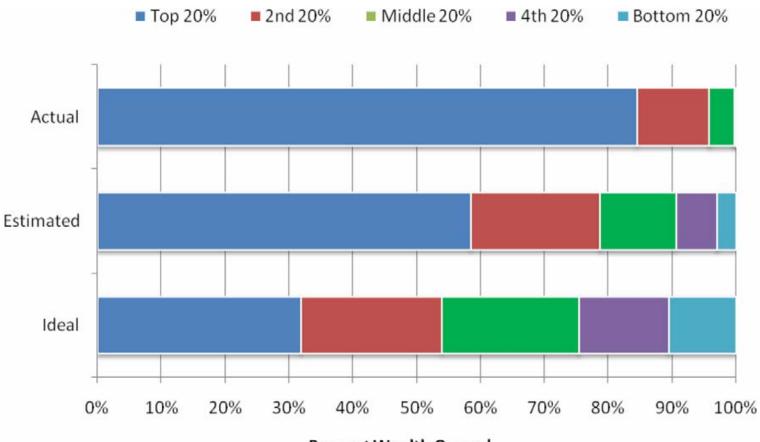




**Fig. I.** Relative preference among all respondents for three distributions: Sweden (upper left), an equal distribution (upper right), and the United States (bottom). Pie charts depict the percentage of wealth possessed by each quintile; for instance, in the United States, the top wealth quintile owns 84% of the total wealth, the second highest 11%, and so on.

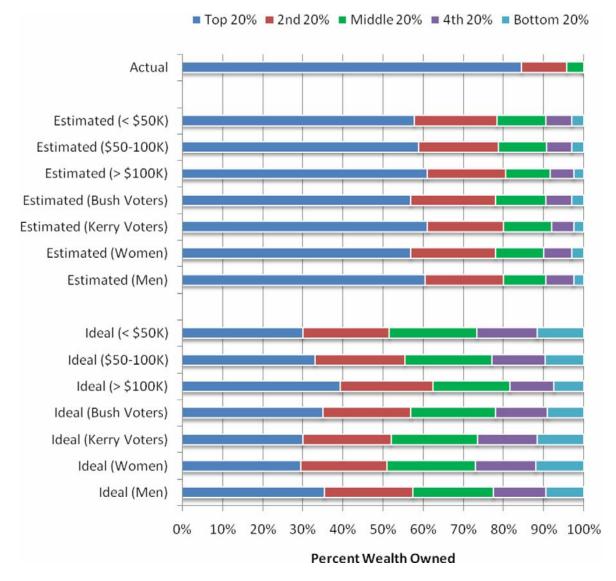
## **Americans Prefer Sweden**

For the first task, we created three unlabeled pie charts of wealth distributions, one of which depicted a perfectly equal distribution of wealth. Unbeknownst to respondents, a second distribution reflected the wealth distribution in the United States; in order to create a distribution with a level of inequality that clearly fell in between these two charts, we constructed a third pie chart from the income distribution of Sweden (Fig. 1).<sup>2</sup> We presented respondents with the three pairwise combinations of these pie charts (in random order) and asked them to choose which nation they would rather join given a "Rawls constraint" for determining a just society (Rawls, 1971): "In considering this question, imagine that if you joined this nation, you would be randomly assigned to a place in the distribution, so you could end up anywhere in this distribution, from the very richest to the very poorest."



Percent Wealth Owned

**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.



**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.

#### **REVIEW**

# Skills, education, and the rise of earnings inequality among the "other 99 percent"

**David H. Autor** 

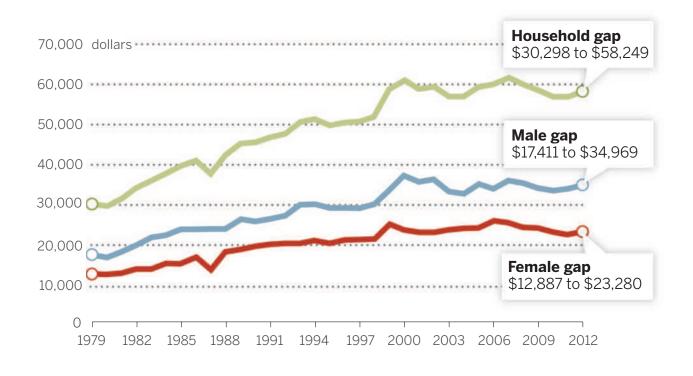
The singular focus of public debate on the "top 1 percent" of households overlooks the component of earnings inequality that is arguably most consequential for the "other 99 percent" of citizens: the dramatic growth in the wage premium associated with higher education and cognitive ability. This Review documents the central role of both the supply and demand for skills in shaping inequality, discusses why skill demands have persistently risen in industrialized countries, and considers the economic value of inequality alongside its potential social costs. I conclude by highlighting the constructive role for public policy in fostering skills formation and preserving economic mobility.

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#### College/high school median annual earnings gap, 1979–2012

In constant 2012 dollars



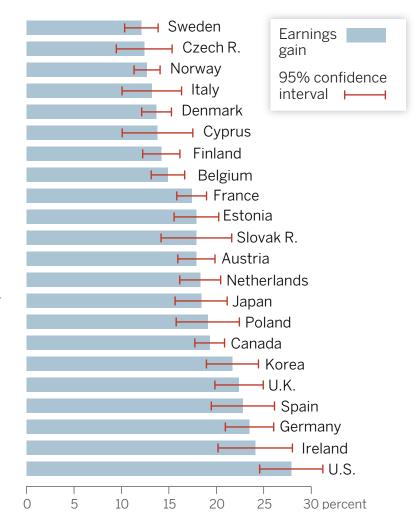
**Fig. 1. College/high school median annual earnings gap, 1979–2012.** Figure is constructed using Census Bureau P-60 (1979–1991) and P-25 (1992–2012) tabulations of median earnings of full-time, full-year workers by educational level and converted to constant 2012 dollars (to account for inflation) using the CPI-U-RS price series. Prior to 1992, college-educated workers are defined as those with 16 or more years of completed schooling, and high school–educated workers are those with exactly 12 years of completed schooling. After 1991, college-educated workers are those who report completing at least 4 years of college, and high school–educated workers are those who report having completed a high school diploma or GED credential.

## Fig. 2. Cross-national differences in wage returns to skills,

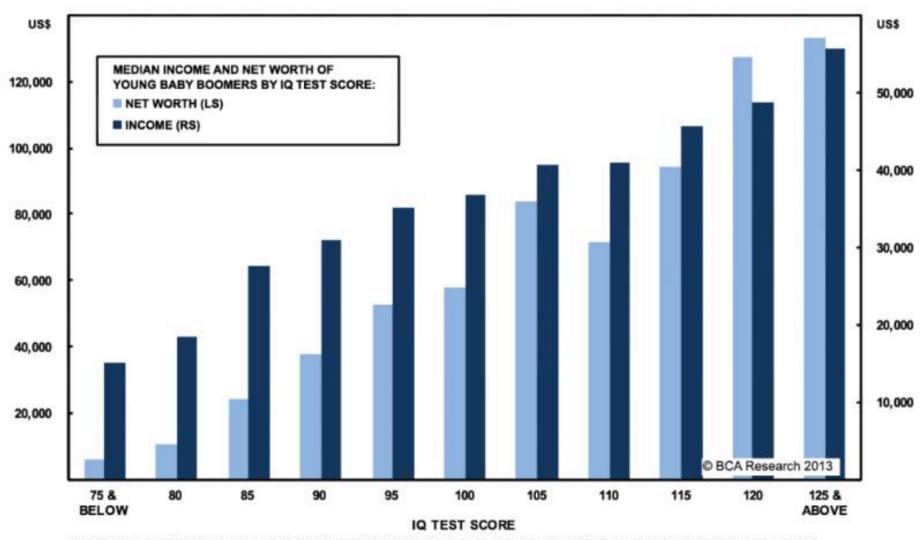
2011-2013. Reproduced with permission from Hanushek et al. [(15), table 2]. Estimates are obtained by regressing the natural logarithm of workers' weekly full-time earnings on test scores while controlling for sex and labor market experience (both a linear and a quadratic term). Regression estimates are performed separately for each country and test scores are normalized with mean zero and unit standard deviation within each country. Estimates that normalize test scores on a common basis across countries. or that use literacy or problem-solving scores rather than numeracy scores, yield qualitatively similar patterns.

## Cross-national differences in wage returns to skills, 2011–2013

Percentage increase for a one standard deviation increase in skill



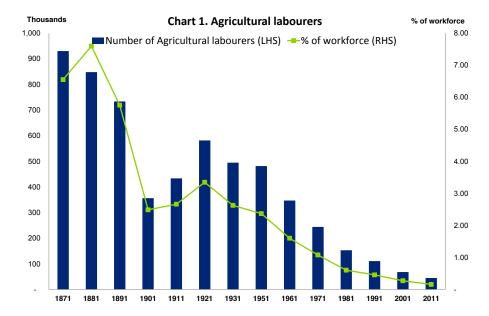
#### Chart III-3: IQ Tends To Be Positively Correlated With Income And Wealth

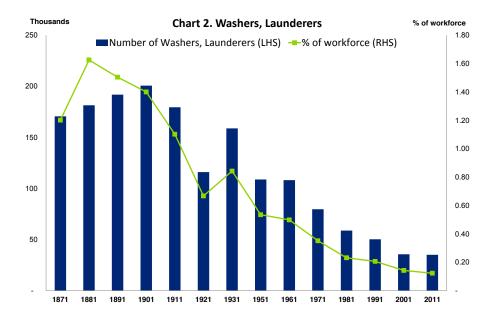


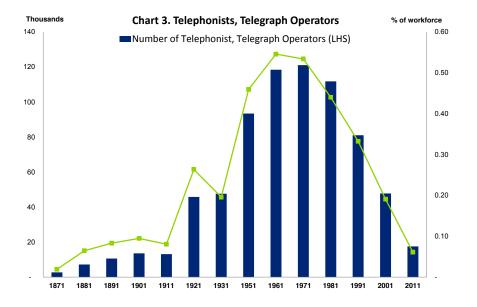
SOURCE: JAY L. ZAGORSKY, "DO YOU HAVE TO BE SMART TO BE RICH? THE IMPACT OF IQ ON WEALTH, INCOME AND FINANCIAL DISTRESS", INTELLIGENCE, SEPTEMBER-OCTOBER 2007, VOLUME 35, ISSUE 5.

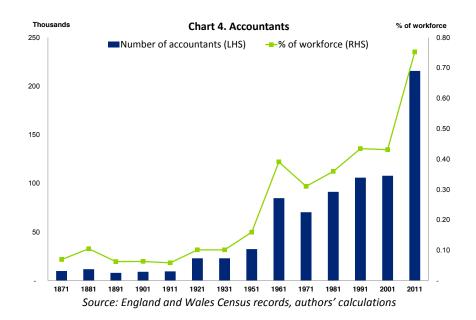
"Throughout much of the 20th century, successive waves of innovation —electrification, mass production, motorized transportation, telecommunications—have reduced the demand for physical labor and raised the centrality of cognitive labor in practically every walk of life. The past three decades of computerization, in particular, have extended the reach of this process by displacing workers from performing routine, codifiable cognitive tasks (e.g., bookkeeping, clerical work, and repetitive production tasks) that are now readily scripted with computer software and performed by inexpensive digital machines. This ongoing process of machine substitution for routine human labor complements aducated workers who even in abstract tasks that harpers problem

educated workers who excel in abstract tasks that harness problemsolving ability, intuition, creativity, and persuasion—tasks that are at present difficult to automate but essential to perform. Simultaneously, it devalues the skills of workers, typically those without postsecondary education, who compete most directly with machinery in performing routine-intensive activities. The net effect of these forces is to further raise the demand for formal education, technical expertise, and cognitive ability." (Autor, 2014)









From: Technology and People: The Great Job-Creating Machine, by Ian Stewart, Debapratim De, & Alex Cole (Deloitte LLP)

# Inequality and visibility of wealth in experimental social networks

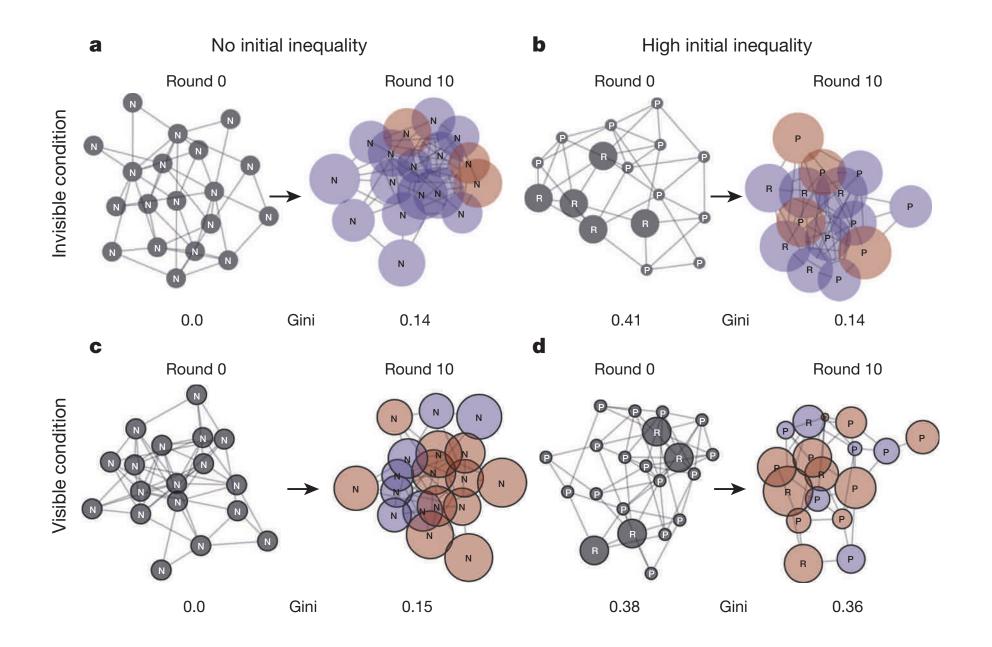
Akihiro Nishi<sup>1,2</sup>, Hirokazu Shirado<sup>1,2</sup>, David G. Rand<sup>1,3,4</sup> & Nicholas A. Christakis<sup>1,2,5,6</sup>

We carried out a series of experiments with 1,462 subjects, divided among 80 sessions lasting an average of 30.0 minutes (s.d. = 7.13). Subjects were placed in groups with an average size of 17.21 (s.d. = 2.79) and arranged in a social network with an Erdős–Rényi random graph configuration in which 30% of ties were present (see Supplementary Information)<sup>10,11,13</sup>; subjects were therefore initially connected to an average of 5.33 (s.d. = 0.98) neighbours. The subjects played a cooperation game lasting 10 rounds with their neighbours. In each round, all subjects chose whether to cooperate, by reducing their own wealth by 50 'units' per neighbour in order to increase the wealth of all neighbours by 100 units each, or to defect by paying no cost and providing no benefits. Subjects made the same choice with all their neighbours. These interactions constituted the economic transactions, affecting each individual's wealth and thus resulting in populationlevel changes in overall wealth and inequality. The arbitrary units were converted to real money at the end of the game (see Supplementary Information).

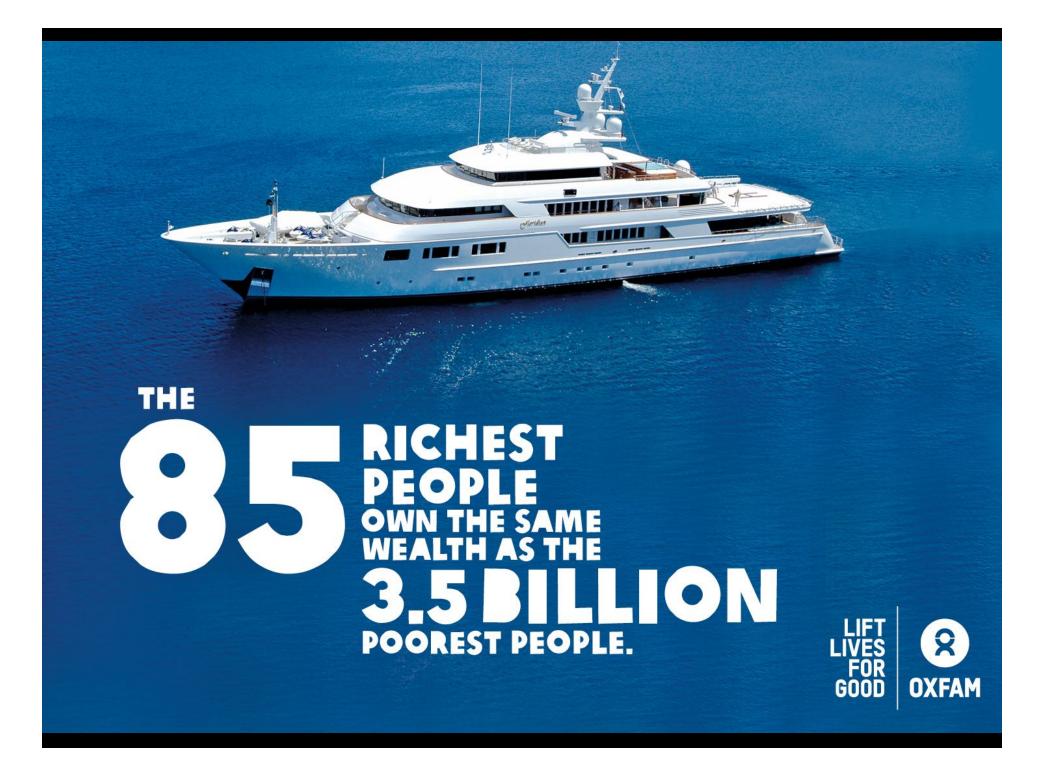
After making their cooperation choice, subjects were informed of the choices made by their neighbours. Then, subjects had the opportunity to change their neighbours by making or breaking ties. Specifically, 30% of all pairs of subjects were chosen at random in each round and given the opportunity to rewire their networks (this set-up was fixed across all manipulated conditions)<sup>10,11</sup>. If a tie already existed between the two subjects, then one of the two was picked at random to be allowed to choose whether to voluntarily break the tie with the other; if a tie did not already exist between the two, both of them were given the option to form a tie and, if both approved, a new tie was formed. When making this decision, subjects were aware of whether the person to whom they might disconnect or connect had cooperated or defected in the past round. Thus, people could choose to alter a new subset of their social ties at each round; the network could be rewired; and subjects' network degree (number of directly connected neighbours) and transitivity (the probability that any two of a focal subject's neighbours are themselves connected) could change.

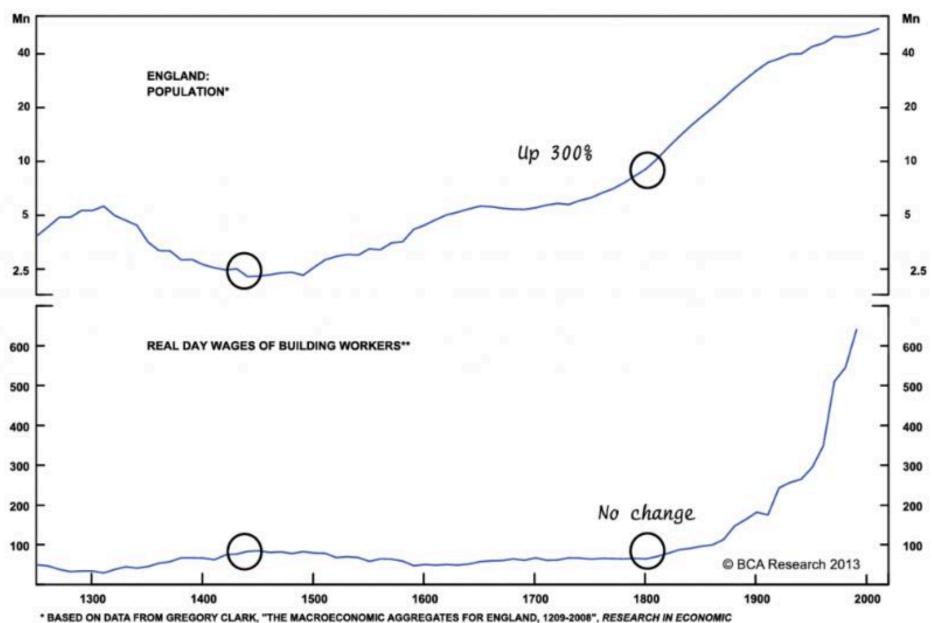
# LETTER

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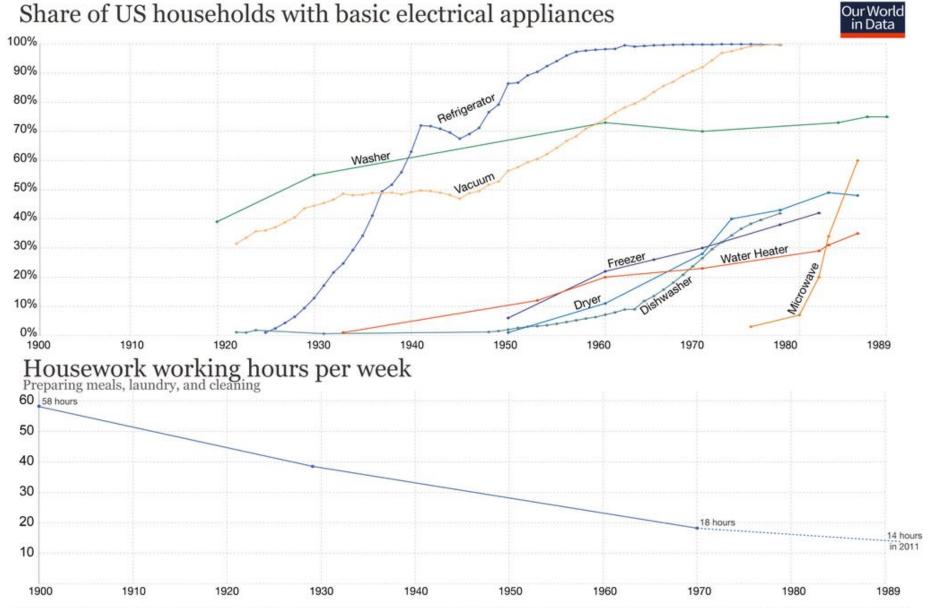






HISTORY, 2010, VOLUME 27; AND THE U.K. OFFICE FOR NATIONAL STATISTICS. DATA FROM 1840 ON INCLUDES WALES.

\*\* REBASED TO 1860 = 100. SOURCE: GREGORY CLARK, "THE CONDITION OF THE WORKING CLASS IN ENGLAND, 1209-2004", JOURNAL OF POLITICAL ECONOMY, UNIVERSITY OF CHICAGO PRESS, 2005, VOLUME 113.



Data source: Greenwood, Seshadri and Yorukoglu (2005) – 'Engines of Liberation', Review of Economic Studies, v. 72, n.1: 109-133. Except working hours in 2011 which are from PEW research. The interactive data visualization is available at OurWorldinData.org. There you find the raw data and more visualizations on this topic.



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