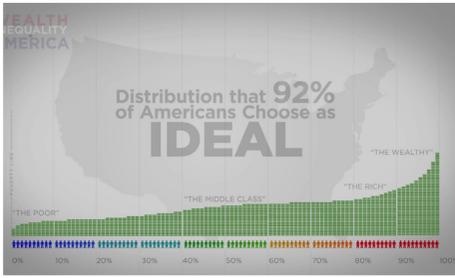


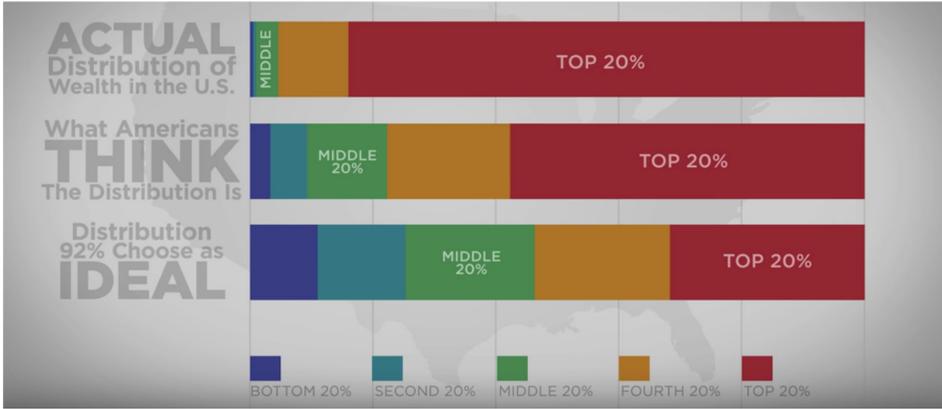
Income and Lifespan Inequality Within and Across Countries

WHAT IS INEQUALITY?



Difference in size, degree, circumstances and **lack of smoothness or regularity**

The relation between two expressions that are not equal

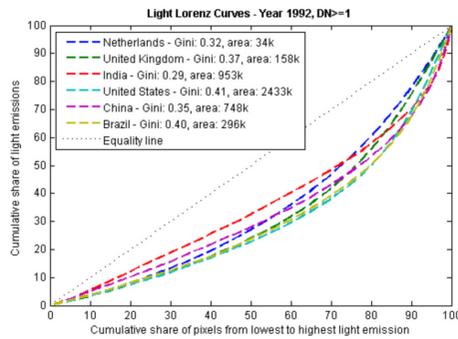
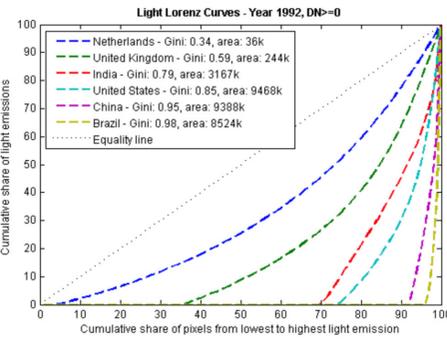
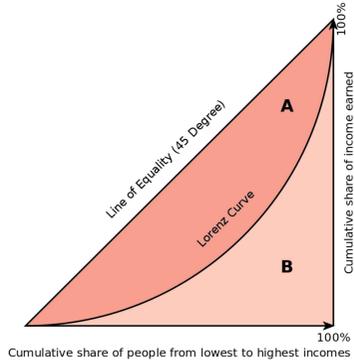


Both "Distribution that 92% of Americans Choose as Ideal" and "What Americans Think the Distribution is" shows people are expecting certain level of difference in income level, either as a motive force or as a rewarding system. In this case, their definition of equality doesn't mean the relation that are absolutely equal, but adequate level of smoothness or regularity.

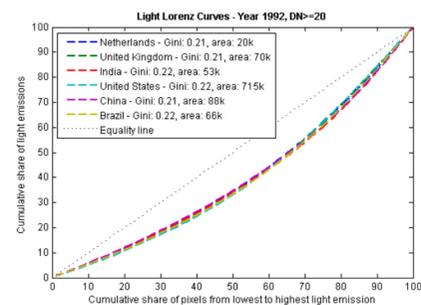
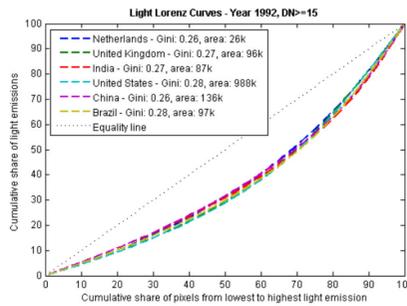
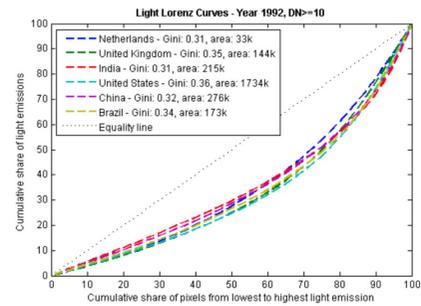
ANALYTICAL APPROACHES

Such subjective definition often gives the confusion and contradiction in studies, which is why there's a need to clarify what exactly is being measured.

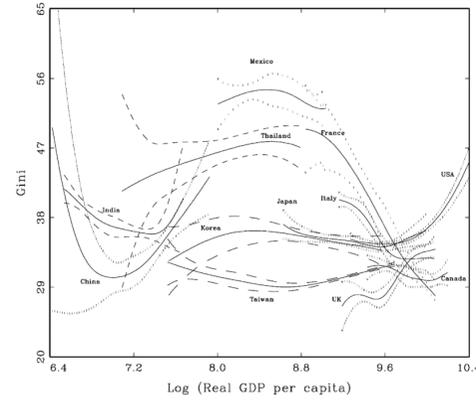
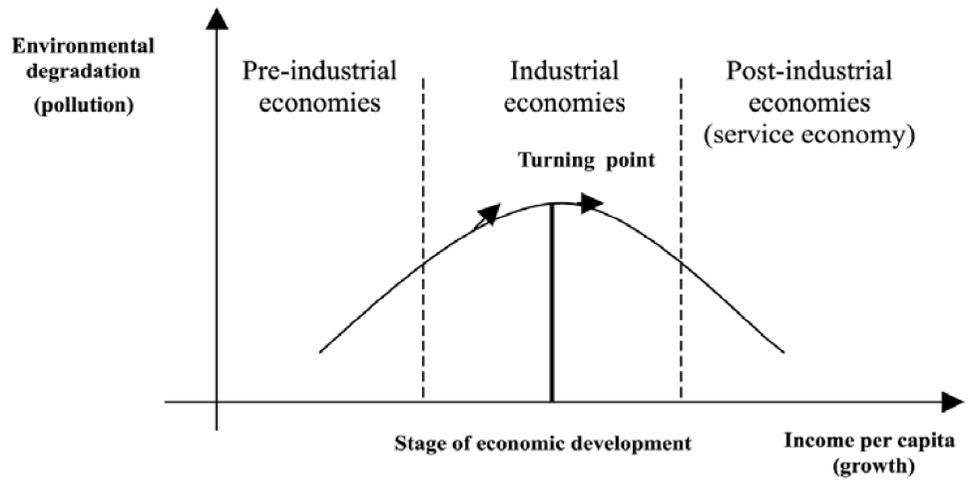
Gini coefficient, the most commonly used measurement of inequality is a good example. It uses cumulative share of income earned as y-axis and cumulative share of people from lowest to highest incomes as x-axis. As the line graph is closer to 45 degrees, it represents equal condition; and as the level of inequality increases, the area difference between the 45 degrees and Lorenz Curve will increase as well, which is finalized as the Gini coefficient.



However, many scholars agree that its interpretation should consider the demographic structure, and not settle with one variant. For example, a huge portion of Brazil is covered by the Amazonian forest which of course is not urbanized, whereas the surface of the Netherlands is almost completely habitable. To overcome this drawback, Nicola Pestalozzi eliminated from the evaluation all the cells that aren't lit at all, i.e. with DN=0.



Following diagrams are excluding the cells that are dimmer than a certain threshold - considering only the more densely urbanized areas. They show how quickly the Gini coefficient converges to the same value for every country.



While there are standardized terminologies and measurement systems, some studies are challenged or rediscovered.

Kuznets curve is a U-shaped graph represents that as an economy develops, market forces first increase and then decrease economic inequality. Since Kuznets first proposed the hypothesis, there have been numerous studies simply aimed at "proving" or "disproving". Instead, *Inequality and development across and within countries* brings up many cases that income level doesn't necessarily followed Kuznets curve.

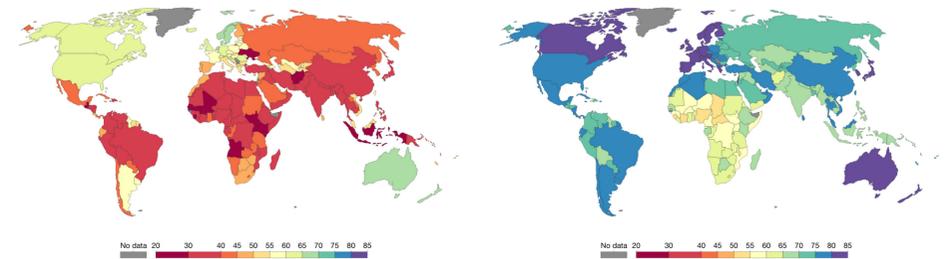
CHANGING CIRCUMSTANCES

As previous examples show that variety of theoretical models can be redefined by new ways of approaching, some are actually influenced by real circumstances.

Hans Rosling emphasized that in the 21st century, the binary distinction between countries is outdated and there's a need to focus more on **production networks** that connect metropolitan areas around the world.



On another hand, international inequalities in **life expectancy** decreased for many years after 1945 (following maps compare life expectancy of 1941 and 2015). Due to either improvement in medical conditions or people's awareness about fundamental human rights, it changed the whole measurement system - just like many studies start focusing more on production networks rather than geographical concentration.



CONCLUSION

These examples suggest that inequality is a subjective and relational term in general sense; and even within theoretical studies, its definition greatly alters upon (1) **different analytical approaches** and (2) **change in real circumstances**.

As a conclusion, the important point in studying inequality will be setting up appropriate parameters according to (1) and (2) - not necessarily limited to older measurement systems.

