## Introduction

ECON 499: The Economics of Inequality
Winter 2017

## Thinking about inequality: Pen's parade

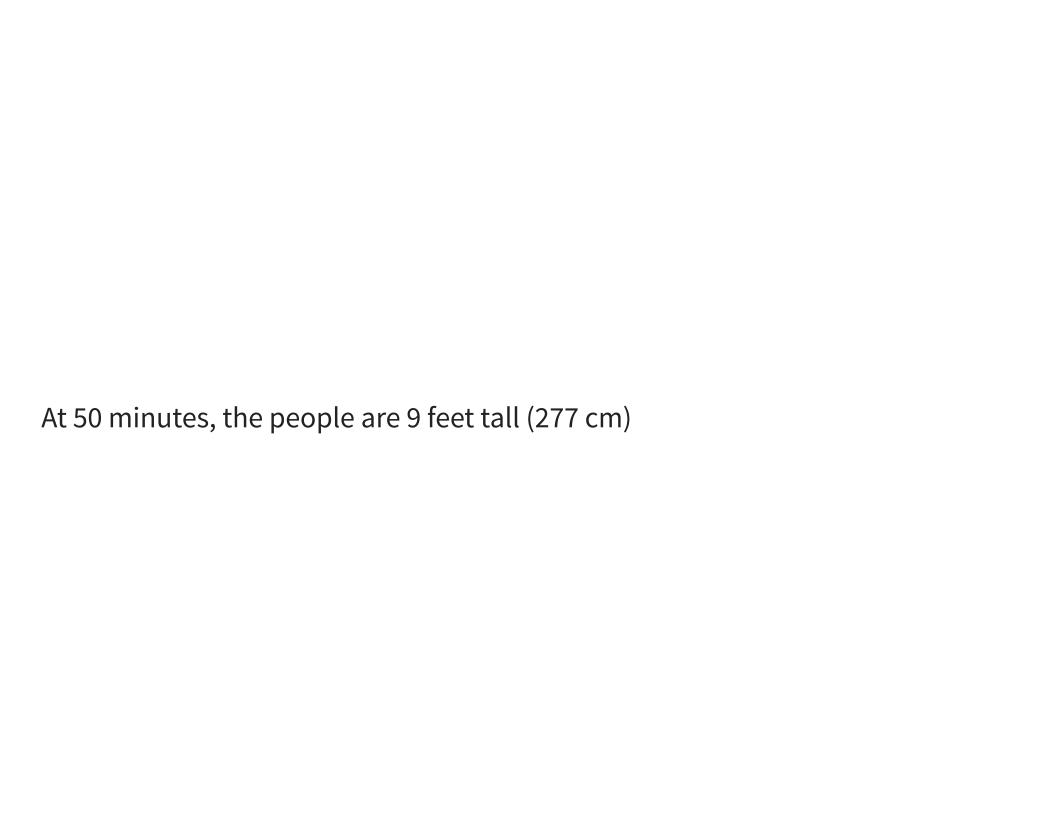
- Suppose each person's height is proportional to their income (in the US)
- People with 0 income are invisible
- People with the average income are average height (5'10'', 177cm)
- Everyone lines up for a parade, and we sit in one place and watch them walk by at a constant speed
- The entire parade lasts 1 hour



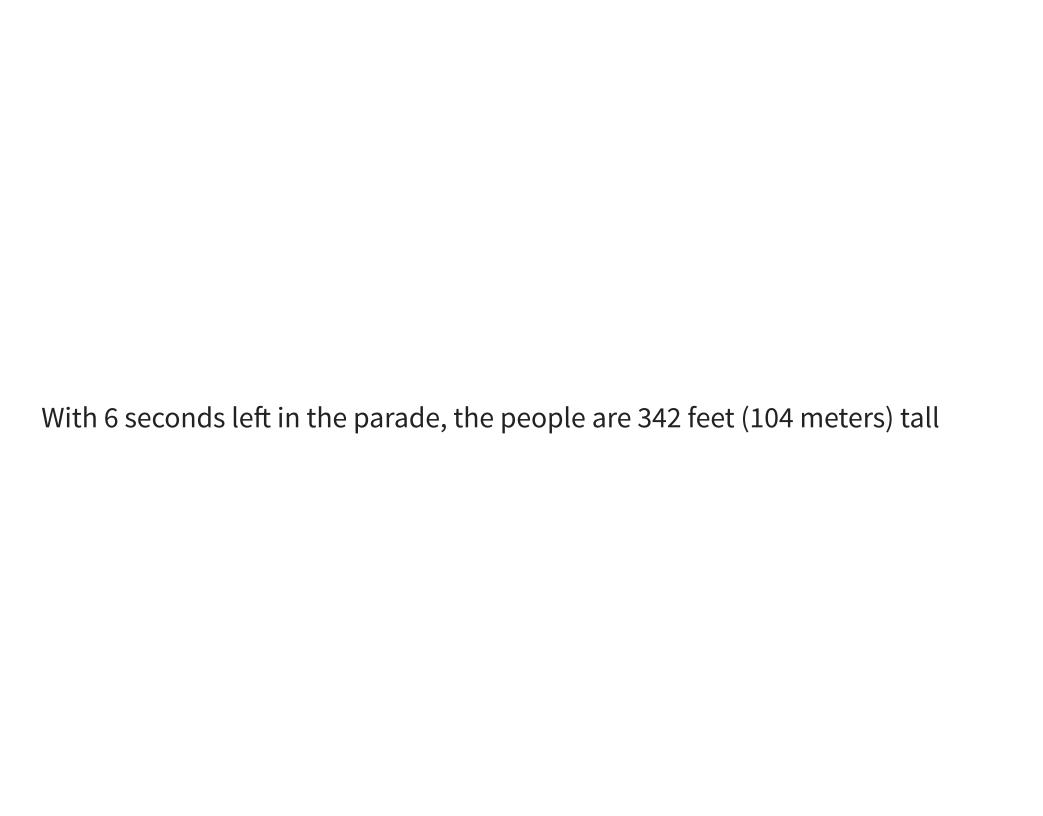
After 10 minutes, the people are 11 inches (27 cm) tall • 1/12 of the population earns less than \$9,500 per year

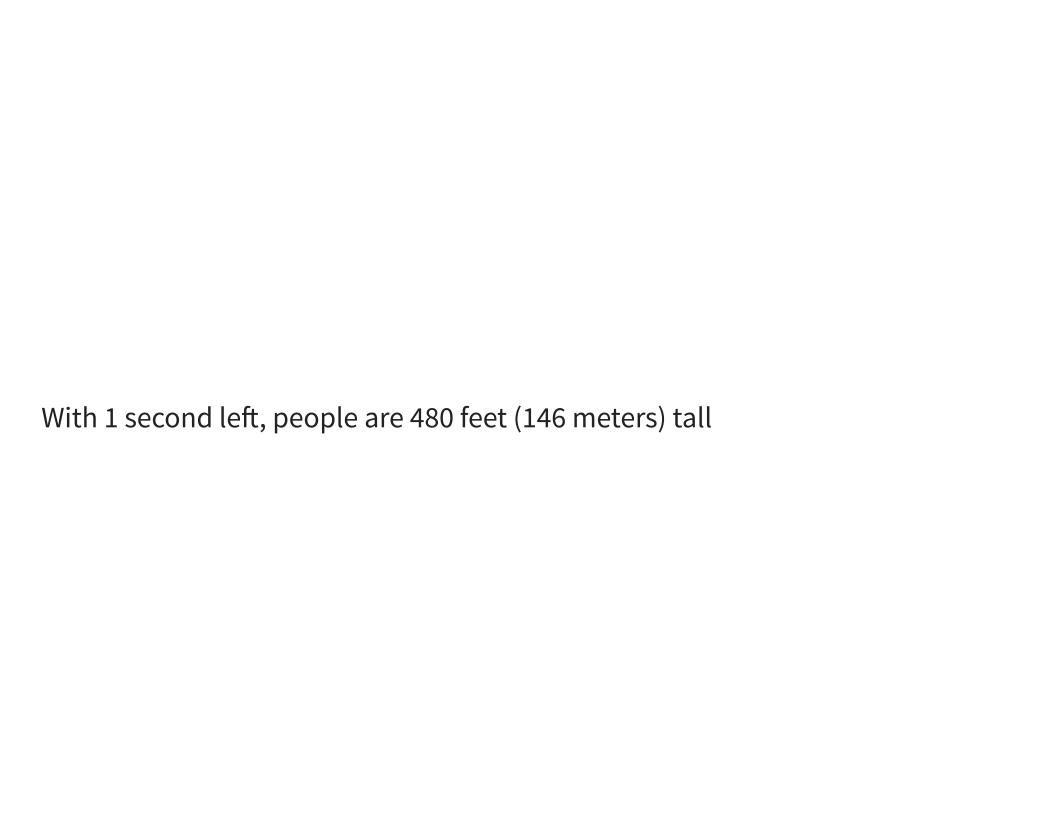
Halfway through, the people are 3'4" (103 cm) tall  • Half the population earn less than \$36,000 per year (median income)

After 42 minutes, we finally see people with the average height  • 70% of the population earn less than the average	



At 57 minutes, the people are 28'6" (871 cm) tall







• Mt Hood: 11,250 feet

# In this class we will try to answer four questions about economic inequality:

- 1. What is it?
- 2. What causes it?
- 3. What are the consequences?
- 4. How do we reduce it?

## 1. What is inequality?

#### "Economic" inequality:

- Income vs wealth
- Individual vs household
- Adults vs children

#### Other outcomes:

- Race
- Gender
- Health

## What do we mean when we say "inequality?"

- We know what "no inequality" looks like
- We (probably) know what "perfect inequality" looks like
- In between, what does it mean for one distribution to have "more inequality" than another?

#### An example

- Consider an "economy" with five agents, each with a different amount of resources (income, wealth, etc)
- Can we compare distributions?

## Example 1

Which distribution has more inequality?

**Distribution A:** 

Obie	Michael	Llewelyn	Rudy	Kitty
2	5	9	20	30

#### **Distribution B:**

Obie	Michael	Llewelyn	Rudy	Kitty
2	6	8	20	30

## Example 2

Which distribution has more inequality?

**Distribution A:** 

Obie	Michael	Llewelyn	Rudy	Kitty
2	5	9	20	30

#### **Distribution B:**

Obie	Michael	Llewelyn	Rudy	Kitty
2	6	9	19	30

## Example 3

#### Which distribution has more inequality?

#### **Distribution A:**

Obie	Michael	Llewelyn	Rudy	Kitty
10	10	10	10	30

#### **Distribution B:**

Obie	Michael	Llewelyn	Rudy	Kitty
10	10	10	20	20

## 2. What causes inequality?

#### On one side:

- Immigration
- Unnecessary regulations
- Welfare discourages work
- Excessive taxation
- Obamacare

#### On the other side:

- Barriers to education
- Corrupt executives
- Taxes too low for the wealthy
- Technology and automation
- Access to health care

## 3. What are the consequences of inequality?

- Is inequality bad for the economy?
- What does it mean for something to be "bad for the economy?"
- How do economists think about the well-being of a society?

#### Do we care about inequality?

The LeBron James parable (Robert Nozick, *Anarchy, State, and Utopia*, 1974):

- Suppose resources are equally distributed among everyone in the economy
- Now suppose that one of the people in our economy is LeBron James
- Lebron decides that he will only play basketball if everyone that comes to see him pays \$1
- If 1 million people pay to see Lebron, then he has \$1 million more than everyone else
- If people choose to watch LeBron, then is there any injustice? Is LeBron entitled to keep his extra money?

These philosophical issues are largely beyond the scope of this course
These issues are largely beyond the scope of economics!
We will need to be careful whenever we use terms like "better" or "worse."

## 4. How do we reduce inequality?

- Minimum wage?
- Basic income?
- Cash assistance?
- Education?
- Taxation?

#### The Lorenz Curve

- A way to graphically represent an income distribution
- Plot the percentage of the population against their cumulative income share

#### How to calculate:

- Collect N incomes into a vector x, arranged from lowest to highest
- Calculate the cumulative income for each  $x_i$  ( i=1,2,...,N)
- Divide this by the total income (this give the cumulative income share)
- Plot against  $x_i$ 's percentile