

# Pigovian Taxation & Preview of Coase

David Possen

DIS Environmental Economics

# Plan of this lecture

1. Pigou on externalities
2. A simple case
3. Coase on Pigou
4. Coase's case
5. The Ronald Coase revolution

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# 1. Pigou on externalities

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It was first popularized by the British economist **Arthur Cecil Pigou** (1877-1959), in his masterwork, *The Economics of Welfare* (1920).



# 1. Pigou on externalities

Money quote:

“One person A, in the course of rendering service to another person B, *incidentally also* renders services or disservices to other persons, of such a sort that payment cannot be exacted from the benefited parties or compensation enforced on behalf of the injured parties.”



Pigou, *The Economics of Welfare*, 4<sup>th</sup> ed. (London: Macmillan, 1932), p. 132.

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Today, a state-imposed tax designed to internalize an externality is called a **Pigovian tax**.

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In environmental economics, we call this the **Polluter Pays Principle**.

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In *The Economics of Welfare*, Pigou offers a famous example of a negative externality, where “costs are thrown upon people not directly concerned”: “uncompensated damage done to surrounding woods by sparks from railway engines.”



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Elsewhere, Pigou calls for “**state action to improve upon ‘natural’ tendencies**” in such cases.



Many readers, including Ronald Coase, see this as a call for the state to fine the railways and compensate the owners of the woods for fire damages due to train sparks.

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A **Pigovian tax** allows the government to redistribute wealth from the “perpetrators” to the “victims” of negative externalities.

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## 2. A Simple Case

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Let's look at such a simple case, a modified version of our “Danish Dynamite” exercise from our first class on externalities.

## 2. A Simple Case

Imposing a tax of \$8 per piece of clothing **looks** like a win-win situation:

- pollution falls to the socially optimal level
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**This is called the “double dividend.”**

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**What's not to like?**

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### 3. Coase on Pigou

Sounds good, right?



### 3. Coase on Pigou

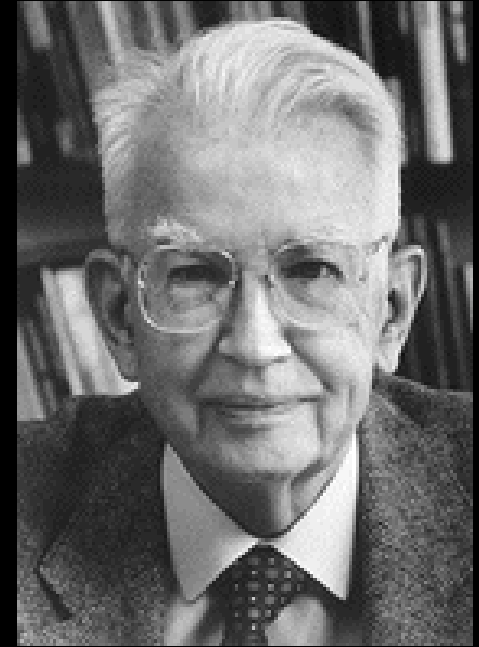
Sounds good, right?

Not according to **Ronald Coase** (1910-2013), who refuted Pigou in a revolutionary 1960 article, “The Problem of Social Cost,” which we will go through *very* closely during our first two classes after Easter break.



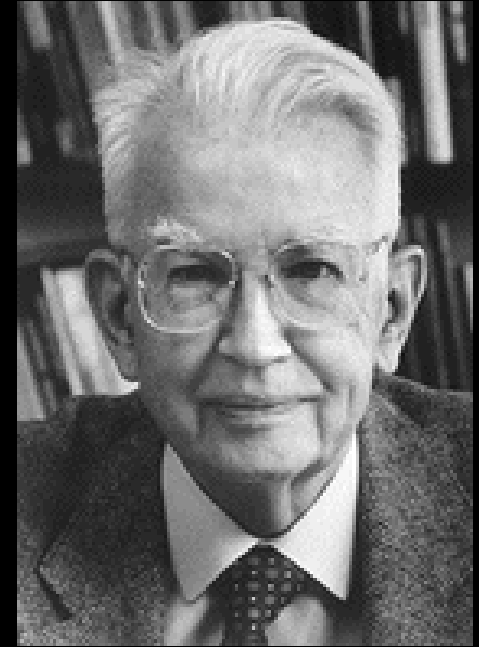
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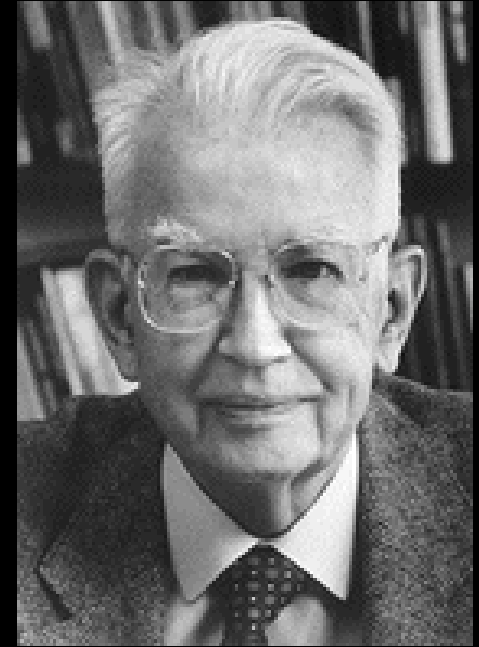
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Let's read it together.

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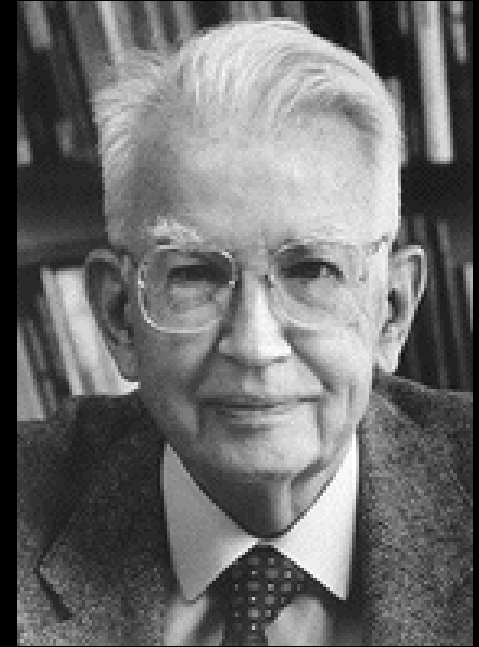
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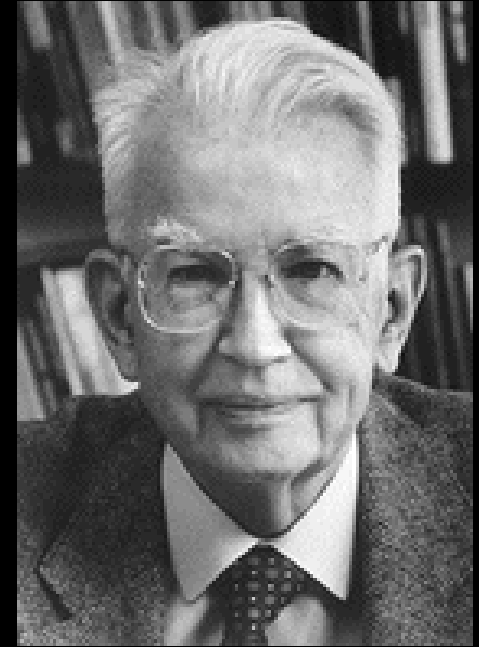
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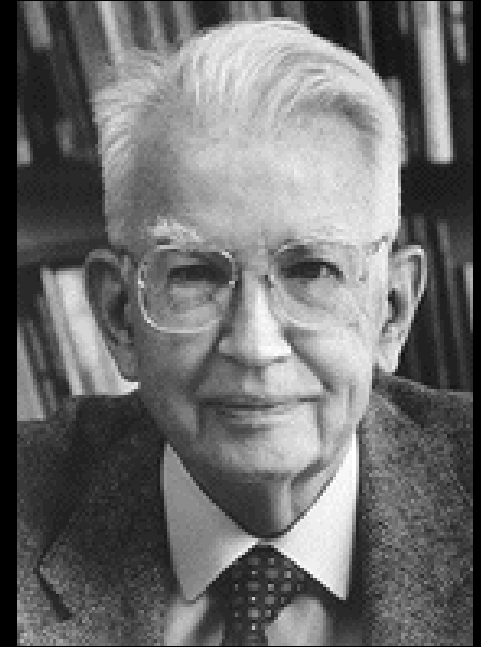


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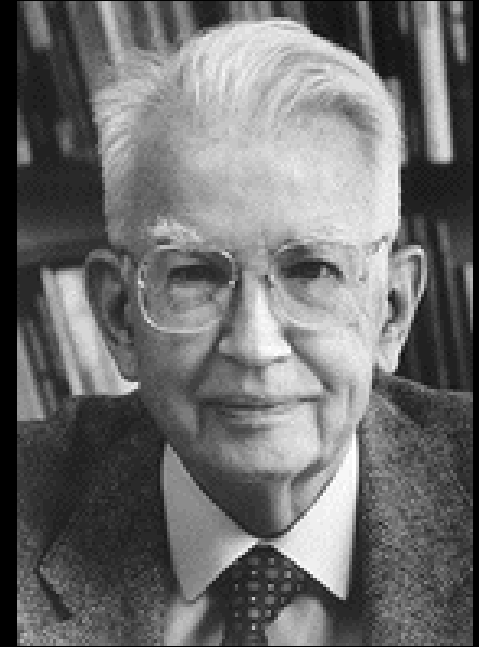


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### 3. Coase on Pigou

**The reciprocity of harm** means that it is misleading to speak of “perpetrators” and “victims” of externalities, since *both* the *harm-er* and the *harm-ee* have an economic interest in the harm.

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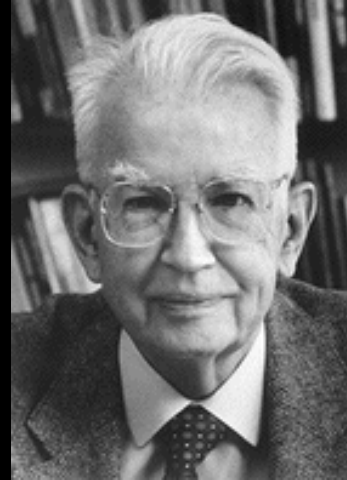
We’ll say a lot more about this in about two weeks—but here’s a preview.

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## 4. Coase's Case

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Running 1 train / day

costs \$50 / year, but grosses \$150 / year.

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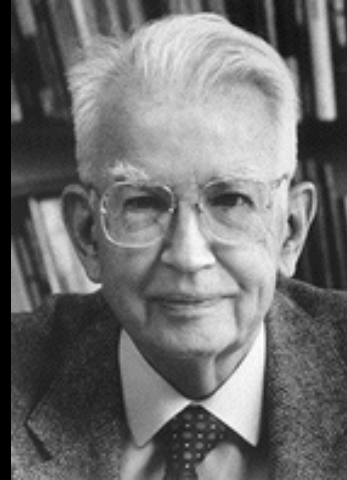


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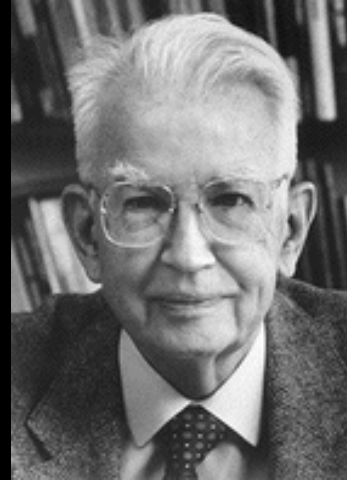


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**Should there still be 2 trains running?**

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Coase's comment:

“The conclusion that it would be better if the second train did not run is correct. The conclusion that it is desirable that the railway should be made liable for the damage it causes is *wrong*.”



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“The conclusion that it would be better if the second train did not run is correct. The conclusion that it is desirable that the railway should be made liable for the damage it causes is *wrong*.” **Why?**



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Now suppose that

running 1 train / day will also  
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**How many trains should be running now?**

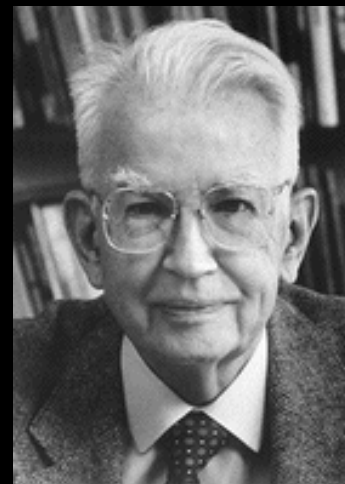


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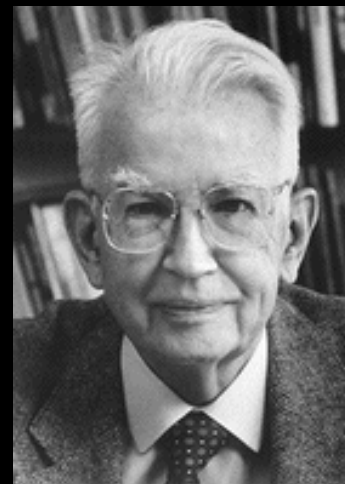
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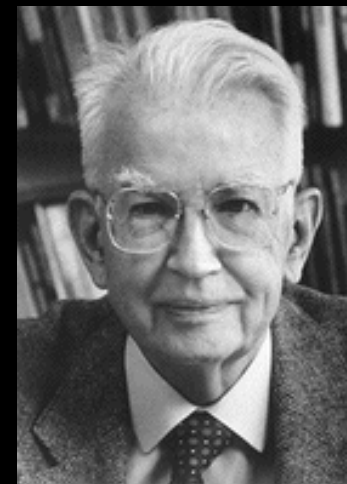


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- (1) It proves that social costs and harms are inherently *reciprocal*—so the instincts behind Pigovian taxation are dead wrong.
- (2) It shows that, in the real world, *transaction costs* and *property rights* make all the difference for internalizing externalities.

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We'll look at (1) next time,  
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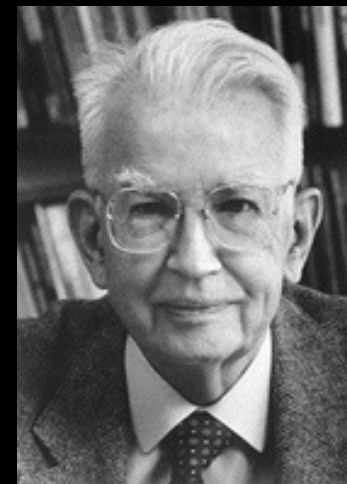
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