The life and legacy of Ronald Coase [1]

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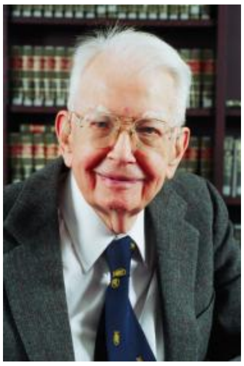

Yesterday, at the age of 103, one of the greatest minds of our time, Nobel prize winner and emeritus professor at University of Chicago Law School Ronald Coase [3] passed away.

His contributions to and influence on economic science are of monumental importance. His groundbreaking research has set the stage for a joint field of law and economics, and has also influenced the new institutional revolution in addition to a number of other fields and areas of research in economic theory.

It would be unfair to say he only made two major contributions since both of these (written 23 years apart from one another) not only won him the Nobel prize, but have continued to influence the economic science ever since. The first was his 1937 paper *The Nature of the Firm* [4] where he introduced the concept of transaction costs in microeconomic analysis. He believed that firms exist because they economize on transaction costs - costs like market entry, acquiring information, managing a company, bargaining, etc. If these individual transactions can be reduced into fewer transactions by organizing a hierarchical body, then entrepreneurs will form firms. With microeconomic theory at the time focusing only on production and transportation costs, Coase's inclusion of transaction costs was a breath of fresh air into economics. However, in 2009 Coase said he was surprised how much *The Nature of the Firm* was being cited since it was "little more than an undergraduate essay".

The second was his 1960 paper *The Problem of Social Cost* [5], widely considered to be the seminal contribution to the joint field of law and economics. It is from this paper that the Coase theorem [6] was later developed (it was Stigler who actually coined the phrase "Coase theorem"). In *The Problem of Social Cost*, Coase examines how a cost imposed on society by an individual firm (an externality such as pollution) can be solved by mutual negotiation and consent if transaction costs are zero and if property rights are well-defined. This idea was subject to vast misinterpretation, which Coase tried to clear up in his subsequent interviews and texts. Regarding the theorem, he later stated [7]: ?All it says is that the people will use resources in the way that produces the most value, that?s all ... I still think it?s an obvious point. You wouldn't think there was a need for a Coase Theorem, really.?

The path to greatness

Born in a London suburb, he received his BA from the London School of Economics in 1932 and was a member of staff at LSE from 1935 until 1951 (the same time Hayek was there). During his student times he spent a year in the US as a travelling scholar, where he studied the American automobile industry. It was from this experience that he formed ideas for *The Nature of the Firm.* For Coase, becoming an economist was pure luck, as he himself admitted, since he wasn't interested in economics until he met Sir Arnold Plant on his final year who introduced him to Adam Smith's invisible hand and explained the coordination mechanism of the price system to him.

It is also interesting that, at the time, Coase was more of a socialist, wondering why people thought Lenin was wrong to posit that a government can be centrally run in the same manner a big firms like Ford or General Motors (Lenin used the Deutsche Post to make his point). In answering this question, he developed a crucial insight about why firms are formed. Even though firms are like centrally planned economies, they are dissimilar to governments in that they are formed by people's voluntary choices, and are governed by the price mechanism. The cost of using the market induces people to make the choice of forming a firm to lower this cost, which leads to the most efficient production processes taking place within a firm: not a government.

During WWII, he worked for the Central Statistical Office of the War Cabinet in London, an experience he cherished as he saw how large organizations tend to operate. He left LSE in 1951 first to join the University of Buffalo, and then the University of Virginia in 1958 (James Buchanan and Gordon Tullock were there at the time). While working in Virginia, he studied the Federal Communication Commission's allocation of radio frequencies.

In his 1959 article [8], he suggested that the Commission should sell the frequencies to the highest bidders in order to solve the externality problem. It is here where he first suggested that with well-defined property rights, radio frequencies could be allocated in the market just like any other good. It wasn't until 1994 that his suggestions were actually implemented. What is interesting about this article is that he presented it [9] to a group of economists from the University of Chicago (including Nobel prize winners George Stigler and Milton Friedman) trying to persuade them that if property rights were properly defined market actors would yield an efficient solution. George Stigler recollects [3] on that night:

> ?We strongly objected to this heresy. Milton Friedman did most of the talking, as usual. He also did much of the thinking, as usual. In the course of two hours of argument, the vote went from 21 against and one for Coase to 21 for Coase. What an exhilarating event! I lamented afterward that we had not had the clairvoyance to tape it.?

It was from this anecdote that *The Problem of Social Cost* was written. Coase was hired by the University of Chicago in 1964. In 1965 he became the editor of the *Journal of Law and Economics*, a position he occupied until 1982. It is believed that his leadership was partly responsible for the journal achieving its influential status. Coase himself said that he used the journal to create a new subject, which he was successful at: not to mention that in this process he influenced the creation of many others.

Oliver Williamson and Douglas North (both Nobel prize winners) on several occasions single out Coase as their major influence behind the new institutional revolution. In 1991, Coase received a Nobel prize in economics [10] "for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy."

As with many great economists, Coase was active and fully engaged in his work until the very last day. (Elinor Ostrom graded PhD papers on her deathbed, and Paul Samuelson wrote op-eds just a few weeks before he passed away.) In his last years, he shifted his attention to China, which culminated in a co-authored book in 2011 (at the age of 101) entitled *How China Became Capitalist* [11] (with Nina Wang). In the book, the authors claim that the Chinese transition wasn't because of deliberate actions of the communist party, but small, marginal changes in society. They dubbed China the product of human action, but not human design, as "China became capitalist while it was trying to modernize socialism". Not since Milton Friedman was there a more respected Western economist in China.

Perhaps the best description of Coase as a person, as well as of the essence of his work, was summarized by Gary Becker: "Coase didn't say a lot, but I began to realize that every time he did say something, it was really profound."

Misinterpreting the Coase theorem

The simplest interpretation of the Coase theorem is that individuals can resolve their disputes in their best interests without the need for government intervention, assuming no transaction or bargaining costs are involved. However, since transaction costs do indeed exist, there is a need for government to lower these costs via an efficient institutional design and properly defined property rights. In other words, courts and efficient institutions are necessary to solve disputes: but not laws that for example prevent smoking, or Pigouvian taxation of externalities like pollution. The right to create social costs like pollution or smoking would simply end up in the hands of those who value it the most.

Consider the following example that Coase himself has noted. A confectioner has machines that shake the office of a nearby doctor when operating, thus preventing him from performing delicate examinations. The answer, Coase would say, is not to enforce a government regulation to put the confectioner out of business. If the value of the machines to the confectioner is higher than the harm imposed on the doctor then there is scope for a mutually beneficial agreement of a payment (compensation) from the confectioner to the doctor for using the machine. It works the other way around as well - if the doctor's work is valued more than the confectioner's, he can make payments to the confectioner to stop production during his work. Another example is a factory whose pollution imposes costs on a dry cleaning business, but whose profits are much higher than that of the dry cleaner. If the factory owner values his production more than what the dry cleaner values his, he can simply pay him the cost he's imposing onto him.

Coase wasn't trying to describe a perfect world without transaction costs (he actually resented such inapplicable economic analysis), but rather make it clear what the role of transaction costs is in designing the institutions of an economic system. The theorem is actually a great showcase of the real world - a world full of transactions, bargaining and choices that are not only constrained by budgets, but by the design of an institutional system within which these choices are made. It is the real world where the Coase theorem has found many of its applications. An example I always think of is the hunting of elephants [12] in Kenya and Botswana. While poaching was banned in Kenya to save elephants from extinction, in Botswana local farmers were given property rights to elephant herds. The ownership of elephant herds would incentivise the farmers to preserve their long term value. As a result in Kenya, which applied the ban on hunting, since the 1970s the amount of elephants has dropped from 140,000 to only 16,000 today, while in Botswana their number has grown from 20,000 to 68,000.

Apart from the externalities problem, Coase also had a few things to say about public goods. In his 1974 paper "The Lighthouse in Economics" he challenged the classical a priori view that a lighthouse is a typical example of a public good that cannot be provided by the private sector at a profit. He showed that in 19th century Britain, all lighthouses were privately provided and charged ships for their use as they entered a port.

The legacy

Finally, from the Institute bearing his name (), a closing point [13]:

> "Coase was critical of economics for being static and preoccupied with formalizing concepts that date back to Adam Smith. He believed that the goal of economists should be to change fundamentally the way we look at a problem. This goal was part of the inspiration behind the Ronald Coase Institute, which a group of scholars formed with Ronald Coase in 2000 to assist young scholars whose research has the potential to help transform their economies. Coase?s support for these young scholars was an act of generosity illustrative of a lifetime of scholarly generosity and confidence in the power of ideas. Ronald Coase himself was an outstanding example of an economist who changed fundamentally the way we think about problems, and the impact of his ideas continues strong today."

Here is a list of some of his most notable writings (a full list of publications can be found here [14]):

- 1937: "The Nature of the Firm."*Economica* 4 (November): 386?405.
- 1938: "Business Organization and the Accountant." Reprinted in James M. Buchanan and G. F. Thirlby, eds., *L.S.E. Essays on Cost*. London: Weidenfeld and Nicolson, 1973.
- 1959: "The Federal Communications Commission."*Journal of Law and Economics* 2 (October): 1?40.
- 1960: "The Problem of Social Cost."*Journal of Law and Economics* 3 (October): 1?44.
- 1972: "Durability and Monopoly."*Journal of Law and Economics* 15 (1) : 143-149.
- 1974: "The Lighthouse in Economics."*Journal of Law and Economics* 17 (2): 357?376.
- 1992: "The Institutional Structure of Production."*American Economic Review* 82(4): 713-719. (Nobel Prize lecture [15])

And these two books that reprint some of his most important work:

- 1988:*The Firm, the Market, and the Law*. University of Chicago Press, Chicago.
- 1994:*Essays on Economics and Economists*. University of Chicago Press, Chicago.

Links:
[1] http://www.adamsmith.org/research/think-pieces/the-life-and-legacy-of-ronald-coase
[2] http://www.adamsmith.org/research-type/think-pieces
[3] http://www.law.uchicago.edu/news/coaseinmemoriam
[4] http://www.law.uchicago.edu/files/file/coase-nature.pdf
[5] http://www.law.uchicago.edu/files/file/coase-problem.pdf
[6] http://en.wikipedia.org/wiki/Coase_theorem
[7] http://reason.com/archives/1997/01/01/looking-for-results/singlepage
[8] http://www.jstor.org/discover/10.2307/724927?uid=3738200&uid=2&uid=4&sid=21102580348721
[9] http://marginalrevolution.com/marginalrevolution/2013/09/coase-and-spectrum-auctions.html
[10] http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1991/
[11] http://www.amazon.com/China-Became-Capitalist-Ronald-Coase/dp/1137351438/
[12] http://www.econlib.org/library/Enc1/PublicGoodsandExternalities.html
[13] http://www.coase.org/coaseretrospective.htm
[14] http://www.law.uchicago.edu/lawecon/coaseinmemoriam/publications
[15] http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1991/coase-lecture.html