

The Coase Theorem

1. The Problem: Hamilton and Jefferson are neighbors. Initially, Hamilton's house is worth \$1,200 to him, and Jefferson's is worth \$1,000 to him. But Jefferson has an opportunity to earn \$500 extra dollars testing sirens in his kitchen, and if he does so, he will impose a \$200 cost on Hamilton. Thus, the values of the houses in the two situations:

No sirens – \$1,200	\$1,000 – No sirens
Sirens - \$1,000	\$1,500 – Sirens

Hamilton

Jefferson

Hamilton and Jefferson go to court to have the relevant property rights defined and allocated. Before this is done, there's no way they can negotiate a solution to their dispute. But "Ron," the elderly observer, says "It doesn't matter who wins; the result will be the same either way." Is this correct?

2. (A) Hamilton wins. Then, initially, there are no sirens, H is "worth" \$1,200, J \$1,000. But J can buy the right from H for some price between \$200 and \$500, and so win the right to test the sirens. Suppose J buys the right for \$300. Then (i) Sirens are tested; (ii) H is "worth" \$1,000 + \$300 = \$1,300. J is "worth" \$1,500 - \$300 = \$1,200. \$2,500 Total Value.

(B) Jefferson wins. Initially, there are sirens, with H until \$1,000 and J \$1,500. Now, however, Hamilton will pay only up to \$200 to buy the right from J, and J will accept nothing less than \$500. So no deal is made, and (1) Sirens are tested; (ii) H is "worth" \$1,000. J is "worth" \$1,500. \$2,500 Total Value.

3. "Ron" is correct in that the sirens are tested regardless of the initial allocation of the relevant property right, and thus the maximum value of the two properties taken together (\$2,500 vs. \$2,200) is realized either way. But the party who wins the court case, whichever one that is, takes a larger portion of this \$2,500 than he would had he lost the case. Hence, The Coase Theorem:

Where bargaining is costless, an "efficient allocation" of property rights (i.e., one which maximizes the value of those rights by placing them in the hands of the party who values them the most) will be achieved irrespective of the initial allocation of those rights. But the distribution of this "maximized value" will differ from one initial allocation to the other.

4. Effect of "Transaction Costs", i.e., bargaining is not free.

If the buyer of a property right must pay a "sales tax" of \$700, The Coase Theorem will fail: high transaction costs will prevent the transactions needed to reallocate rights to their highest valuing owner if the court has not made this allocation initially itself.

(A) Hamilton wins:

Initially: H \$1,200 = \$2,200
 J \$1,000

No sirens. J won't pay the necessary price to H and the \$700 tax. Hence, this "misallocation" persists.

(B) Jefferson wins:

Initially: H \$1,000 = \$2,500
 J \$1,500

Sirens are tested. H can't pay enough to buy the right from J. Identical to 2(b)

5. Posner's Corollary: When transaction costs are high, efficiency will result only if the court initially grants the right to the highest valuing owner.