

HOW TO ELIMINATE SPAM

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Industry analysts estimate that spam currently accounts for close to 80 per cent of email messages sent and causes close to £5 billion in economic losses annually. Luther Martin of Voltage Security takes a look at the issue of spam from a fresh perspective and proposes an innovative way of eliminating it once and for all.

The problem with spam is very similar to that of pollution: spammers profit from their activity at the expense of the rest of the population, just like polluters of the environment profit while annoying or endangering others.

So it seems reasonable that our understanding of the economics of pollution may give some insight into the economics of spam. The work of Nobel laureate Ronald Coase is particularly useful for this.

In 1991, Coase was awarded the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel for his contributions to understanding how property rights and transaction costs affect the structure and functioning of an economy.

Coase showed that if we assume that transaction costs are negligible, as long as property rights are clearly defined, the equilibrium that a market will reach does not depend on who initially owns the affected property. All that will change is who profits from the transactions that lead to the equilibrium.

An example of this principle is a locomotive whose coal-burning engine showers sparks over the land that it passes. Reducing the level of sparks emitted is possible but requires that the owner of the train incur the additional costs to purchase some sort of sparkreduction equipment.

To quantify this let's assume that a train normally produces 10 units of sparks, but these can be reduced at a cost of £200 per unit eliminated, and that each unit of

sparks does £300 of damage to the land that it passes. So if the train produces 10 units of sparks there will be no additional costs for the owner of the train, and the train will do £3,000 of damage to the land that it passes.

If the train produces no sparks at all, there will be additional costs of £2,000 for the owner of the train, but the train will do no damage to the land that it passes.

If the owner of the train is free to shower sparks over the land that his train passes, the owners of the land will be willing to pay the owner of the train £300 for each unit of sparks that they eliminate. This situation will reach equilibrium where the owners of the land will pay the owner of the train £1,200 to reduce the sparks down to only four units, which the owner of the train will use to finance the modifications to his trains that the reduction in sparks requires.

On the other hand if the owner of the land is free to deny the owner of the train the right to shower sparks on his land, then the train owner will be happy to pay the landowner £1,200 to compensate him for his inconvenience, and the landowner will then be happy to endure four units of sparks.

The end result that we arrive at is the same in both cases, with the only difference being who is paying whom. And since both parties prefer the arrangement where four units of sparks are produced to any other, it will be the state that this market eventually reaches.

Coase showed that this will always happen as long as there are no transaction costs. So as long as we have clearly-established property rights, we will reach equilibrium between a polluter and the victims of the pollution and the equilibrium that we will reach will be the same no matter who owns the property rights to the environment.

If we apply this model to spam, we see that spammers are analogous to the train owners and recipients of email are analogous to the owners of the land that the train will damage with its sparks. But in the case of spam, there is no way for spammers and recipients of email to reach an agreement that limits the amount of spam to a mutually acceptable level.

First, there are no property rights to enforce; neither the spammers nor the legitimate users of email can claim any exclusive right to use the internet for messaging. Next, there is no efficient way for spammers to reach an agreement with their victims. Because of this the amount of spam sent remains unchecked by market forces, as does the annoyance suffered by users of email.

Thus Coase's result provides an easy solution to the problem of spam: define ownership of the internet and the rights to use it. Once we do this, market forces will then drive the amount of spam that is sent to an acceptable level, with slight inefficiencies possible due to the transaction costs involved.

And since the equilibrium that the market will reach does not depend on to whom we assign ownership of the internet, we will even end up with the same reduction in spam if we decide to assign the ownership of the internet to the spammers - a truly remarkable result.

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