

## REPLIES

### One More Externality Article: Reply

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The essence of Peskin's (1) argument is that congestion is neither depletable nor undepletable in the sense used in the Bird-Freeman-Baumol/Oates (2, 3, 4) debate. In my analysis, however, congestion can be categorized as an undepletable bad.

Consider Peskin's example of a crowded beach. The presence on the beach of any individual A causes displeasure to others (B, C, etc.). However, the suffering of displeasure by B does not in itself reduce the displeasure felt by C and others on the beach. It follows that congestion has the non-rival undepletable characteristic. Clearly congestion is a bad.

Peskin points out that the congester is also the congestee. This is certainly a particular feature of congestion externalities. But it does not mean that congestion can therefore be classified neither as depletable nor as undepletable.

It is possible to treat congestion in the same way as other externalities. This is done by separating conceptually the mind (the subject of the utility function) from the body (an argument in other mind's utility functions). In the beach problem, the mind gets the pleasure from being on the beach—the view, the scent of the sea air, the sound of the waves. The body—its smell, its sound, its blocking of the view—represents the pollution imposed on other minds. The problem put this way is simply the conventional pollution model.

Congestion can of course be modeled differently. The beach problem can be treated as that of allocating the finite, scarce, and depletable resource of beach space. It is easier to model many congestion problems this way; the solution of rationing by price (paying to go on the beach) is more intuitive when so derived. Road pricing, such as operates in Central Singapore, is a similar example of this method of allocation. However, this does not make congestion special. A conventional pollution problem such as smoking can be modeled in the same way, as allocating finite, scarce, and depletable clean air.

In my original classification congestion is an undepletable and therefore a non-transferable externality. The prescribed solution is that the congester pays (everyone is charged for going on the beach); but the congestee is not paid (no one is compensated for suffering the congestion). This is the same solution as derived in the previous paragraph. It shows that my transferable/non-transferable distinction does correctly deal with congestion externalities.

## REFERENCES

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