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The Perfectly Competitive Production of Collective Goods: Comment

In a recent paper* Professor Thompson derives the central theorem

> ...that there is an overvaluation and overproduction of a collective good in any perfectly competitive equilibrium...(p.1).

I wish to argue that Professor Thompson's theorem, as stated is false, and that his proof is based on a very special and peculiar kind of competition indeed, and one which has nothing to do with the well-known concept of "perfect competition" advertised in his title and theorem. As a substitute, I pose the alternative theorem that in a purely competitive economy no collective goods can be produced.

The argument that collective goods can not be produced under competition does not rest on the possibility of exclusion, and it does not rest on the possibility of price discrimination. It rests instead on the peculiar property of public goods, that the marginal cost of supplying any consumer after the first is exactly zero. When firms producing such a good compete against each other, forces of competition will drive the price of the product to equal its marginal cost, which being zero, results in the non-viability of any firm producing the good. If a public good is to be produced at all, it must be produced non-competitively.

*Earl A. Thompson, "The Perfectly Competitive Production of Collective Goods" *Review of Economics and Statistics*, XLX, Feb., 1968, p.1.

Thompson's model preserves the existence of many firms producing the collective good by having all firms act under the "Cournot-Bertrand convention" and by discriminating in price among consumers. This use of the Cournot assumption is clearly at variance with the prior assumption by Thompson that "...there is perfect knowledge of all market-relevant information..." The peculiar results of the Thompson model rely on perfect knowledge by producers of consumers' preferences, and upon perfect knowledge by consumers of the intentions of producers to discriminate in price. But perfect knowledge of all market-relevant information evidently excludes knowledge of the fact, by any producer, that he can have all the revenue of the industry at no additional cost simply by reducing his price(s) slightly. This is simply not compatible with perfect competition as usually understood, and has nothing to do with whether or not consumers have an incentive to compete against each other.

A new entrant or an existing firm in Thompson's model who "accidentally" reduces his price will reap great rewards. This could not happen in a perfectly competitive equilibrium. If any firm in Thompson's model reduces its price, a destructive competitive price reduction spiral will ensue, reducing the price to equality with marginal cost, which is zero. This is what perfect competition is all about, and it is very different from the behavior of Thompson's producers, who do not in fact compete. Just as the non-government allocation of a public good requires

barriers to competition, price discrimination requires the same. There is nothing in the inherent nature of a public good which provides these barriers. As a result, Thompson has to make special assumptions about the nature of competition to get his result. These assumptions are not consistent with perfect competition.

I would have no quarrel with Thompson if he had titled his paper "The Production of Collective Goods Under a Very Peculiar Kind of Non-Competitive Polipoly," and had deleted all further references to perfect competition. One might still argue, of course, that the model is then void of either practical or theoretical usefulness. On the practical side, I submit that each of the examples cited by Thompson of the private (e.g., non-government) allocation of a public good is a case in which there is either some barrier to competition, or in which some private good has been substituted for the collective good. In broadcasting, for example, stations substitute the "private" good, audience size, for the "public" good, programming. They sell the private good, not the public one.

No collective good can be privately and competitively produced. Non-governmental allocation of such a good requires both exclusion devices and barriers to competition. Efficient private allocation may require price discrimination.

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