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Prof. François Munoz
PCI Ecology

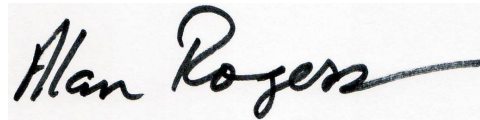Dear Prof. Munoz:

I believe that Prof. Massol has misunderstood Theorem 1 of Bishop and Cannings (1978). That theorem says that A implies B, where A is the event that strategy I is an ESS, and B is the condition that (almost) all strategies within the support of I receive equal payoffs in contests against I. The theorem does not say, as Prof. Massol seems to think, that B implies A. The theorem shows that B is a necessary condition for I to be an ESS. It does not imply that B is sufficient.

My section 3.2 defines a mixed strategy and shows that it satisfies condition B. Contrary to Prof. Massol's claim, this does not imply that I is an ESS, because although B is necessary, it is not sufficient. My section 3.3 then proves that I is not an ESS. This mathematical proof is verified by computer simulations in section 4.2. These simulations demonstrate that I can be invaded and is therefore not an ESS.

In his 4th point, Prof. Massol is confusing the size of the population with the size of the groups within which competition occurs. An infinite population does not imply that $K \to \infty$, because the population consists of many groups, each of size $K + 1$.

In summary, I disagree with this review and have made no changes in the manuscript. As Prof. Massol and I seem to be at an impasse, I request that you submit this dispute to a 3rd party.

Yours

Alan R. Rogers