On the Reduced Game Property and its Converse

A Correction

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Remark 4.7 in Peleg (1986) is incorrect. If a single-valued solution satisfies COV and RGP, then it satisfies PO. However, the foregoing claim is *not* true for *set-valued* solutions. Indeed, the following example shows that PO is independent of COV and RGP.

Example 1: Let (N, v) be a game. Define

$$\sigma(N, v) = \{x \in X^*(N, v) \mid s_{ij}(x) = s_{ji}(x) \text{ for all } i \neq j\}.$$

Then, as the reader can easily verify, σ satisfies NE, ETP, COV, RGP, and CRGP. Also, σ violates PO (see the notations of Peleg 1986).

Remark 2: We conclude from Example 1 and Peleg (1986) that the following *six* independent axioms characterize the prekernel: NE, PO, ETP, COV, RGP, and CRGP.

I am grateful to Mr. Benny Moldovanu for pointing out the foregoing mistake.

Reference

Peleg B (1986) On the reduced game property and its converse. *International Journal of Game Theory* 15:187--200