

A coordination game:

Like in Bas, suppose both ~~people~~ agree on the more desirable concert - say they both prefer Bach. A strategic game that models this situation as:

P1 \ P2	Bach	Stravinsky
Bach	2, 2	0, 0
Stravinsky	0, 0	1, 1

2 Nash equilibria: (Bach, Bach) and (Stravinsky, Stravinsky)

Is the equilibrium in which both people choose Stravinsky plausible?

People who argue that the tech of Apple computers originally dominated that of IBM computers, and that the Beta format for video recording is better than VHS, would say "yes". In both cases users had a strong interest in adopting the same standard, and one standard was better than the other; in the steady state that emerged in each case, the inferior tech. was adopted by a large majority of users.

To use the terminology of Schelling, some equilibria are focal. The preferable equilibrium seems more likely to be focal.

If features of the situation not modeled by the notion of a strategic game make some equilibria focal then those equilibria may be more likely to emerge as steady states, and the rate at which a steady state is reached may be higher than it otherwise would have been.

If 2 people played this game it seems likely that the outcome would be (Bach, Bach).

Example 17: Contributing to a public good

Each of n people chooses whether or not to contribute a fixed amount toward the provision of a public good. The good is provided if and only if at least k people contribute, where $2 \leq k \leq n$; if it is not provided, contributions are not refunded. Each person ranks outcomes from best to worst as follows:

- (i) any outcome in which the good is provided and he does not contribute
- (ii) good is provided and he contributes
- (iii) good is not provided and he does not contribute
- (iv) good is not provided and he contributes

Strategic Game:

Players: n people

Actions: {Contribute, don't contribute}

Preferences: (i), (ii), (iii), (iv)

- An action profile in which more than k people contribute is not a Nash equilibrium: any contributor can induce an outcome he prefers by deviating to not contributing.
- An action profile in which k people contribute is a Nash equilibrium: if any contributor stops contributing then the good is not provided; if any non-contributor switches to contributing then he is worse off.

An action profile in which fewer than k people contribute is a Nash equilibrium only if no one contributes: if someone contributes, he can increase his payoff by switching to non-contribution.

Nash equilibria

~~Contribute, Contribute~~
~~Don't Contribute, or~~

(Contribute, _____, Contribute, Don't-Contri, _____, Don't C)

k $n-k$

and

(Don't contribute, _____, Don't contribute)