

Abstract

In his classic novel, *Catch-22* (1961), Joseph Heller describes a thoroughly frustrating situation faced by a combat pilot in WWII. This is generalized to a "generic" 2 x 2 strict ordinal game, in which whatever strategy the column player chooses, the best response of the row player inflicts on the column player a worst or next-worst outcome, and possibly vice versa. The 12 specific games subsumed by the generic game are called *catch-22 games*. These games, along with 4 *king-of-the-mountain games*, turn out to be the only games in which moving power is *effective*, based on the theory of moves (TOM): each player can induce a better outcome in a game when it possesses this power than when its opponent possesses it.

These 16 games constitute 28% of the 57 2 x 2 *conflict games*, in which there is no mutually best outcome. A specific *catch-22* game is used to model the conflict between the pilot in the Heller novel and a doctor who can certify his sanity; a different *catch-22* game is used to model medieval witch trials, in which people accused of consorting with the devil were condemned (and often executed) if they confessed, tortured if they did not. *King-of-the-mountain* games portray related situations in which there is a contest to come out on top, but the player who "loses" does not suffer as much as in a *catch-22* game.

In all these games, cycling is always possible and frequently observed; additionally, cycling often destroys focal points, including unique pure-strategy Nash equilibria. Ways to attenuate the frustration of players who continually move to try to escape inferior outcomes are discussed, including depriving them of the wherewithal to cycle and rendering uncertain their prospects of outlasting their opponents.

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