

Auction bridge::

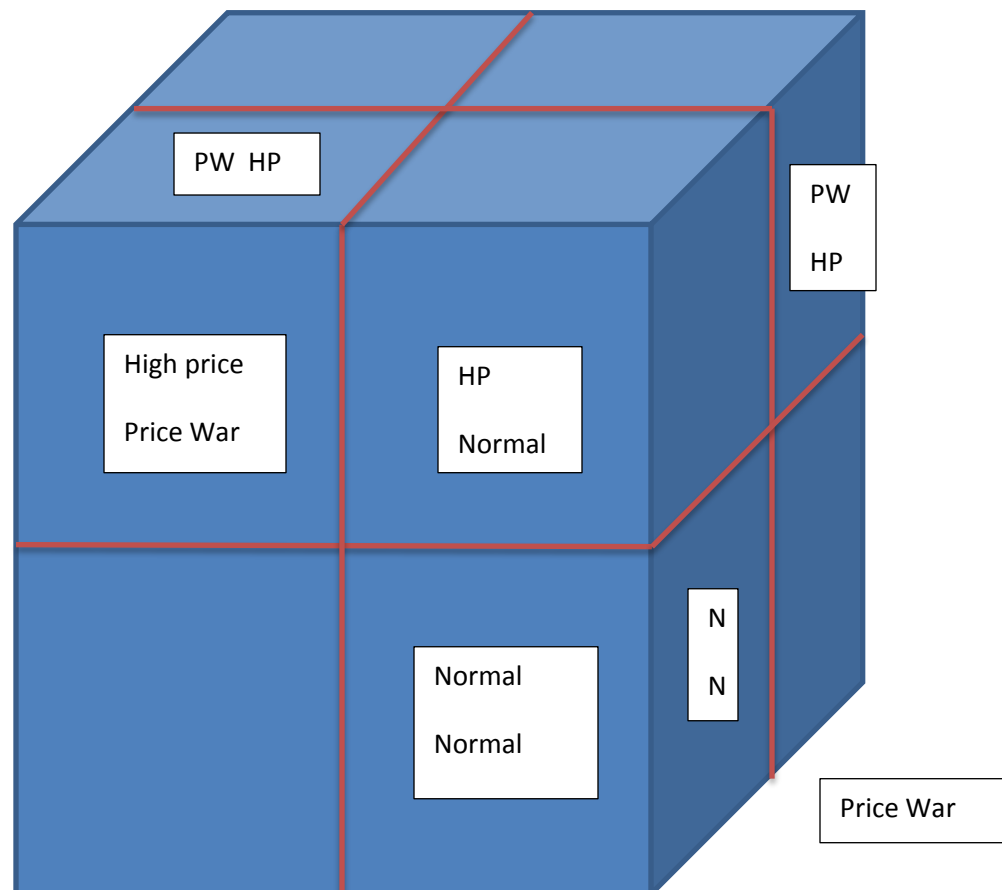
>> It's a rivalry game first, then a price war:

4 players 2 opponents

4 colors

52 cards

13 each, i.e 26 for each opponent



Rivalry Game

Auction bridge scoring is as follows. From Wikipedia.

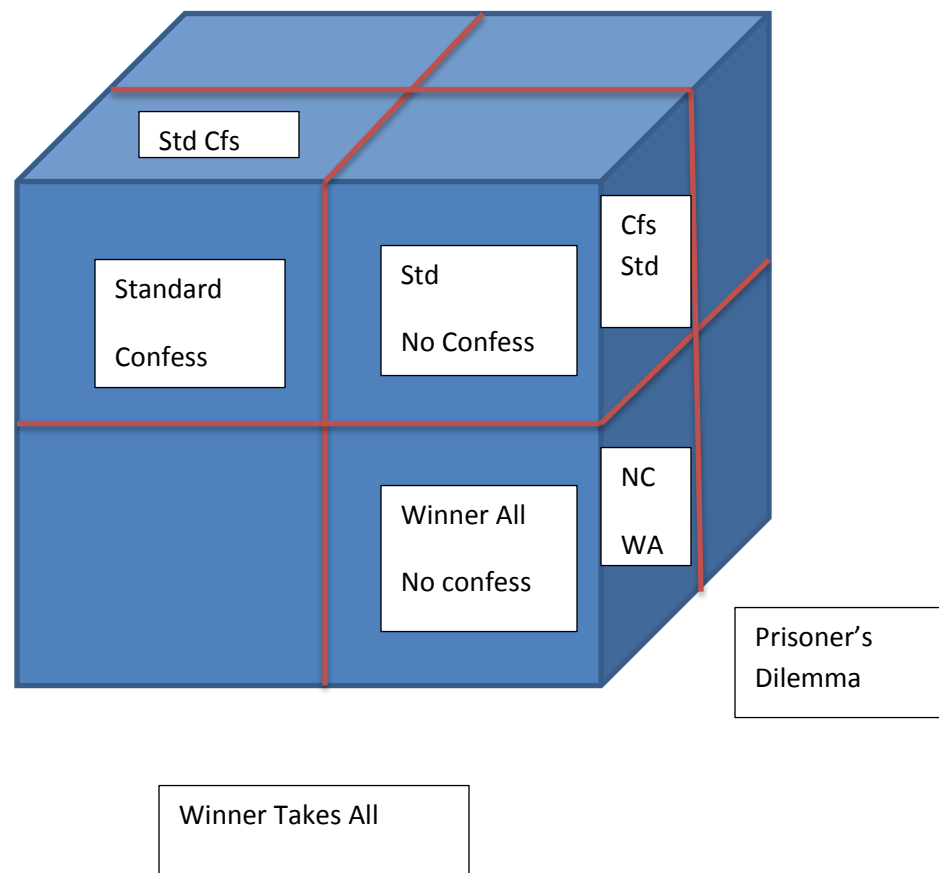
- Each trick exceeding six scores:
 - Notrumps: 10 points
 - Spades: 9 points
 - Hearts: 8 points
 - Diamonds: 7 points
 - Clubs: 6 points
- Game is 30 points, and only odd-tricks count towards game. The first side to win two games wins the rubber and scores a 250-point bonus.
- Each under-trick is worth 50 points to the opponents.
- Small slam is worth 50 points; grand slam is worth 100 points.
- Honours are scored as follows:
 - Four trump honours in one hand: 80
 - Five trump honours (or four aces in notrump) in one hand: 100
 - For an additional honour in partner's hand, or for three or more honours divided between both hands: 10 each
- Contracts could be doubled and redoubled, which doubled or quadrupled the odd-trick and under-trick amounts. In addition there was a bonus of 50 points for making a doubled contract and for each over-trick, this was doubled if the contract was redoubled.

If u need to arrange the drawing by urself, check samuelson-nordhaus. U'll need to turn the price war situation to reverse. In the 3D isometric drawing, U take x axis as rivalry game, and z axis as price war. And then u can generate the above drawing. I have identified u 5 cubes & 6 surfaces (u may need to start w/ surfaces). Not all may be correct. Check the first cube. The first surface (on XY) is 'high price-price war' and the surface (on XZ) is 'Price war-High price' – because rivalry got plotted on X and Price war got plotted on Z inversely. The right hand top corner surface is marked 'Price war-High price'. Same reason, plotting.

I don't know abt the rest. Point is, u can set ur data here. Auction bridge is different from real life for the fact that u can generate all moves and calculate points. So if u can analyze some statistically supportable no of sample games, recorded games from world championships, and if u calculate the equivalence of points distributions to earning (they do get paid very high), among other factors u may need to think of bcause u never played an Auction bridge game – u may find an interesting problem to solve.

Second: it's a winner takes all situation and a prisoner's dilemma. Here winner takes all is in X axis and prisoners dilemma is in the Z axis. The same reason. First the game is a rivalry, then, price war, then winner takes all & prisoner's dilemma. In an ideal game the prisoner's dilemma should not get

considered. It is taken that u will not manage any corruption. But in real games, corruptions do take place and unwillingly too. So, u will need to take it into consideration.



Again, if you start w/ rivalry & winner takes all, u will get another perspective. Then u can take winner takes all & price war. All of those except prisoner's dilemma are ideal conditions. Somehow, at this point, I am thinking that if u start w/ rivalry & winner takes all and then consider rivalry & price war and then winner takes all & price war, u may have different analyses. If u know something abt championship card games, u will know why I am thinking of the sequences of situation(s) arrangements.

How u get data for prisoner's dilemma from card games? Such data should be available. But in real game there is no chance for corruption. So u take under-tricks, in points calculation, as fines for prisoners dilemma. i.e. if u call false, during contracting, in point counting ur opponent will get 50 for one false call. U should call this "prisoners' dilemma" rather than "prisoner's dilemma" – the fact that u

play auction bridge in partnership. One point here, under-tricks r no confession, it's just a penalty. U can manage under-tricks to loose points even, depending on the fact that u r sure that u can manage the game – sort 0of bluffing goes on in such situations. Sort of gambling. All u can manage actually, by intentionally managing under-tricks, is 'hope'; that ur next deal or even the next may turn your partnership better hands. A strategy u take when ur desperate and possibly in no other situation. Considering over-tricks can be another gambling analysis. It's not exactly the reverse.

How u plot data::

U have 6 surfaces on a cube. Each surface is divided into four. So u have 24 surface-fractions. These fractions arise because of payoffs in different situations. Now if u can isolate some valid data to satisfy what Neumann managed, i.e. four possible situations for each surface, then u can try to place other less-relevant data on other surfaces based on logic. And the u verify that w/ maths. U'll need to perform matrix manipulations possibly – say u need all data in every surface-fraction in some manipulable form.

Further analyses may take u into thinking that u r considering 8 cubes and u can plot ur data in a 3d manner. Such as, from sam-nordhs, the pay off matrix of rivalry game is as below

	High Price	Normal price
High price	HP-HP	
Normal Price		NP-NP

Pay off at HP-HP and NP-NP is cannot possibly a constant plot. It is supposed to be a sort of a Supply & Demand curve, to be ideal; u can presume better than that, of-course, depending what kind of price fluctuation(s) is/are occurring. U can think of interest rate adjustments while ur calculations r continuing. Such as in a world championship auction bridge game u r almost winning 1,000,000. But u don't know that by the time u r a winner, the world market has rushed into a Price war-Pollution Game, and ur million has fallen to 70% or risen to 120%, according to neumann's description of pollution game in sam-nrdhs.

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