

Dutch Strategy 1:

On Sunday, place Bet 1.  
On Monday, place Bet 2.

To avoid book, agent who bases Bet 1 on 1/2 credence in H also bases Bet 2 on 1/2 credence in H.

Dutch Strategy 2:

On Sunday, place Bet 1'.  
On Monday, place Bet 2'.  
If tails, on Tuesday place Bet 3'  
(just like Bet 2').

To avoid book, agent who bases Bet 1' on 1/2 credence in H bases Bet 2' (and Bet 3', if necessary) on 1/3 credence in H.

Hitchcock: "If *the bookie can achieve his certain gain only by exploiting information that is unavailable to the agent*, then the Dutch Book reflects an evaluation of the system of bets that is not the agent's own."

According to Hitchcock, Strategy 1 fulfills the antecedent because it has Feature H: To implement the strategy, Bookie must have information when he offers a bet not available to Beauty when she accepts it.

Instructions to the Bookie:Dutch Strategy 1:

If it's Sunday, place Bet 1.  
If it's Monday, place Bet 2.

Dutch Strategy 2:

If it's Sunday, place Bet 1'.  
If you find yourself awake after Sunday, place Bet 2'.

Vineberg notes that Strategy 2 has

Feature V1: The structure of the bets depends on information not available to Beauty.

Feature V2: When Beauty places Bet 2' (and Bet 3', if needed), she doesn't know which bet she's placing.

Feature V3: When Beauty considers the entire betting structure at time 0, she doesn't know how many bets she will wind up placing.

A thought: Perhaps we should require both

Feature T1: Both when she is considering all bets and when she is placing each bet, Beauty knows the entire strategy being used against her.

Feature T2: Beauty bases all bets on credences conditionalized on (a) the entire strategy being used against her, and (b) the fact that that bet is being offered.