

Payoff (\$M, NPV) numbers in parentheses are losses

circle best

I

	Economic Environment			EMV
	poor	good	great	
Probability	0.5	0.4	0.1	
do nothing	20	25	20	22
expand	4	10	50	11
double capacity	2	9	70	11.6
calc EMVc	20	25	70	27

regrets (\$M, NPV)

	Economic Environment			worst regret for each strategy
	poor	good	great	
do nothing	0	0	50	50
expand	16	15	20	20
double capacity	18	16	0	18

CYA costs 22. max EMV costs 11.6. CYA costs 10.4 M more

II

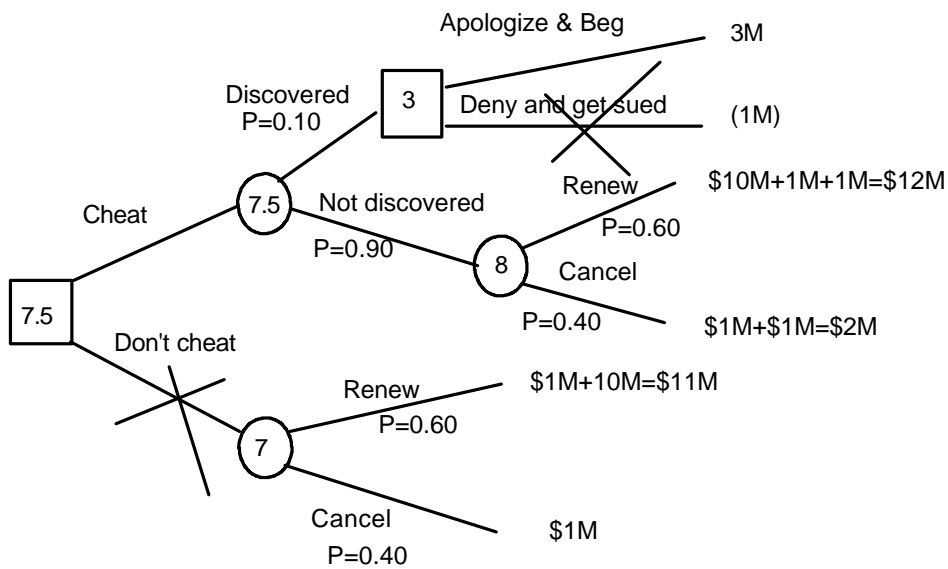
6) $X = 13 - Z(0.2) * 2 = 13 - 0.84 * 2 = 11.3$

7) $(20K - 5K) / (100 - 50) = 300$

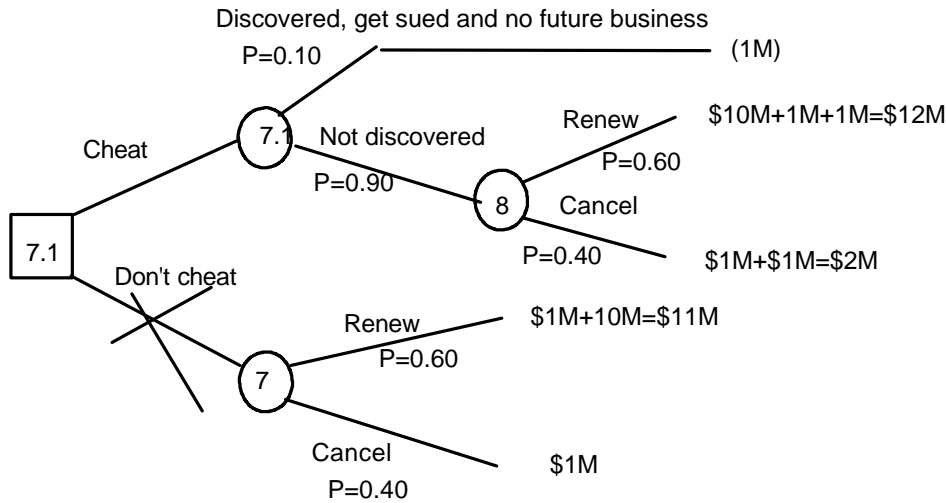
8) $.9375 * .91 * .9 = .7678125$

9) difference in reliability = $.576 - .360 =$ difference in Pfail; Pfail * cost Fail = expected cost;

III



Since you'll be forgiven, go ahead and cheat!



Even if he won't be forgiven, there is still enough advantage to be gained that the vendor has incentive to cheat. However, eliminating the forgiveness reduces the incentive. There were many imaginative ideas about how to reduce the incentive to cheat. Most common were:

- increase P detection
- increase future value
- increase penalty-sue for more.
- tell everybody--reputation is everything.

Note the incentive-decision tree example reinforces the iterated prisoner's dilemma game-theory conclusion, but may add another view of the effect of forgiveness in the tit-for-tat strategy. My view is that you should allow a few mistakes, as everybody makes them now and again. But when somebody reveals himself to be a consistent jerk, "Don't work with jerks!"

Joe's and Sally's speed at the merge of highways 40 and 270

Joe / Sally	courteous	aggressive weaving	duels and cutting off
courteous	40 / 40	20 / 50	2 / 60
aggressive weaving	55 / 20	35 / 25	5 / 40
duels and cutting off	50 / 2	30 / 5	10 / 10

Sally's best speed

Joe's best speed

both would duel and cutoff 10/10 in the prisoner's dilemma equilibrium.

courteous/courteous would be a lot better , giving 40/40

maintain by better cops, better laws, prior agreements, live in Missouri rather than NY. In general, educate the populace about game theory and the rational self interest in caring about the other guy. In the long run, you can most effectively get what you want by

IV

V

- 1) $5+40Ph=25-10Ph$; $Ph=20/50=40\%$
- 2) Rational Laziness is a key factor in achieving higher productivity.
- 3) Depersonalize decisions by agreeing on a process and applying it with reasonable consistency
- 4) buy information when the information is worth more than it costs
- 5) working overtime while slacking off during regular hours is an example of the overflowing bologna sandwich technique.