

#Simple applicatons of decision theory.

← Back to Chapters

### Comments on 14.1 and 14.2

On p. 428 Jaynes seems to be describing a simple probabilistic graphical model (and is making some analogy between belief propagation in a PGM and Huygens principle).

$Y - V - D$

Then  $V$  screens  $D$  from  $Y$  and also screens  $Y$  from  $D$ .

See also this on Kevin Van Horn's page.

### Comments on 14.4

Small nitpick: There is a discrepancy between the caption of Fig 14.1 and the text ( $L_a = 2, L_r = 1$  gives  $L_a = 2L_r$  and not  $L_a = (3/2)L_r$ ).

A key point seems to be that (in the example at hand) both the minimax and Neyman-Pearson decision rules are reproduced by a Bayesian decision rule with appropriate prior. It would be interesting to know how general this phenomenon is. I guess by Wald's theorem one only needs to show that minimax/Neyman-Pearson is an dmissible decision rule, as Jaynes says: "Wald showed in great generality what we have just illustrated by one simple example".