

# Lecture 8 - More Probability

Graham Cooper

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When looking at a Bayes net, see slide 24, lecture 7

The numbers here are just examples

P(a)   P(!a)	
0.6	0.4

  

A	C	P(C—A)
a	c	0.9
a	!c	0.1
!a	c	0.3
!a	!c	0.7

  

A	B	D	P(D—A,B)
a	b	d	
a	b	!d	
a	!b	d	
a	!b	!d	
!a	b	d	
!a	b	!d	
!a	!b	d	
!a	!b	!d	

Can we have arrows going both ways? No we want an acyclic directed graph.

Bayesian networks do not have cycles

D-Separations - Slide 34 lecture 7

1. Independent (first rule) - I missed part of the answer to this :S
2. Dependent if we do not observe fever, Independent if we do (second rule)
3. Dependent if we do not observe fever or flu, independent if we do
4. Independent if we do not observe fever (rule 3), dependent if we do observe fever (the path opens up)
5. Independent if we do not observe fever (Rule 3), dependent if we do observe fever (the path opens up)

Finished on slide 8? Lecture 8