

ベイジアンネットワーク入門2

知能システム演習A

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例題2

クリック ノードのラベルとドメインを設定する

0

1

2

ラベルを入力する

4

Node Properties

Node name: A

Node type: Regular Decision Utility

Domain: T, F

Use commas to separate domain values: d1, d2, ..., dn

OK Cancel

5

クリック

事前確率を入力する

Probability Table for A

	$P(A=T)$	$P(A=F)$
Prior Probability	0.6	0.4

No observed value for this node.

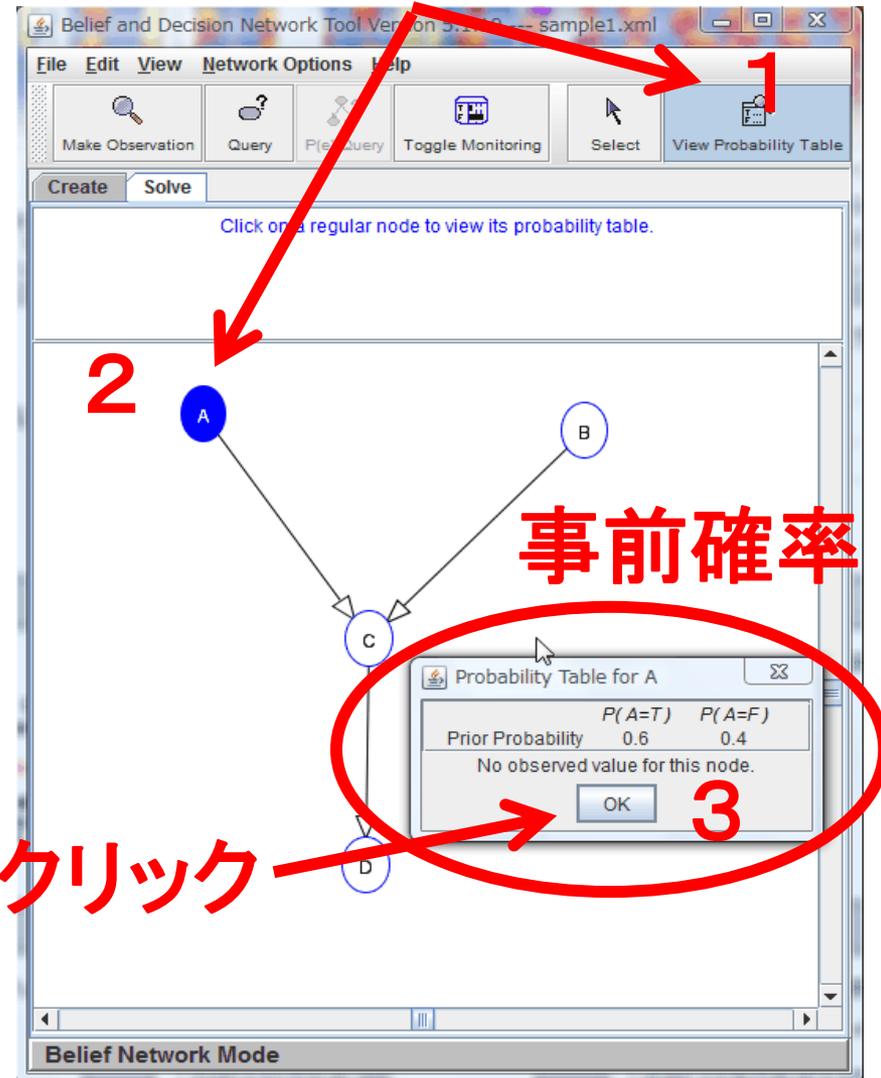
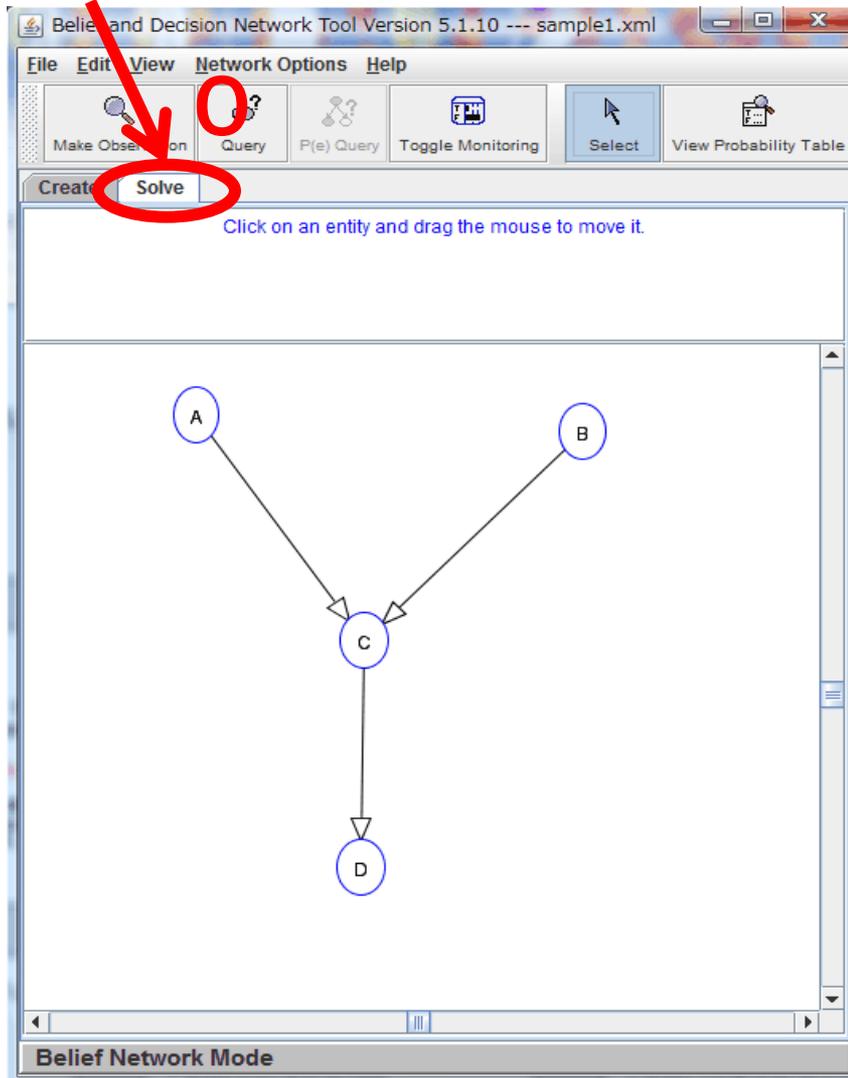
OK Cancel

クリック

例題2

クリック

条件付き確率表の表示



例題2

条件付き確率表の表示

Belief and Decision Network Tool Version 5.1.10 --- sample1.xml

File Edit View Network Options Help

Make Observation Query P(e) Query Toggle Monitoring Select View Probability Table

Create Solve

Click on a regular node to view its probability table.

4

事前確率

Probability Table for B

	$P(B=T)$	$P(B=F)$
Prior Probability	0.2	0.8

No observed value for this node.

OK 5

クリック

Belief Network Mode

6

7

Probability Table for C

A	B	$P(C=T)$	$P(C=F)$
T	T	0.3	0.7
T	F	0.7	0.3
F	T	0.5	0.5
F	F	0.9	0.1

No observed value for this node.

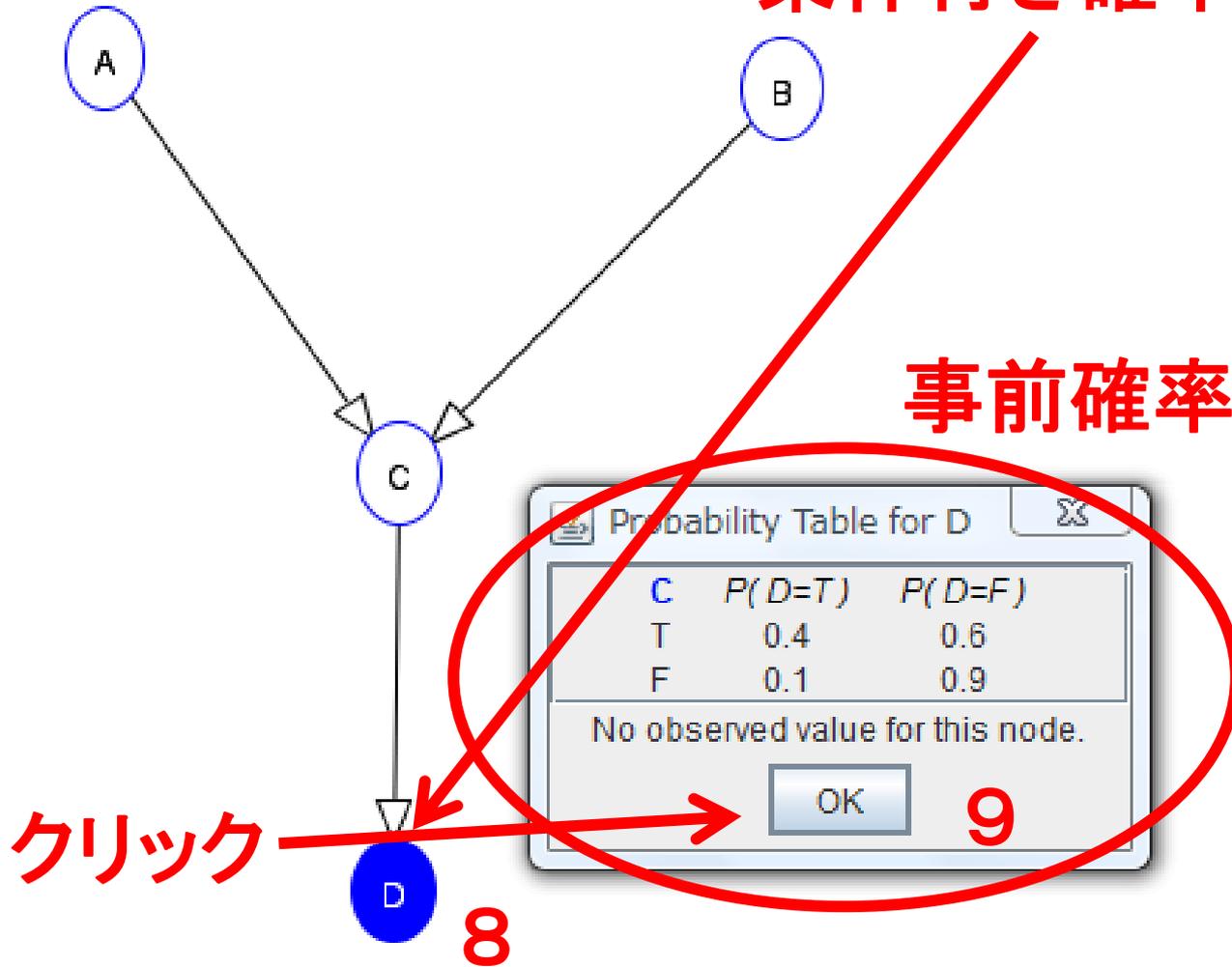
OK 7

クリック

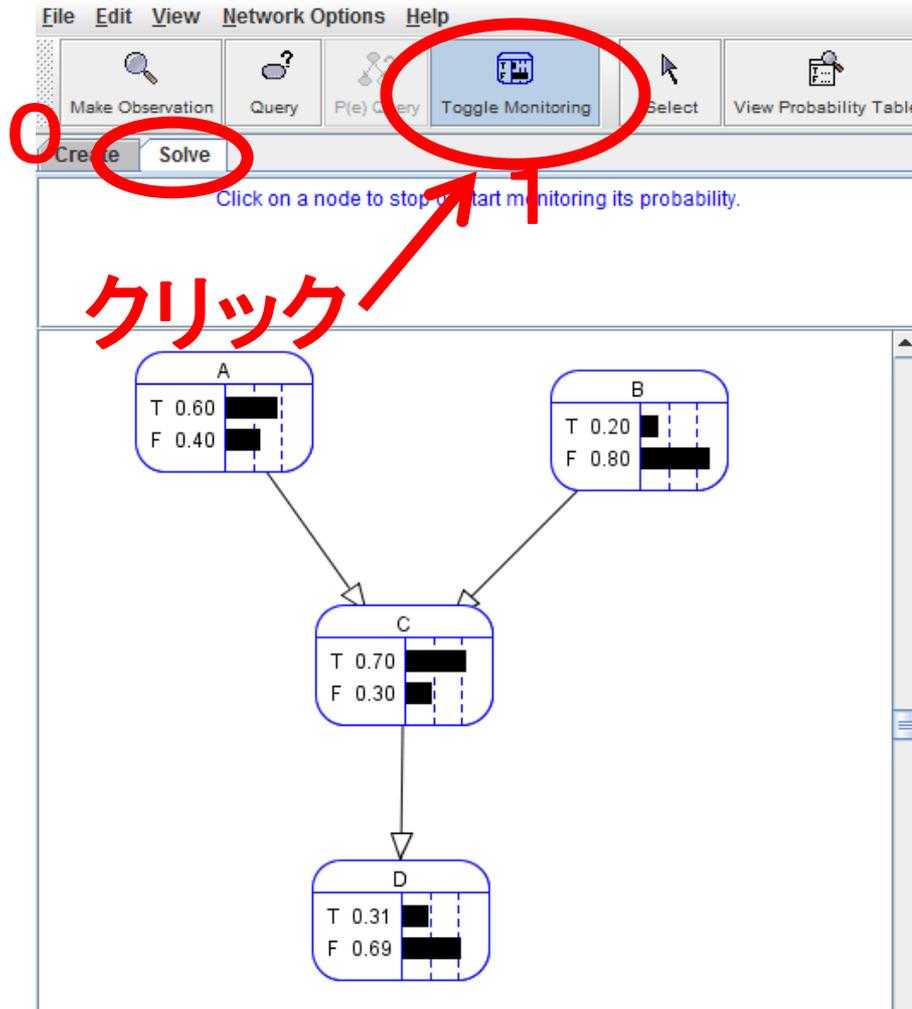
例題2

条件付き確率表の表示

事前確率



例題2



クリック



1

例題2 ノードの観測確率を Trueにする

File Edit View Network Options Help

Make Observation Query P(e) Query Toggle Monitoring Select View Probability Table

Create Solve

Click on a node to make an observation about its value.

A
T 0.60
F 0.40

B
T 0.20
F 0.80

C
T 0.70
F 0.30

D
T 0.31
F 0.69

Click on a node to make an observation about its value.

<none>
T
F
OK

クリック

2

File Edit View Network Options Help

Make Observation Query P(e) Query Toggle Monitoring Select View Probability Table

Create Solve

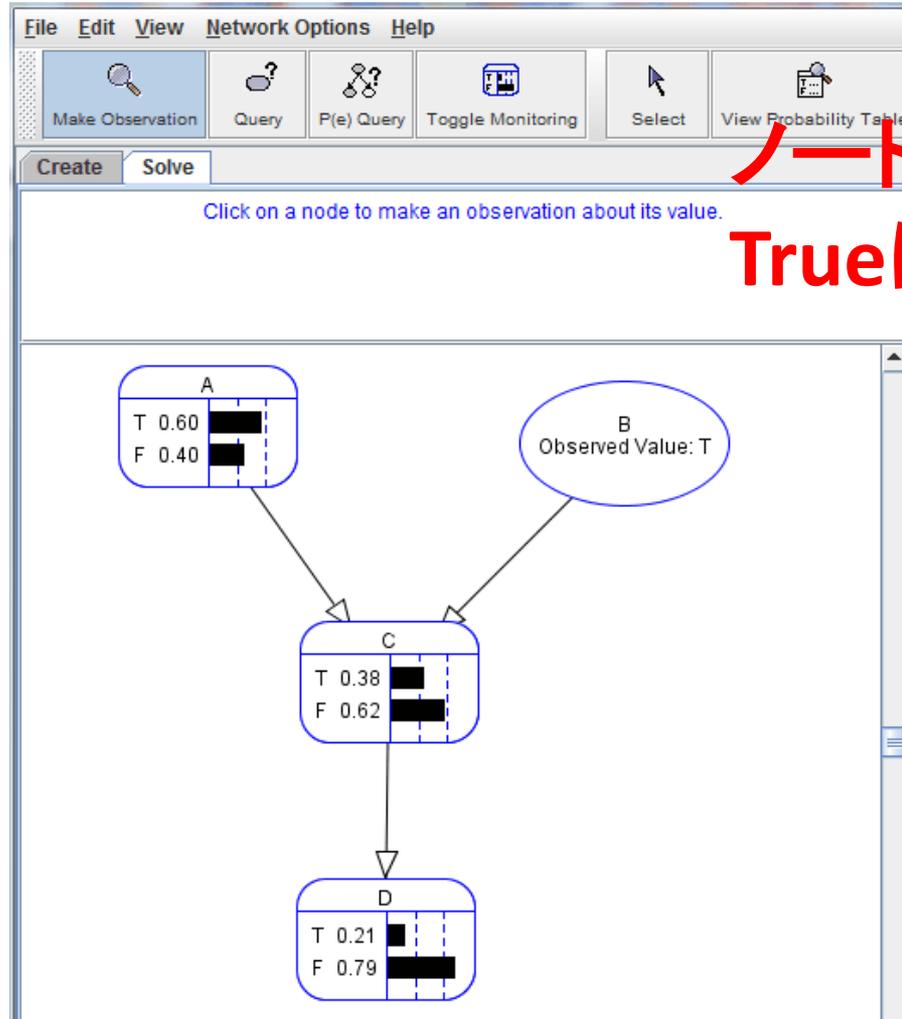
Click on a node to make an observation about its value.

A
Observed Value: T

B
T 0.20
F 0.80

C
T 0.62
F 0.38

D
T 0.29
F 0.71



ノードBの観測確率を
Trueにする

条件付き独立性のクイズ

Conditional Independence Quiz

Quiz Yourself Ask the Applet

Click 'Answer a Question' to get a new conditional independence question.

```
graph TD; A((A)) --> C((C)); B((B)) --> C; C --> D((D));
```

Answer a Question

Get Answer

True False

Score:

Autoscale

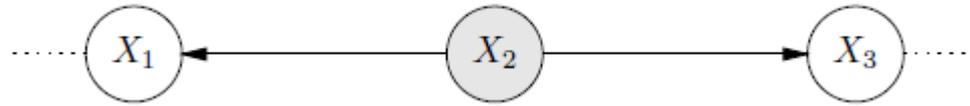
Clear Text

No Questions

Close

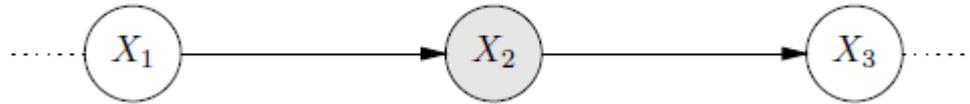
条件付き独立性

$X_1 \perp X_3 \mid X_2$
X2 d-separates X1 and X3



X1, X3
条件付き独立

$X_1 \perp X_3 \mid X_2$
X2 d-separates X1 and X3



X1, X3
条件付き独立

$X_1, X_3 \mid X_2$ 独立ではない

