

MATEZ++  
MATEBOARD

$x_1 \backslash x_2$	T	F
T	TF	TT
F	FT	FF

HOLP 2: IF YOU KNOW  
THE EV. ODNB.

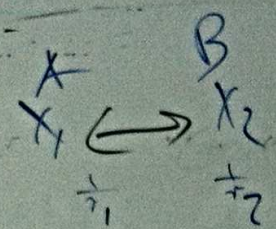
MIRROR DESCENT  
FROM ONE CIST TO  
THE NEXT.

FAIRLY RECENT

inconsistent vs  
consistent.

WRAH: 1510 1141  
SARAH & MAI

2



$$\text{DIFF}(C) \rightarrow \text{INT}(C)$$

$$0,1 \quad 0,1$$

$$0 = (x_2, x_1)$$

SIRI RAM: RE. LR  
 $x' = [T, T]$   $x' = [T, F]$

$$q_1(x_1, x_2) = \frac{\theta_{x_1 x_2}^{\tau_1}}{\theta_{x_1 x_2}^{\tau_1} + \theta_{x_1 \bar{x}_2}^{\tau_1}} \cdot \frac{\theta_{x_2}^{\tau_1} + \theta_{\bar{x}_2}^{\tau_1}}{\theta_{x_2}^{\tau_1}}$$

$$p(x_1 = T | x_2) = \frac{\theta_{Tx_2}^{\tau_1}}{\theta_{Tx_2}^{\tau_1} + \theta_{Fx_2}^{\tau_1}}$$

$$q_2(x_2) = \frac{\theta_{Tx_2}^{\tau_2}}{\theta_{Tx_2}^{\tau_2} + \theta_{Fx_2}^{\tau_2}} \cdot \frac{\theta_{TT}^{\tau_2} + \theta_{TF}^{\tau_2}}{\theta_{TT}^{\tau_2}}$$

$$p(x_1, x_2) = q_1(x_1, x_2) \cdot q_2(x_2)$$

$$p(x_1, x_2) = \frac{p(x_1 | x_2)}{p(x_2)}$$

	TF	FT
FF	$\frac{\theta_{FF}^{\tau_1}}{\theta_{FT}^{\tau_1}}$	$\frac{\theta_{FF}^{\tau_2}}{\theta_{FT}^{\tau_2}}$
FT	$\frac{\theta_{FT}^{\tau_1}}{\theta_{FT}^{\tau_1}}$	$\frac{\theta_{FT}^{\tau_2}}{\theta_{FT}^{\tau_2}}$

$$q_1(x_2 | x_1) = \frac{\theta_{x_2 x_1}^{\tau_2}}{\theta_{x_2 x_1}^{\tau_2} + \theta_{\bar{x}_2 x_1}^{\tau_2}} \cdot \frac{\theta_{Tx_1}^{\tau_2} + \theta_{\bar{T}x_1}^{\tau_2}}{\theta_{Tx_1}^{\tau_2}}$$

$$q_2(x_1) = \frac{\theta_{Tx_1}^{\tau_1}}{\theta_{Tx_1}^{\tau_1} + \theta_{\bar{T}x_1}^{\tau_1}} \cdot \frac{\theta_{TT}^{\tau_1} + \theta_{TF}^{\tau_1}}{\theta_{TT}^{\tau_1}}$$

FF	FT	TF
$\frac{\theta_{FF}^{\tau_2}}{\theta_{FT}^{\tau_2}}$	$\frac{\theta_{FF}^{\tau_1}}{\theta_{FT}^{\tau_1}}$	$\frac{\theta_{FF}^{\tau_2}}{\theta_{FT}^{\tau_2}}$
$\frac{\theta_{FT}^{\tau_2}}{\theta_{FT}^{\tau_2}}$	$\frac{\theta_{FT}^{\tau_1}}{\theta_{FT}^{\tau_1}}$	$\frac{\theta_{FT}^{\tau_2}}{\theta_{FT}^{\tau_2}}$