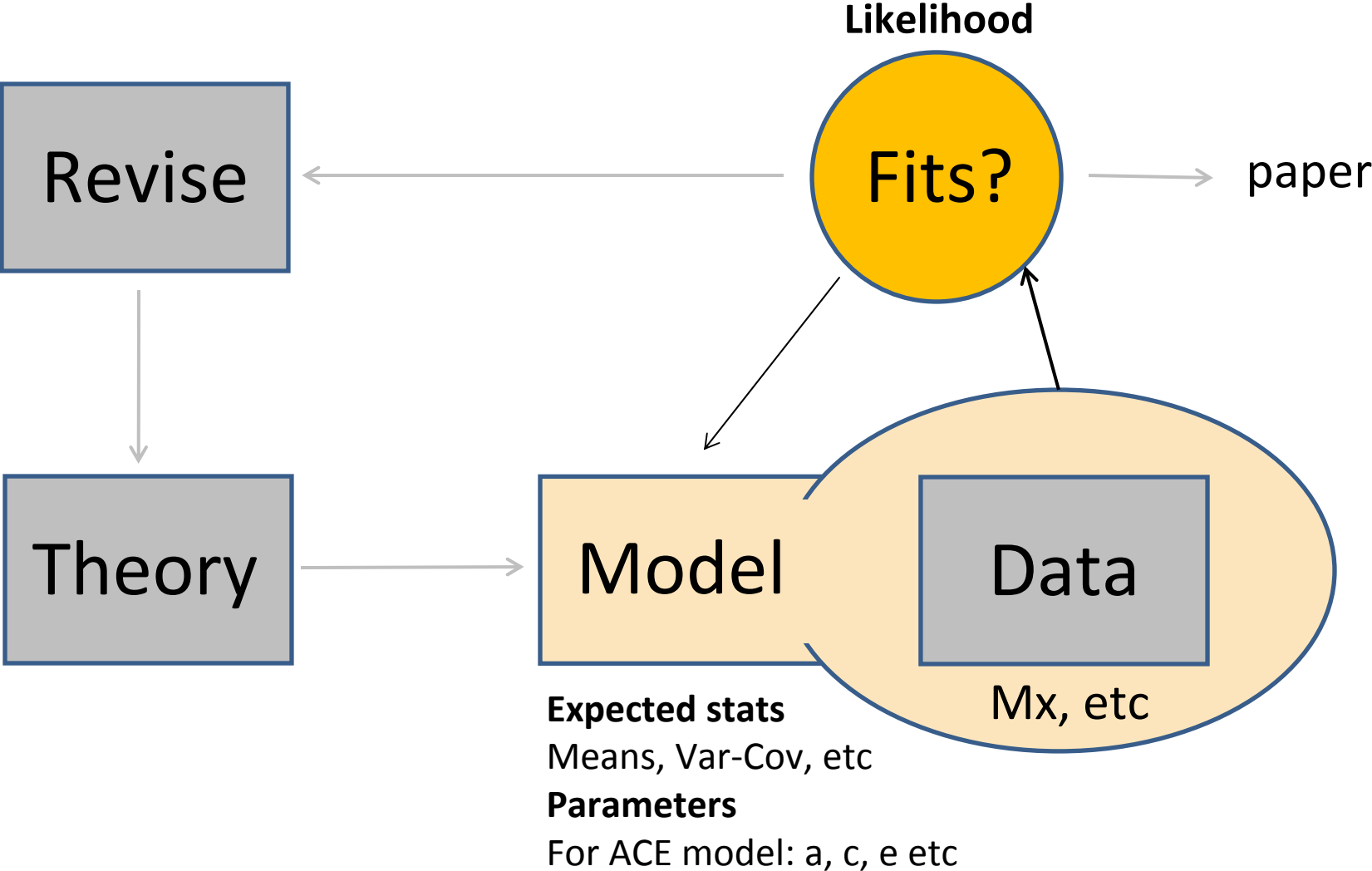


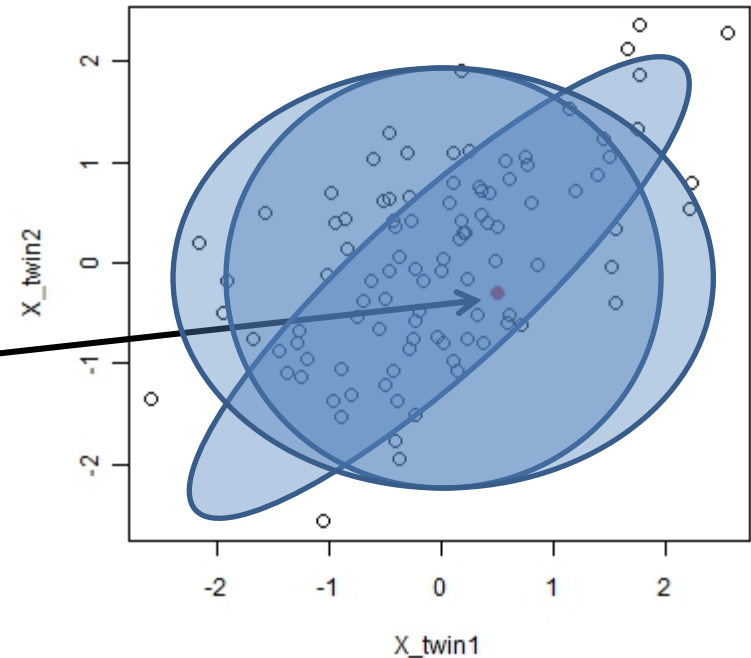
Likelihood Practical



Slightly modified from Lindon Eaves

Likelihood Practical - idea

X_tw1	X_tw2	Likelihood
-1.25	-1.12	0.071
-0.94	0.39	0.072
0.25	1.12	0.092
-0.03	-0.73	0.131
0.5	-0.3	0.133
-1.58	0.5	0.017
...
Overall Likelihood:		250.230
Overall -2LogL:		-11.045



- (1) $\mathbf{M} = [\text{mean}(X_{\text{tw1}}) \text{ mean}(X_{\text{tw2}})]$
- (2) $\mathbf{S} = \begin{bmatrix} \text{var}(X_{\text{tw1}}) & \\ \text{cov}(X_{\text{tw1}}, X_{\text{tw2}}) & \text{var}(X_{\text{tw2}}) \end{bmatrix}$

$$L = \text{inv}(\text{sqrt}(\text{det}(2 * \pi * \mathbf{S}))) * e^{(-0.5 * (\mathbf{X} - \mathbf{M}) * \text{inv}(\mathbf{S}) * \text{t}(\mathbf{X} - \mathbf{M}))}$$

Change to R

copy

F:\manuel\likelihood\likelihood.R

Into a folder in your H drive

Likelihood Practical - results

Group	X_tw1	X_tw2	cov(X_tw1,X_tw2)	Likelihood
1	0.5	-0.5	-0.5	
2	0.5	-0.5	-0.25	
3	0.5	-0.5	0	
4	0.5	-0.5	0.25	
5	0.5	-0.5	0.5	
6	0.5	0.5	-0.5	
7	0.5	0.5	-0.25	
8	0.5	0.5	0	
9	0.5	0.5	0.25	
10	0.5	0.5	0.5	

Likelihood Practical - results

