

this time:
categorical
data; decision
theory

week 4 due Sun
highlight; quiz 9
due next Tue night; ①
final due Sun + 1 week

STATS
5 Dec 19

course evaluations: 80% participate +
+ jump

L-295 | K. Pearson (1890s)

$P(A \text{ and } B) = P(A) \cdot P(B)$ if A, B
independent

$$\frac{(O_{11} - \hat{E}_{11})^2}{\hat{E}_{11}} + \frac{(O_{12} - \hat{E}_{12})^2}{\hat{E}_{12}} + \dots + \frac{(O_{32} - \hat{E}_{32})^2}{\hat{E}_{32}} = \chi^2$$

chi-squared

3.062

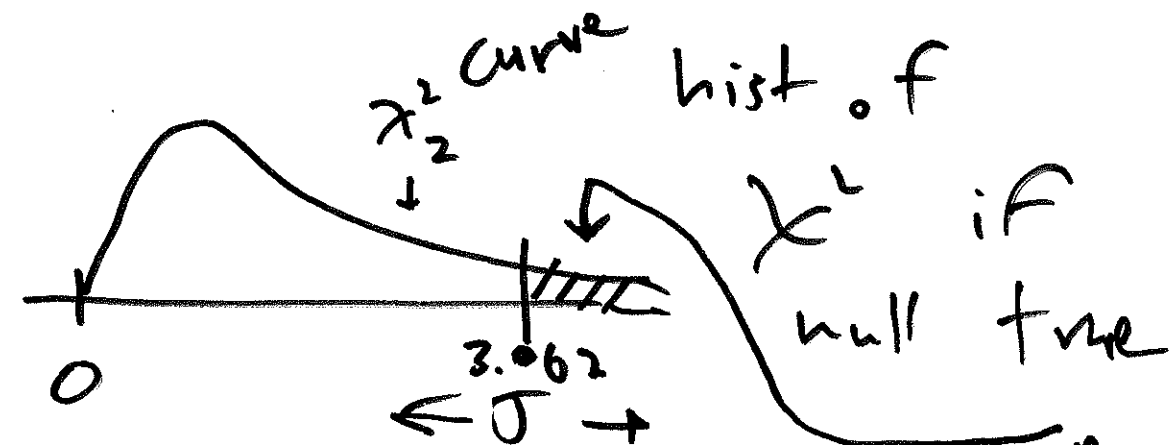
$(0 - \hat{E})$

✓	x	
-7.3	+7.3	0
-1.8	+1.8 ^x	0
+9.1 ^x	-9.1 ^x	0

residuals

~~df~~
2

0 0



(residual)

	1	2	...	J-1	J
1	✓	✓	✓	✓	x
2	✓				x
⋮					x
I-1	✓				x
I	x	x	x	x	x

$p = 22\%$
not statis

d.f. in
(I x J)
table

reject null if $p \leq 5\%$

(I-1) · (J-1)

pract. sig but not statistically → ③
not enough data
