$L\hat{\beta}$

$Var(L\hat{\beta}) = L(X'X)^{-1}L'$

$\underset{\sim}{Y} = X\underset{\sim}{\beta} + \underset{\sim}{\varepsilon}$

3330

$Y \sim X * G$

$Y \sim X * G$

?

x

not indep

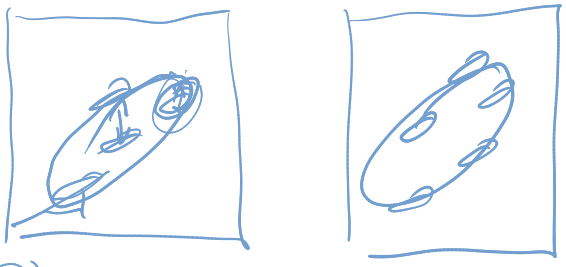
2) "Fixed effects model" Econ

$Y \sim X + S$ → parameters

Complex comb. of parameter → estimate sector effect.

No variability between schools within sector.

3)



Mult variate methods

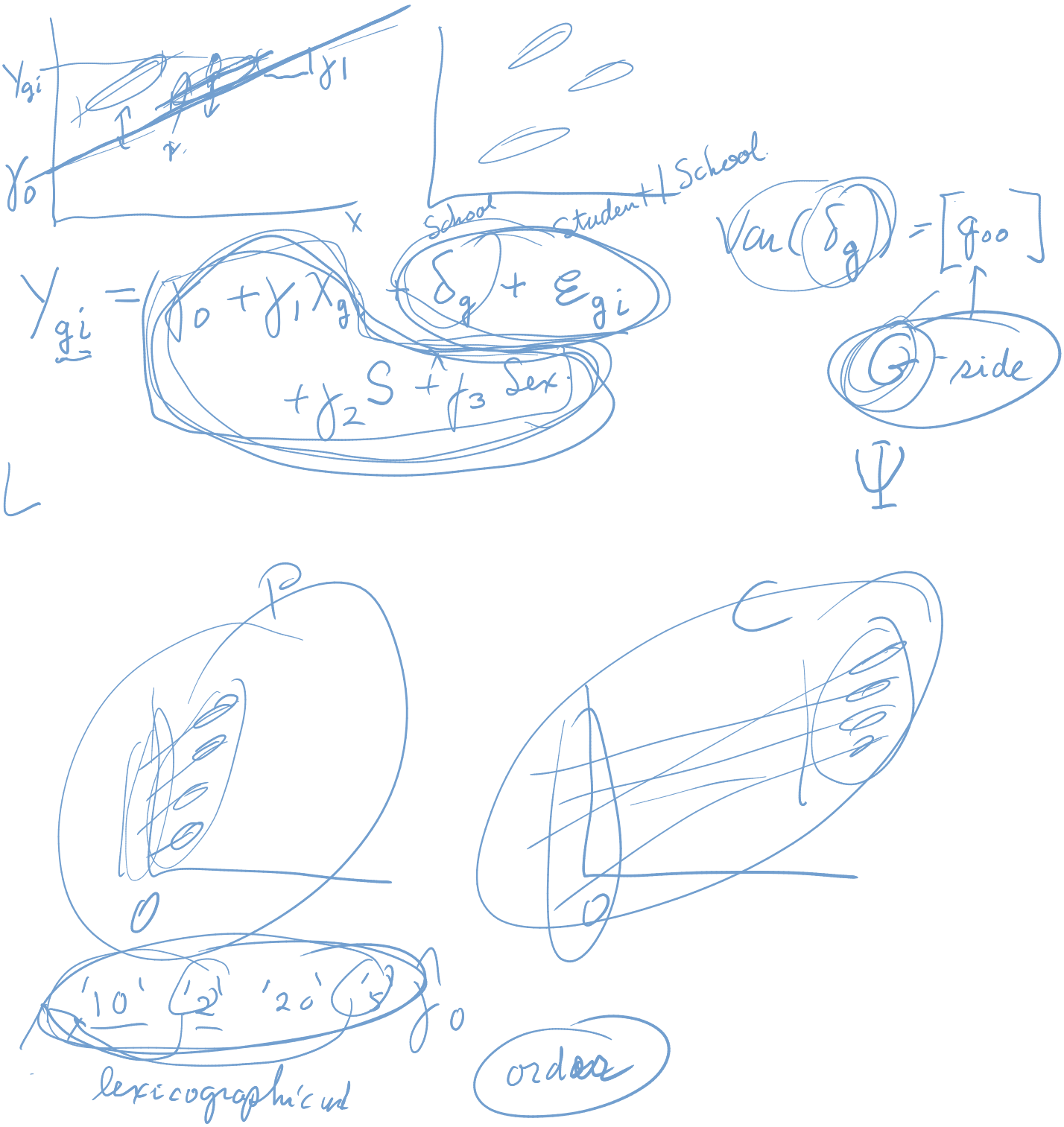
$\begin{pmatrix} \hat{\beta}_{0g} \\ \hat{\beta}_{1g} \end{pmatrix} \sim S$

$Var\begin{pmatrix} \hat{\beta}_{0S} \\ \hat{\beta}_{1S} \end{pmatrix} = \sum_1$

$\begin{pmatrix} \hat{\beta}_{01} \\ \hat{\beta}_{11} \end{pmatrix} \quad \begin{pmatrix} \hat{\beta}_{02} \\ \hat{\beta}_{12} \end{pmatrix} \quad \cdots \quad \begin{pmatrix} \hat{\beta}_{0\,1000} \\ \hat{\beta}_{1\,1000} \end{pmatrix}$

P

C


Y_{gi}
γ_1
γ_0
x
School
student + School
$Y_{gi} = \gamma_0 + \gamma_1 x_{gi} + \delta_g + \varepsilon_{gi} + \gamma_2 S + \gamma_3 Sex_i$
$Var(\delta_g) = [\tau_{00}]$
side
Ψ
L
P
'10'
'2'
'20'
'5'
γ_0
lexicographical
order