HL@Simplify@With[{𝔼 = MatrixExp},
𝔼[η_i ŷ].𝔼[β_i b̂].𝔼[α_i â].𝔼[ξ_i x̂].𝔼[η_j ŷ].𝔼[β_j b̂].
𝔼[α_j â].𝔼[ξ_j x̂] == 𝔼[ŷ ∂_{y_k} Λ].𝔼[b̂ ∂_{b_k} Λ].𝔼[â ∂_{a_k} Λ].
𝔼[x̂ ∂_{x_k} Λ]]