Sampling Distribution for Test Statistics

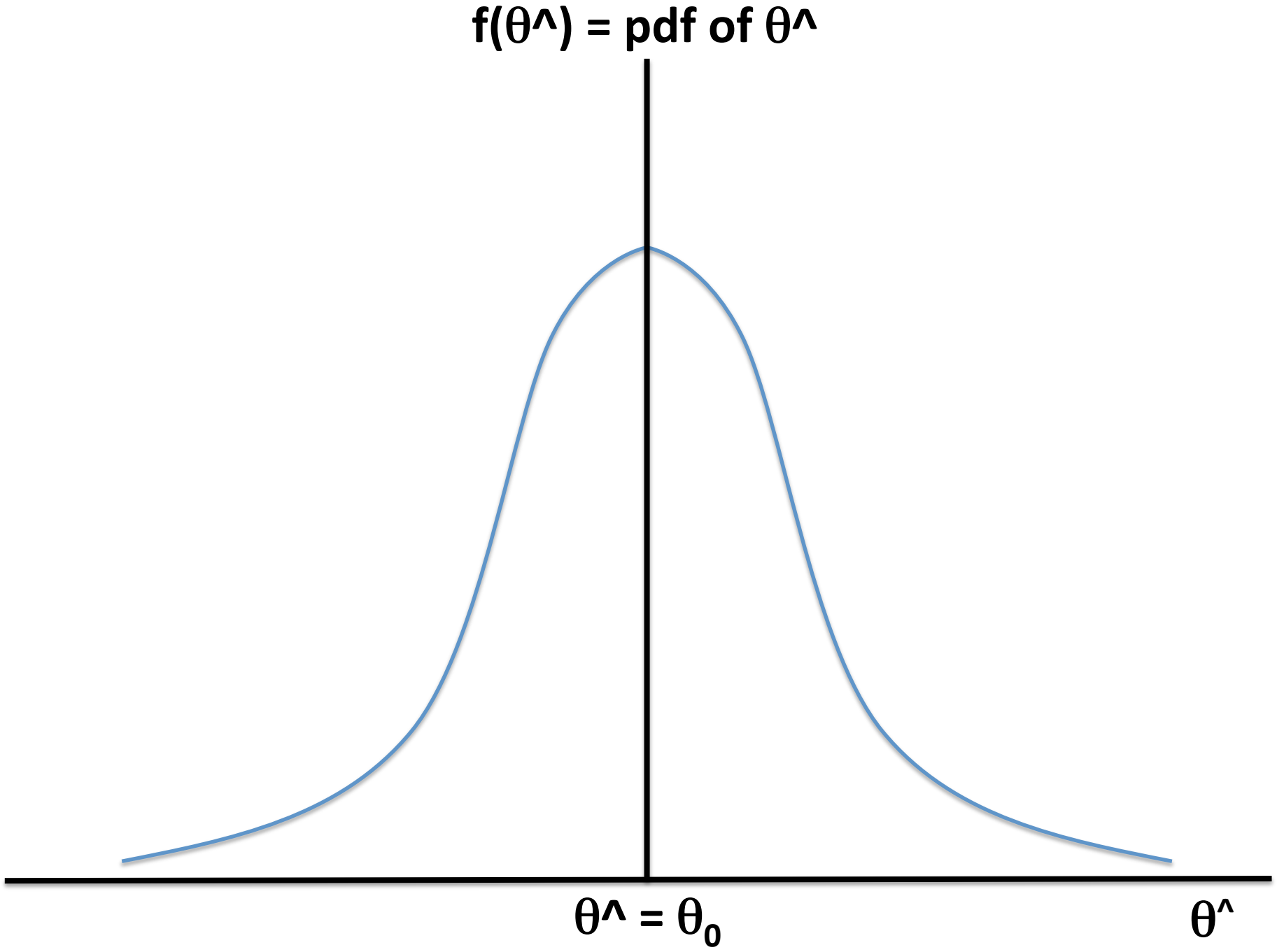
Econ 361: Advanced Econometrics

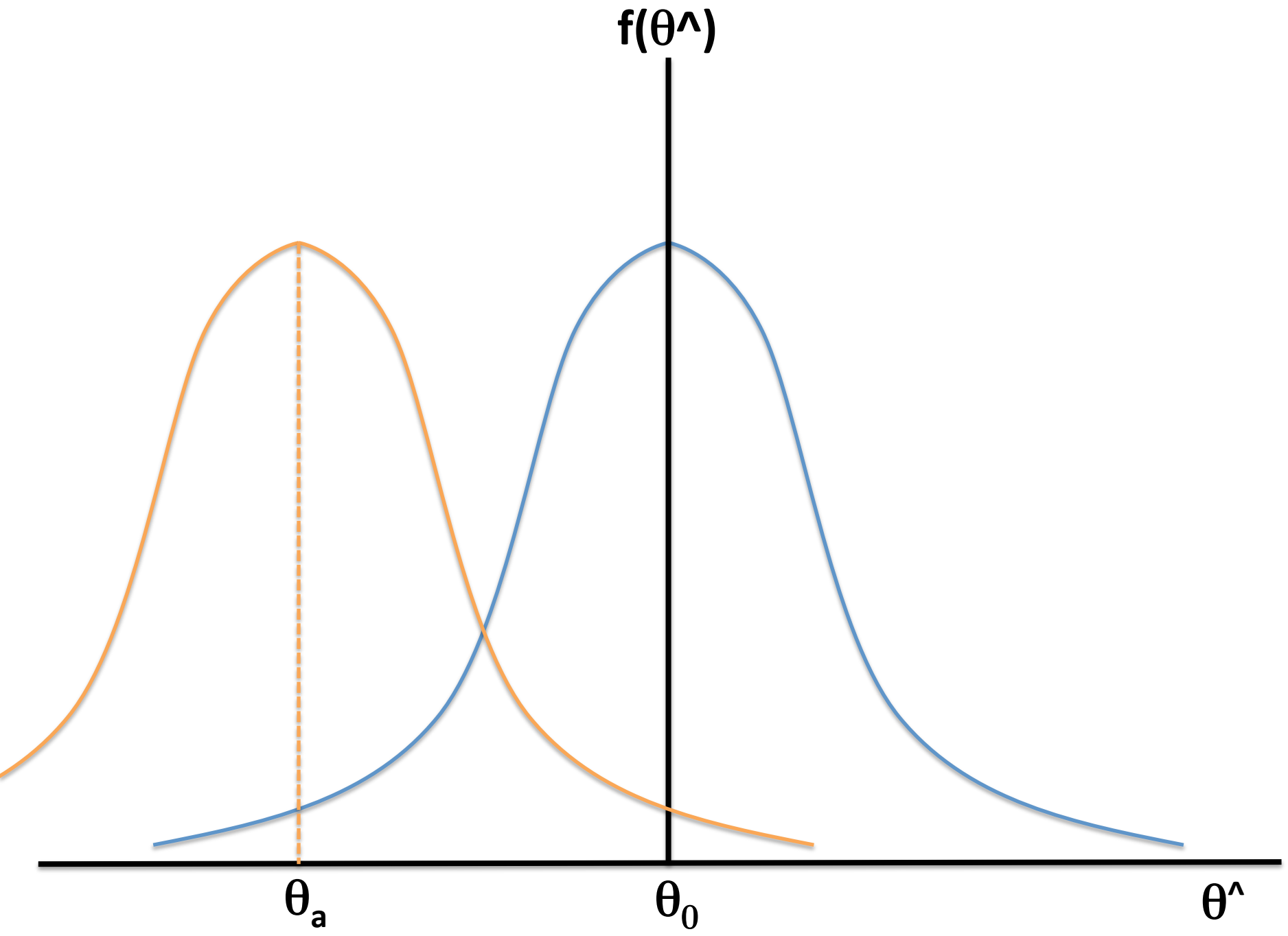
Neyman-Pearson Hypothesis Testing

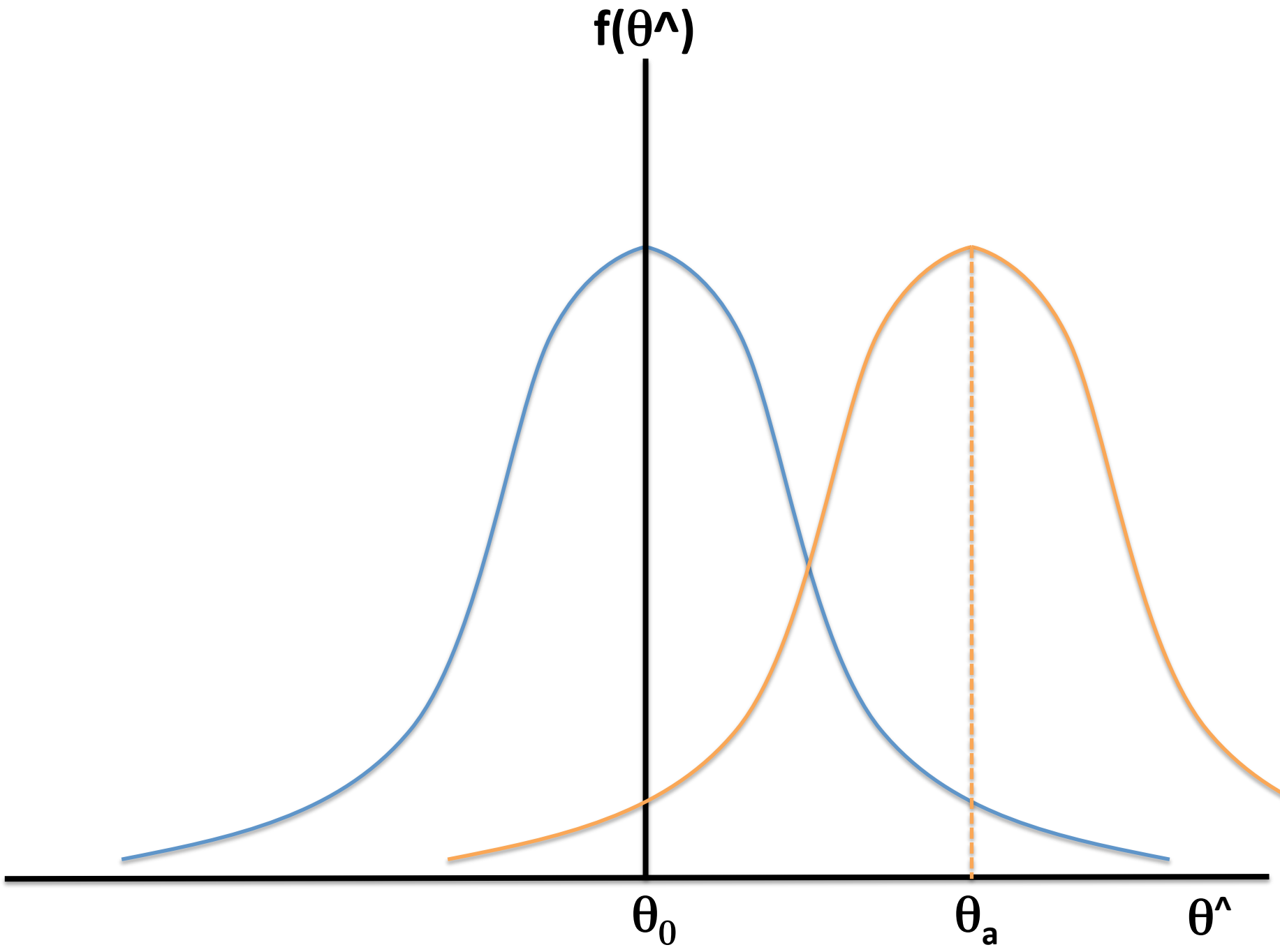
- Neyman-Pearson Hypothesis Testing is specified by

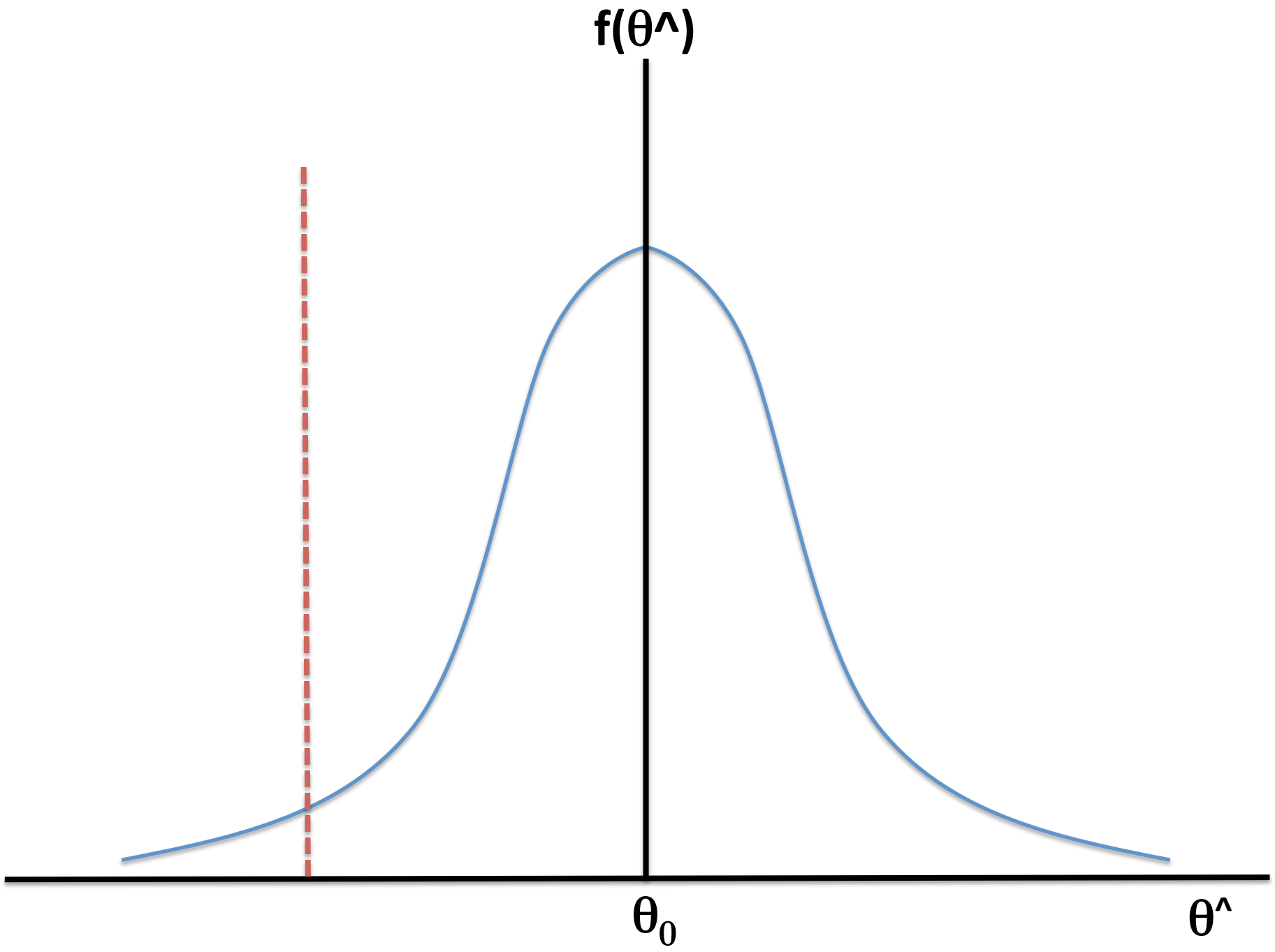
1. Statement of Null (H_0) and Alternative (H_a) Hypotheses
2. Test Statistic
3. Critical Region

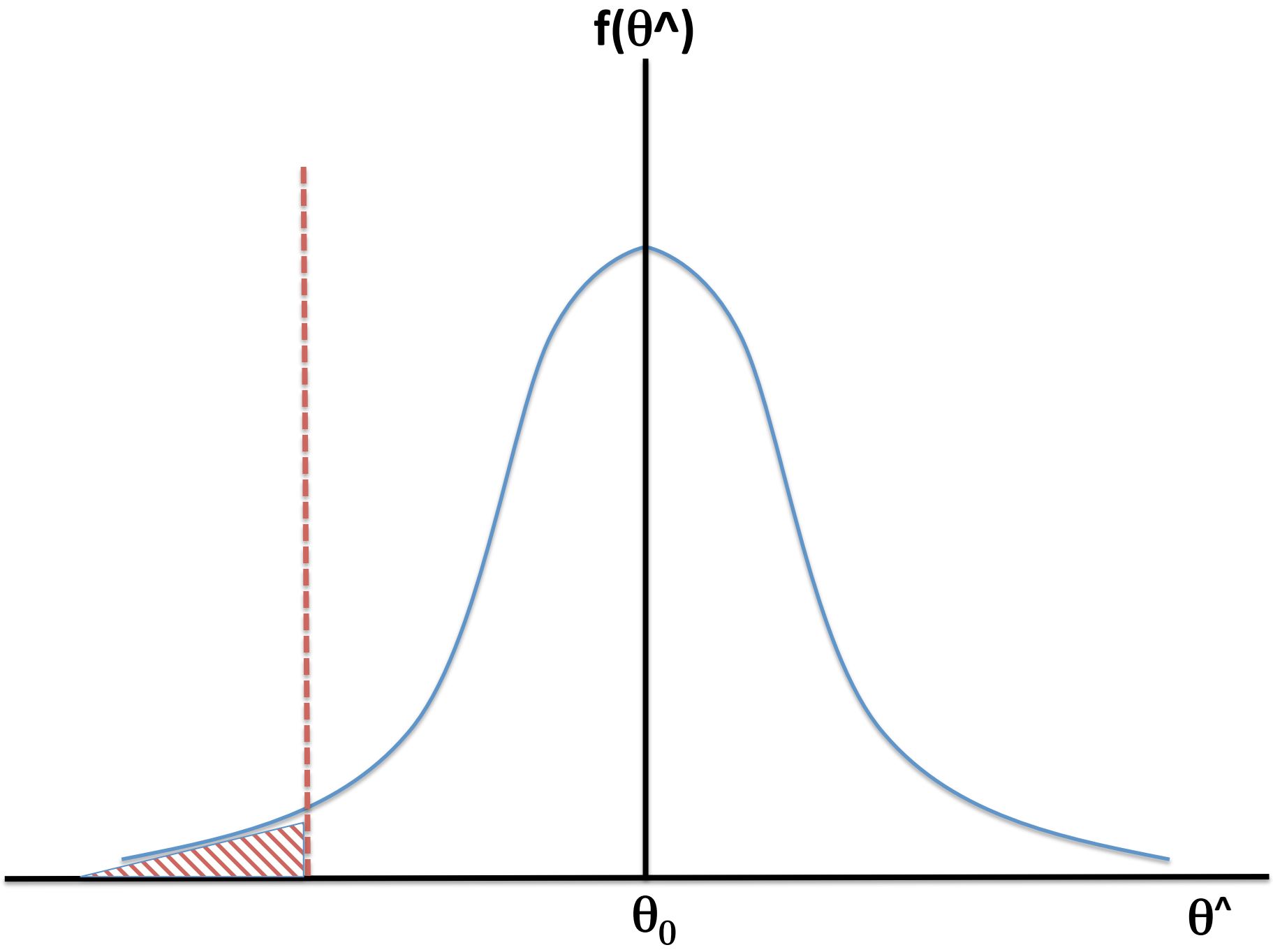
To determine the appropriate critical region, we need to derive the sampling distribution of the test statistic assuming the null hypothesis is true ("under the null")

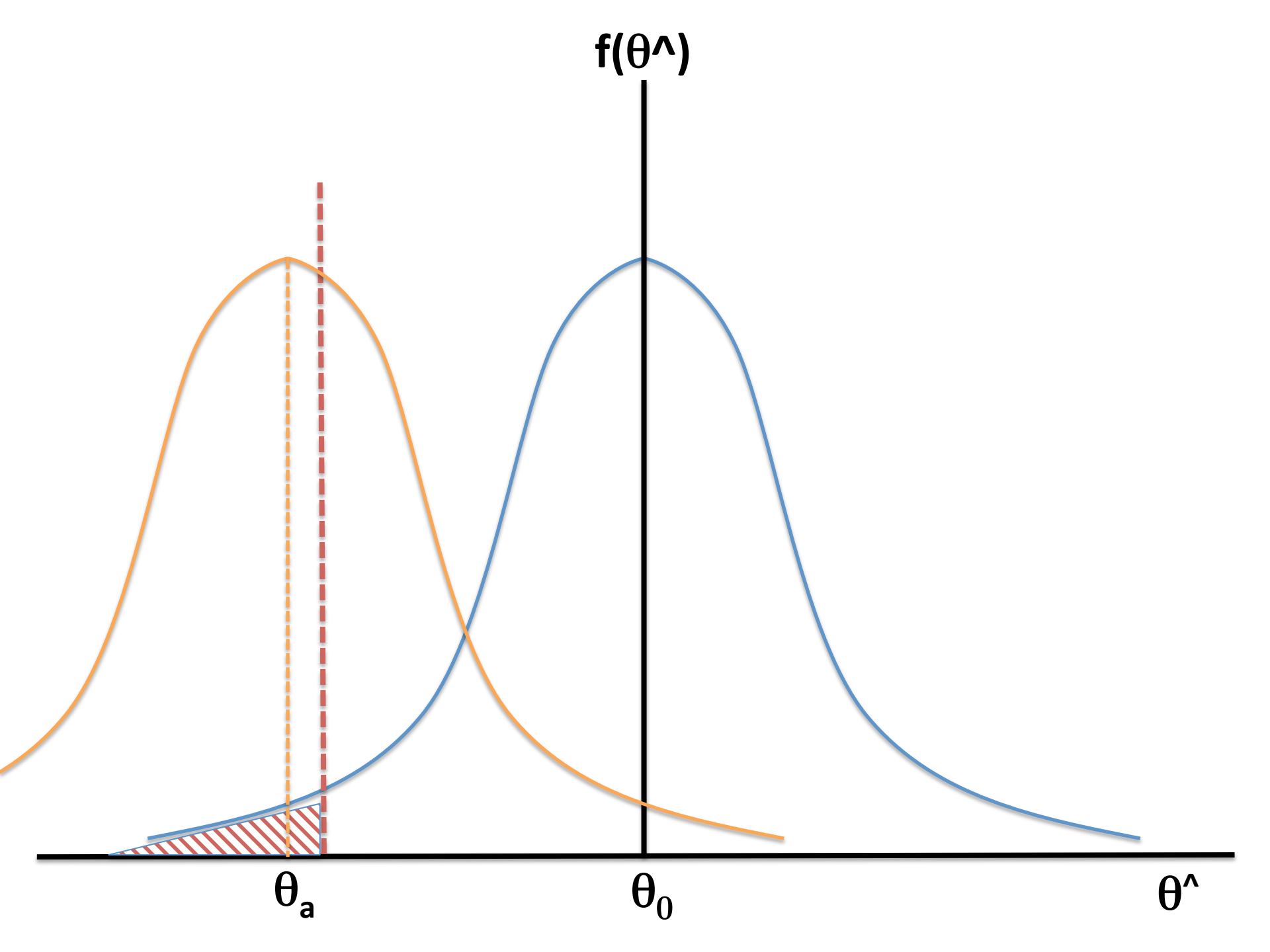

f(θ^) = pdf of θ^
θ^ = θ0
θ^

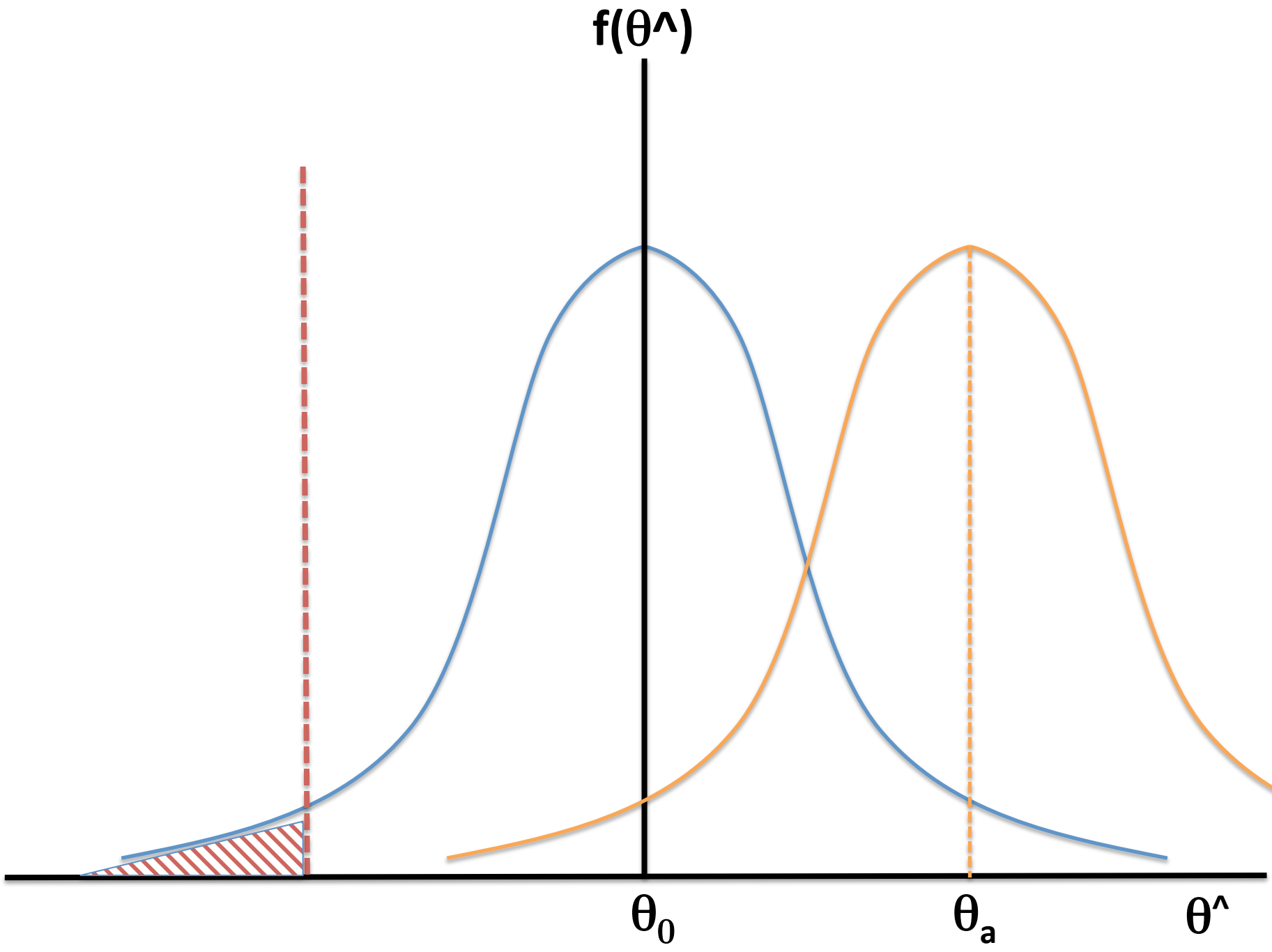

f(θ^)
θa
θ0
θ^

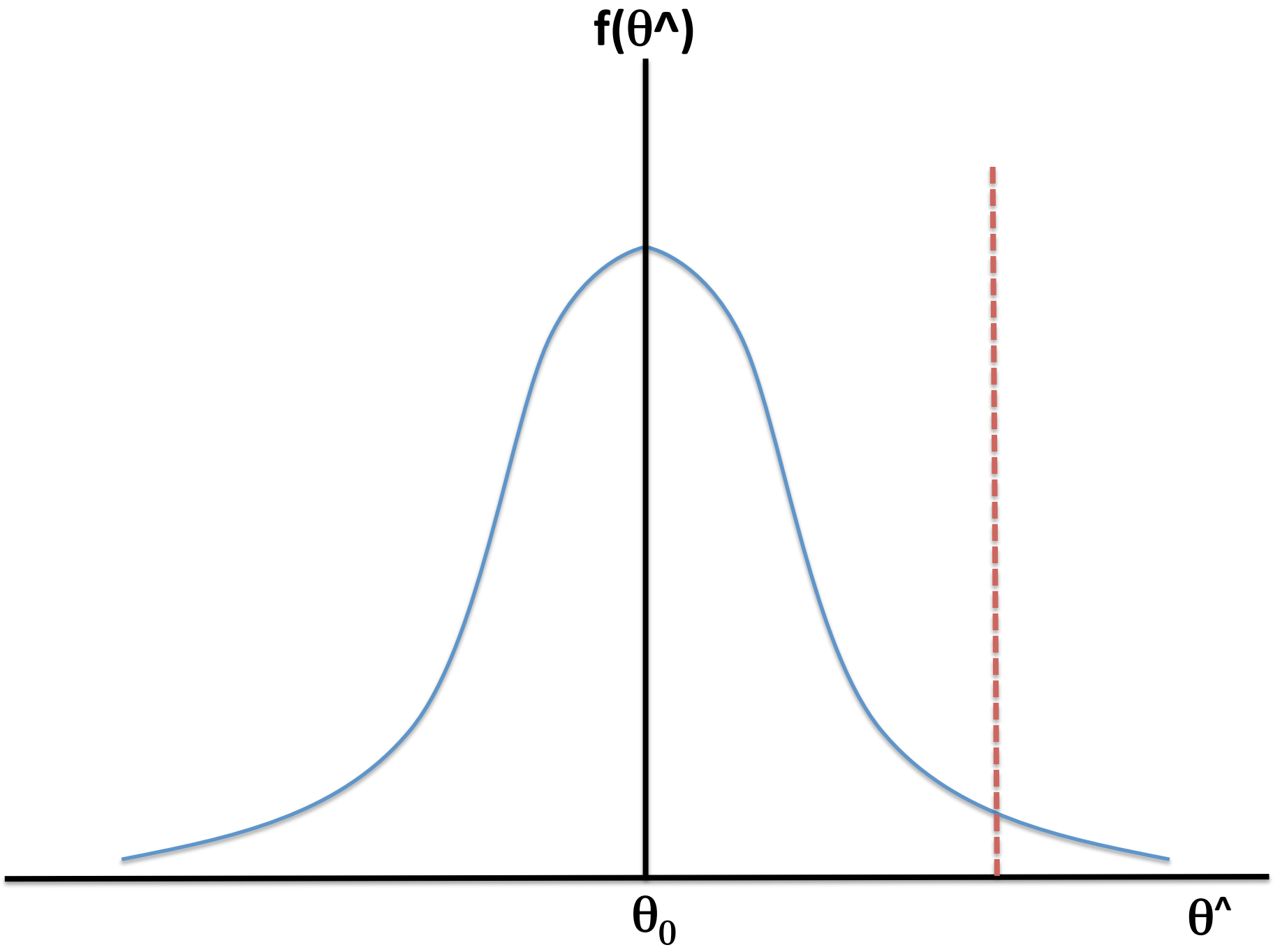

f(θ^)
θ0
θa
θ^


f(θ^)
θ0
θ^


f(θ^)
θ0
θ^


f(θ^)
θa
θ0
θ^


f(θ^)
θ0
θa
θ^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θ0
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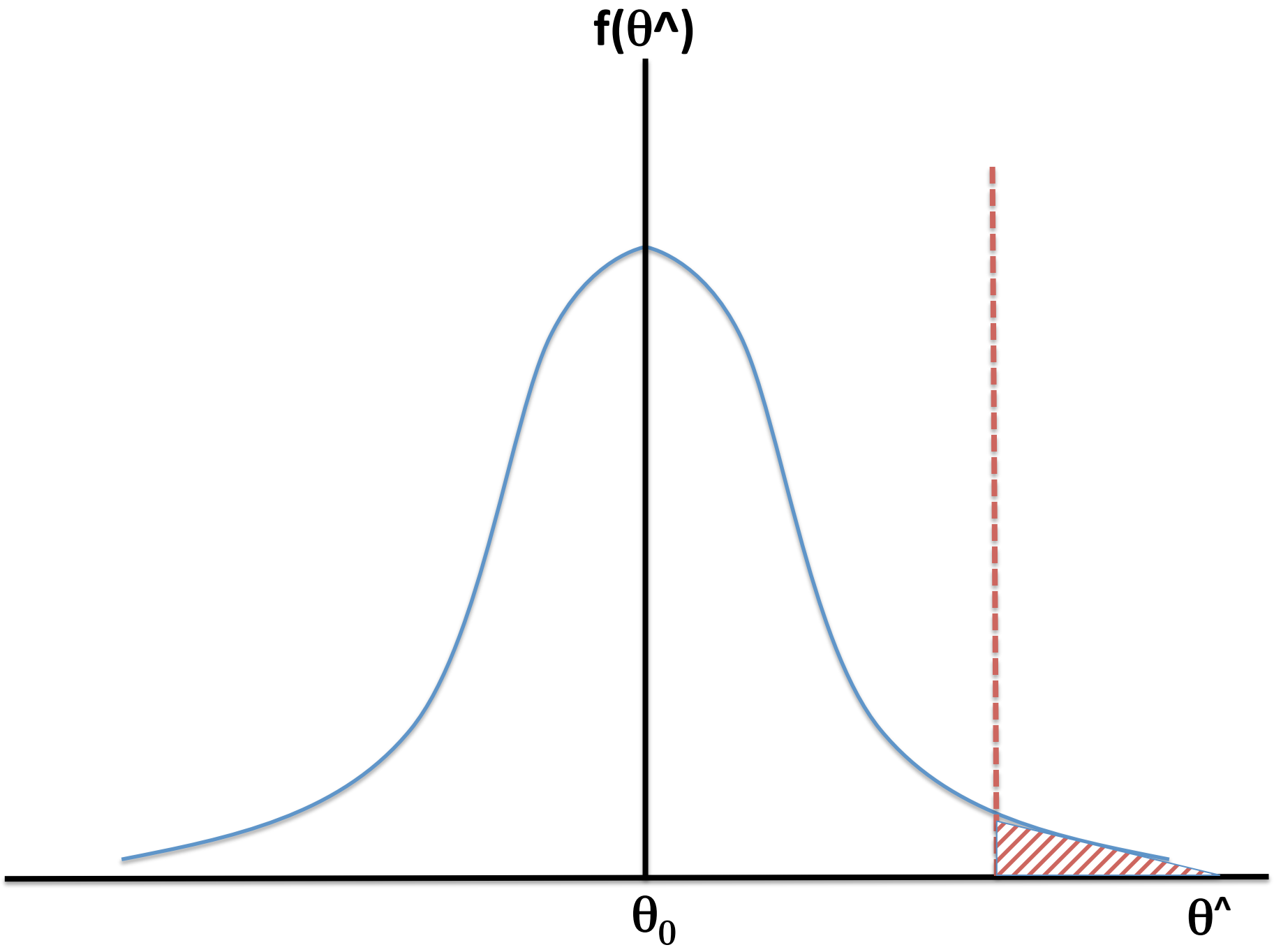
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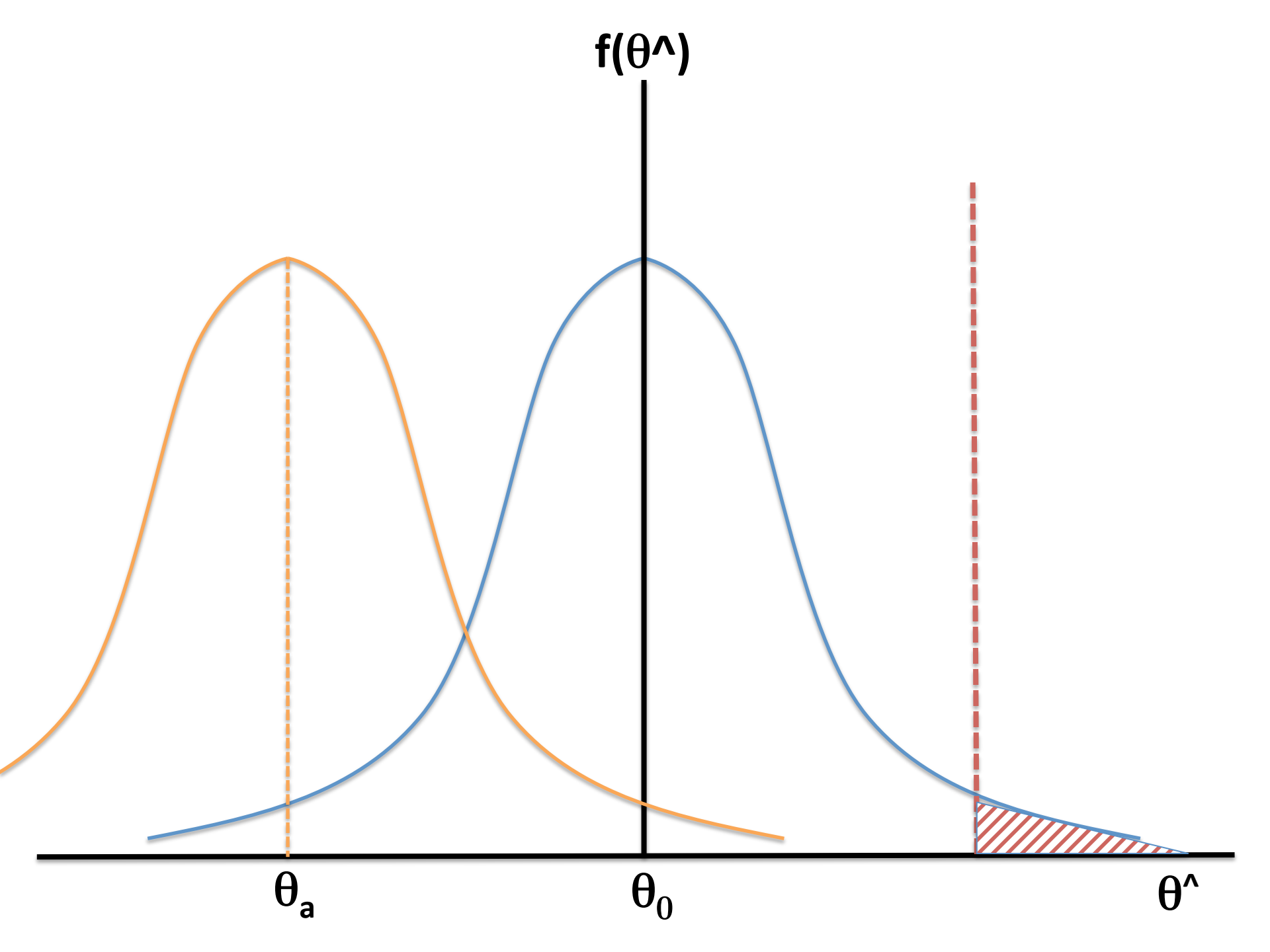
θ0
θ^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θa
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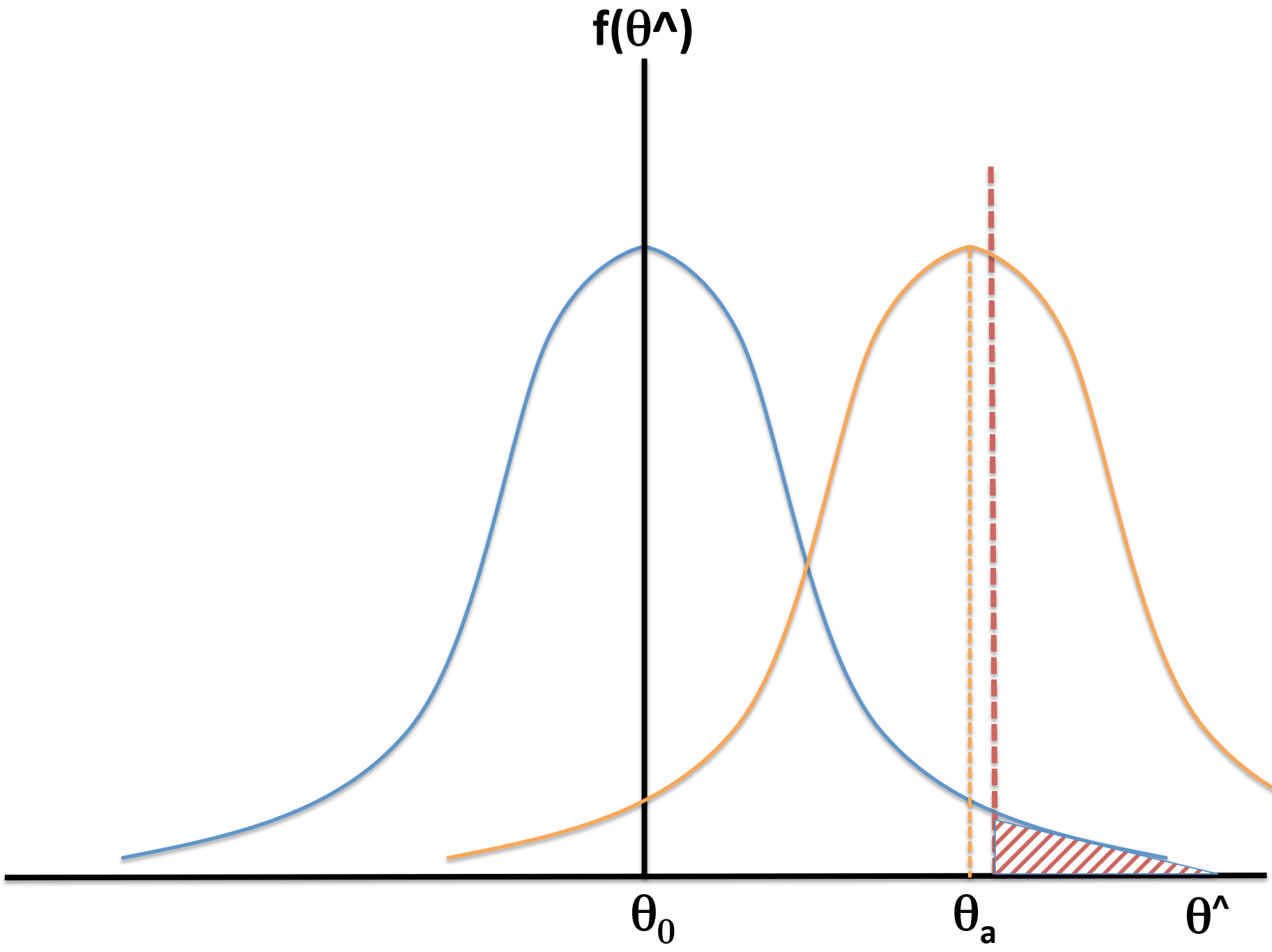
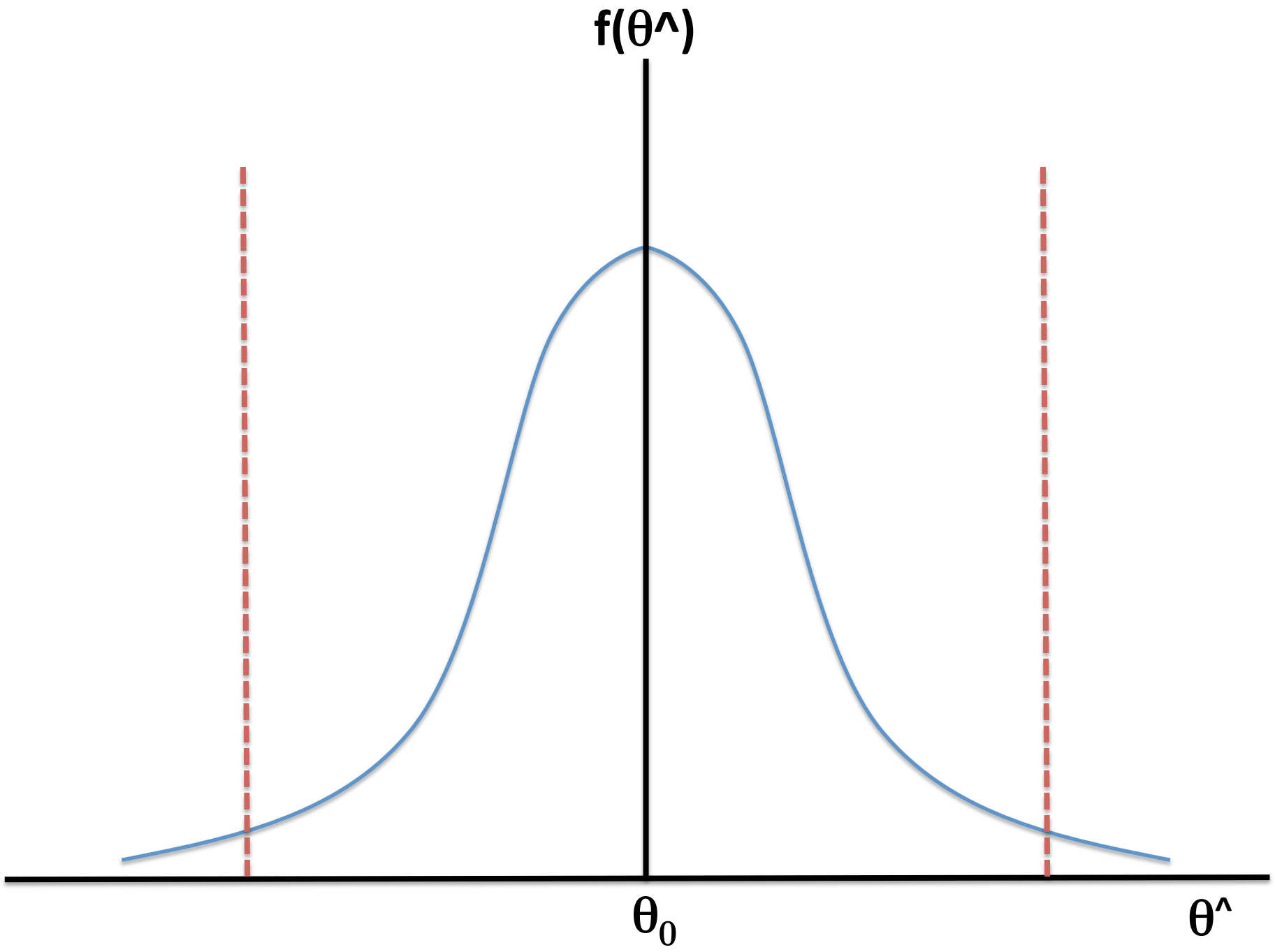

f(θ^)
θ0
θa
θ^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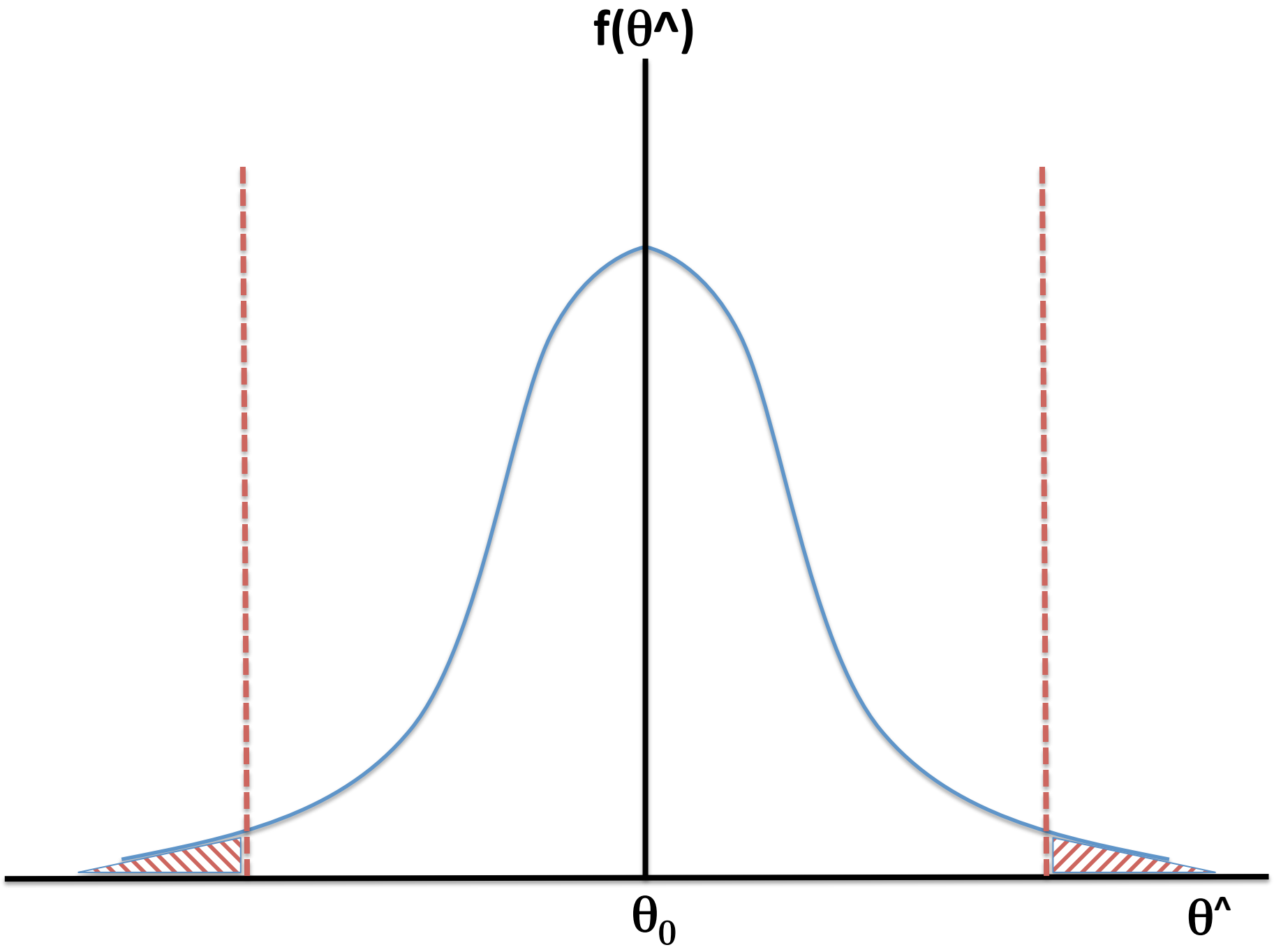
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θ0
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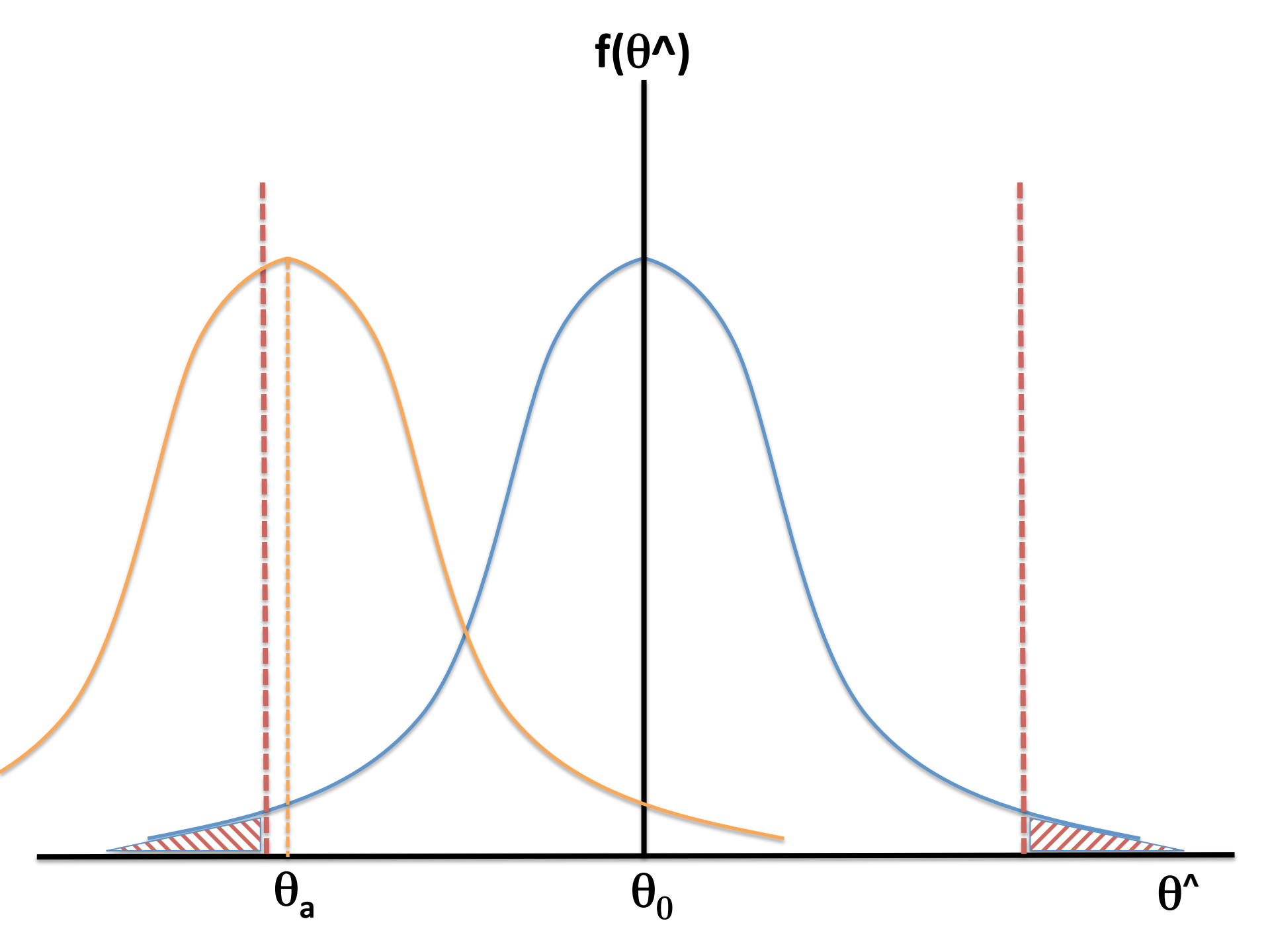
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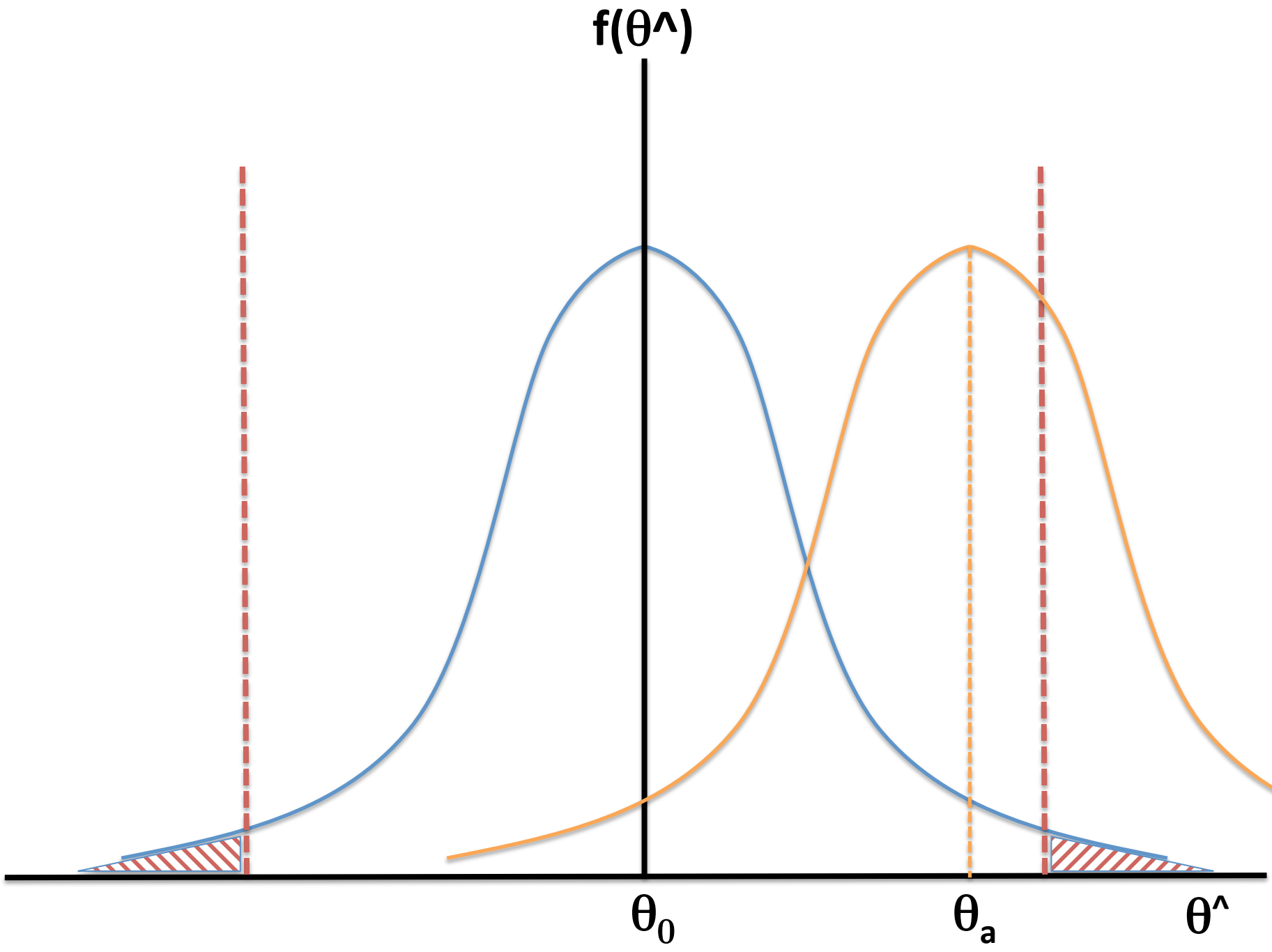
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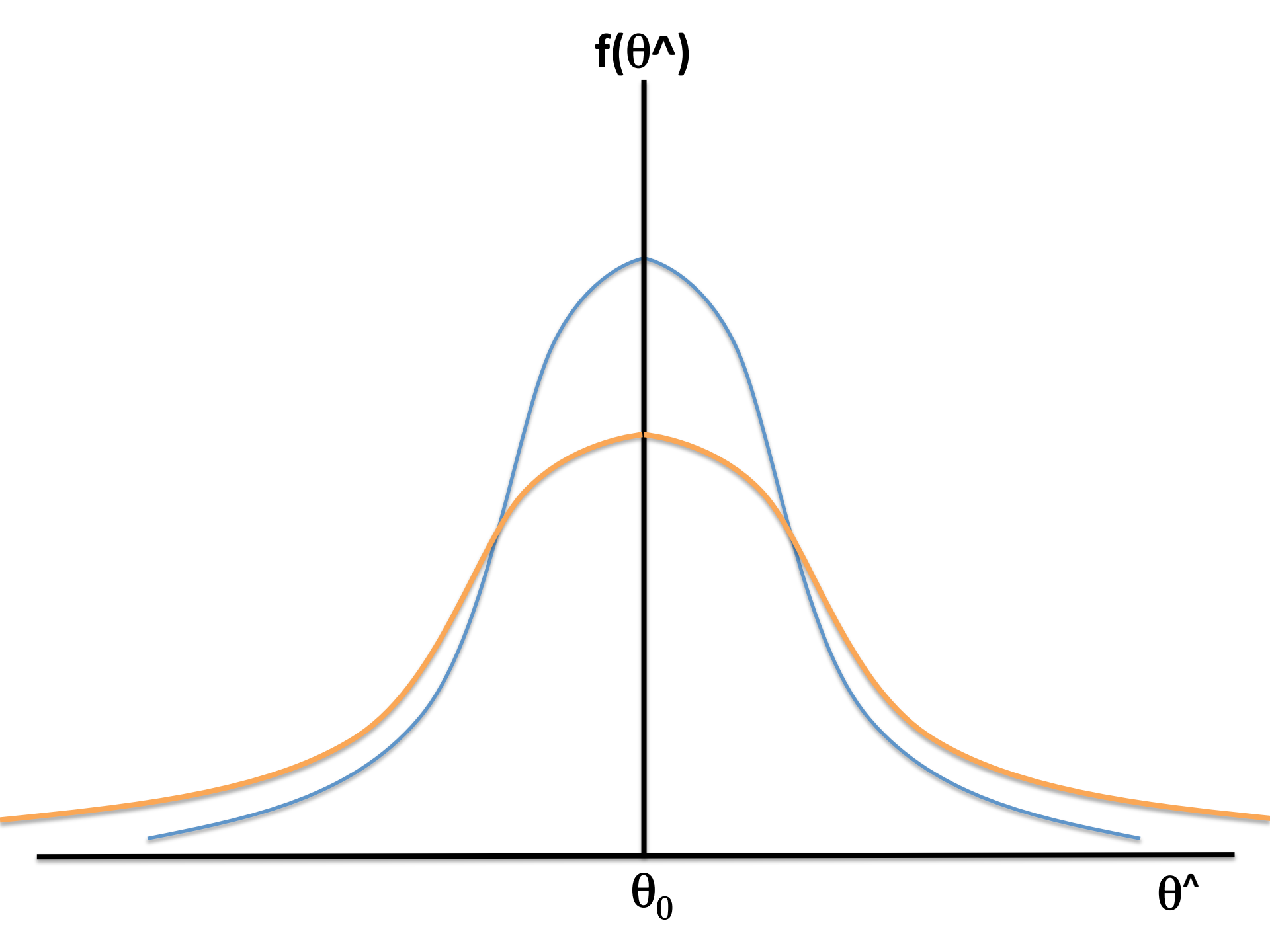
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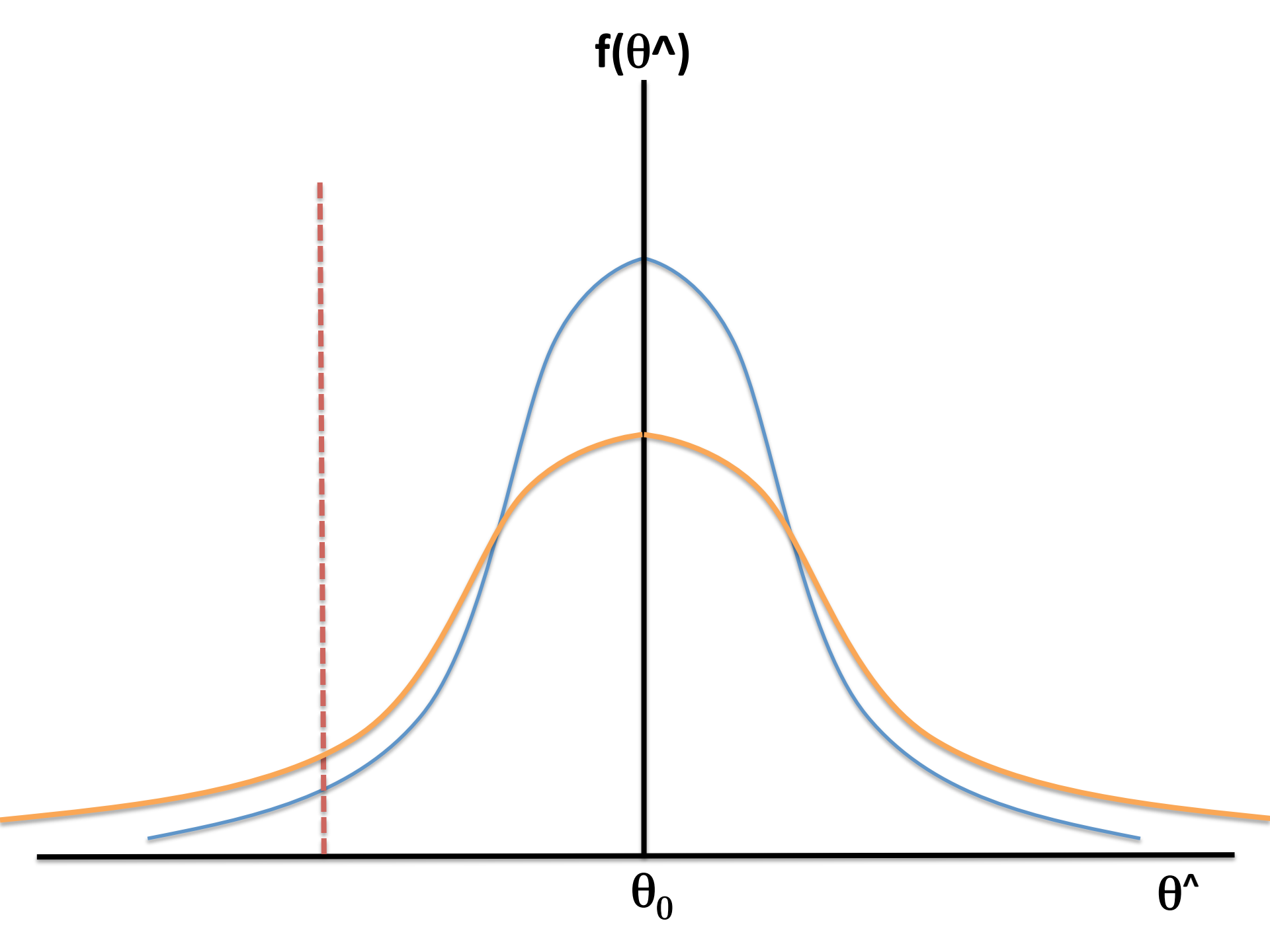
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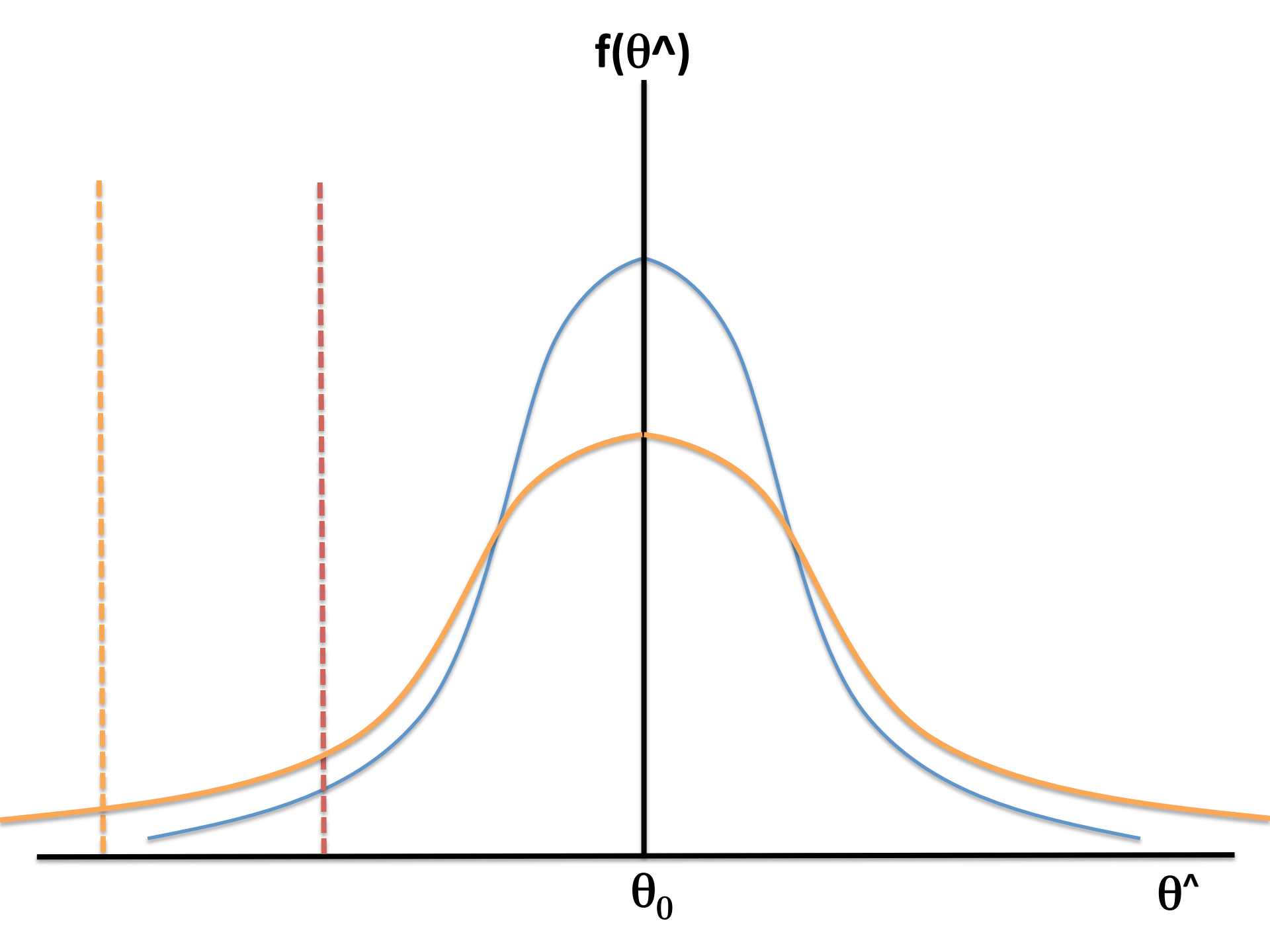
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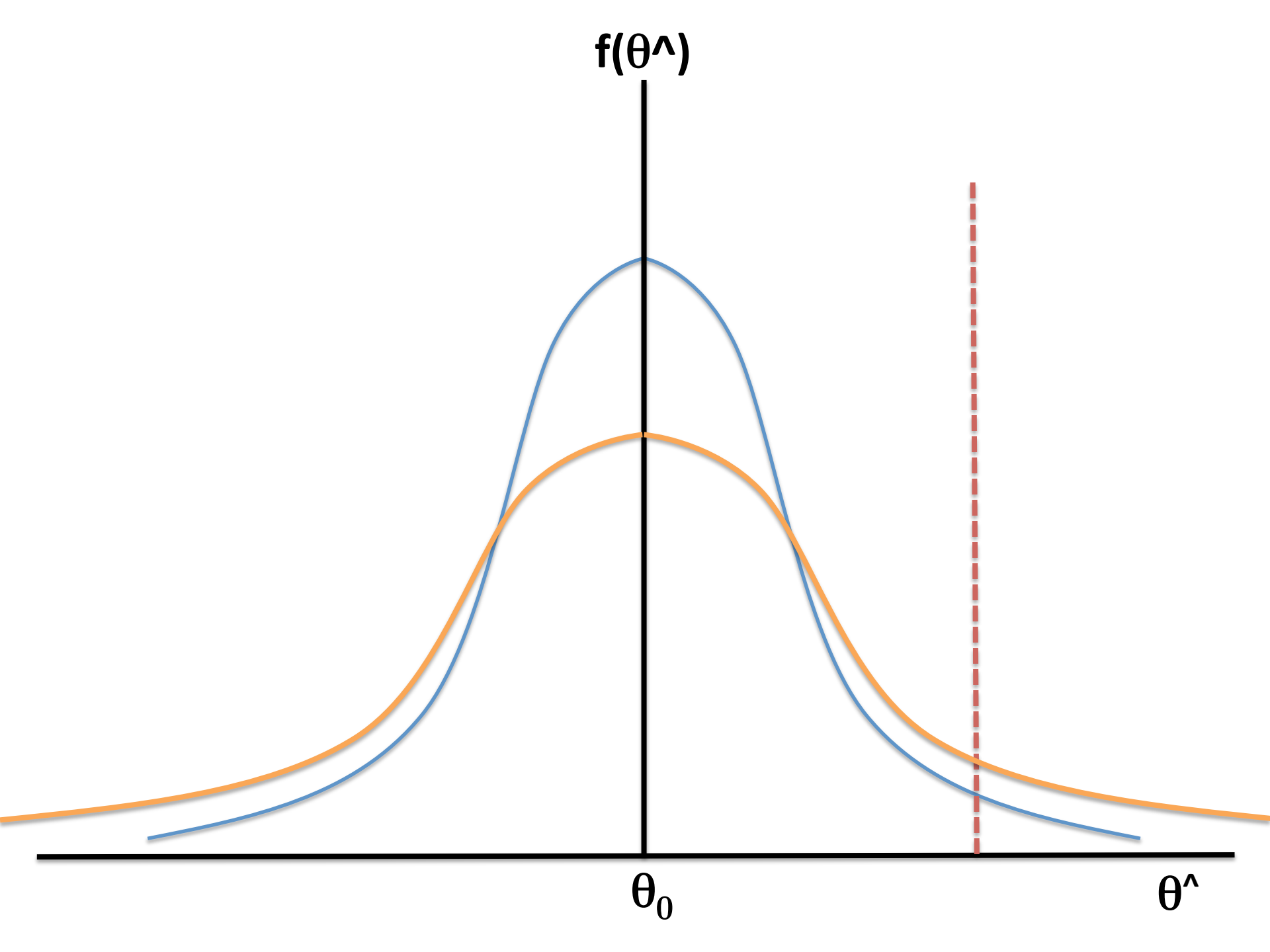
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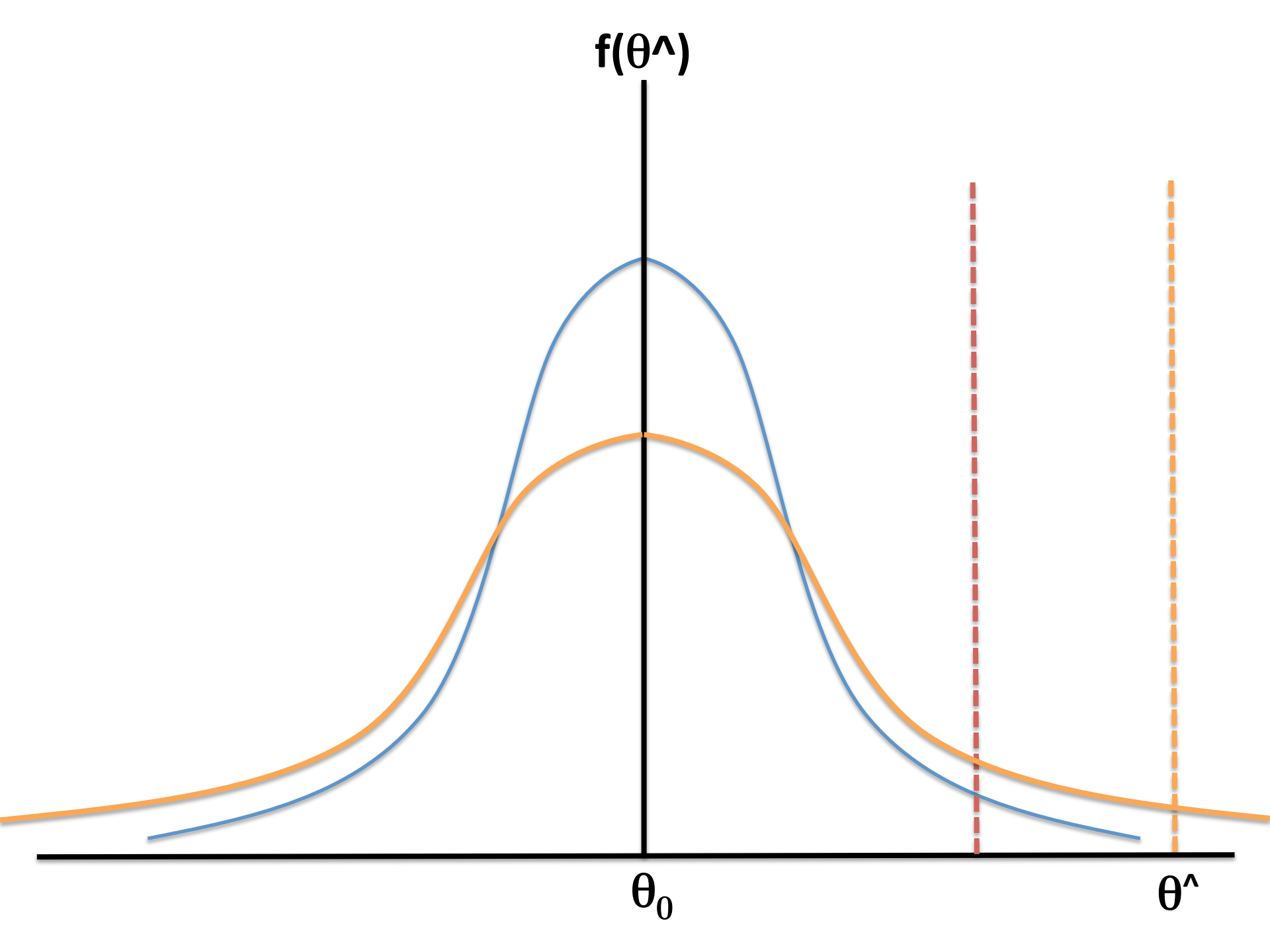
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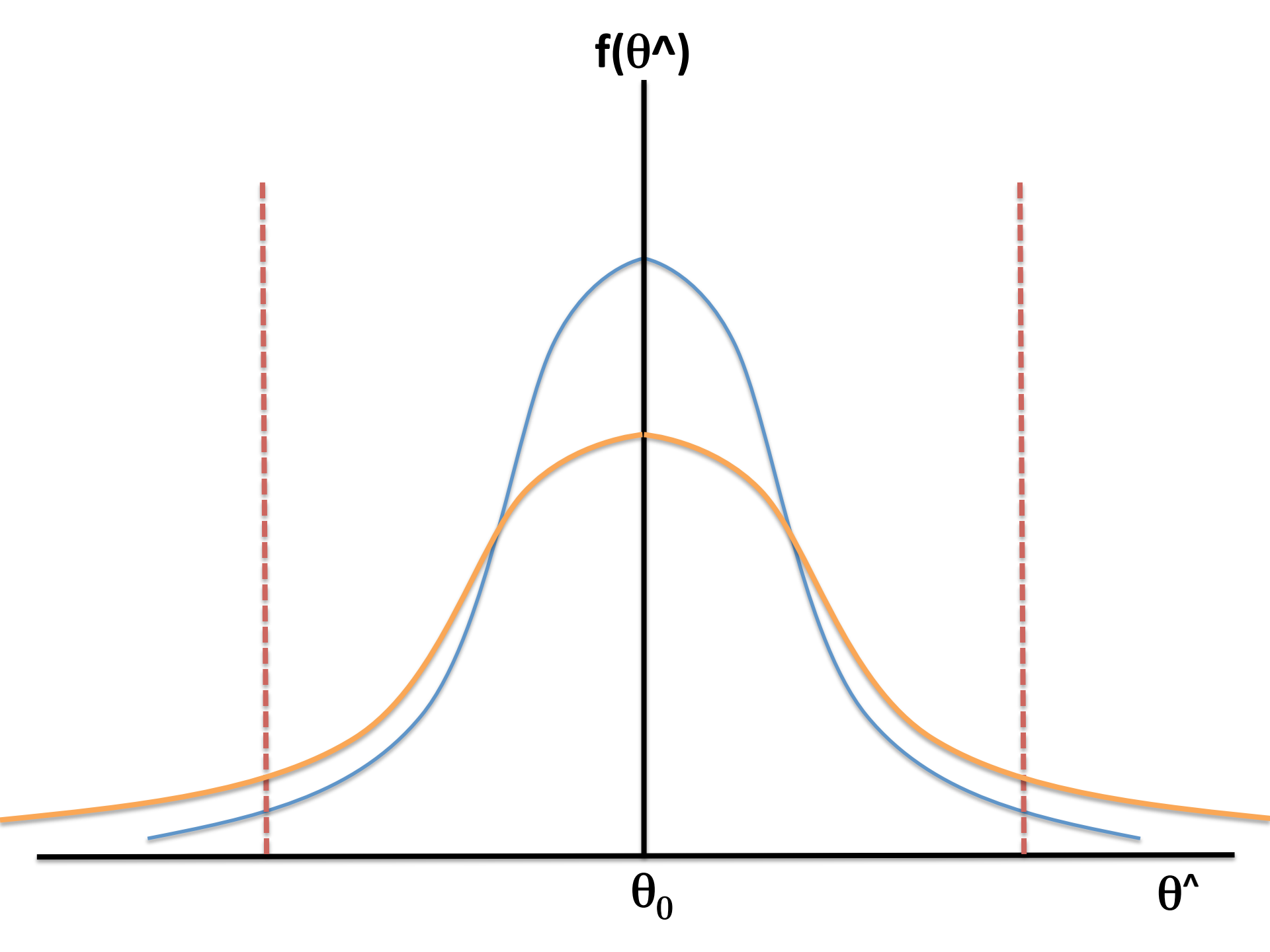
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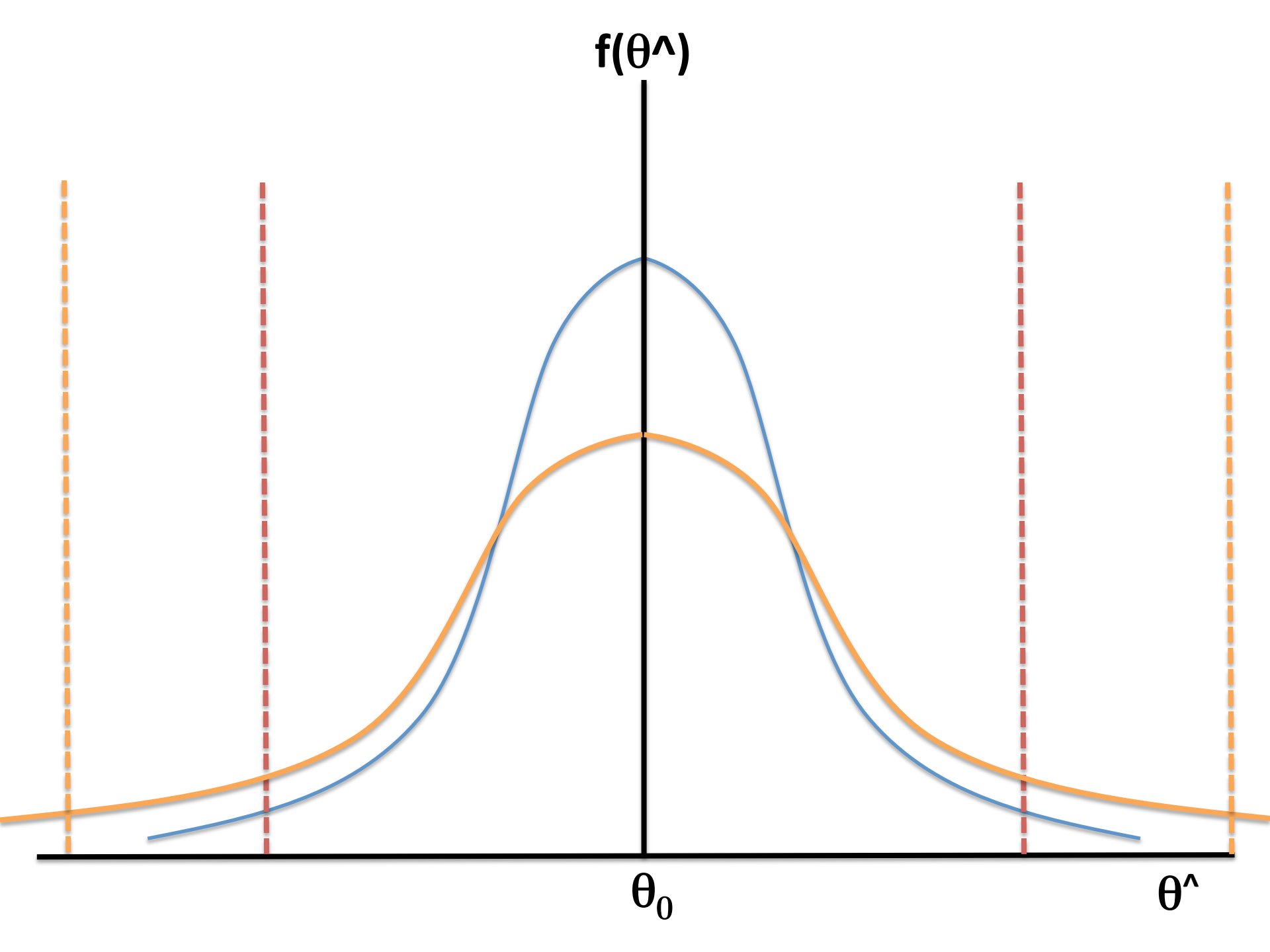
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