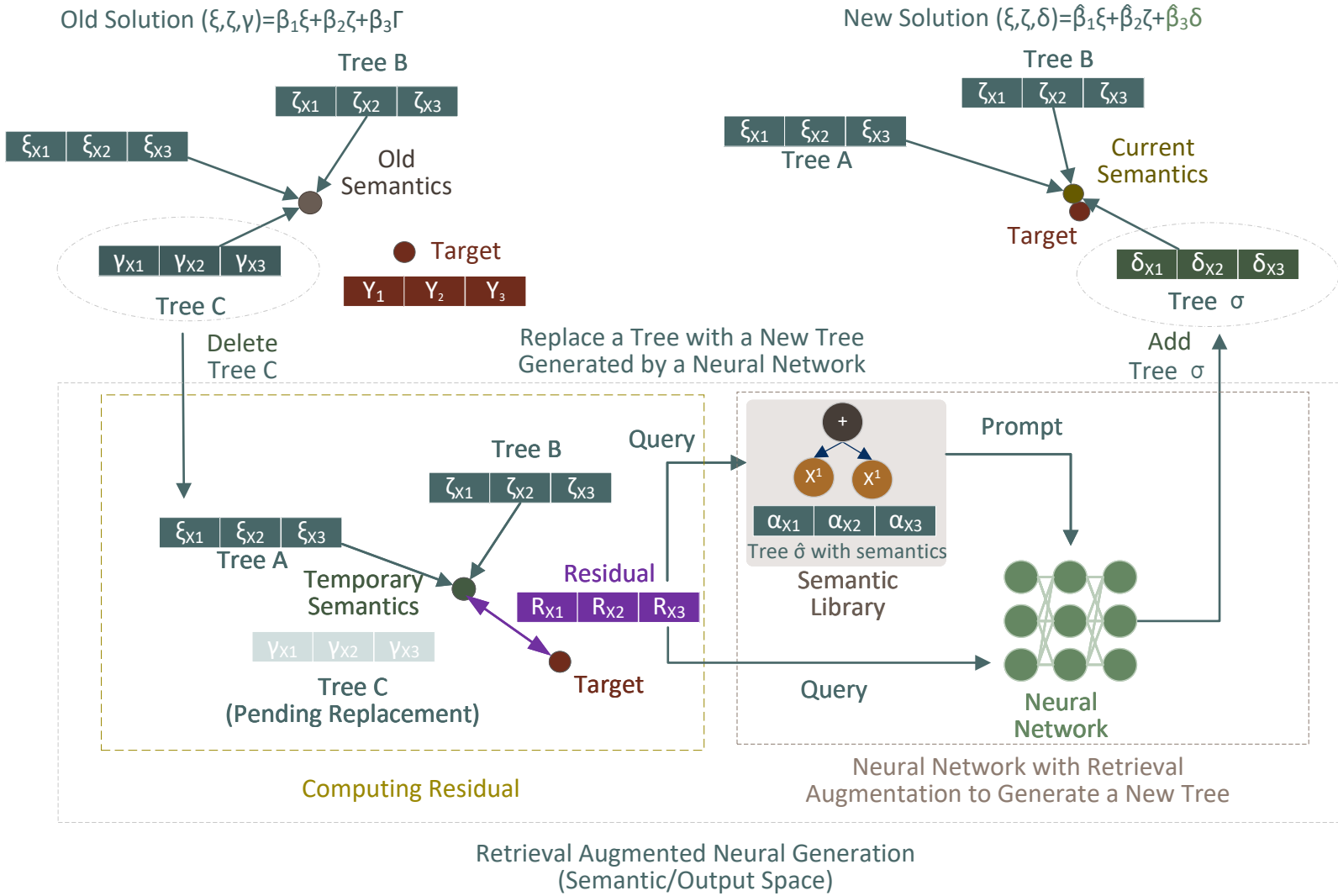
Old Solution (ξ,ζ,γ)=β1ξ+β2ζ+β3Γ
Tree B
ζX1 ζX2 ζX3
ξX1 ξX2 ξX3
Old Semantics
γX1 γX2 γX3
Tree C
Target
Y1 Y2 Y3
New Solution (ξ,ζ,δ)=β̂1ξ+β̂2ζ+β̂3δ
Tree B
ζX1 ζX2 ζX3
ξX1 ξX2 ξX3
Tree A
Current Semantics
Target
δX1 δX2 δX3
Tree σ
Delete Tree C
Replace a Tree with a New Tree Generated by a Neural Network
Add Tree σ
Tree B
ζX1 ζX2 ζX3
Query
ξX1 ξX2 ξX3
Tree A
Temporary Semantics
Residual
RX1 RX2 RX3
γX1 γX2 γX3
Tree C
(Pending Replacement)
Target
Computing Residual
+
x1 x1
αX1 αX2 αX3
Tree ô with semantics
Semantic Library
Prompt
Query
Neural Network
Neural Network with Retrieval Augmentation to Generate a New Tree
Retrieval Augmented Neural Generation
(Semantic/Output Space)