



(i) Comprehensive Comparison Summary		
Property	IS Reshape (w^γ)	PPO Clip
Weight function	$f(w) = w^\gamma$	$\text{clip}(w, 1-\epsilon, 1+\epsilon)$
Transform type	Smooth power transform	Hard truncation
Symmetry	Symmetric in w	Asymmetric (depends on A)
High w handling	Smooth compression	Truncate to $1+\epsilon$
Low w handling	Smooth compression	Truncate to $1-\epsilon$ (only $A < 0$)
Theoretical basis	Generalized divergence D_α	Trust region constraint
Parameter control	γ controls SFT-RL interpolation	ϵ controls trust region size
Adaptivity	γ can adapt based on ESS	ϵ usually fixed
Gradient info	Preserves relative ordering	Loses info beyond threshold