

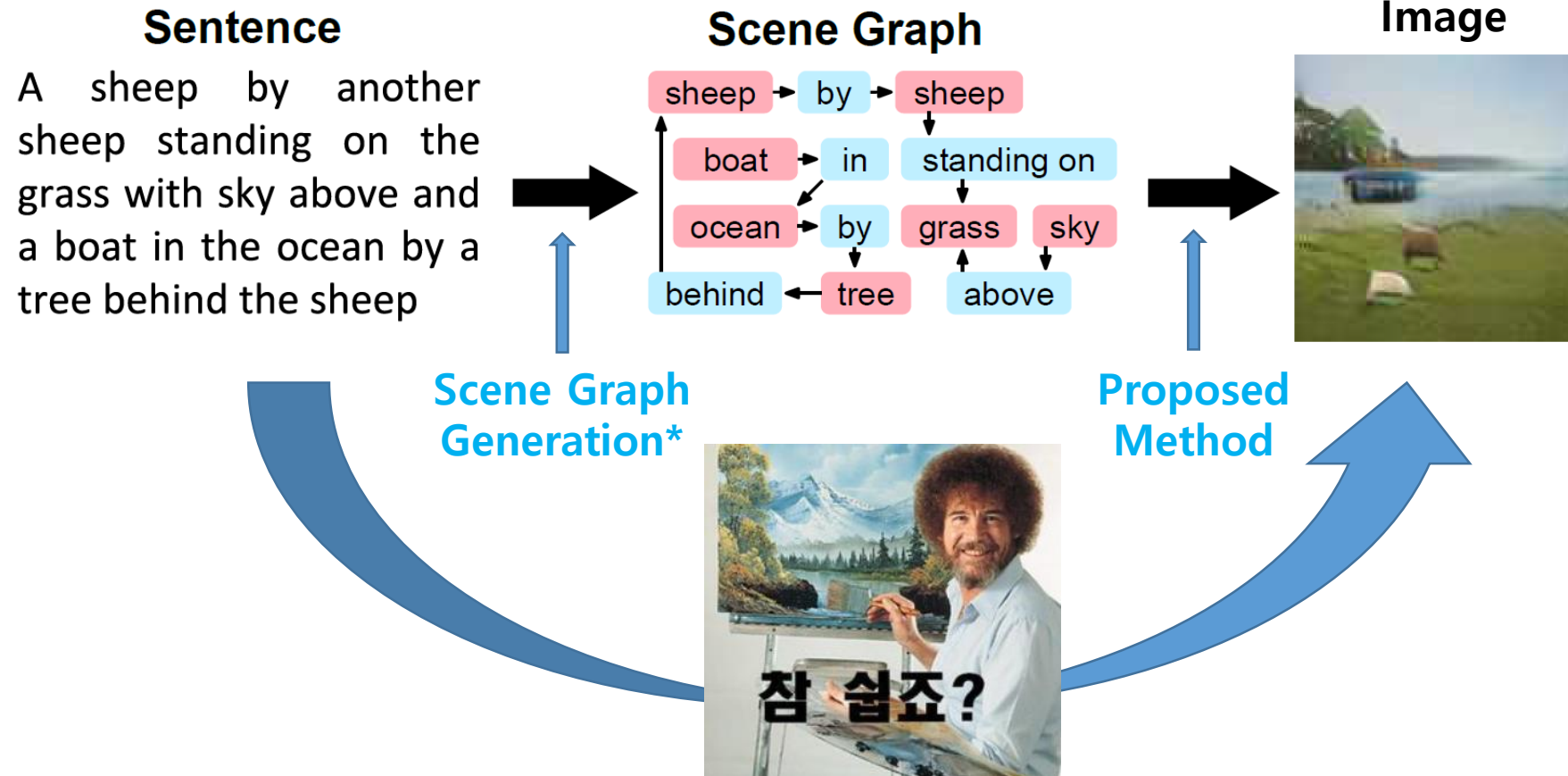
Image Generation from Scene Graphs

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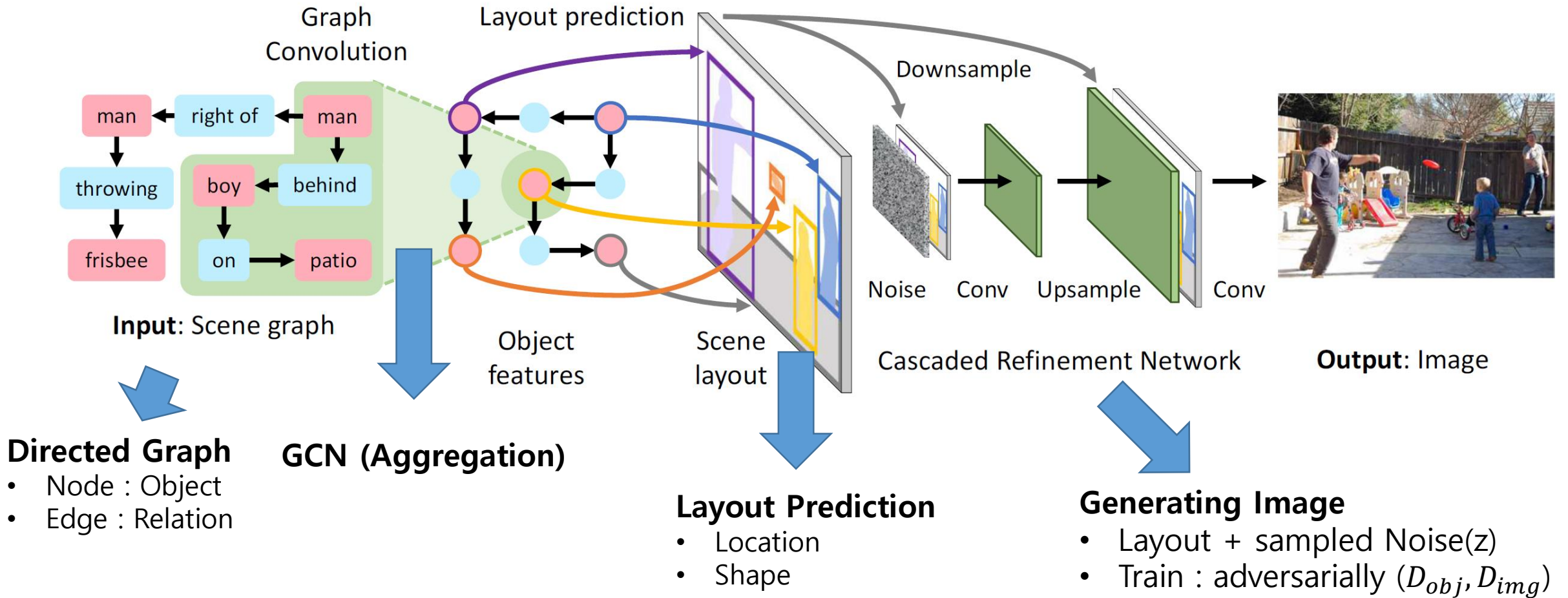
Main Reference : JOHNSON, Justin; GUPTA, Agrim; FEI-FEI, Li. **Image generation from scene graphs**. In: *Proceedings of the IEEE conference on computer vision and pattern recognition*. 2018. p. 1219-1228.

Image Generation from Scene Graph

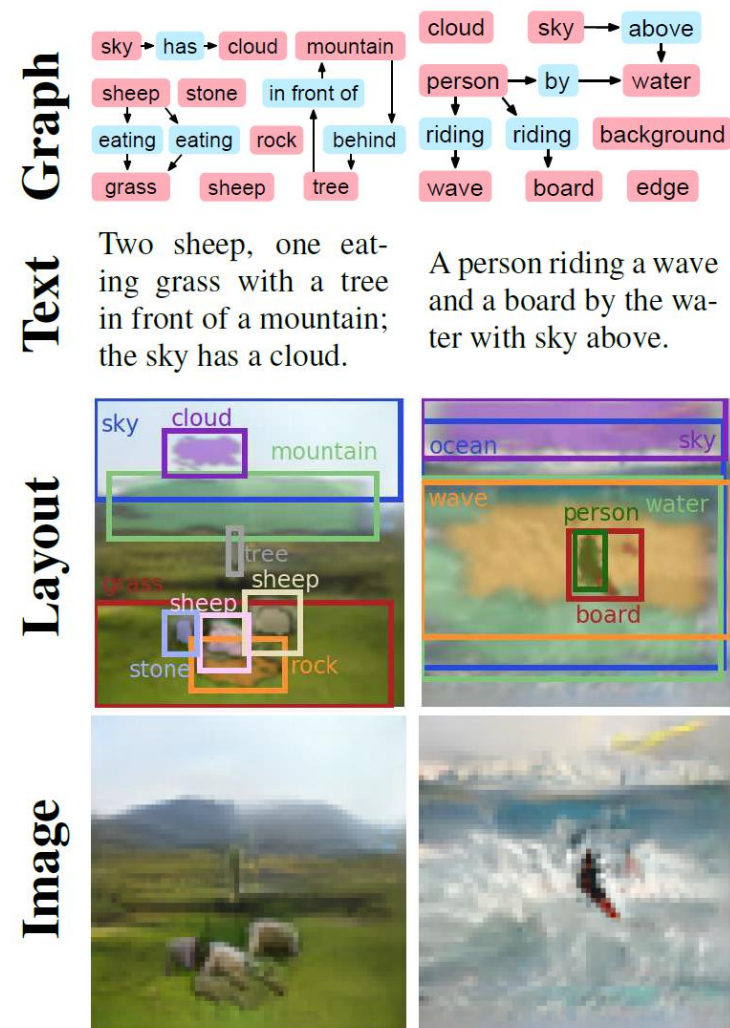


*SCHUSTER, Sebastian, et al. Generating semantically precise scene graphs from textual descriptions for improved image retrieval. In: *Proceedings of the fourth workshop on vision and language*. 2015. p. 70-80.

Overview



Experiments & Result



Caption	StackGAN [59]	Ours	Scene Graph
A person skiing down a slope next to snow covered trees			
Which image matches the caption better?			
User choice	332 / 1024 (32.4%)	692 / 1024 (67.6%)	

Method	Inception	
	COCO	VG
Real Images (64 × 64)	16.3 ± 0.4	13.9 ± 0.5
Ours (No gconv)	4.6 ± 0.1	4.2 ± 0.1
Ours (No relationships)	3.7 ± 0.1	4.9 ± 0.1
Ours (No discriminators)	4.8 ± 0.1	3.6 ± 0.1
Ours (No D_{obj})	5.6 ± 0.1	5.0 ± 0.2
Ours (No D_{img})	5.6 ± 0.1	5.7 ± 0.3
Ours (Full model)	6.7 ± 0.1	5.5 ± 0.1
Ours (GT Layout, no gconv)	7.0 ± 0.2	6.0 ± 0.2
Ours (GT Layout)	7.3 ± 0.1	6.3 ± 0.2
StackGAN [59] (64 × 64)	8.4 ± 0.2	-