



Northumbria
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Makeup Style Transfer on Low-quality Images with Weighted Multi-scale Attention

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Problems with State-of-the-Art

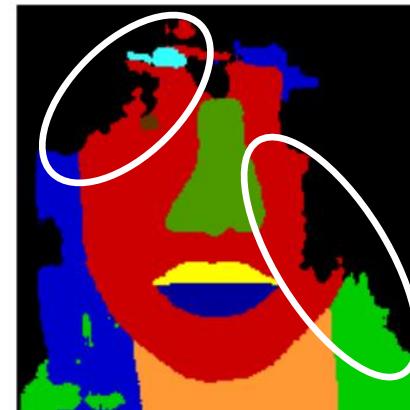
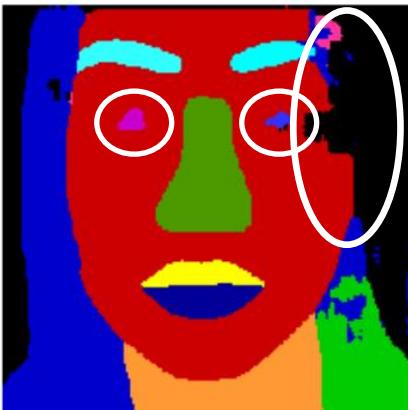
Input



1080p mask



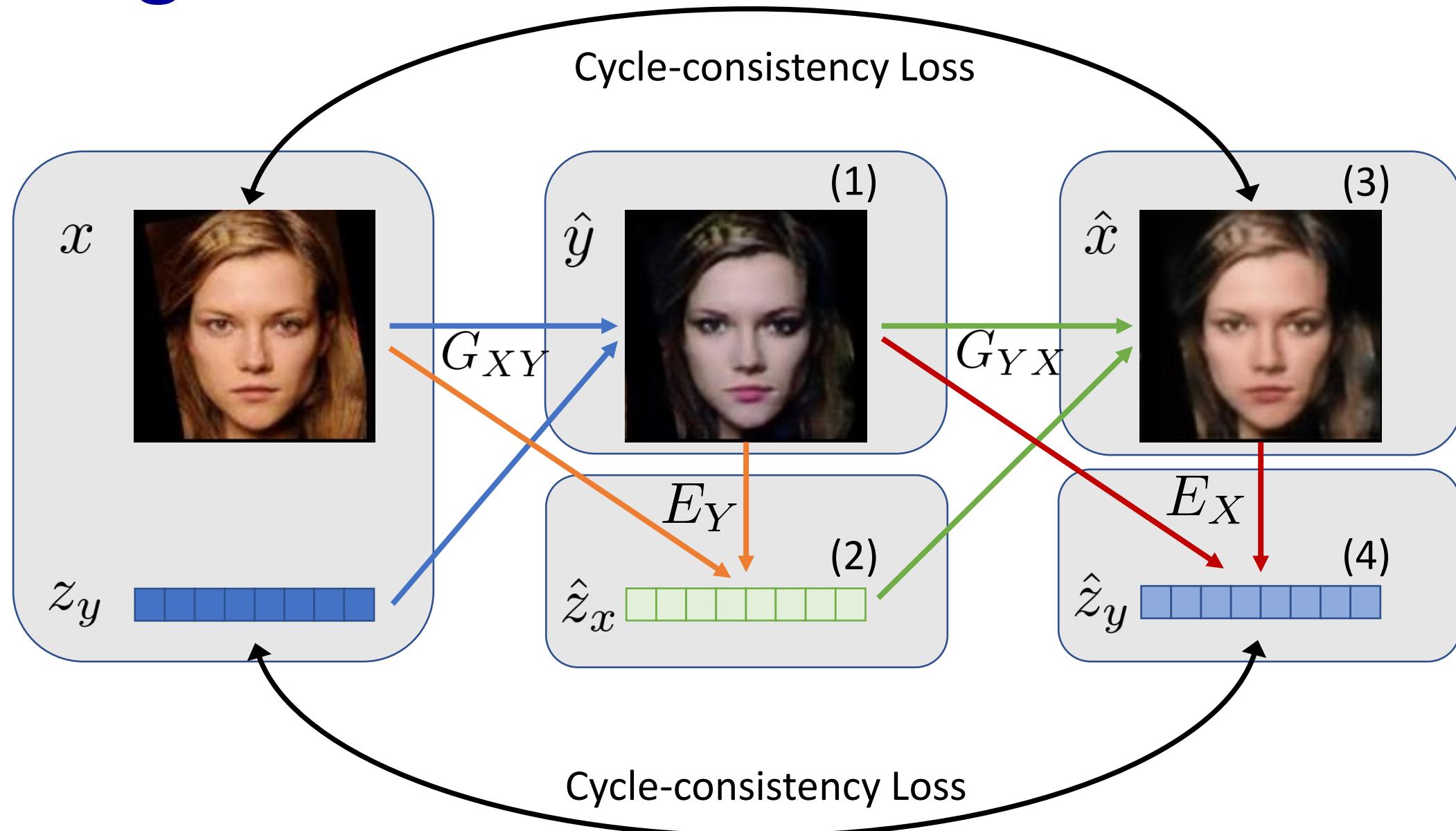
144p mask



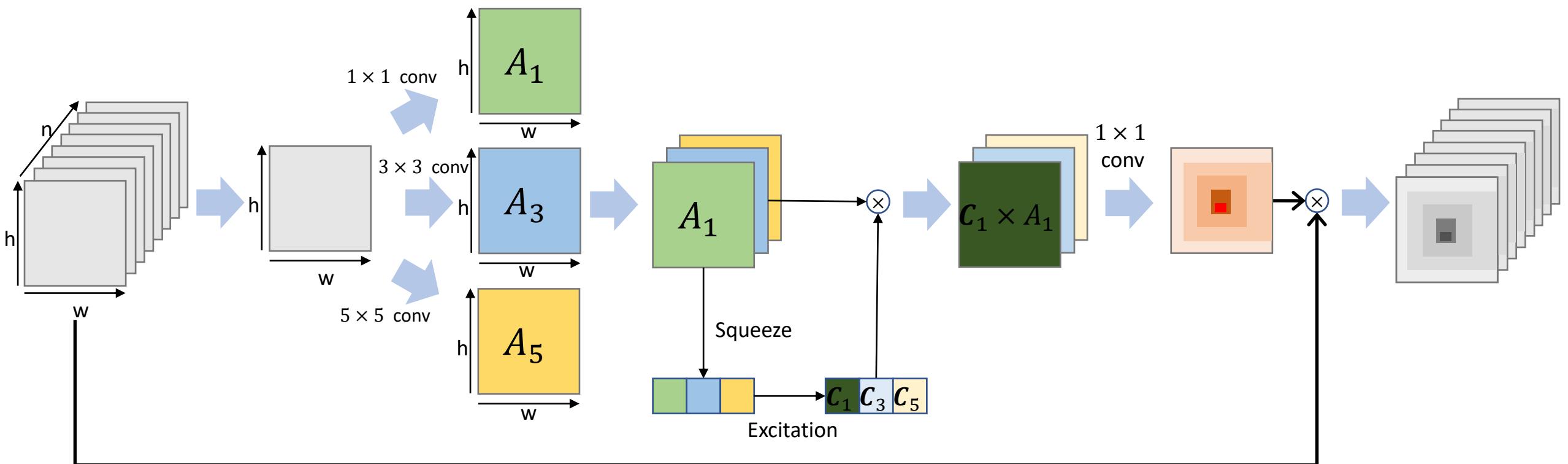
Outputs of Face Parsing Algorithm

- Stable
- Not so stable

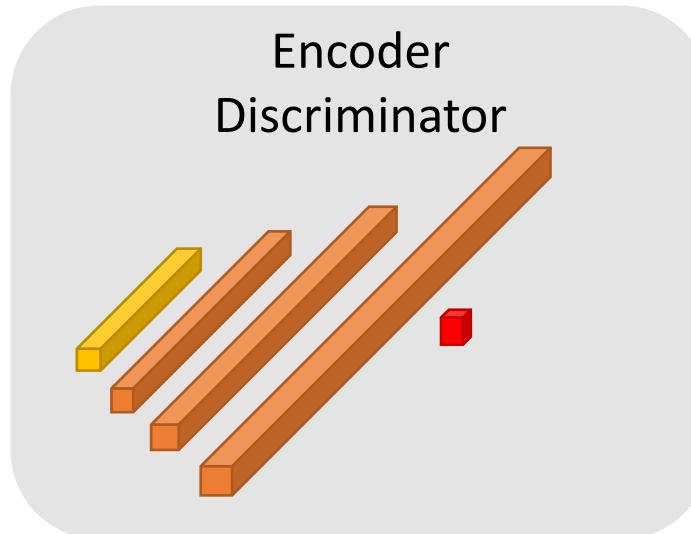
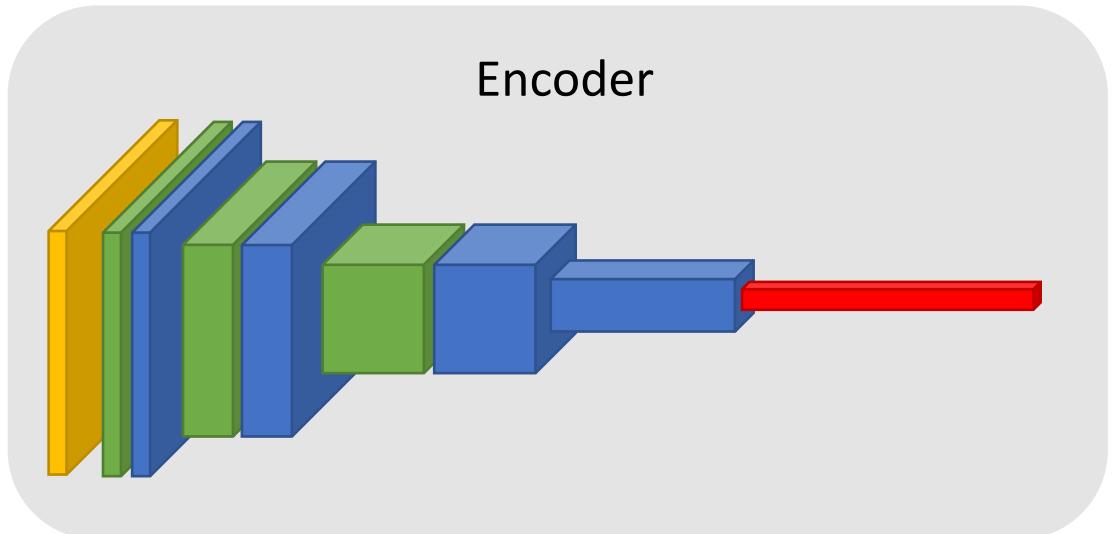
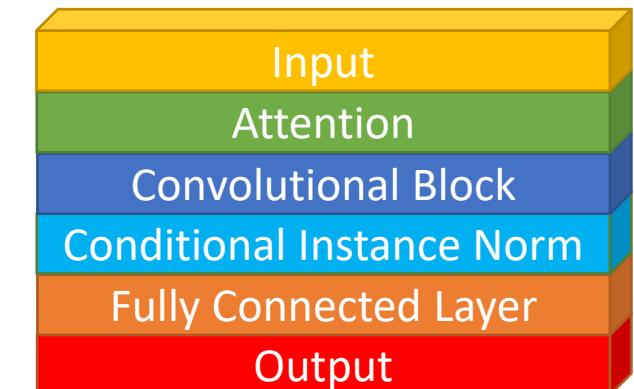
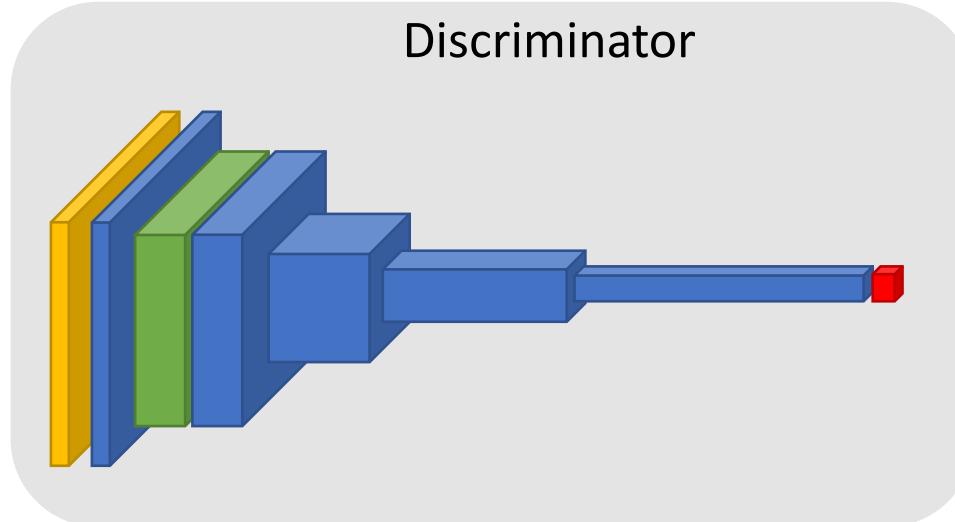
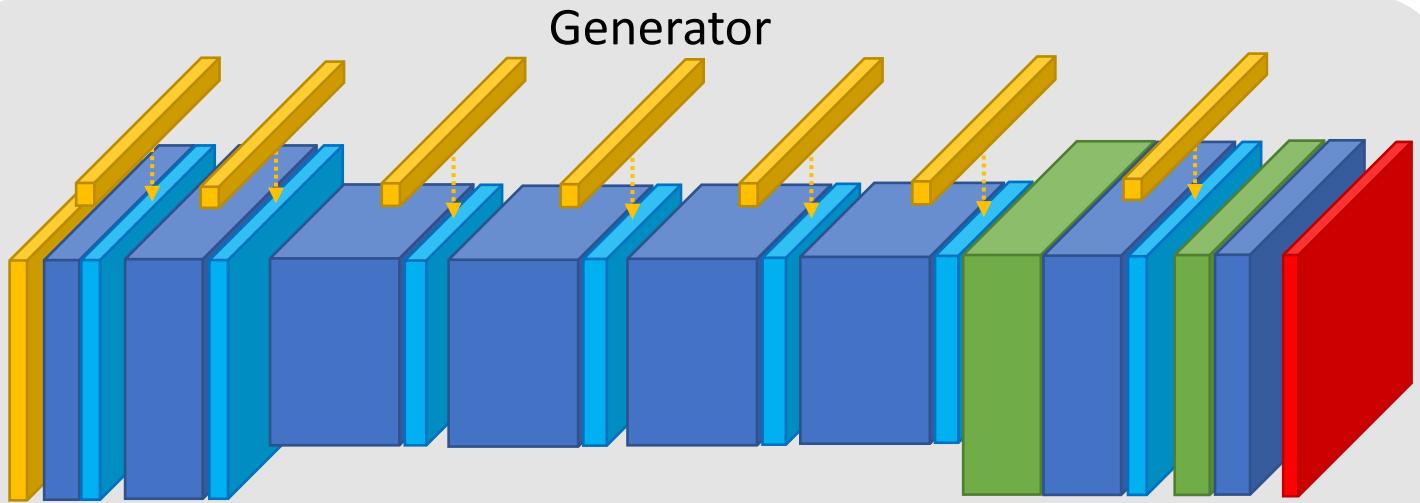
Algorithm



Multi-scale Attention



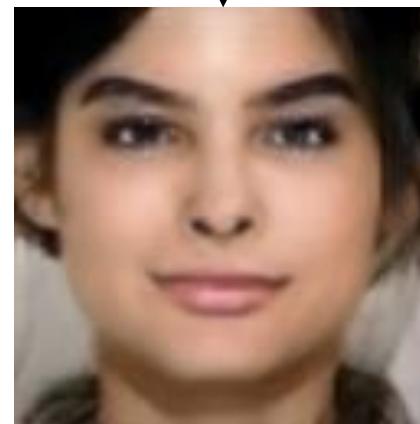
Architectures



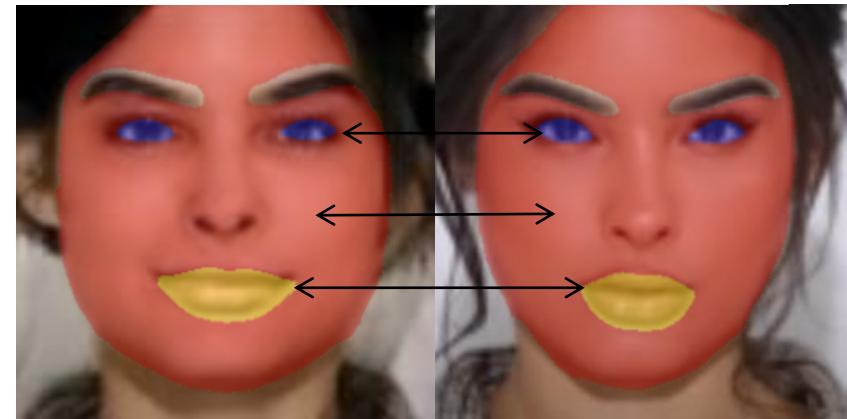
Quantitative Evaluation



Downsample then
transfer makeup



b)



Compute L1 distance
between different face parts

Quantitative Evaluation

TABLE I
COMPARISON WITH STATE OF THE ART METHODS

Method	Eyes	Skin	Lips	Total
BeautyGAN [2]	0.230	0.086	0.215	0.532
DMT [4]	0.238	0.084	0.218	0.541
Ours	0.197	0.089	0.229	0.515

Lower numbers are better

TABLE II
ABLATION STUDY ON ATTENTION

Method	Eyes	Skin	Lips	Total
Ours	0.197	0.089	0.229	0.515
w/o Multi-scale Attention	0.188	0.105	0.236	0.529
w/o Any Attention	0.274	0.126	0.247	0.647

Lower numbers are better

Qualitative Evaluation

