

# Supplementary Material for SphereEdit: Spherical Semantic Editing in Diffusion Models.

## Additional Qualitative Results:



Figure 1. **Cross-domain compositional edits with SphereEdit.** Examples show disentangled and localized edits across animals, vehicles, and artworks. Top: dog edited into cat, fox, and their composition (cat+fox). Second row: cat edited into lion, leopard, and lion+leopard. Third row: car edited into truck, cartoon, and their composition. Bottom: portraits edited into artistic styles (Picasso, watercolor, and their composition). SphereEdit preserves structure and identity while enabling smooth compositional control across domains.

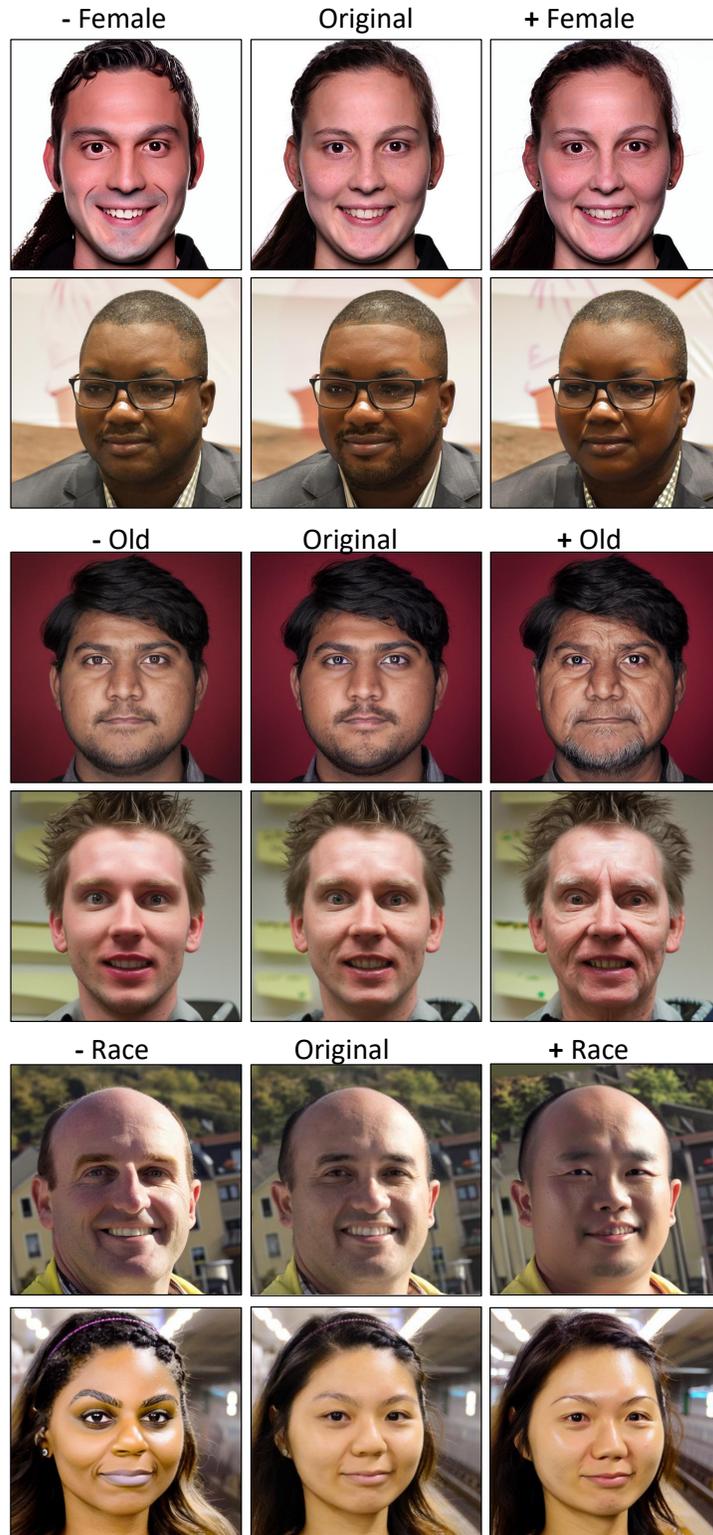


Figure 2. **Antipodal control.** Visualizing SphereEdit’s bidirectional editing along antipodal attribute directions with a scale of  $-7.5, 7.5$ . Each row shows the original input (middle) alongside edits obtained by moving in the negative (left) and positive (right) direction of a semantic attribute. Attributes include Female, Old, and Race. The results illustrate how antipodal symmetry enables interpretable edits (e.g., aging vs. de-aging, feminization vs. masculinization) while preserving identity.

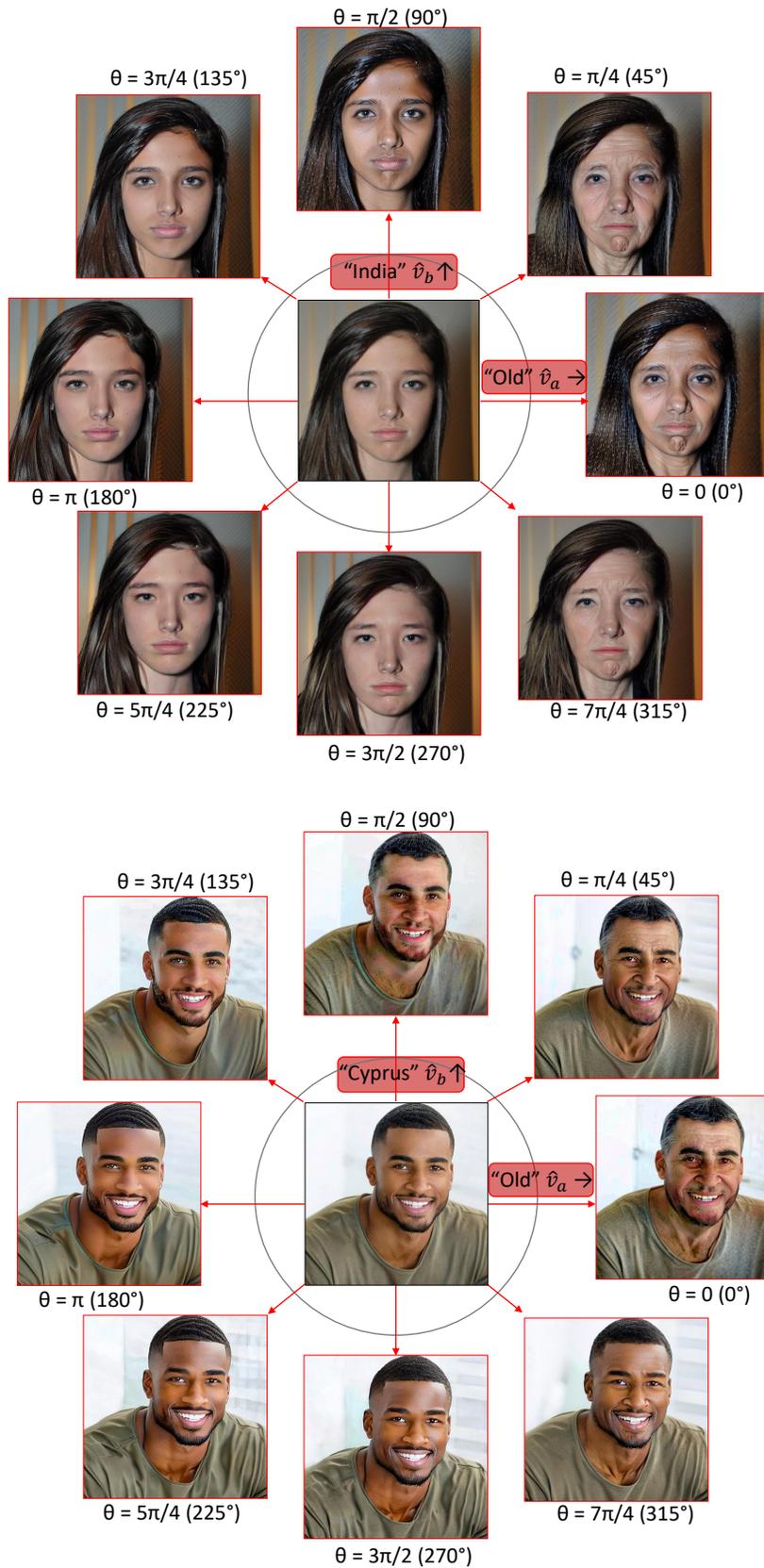


Figure 3. **Edit of two conditions using SphereEdit.** We show angular traversals on the unit sphere for two sets of attributes. Top: combining India and Old attributes. Bottom: combining Cyprus and Old attributes. Moving around the circle corresponds to varying the spherical angle  $\theta$ , which smoothly interpolates between attributes. Antipodal positions (e.g.,  $\theta = 0^\circ$  vs.  $\theta = 180^\circ$ ) yield opposite semantic edits, while intermediate angles provide continuous trade-offs.