Appendix

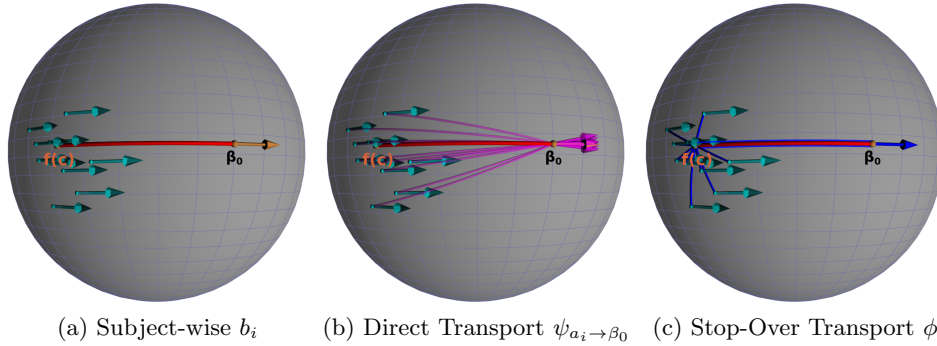(a) Subject-wise b_i (b) Direct Transport $\psi_{a_i \to \beta_0}$ (c) Stop-Over Transport ϕ

Fig. A1: Synthetic Example on a S^2 manifold for stop-over transport ϕ. (a) Ten subject-wise slope tangent vectors parallel to the equator attached to subject-wise intercepts (cyan) generated by random perturbation of $f(c)$. Brown arrow is the ground truth tangent vector at β_0. (b) Direct parallel transport $\psi_{f(c) \to \beta_0}$ generates an inconsistent set of transported tangent vectors (magenta arrows). (c) The proposed stop-over transport ϕ consistently moves b_i to $f(c)$ and then from $f(c)$ to β_0 (blue curves) without arbitrarily rotating them which results in a consistent tangent vector at β_0 (blue arrow) equal to the ground truth.