Bird beak's shapespace (8D) Elaboration (class level) Innovation (class level) PC2 (30.09%) Figure 2: Figure 3: Innovation and elaboration at the **macro** evolutionary level: species elaboration and innovation Innovation and elaboration at the **mega** evolutionary level: clade's elaboration and innovation PC1 (56.16%) Species' elaboration: Proportional variance projection on the order's per dimension phylogenetics' VCV major axis Dimension Species' innovation: rejection from the order's phylogenetic VCV major axis Dimension 1 Scaling and positioning Measuring elaboration and innovation 10 Clade's elaboration: projection of the order's VCV major axis on the innovation phylogenetic's one. Clade's innovation: rejection of the order's VCV major axis from the elaboration phylogenetic's one.