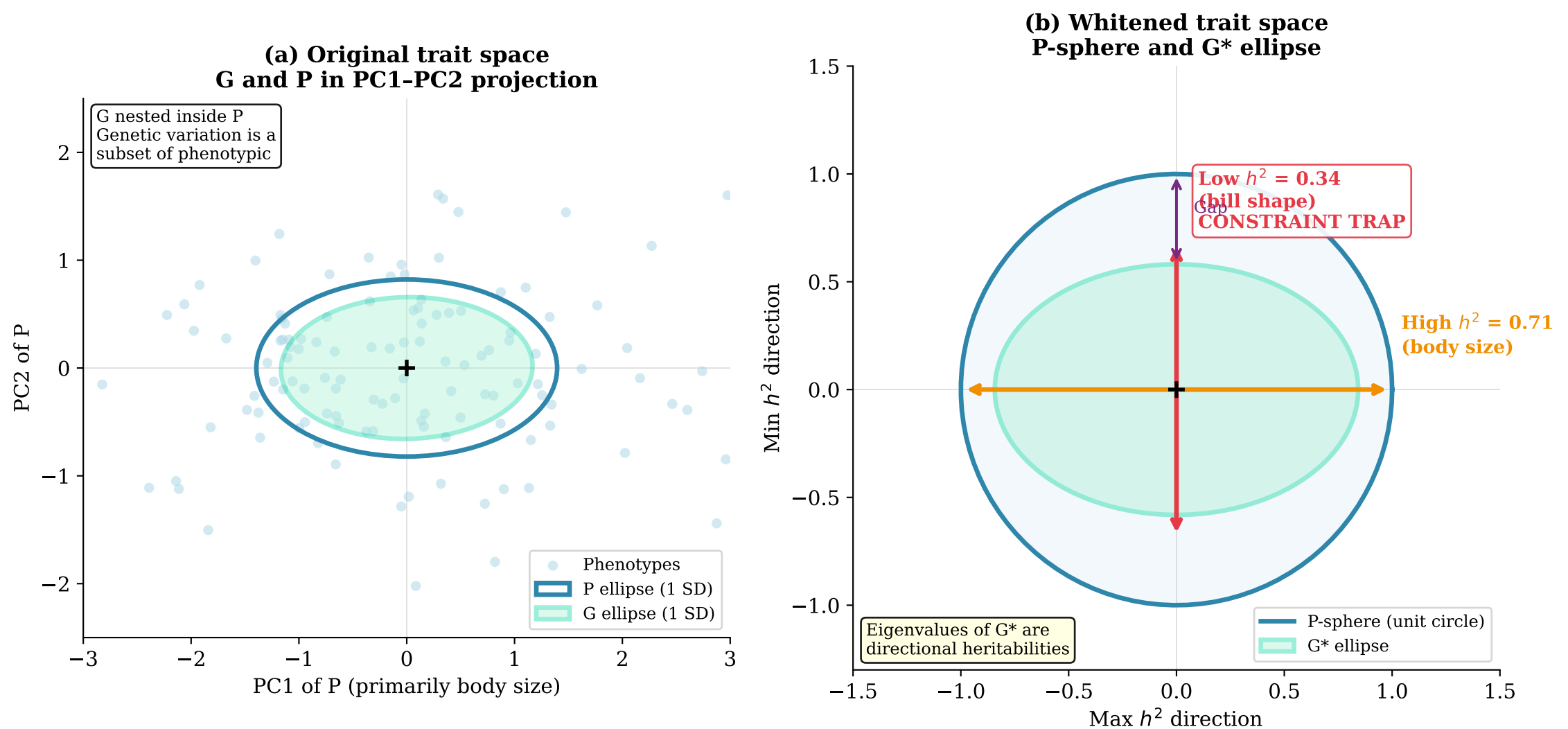
(a) Original trait space
G and P in PC1–PC2 projection
G nested inside P
Genetic variation is a
subset of phenotypic
Phenotypes
P ellipse (1 SD)
G ellipse (1 SD)
PC2 of P
PC1 of P (primarily body size)
(b) Whitened trait space
P-sphere and G* ellipse
Low h^2 = 0.34
(hill shape)
CONSTRAINT TRAP
Gap
High h^2 = 0.71
(body size)
Eigenvalues of G* are
directional heritabilities
P-sphere (unit circle)
G* ellipse
Min h^2 direction
Max h^2 direction