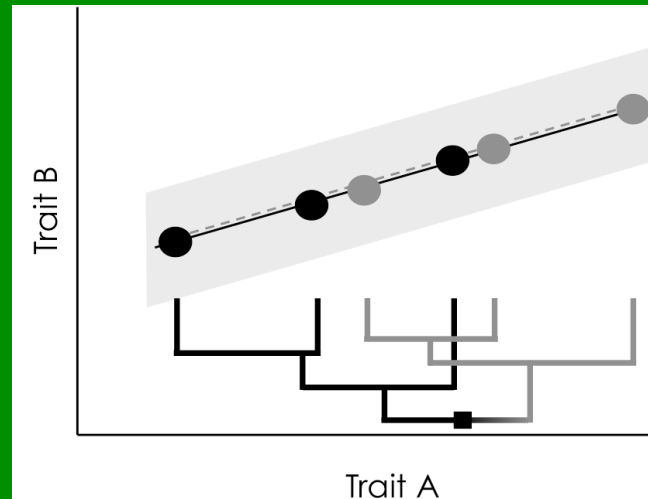




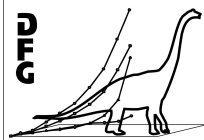
Excursion: Phylogenetic statistics



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French-German Summer School, Vetsuisse 2015*

Research Unit 533
Sauropod Biology




better late than never

**SAUROPOD
NUTRITION
SQUAD**



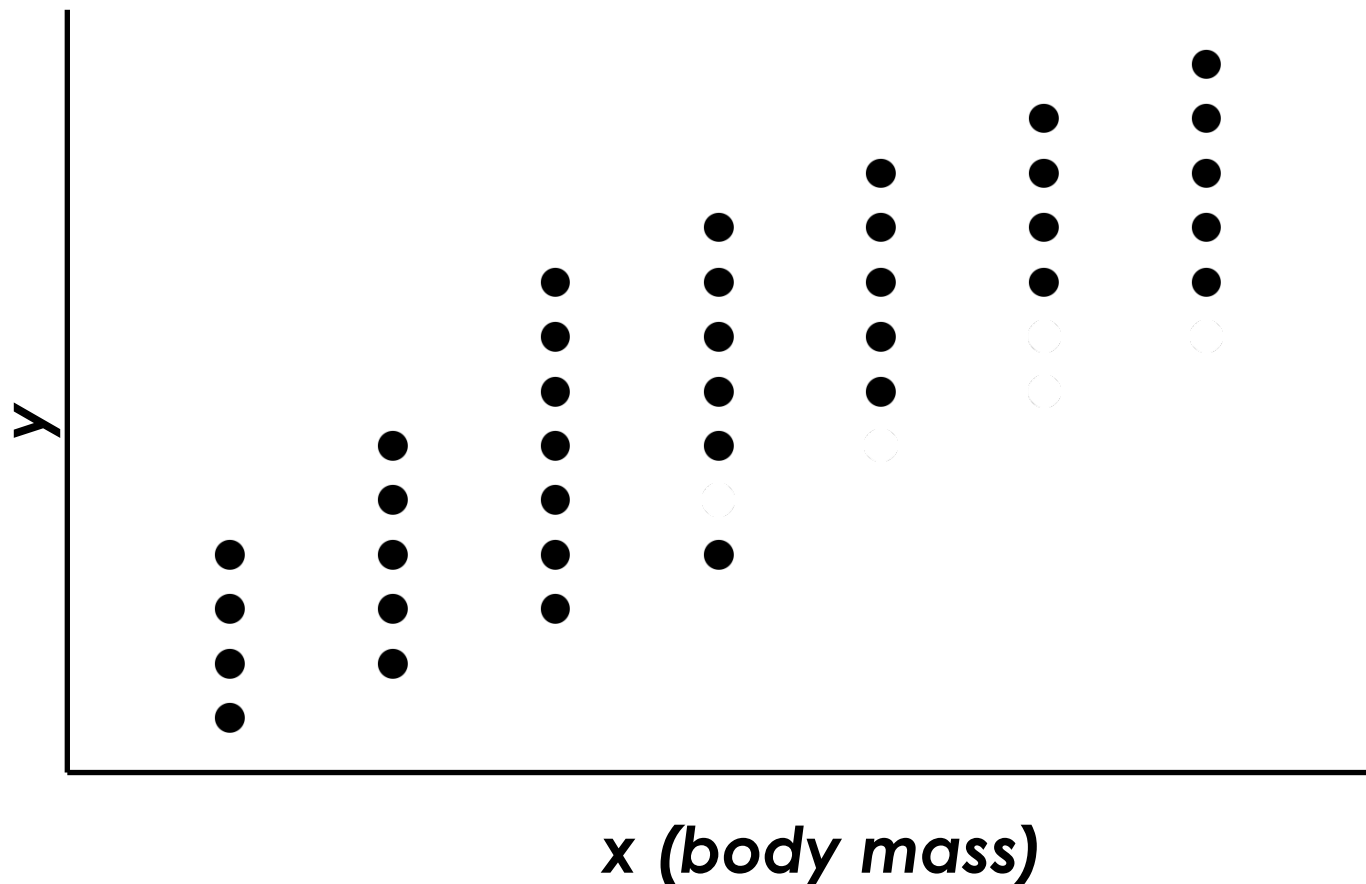
Phylogenetic statistics



Comparative statistics

Conventional regression analysis assumes independence of data points.

But this is violated by phylogenetic relationships.





Comparative statistics

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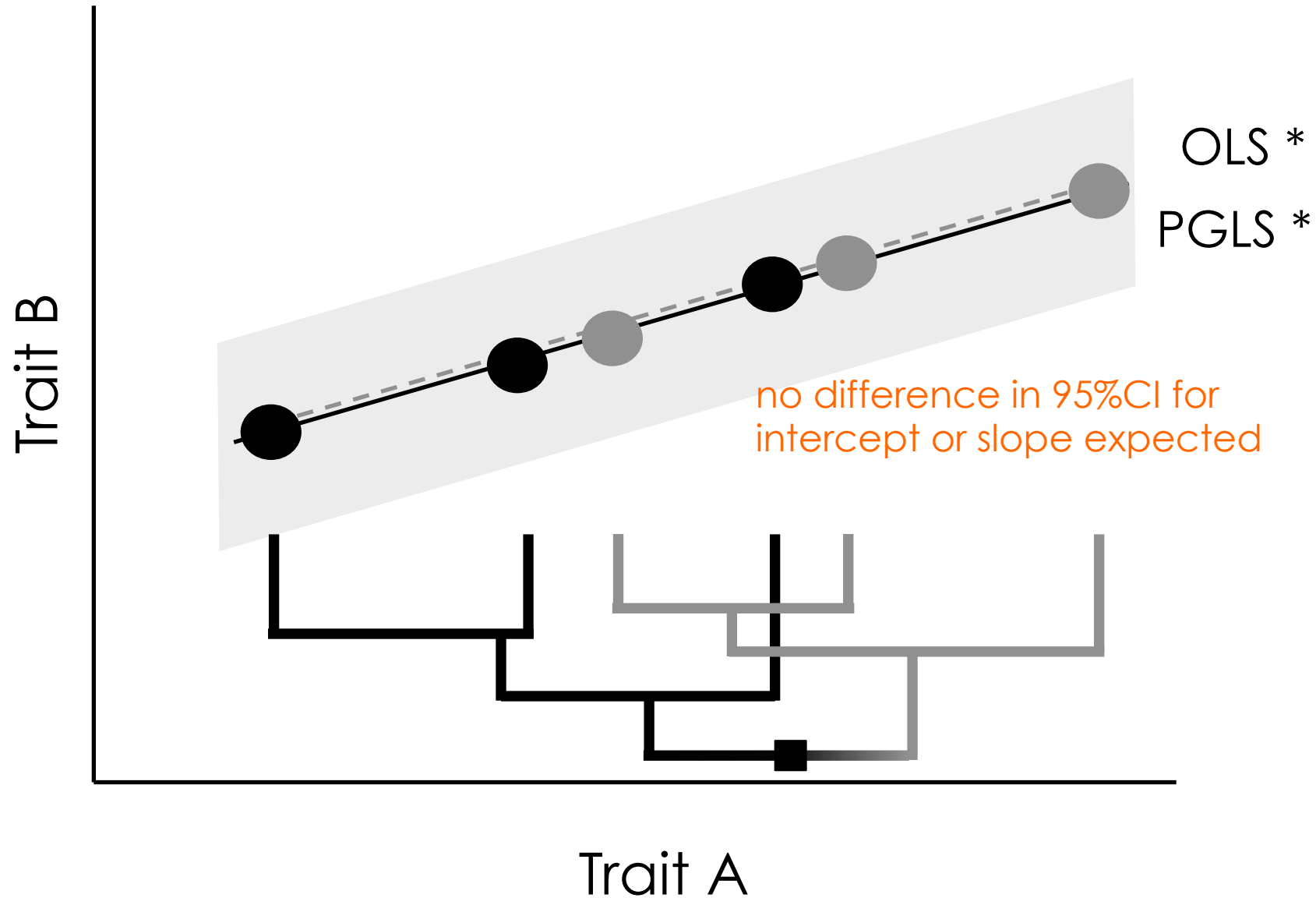
But this is violated by phylogenetic relationships.

Therefore, we perform allometric analyses also with accounting for phylogeny, using PGLS (Phylogenetic Generalized Least Squares).

Results mostly did not differ from conventional statistics in a relevant way, but the intensive use of comparative statistics (also with additional examples) led to formulation of some concepts new to ourselves.

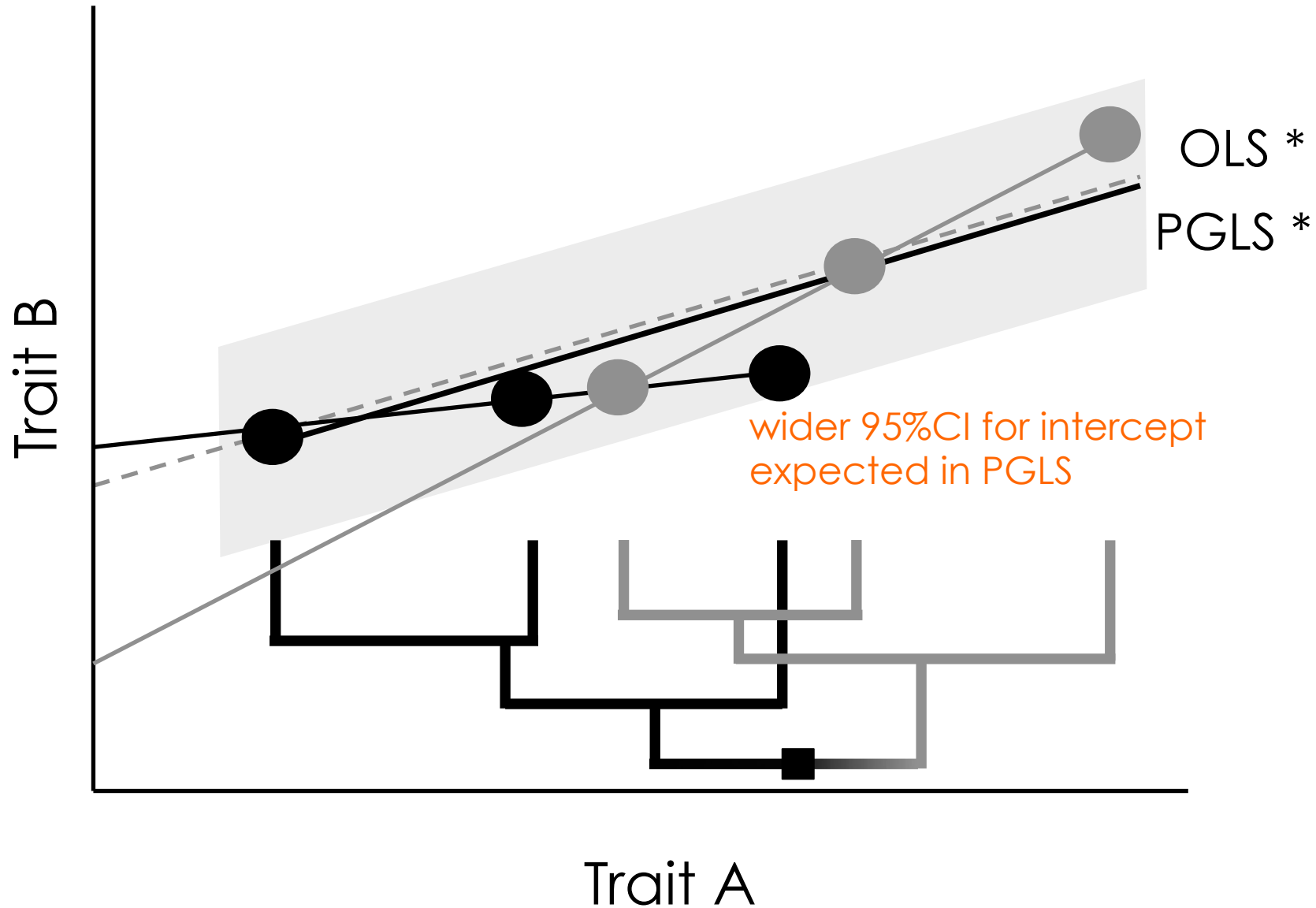


Accounting for phylogeny



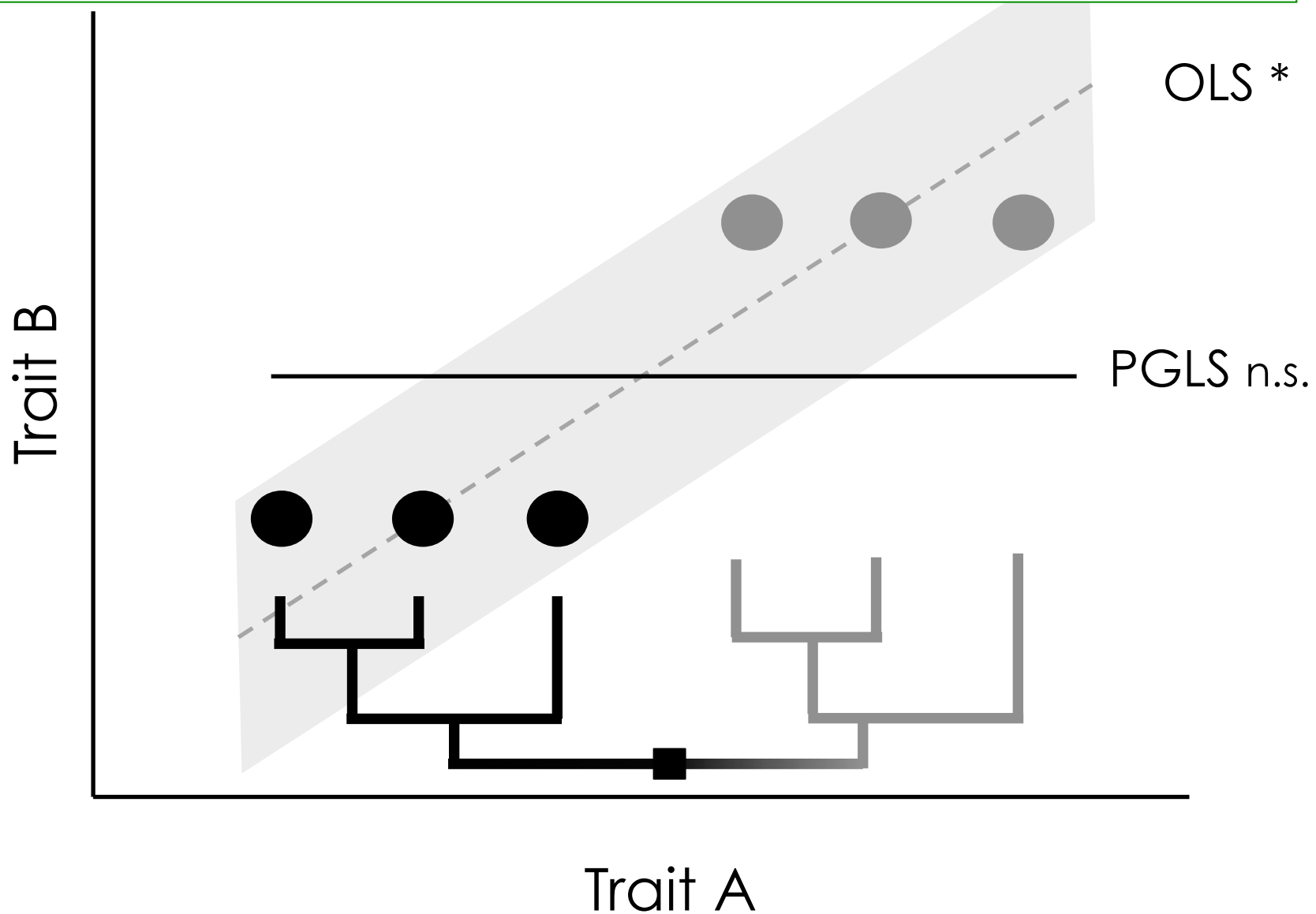


Accounting for phylogeny



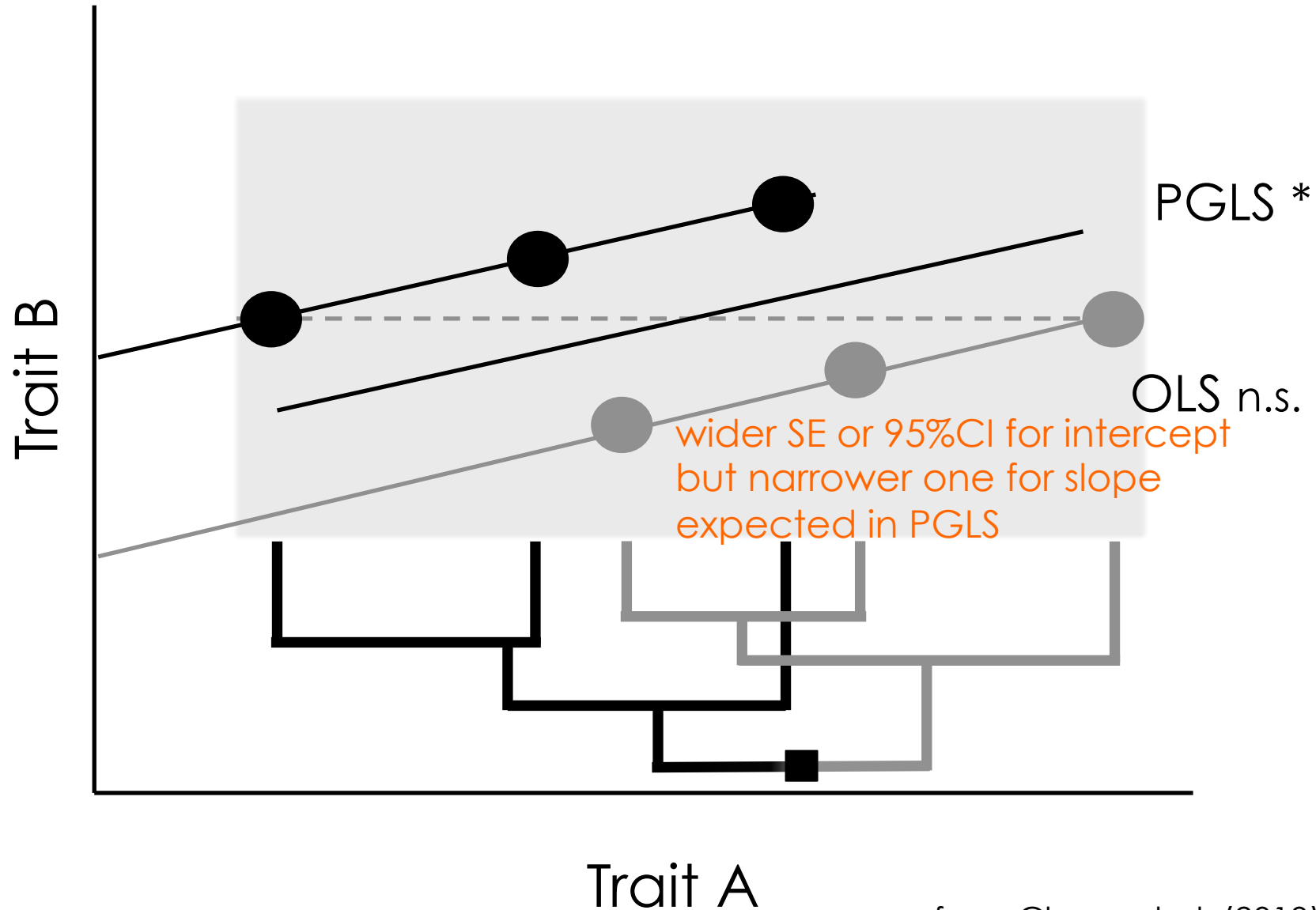


Accounting for phylogeny



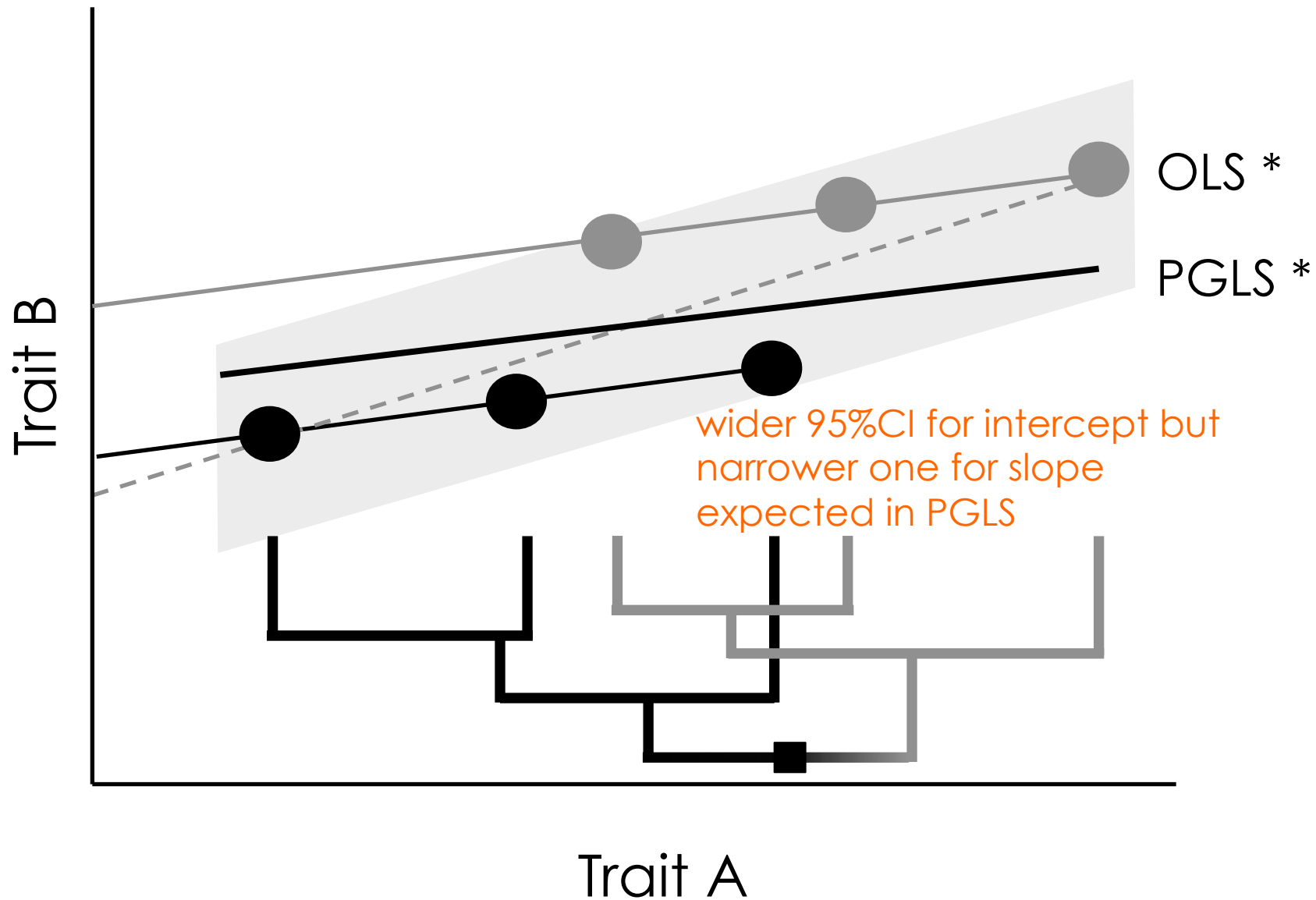


Accounting for phylogeny





Accounting for phylogeny





Comparative statistics

Accounting for phylogenetic relatedness of data is common practice in comparative studies.

If you are interested in comparative biology, you have to familiarize yourself with such statistical procedures.