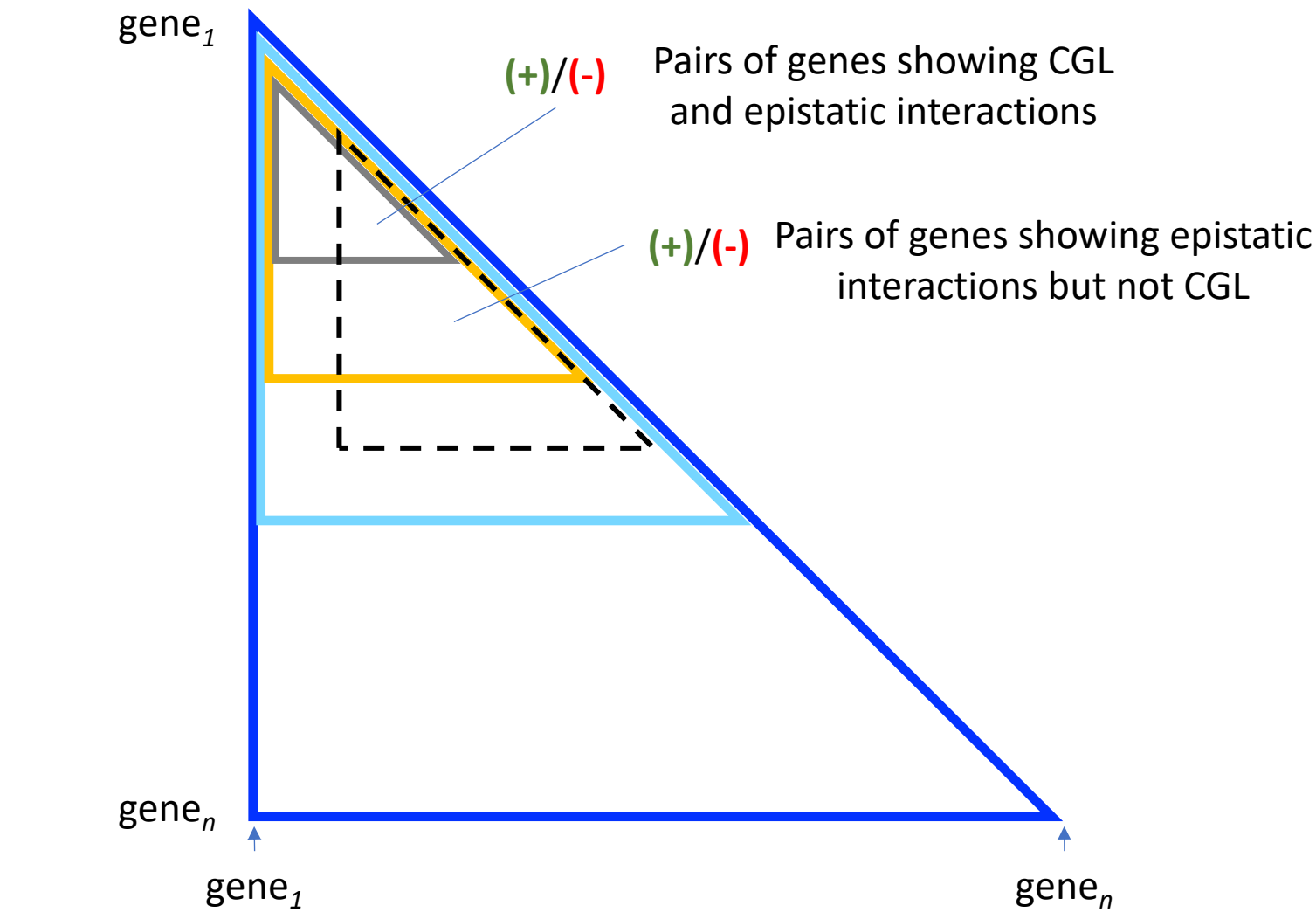


a)



b)

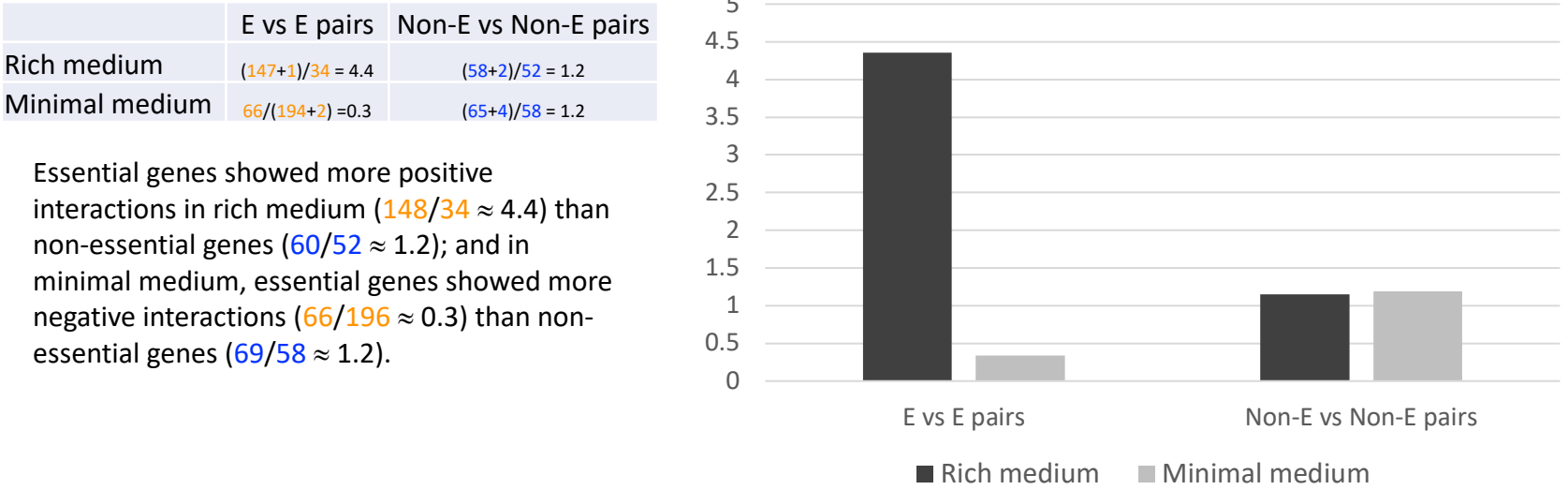
	RM		MM		RM		MM	
	epistasis		epistasis		epistasis		epistasis	
	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)
CGL	4 (1:1:2)	0 (0:0:0)	9 (0:5:4)	4 (2:2:0)	42 (12:21:9)	13 (1:9:3)	46 (5:23:18)	48 (19:23:6)
No CGL	403 (147:198:58)	180 (34:94:52)	288 (66:157:65)	505 (194:253:58)	365 (136:178:51)	167 (33:85:49)	251 (61:139:51)	461 (177:232:52)

FDR < 0.1

FDR < 0.45

(Essntial-Essential:Essential-Non-essential:Non-essential-Non-essential)

c)



- E. coli*
- Genes studied by Babu et al. (2011)
- E. coli* genes studied here with orthologs in *Buchnera*
- Negative epistasis
- Positive epistasis