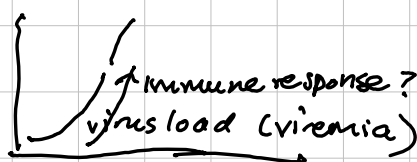
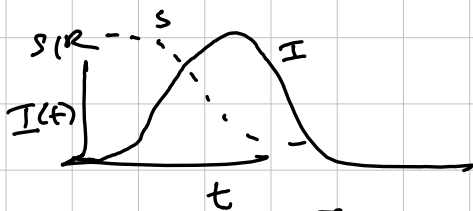


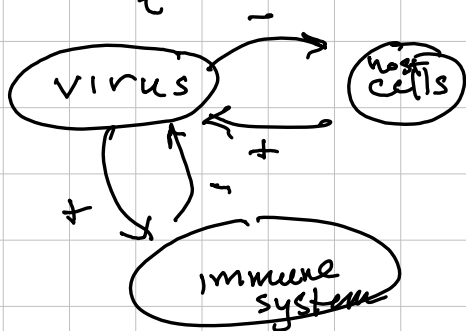
rinderpest (introduced by
Italian army from
Saudi Arabia)
introduced late 19th c.
East Africa

rinderpest
↓
wildebeest + (other ungulates?)
↓
grass → bushy vegetation

WITHIN-HOST DYNAMICS



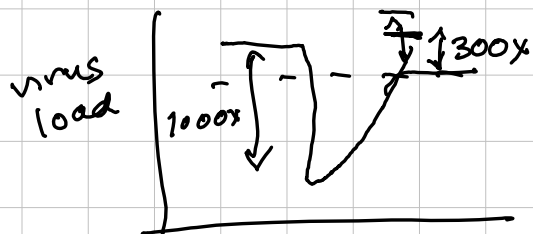
decrease in
infectible cells.



within host HIV dynamics

Bohnhoeffer + Nowak
1997

early antiretroviral drugs:
rapid evolution of resistance



300-fold decline
in viral RNA
after treatment

? why is there recovery
to a lower threshold
but not extinction?

within-host $R_0 \approx 50$

drugs reduce R_0 to just above 1,
but never less than 1 ... ?