

ENAS 888
lecture #3 Sept 20, 2011

P71

Simulations - what are they good for?

models - forward problem (simulate system - sens. anal.)
↳ inverse problem (fitting to data)

equilibrium

recall 'identifiability' ($y = m \cdot n \cdot x + b$)
from last time.

use sim'l'tus of full model to
test our ability to estimate parameters
of a simpler model.

What is Logan's model for DA & tracer

Why Logan assumes Total DA (F+B) is const.??

try to draw a few models.

Ask class to draw on paper.

How does def'n of B_{max} differ
(if $DA = \text{const}$ or $DA = DA(t)$) .

Morris → tried to simulate effects
of cognition on DA → PET to see if
expts would be possible / worth trying.

new
* * *

~~get Jenna figures of modeling 3 cases (another
simple example)~~

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Logan 1991:

Main pt \rightarrow
simulate effect of endog DA
on binding of tracer.

But note DA (called F by Logan)
is NOT time-varying. here

well.. pg 199 maybe she allows
 F to change

catch typo in equ (7)

Can class draw Logan's model
based on the eqns in (7) ???

~~Question~~ The simulation paradigm

What is a step function?

Ampt infusion might \rightarrow DA comb
 \sim Logan sim' tns.

What is BIG difference in
orientation of Logan in 1991
and Morris in 1995?

both used ~same simulation approach

See page 201 left para.
for Logan findings

pg 202 for findings w/ DA(+)

to over importance of timing
of DA(+), relative to ~~radon~~
source !!!