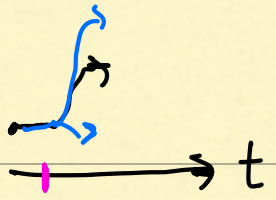
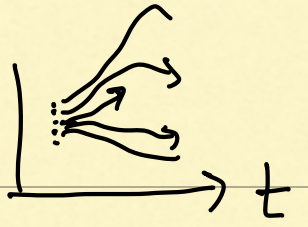
HETEROGENEITY A.K.A. PARAMETRIC NOISE



RANDOMNESS "IN DYNAMICS"



RANDOMNESS "IN PARAMETERS"

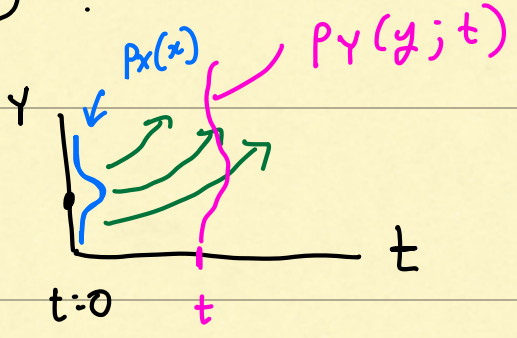
EX

$Y(t)$ OBEYS $\frac{dY}{dt} = kY$

$Y(0) = X$

1) SUPPOSE $X \sim p_X(x)$.

WHAT IS $p_Y(y;t)$?



TO SOLVE THIS:

SUPPOSE $X \sim p_X(x)$

AND $Y = g(X)$

WHAT IS $p_Y(y)$?

PSG: $K \sim p_K(k)$?.

PSG

$X, K \longleftrightarrow R$

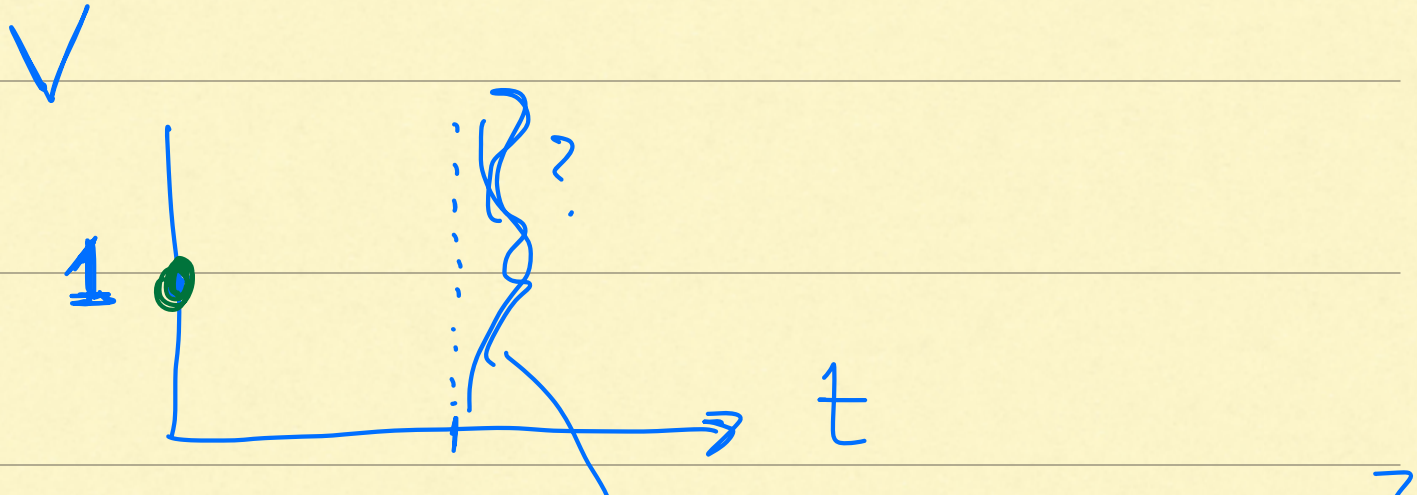
$Y \longleftrightarrow V$

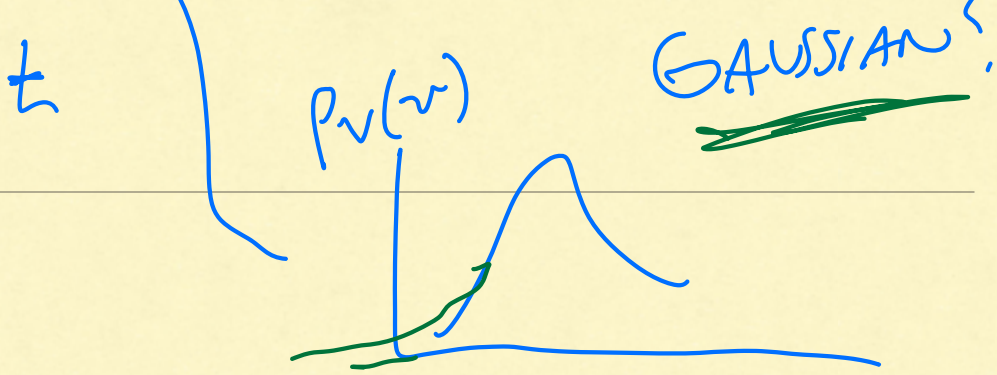
IF $Y = g(X)$ | $V = g(R)$

?

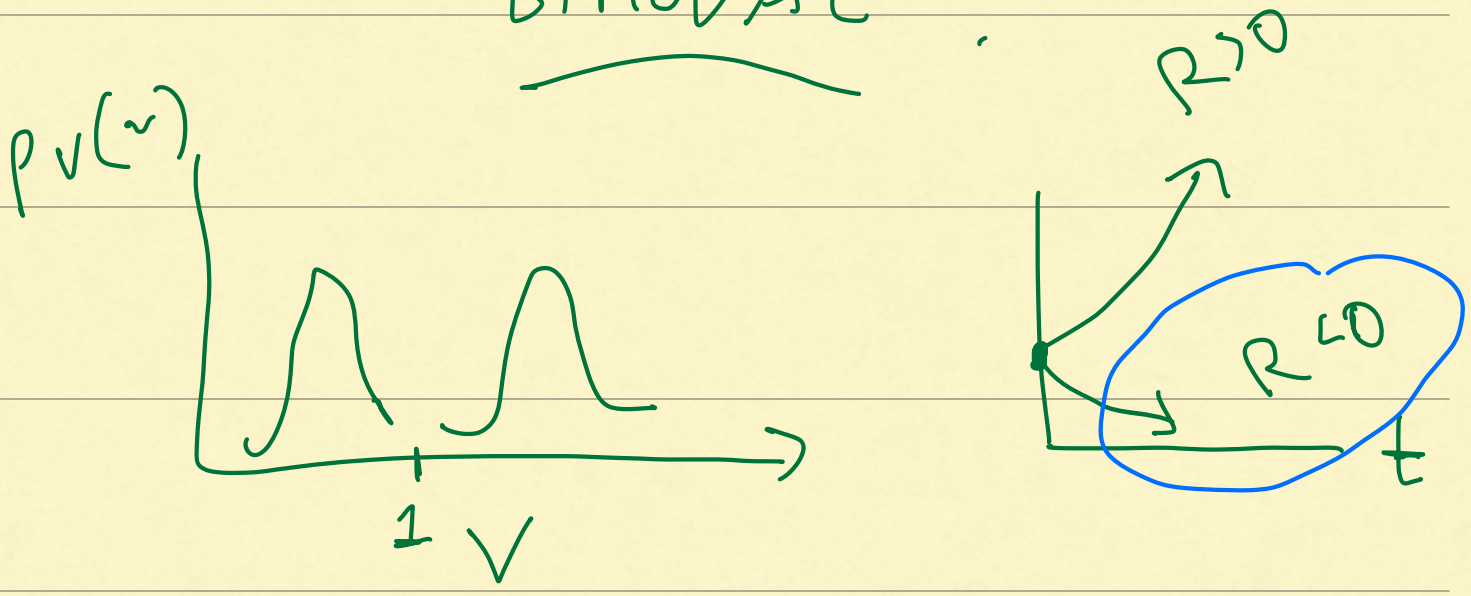
$g = e^{\left(\frac{r-1}{r}\right)t}$

$p_V(v) =$





BIMODAL?



NOT BIMODAL?