

FAKE NEWS: THE GREAT MOON HOAX

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INTRODUCTION

For our example, we decided on the The Great Moon Hoax model.



EXPLANATION OF THE MATH USED : SIR MODEL

- $dS/dt = -aSI$, $S(0) = S_0$
- $dI/dt = aSI - bI$, $I(0) = I_0$
- $dR/dt = bI$, $R(0) = R_0$



THE RESULTS/NUMBERS OF THE GREAT MOON HOAX

Initial values

$$S(0)=0.95P=243200$$

$$I(0)=0$$

$$R(0)=0.5P=12800$$

$$dS/dt = -aSI$$

$$dS/dt = -2.1SI$$

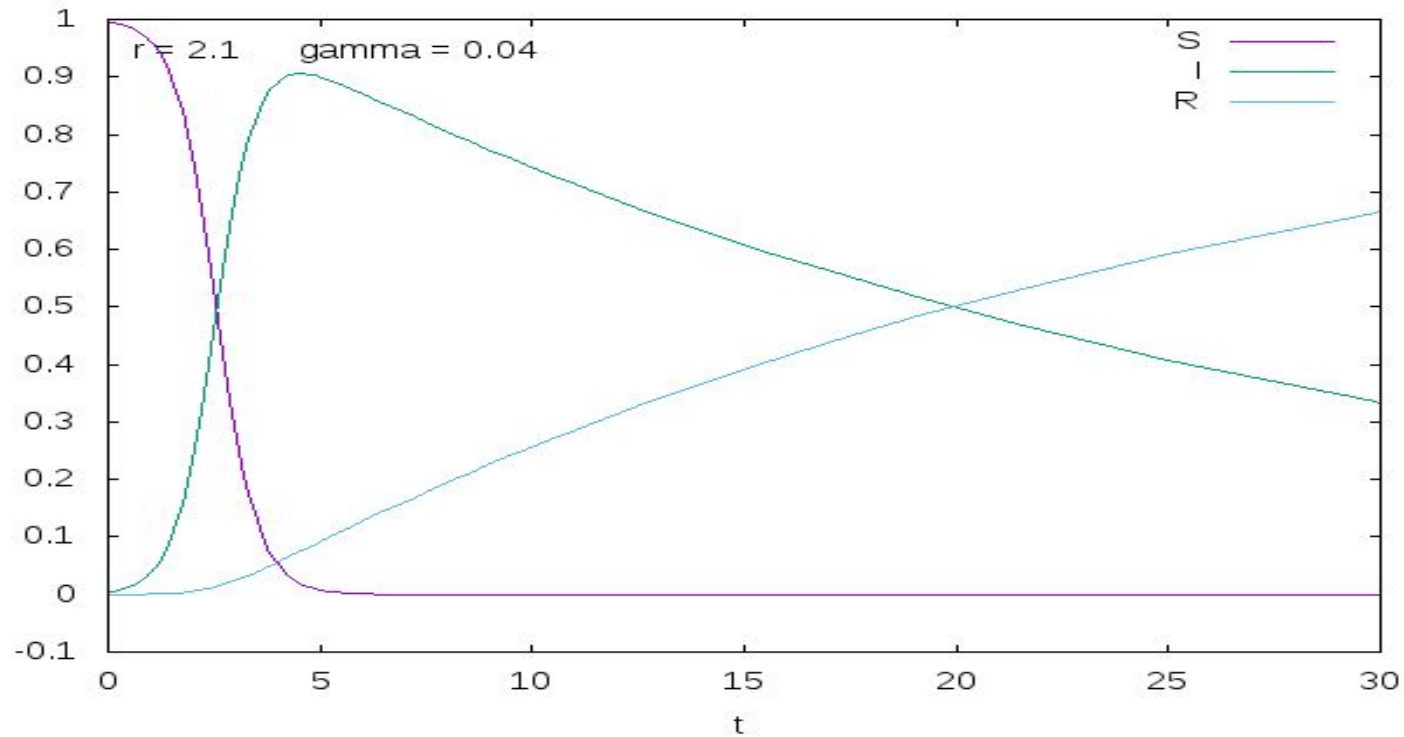
$$dI/dt = aSI - bI$$

$$(dI/dt) = (2.1)SI - (0.04)I$$

$$(dR/dt) = 0.04I$$



GRAPH



SIS MODEL

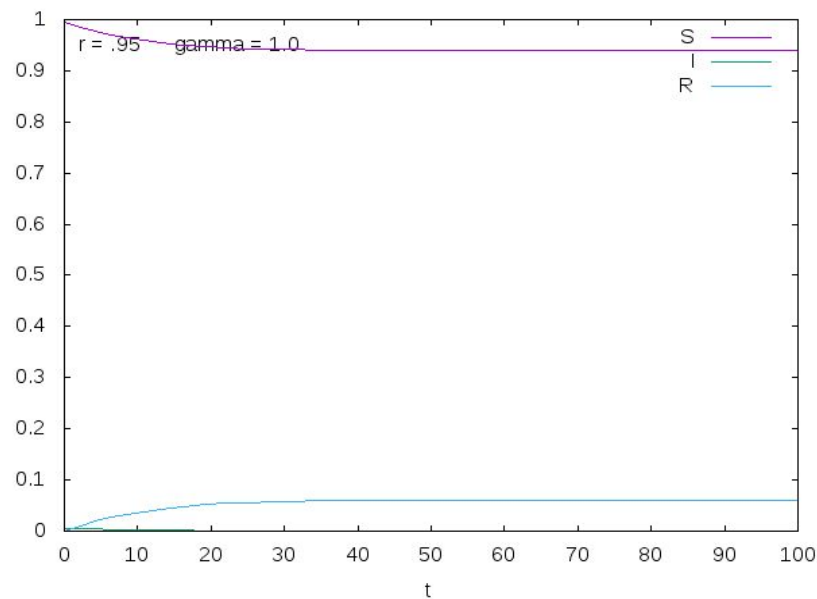
What if the resistant group becomes susceptible once again?

$$dS/dt = -aSI + bI$$

$$dI/dt = aSI - bI$$

$$dS/dt = -0.95SI + I$$

$$dI/dt = 0.95SI - bI$$



CONCLUSION

- SIR model vs SIS model
- Combating Fake News



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Work Cited