Statistics 473: Game Theory

Problem Set 1

Due: Thursday January 24

Do the following problems from the text: 27.2, 31.2, 33.1.

1) Watch the following excerpt from the film *A Beautiful Mind*.

http://www.youtube.com/watch?v=CemLiSI5ox8

Consider the (admittedly sexist) strategic game where 4 men meet 5 women, one blonde and four brunettes, in a bar. Each man must decide to make a pass at the blonde or any of the brunettes. Each man prefers the blonde to the brunettes and prefers the brunettes to failure. If more than one man makes a pass at the blonde everyone will fail. If at most one man makes a pass at the blond everyone will succeed.

Is the outcome where every man makes a pass at the brunette an equilibrium? What about an outcome where exactly one man makes a pass at the blonde? The outcome where exactly two men make passes at the blonde? The outcome where more than two make passes at the blonde?

Did the screenwriters get this right?