

Playing the Game - Strategizing the Curve

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Strategizing the Curve

- In his class “Introduction to Programming” at John Hopkins University, Professor Peter Frohlich announced that the final exam would be graded on a curve and that the curve would be anchored by the highest grade, which would receive an A.
- Normally students will study hard for higher grade, but this is not what happened on Professor Frohlich’s class
- Some of his students figured out that everyone taking the exam is not the only Nash Equilibrium to this game among students. A second Nash equilibrium exists, where no one takes the exam!
 - As a result, everyone gets a score of zero, and by virtue of zero being the highest score, everyone receives an A

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- While it is clear that all students prefer the equilibrium in which each student gets an A, the problem is that this equilibrium involves weakly dominated strategies
 - If no one takes the exam, a student gets an A whether or not she takes the exam; however, if one or more student takes the exam, she will get an F, whereas taking the exam would most likely result in a higher grade
- To avoid the potential instability of a Nash equilibrium in weakly dominated strategies, students waited outside of the classroom and watched each other when the exam is taken
- After 20-30 minutes of waiting for students to enter, Professor Frohlich gave up and went to his office to give everyone an A