Playing the Game - Strategizing the Curve

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January 22, 2015
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.
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.