To:	Department of History, Portland State University
From:	Thomas M. Luckett
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RE:	some thoughts on enrollment incentives

        In teaching sophomore inquiry, I am often at a loss what sort of specifically interdisciplinary tasks to set to students, exercises that might teach problem solving, deductive logic, marketable skills and so forth. I am thus grateful to the administration for supplying us with challenging and entertaining teaching materials. The provost's recent memo on the New Enrollment Incentive Program (NEIP) is an excellent example, and I can highly recommend it to colleagues who wish to provide their students with a lesson in both textual analysis and economic reasoning. The question to pose, to students as to ourselves, is: what sort of incentives will the NEIP actually create? The following is my own attempt to puzzle out an answer.

        We might think of the NEIP on the model of a market in which we as a department are invited to invest our time and energy in the hope of an uncertain monetary return. Now the first crucial point to understand about this market is precisely its uncertainty, or risk, which will constantly complicate all our calculations. For the provost's memo states that there are "no incentives to be distributed if the University fails to meet its overall revenue and enrollment goals." Thus not only is it uncertain what proportion of the incentive money our department will receive if we meet our departmental enrollment goal (a point that we may try to clarify in advance with the dean), but it is even uncertain whether there will be any incentive money to distribute at all. The answer to this last question will depend, not on our behavior, but on the average behavior of all departments. In deciding whether to invest, we must take their intentions into account, even as they take our intentions into account in the formulation of their intentions.

        Our market thus resembles John Maynard Keynes' description of a speculative market, which he likens to:

> those newspaper competitions in which competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees. (Keynes, *General Theory,* 156.)

Among the well-known features of such speculative markets is that they are subject to violent, self-fulfilling changes of expectation, swinging between exaggerated optimism and exaggerated pessimism. They tend to produce tulip manias, but the timing and course of their manias is so hard to predict over the long run that the rational investor

must constantly privilege short-term over long-term profits, a behavior that in turn reinforces the market's sudden mood swings. As a general result, "there is no clear evidence from experience that the investment policy which is socially advantageous coincides with that which is most profitable" (ibid., 157).

The issue before our department, however, is not to devise a socially advantageous policy, but a profitable one given the nature of the market. Let us assume for a moment that the University will have incentive money to distribute (keeping in mind that we will need to return to this question below). The second crucial aspect of the NEIP to consider is that incentive money will be distributed to individual departments, not on the basis of their absolute level of enrollment, but rather on that of the year-to-year variation in their enrollment. Precisely, to earn incentive money in any given year, we must equal or surpass our enrollment level either for the previous year, or for the average of the three previous years, whichever is larger. Now, for several reasons, year-to-year variation is much easier to achieve by selectively *discouraging* enrollment than by heroic efforts to increase it. First, it obviously takes less work to grade papers for smaller classes than larger ones. Secondly, since any increase in our class size is likely to be achieved by attracting students away from other departments, we can expect our heroic efforts to be matched by their heroic efforts, with zero net effect. Thirdly, as the NEIP is structured, any heroically large enrollment that we manage to achieve one year becomes our quota for the next year. Each such increase thus makes it progressively more and more unlikely that we can continue to meet our goals and obtain incentive money in the future. We might suppose that the winning strategy would be to make only modest efforts to increase enrollment, maintaining a growth rate of, say, two percent per annum, but this would be chimerical. The sort of strategies by which we can raise total student credit hours are not so finely tuned, nor the response of students so predictable, that we can target a small growth rate without serious risk of its falling below zero. Our efforts must be all or nothing.

No, the winning strategy is to *reduce* enrollment every second year through such devices as severe limits on class size, unpopular topics, harsh grades in the first four weeks of the term, and so on. Call these years "bad" years. During the alternate, "good" years, we would return to current practices, teaching popular topics including a reasonable number of large lecture courses. Enrollment in good years would be at roughly its current level, and thus easily surpass both the previous year's enrollment and the average of the three previous years (which include two bad years). We would write off any possibility of receiving incentive money every second year, but by the same token would guarantee ourselves incentive money in the alternate years, and all without heroic efforts in any year to raise enrollment above its current level. Our bad years would of course make it somewhat more difficult for the University as a whole to meet its enrollment target, but this would actually work to our advantage, by then making it easier for the University to meet its target during our own good years, when we stand to share in the profits. In any case, the effect of our department's decisions would be a mere drop in the bucket of total University enrollment, and need not enter into our departmental calculations. All things considered, such a two-year enrollment cycle is the most

rational, indeed the only rational, investment strategy dictated by the peculiar structure of our new incentive market.[*]

The only problem with this plan is that what one fool can do, another can. In other words, if reducing enrollment in alternate years is really the most rational investment strategy under the NEIP, we should expect all departments, sooner or later, to adopt it. In many cases they will not do so intentionally, but will fall into such a pattern through trial and error. Having made heroic efforts one year to increase class size, they will then reason the following year that "we cannot possibly top that, so why bother trying?" After a year of not trying, it will belatedly occur to them that their consequent enrollment goal for the following year can easily be surpassed with only moderate effort. Eventually even the most civic-minded of departments will decide that, as other departments have already taken advantage of the NEIP to profit from reduced class sizes, they would be foolish not to do so also. The inevitable result of the gradual adoption of this investment strategy across the University will be, not to raise the total enrollment of the University, but to lower it.

Here is a slightly different way to think about the problem. It is next to impossible over the long run for any department to earn incentive money in every single year, since this would require an unrealistic rate of growth. Nor is it likely that any department will fall short of its enrollment goal in every single year. Rather, the record of most departments will be a mixture of wins and losses, with roughly half of each. In years when they surpass their enrollment goal, it will be in their interest to do so by as *narrow* a margin as possible, so as to avoid unduly raising their enrollment goals for the next three years. In years when they fall short, however, it will be in their interest to do so by as *wide* a margin as possible, so as to reduce their subsequent enrollment goals by as much as possible. The combined influence of these two asymmetric incentives must infallibly, over the long run, reduce average University enrollment.

Which brings me finally back to my first point. If the effect of the NEIP is to reduce rather than raise total University enrollment then, first, there will be no money forthcoming to reward any departments, regardless what particular attitude they have adopted, and secondly, an enrollment incentive program that is seen to reduce enrollment will quickly fall into an abyss of discredit and revilement from which no subsequent reform can ever resurrect it. I thus predict the following sequence of events. Year one: All departments will try to some extent to meet their enrollment quotas, and most will succeed. $850,000 will be disbursed, champagne will be uncorked, and glowing reports written about the NEIP. A few people will notice that the increase in total University

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[*] Arithmetically inclined members of the department may object that if a 2-year enrollment cycle guarantees funding one year out of two, then a 3-year enrollment cycle, properly managed, would guarantee funding two years out of three. For instance, suppose that our current enrollment is 12,000 SCH per year. We might adopt a cycle in which our enrollment goes from 6,000 in year one, to 10,000 in year two, to 12,000 in year three. Each second and third year we would surpass both the previous year and the 3-year rolling average, which would be constant at 9,333. This is true as far as it goes, but notice that if we missed a little in the second year and achieved an enrollment of only, say, 8,900 SCH, then we would fall below the 3-year average (8,967) in two out of three years. We might even attempt a 4-year, 5-year or longer cycle, but with each addition we require ourselves to target specific enrollment levels with greater and greater precision, so that two years is probably the longest cycle that is practically achievable. In any case none of this affects my principal point, which is that the NEIP provides departments with incentives to reduce, not increase, their average enrollment from current levels.

enrollment is not actually statistically significant, but those few will reason that this is nevertheless a propitious beginning to a program whose benefits can only increase with time. Year two: The difficulty of increasing enrollment beyond its current levels will become gradually apparent. Faculty will become frustrated at perceived inequities in the distribution of incentive funds, and angry at the predatory practices of the most successful departments, which they will view with some justice as a theft of students from their own courses. The administration will remind everyone that this is, after all, a very new program with unavoidable growing pains, but that there is every expectation that its shortcomings can be overcome in future. Year three: Crash and burn. Year four: The phrase "enrollment incentive" will not appear in any memo issuing from the administration.

Though the precise timing may be too brief, something like this sequence of events cannot fail to occur if the NEIP is instituted in its current form. In other words, the probability of the University actually distributing incentive money in the first year of the program is reasonably close to 100%, but falls rapidly with each passing year until it reaches zero. Our strategy as a department should therefore be to get as much money as we can out of the program in the short run (for instance, by being the very first department to openly adopt the two-year enrollment cycle), and let the long run take care of itself.

What if, however, we wish to take the larger view, and ask what sort of program would actually achieve the socially advantageous result of substantially raising total University enrollment? It would probably not involve any novel system for providing monetary incentives to individual departments, since the sort of tricks that are available to departments for increasing class size, such as grade inflation, large lecture courses on very general topics, courses taught by teaching assistants and the like, may attract some students away from other departments but do little to draw new students into the University, and may indeed have the reverse effect. At the larger level the University is embedded in its own market, where enrollment is governed by supply and demand. We might easily increase enrollment by lowering tuition, but this would probably not increase net University revenues, which is the real object of the maneuver. Alternatively, the University can increase demand (and thus tuition) by raising the quality of its instruction, and the way to do that, oddly enough, is to *lower* the student/faculty ratio by hiring new faculty in an exciting variety of fields, to expand the library collection, and to support ongoing faculty research where it contributes (as it usually does) to knowledge of one's larger field and ability to communicate that knowledge to students. Unfortunately the cost of such a policy is immediate and certain, while the pay-off is distant and uncertain. Finally, the University might increase demand through aggressive advertising, including active recruitment of promising students in Portland-area high schools, targeting both under-represented minorities who might otherwise never go to college and "traditional" students who might otherwise go elsewhere. The potential of advertising to fool the public, however, is limited. If the reality of our institution's quality falls far below the happy image we present, prospective students will figure that out.

If it sounds like there is no magic bullet, that is probably because there is not.