Economics 401, spring 2008
Instructor: Jeremy Sandford

Optional paper assignment
due 5pm, 4/28/2008

The syllabus lists a paper which goes into your course grade with weight 10%. This paper is now optional; if you choose to write one, your grade will be determined as per the syllabus. If you choose not to, the homework and exams will be re-weighted to sum to 100% (meaning the homework will count for 33.3% of your grade, the midterm for 27.8%, and the final for 38.9%).

The assignment is this: write a short "vignette" telling a story through the lens of economic analysis. The story can be from your own life, from a book or movie, or completely fictional. I would go into more detail, but the best way to get a feel for what is expected is to read the attached example vignettes (taken from another professor at another university). The bit of economic wisdom you discuss could come from the 401 class (i.e. some story about monopoly profits, a situation analyzed as a game, etc), or from another economics class.

The paper will receive either 10 points, 8 points, or 0 points. It will receive 0 points if it is wholly inadequate or plagiarized (if so, I will also take action consistent with university guidelines on plagiarism), 8 points if it is adequate, and 10 points if it is good, interesting, and/or funny. Papers should be well-written and proofread in order to receive a 10.

If you intend to complete the assignment, please turn it in to me by 5pm on Monday April 28, the day of our final. If you intend to not do the assignment, and have this 10% of your grade redistributed across your other course work, no action is required.

I would expect the paper to be about a page in length. Please do not turn in anything over 2 pages in length.

[redacted]

11/19/07

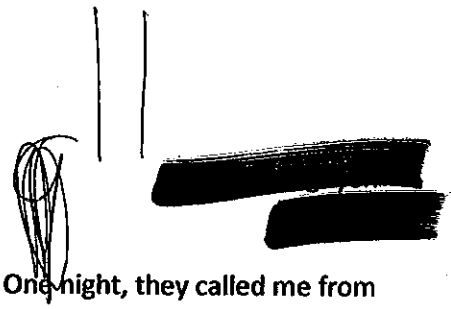
ECO 304K

Economics for Dinner

My observant younger sister, Alisa, employed the economic principle of **demand curves** when she was just six years old. After a long day in the second grade, I came home and bounced over to the kitchen to enjoy my usual afternoon snack. Instead of being greeted by a colorful bowl of Lucky Charms, I encountered my darling little sister's palm upturned and expectant. She had opened the pantry door to block the kitchen entrance and posted a misspelled sign announcing a fifty- cent fee. She explained that anyone who wished to gain admittance to the kitchen must pay her first. Mom was nowhere to be found, so I succumbed to the intense growling in my tummy and reluctantly shelled out the coins.

Upon returning to the kitchen later that evening for dinner, I again found my sister staunchly perched in the same spot, guarding the food Mecca's entrance. This time, however, the fee had increased to a dollar. There are five people in my immediate family and Alisa had figured out that the kitchen would be in higher demand around 7:00pm. She also realized that people were willing to pay more when their stomachs rumbled with hunger and no alternatives for food, other than our dear kitchen, were readily available. Thus, she understood that **demand was inelastic** when it came to our kitchen around meal times; for breakfast, lunch, and dinner the price increased to a dollar, but fell to fifty cents in- between meals.

Outraged, I (a whiny nine year old at the time) complained mightily to my parents who seemed amused by the whole situation. Finally, the powerful government of DAD stepped in and set a **price ceiling** of one penny to be charged. My sister pouted a bit, understanding that this new law would not benefit her much. She decided instead that a lemonade stand would now generate more profit and she exited the kitchen-monitoring market. What a cute, young economist-in-the-making!



I went to Chicago to visit some friends at Northwestern last year. One night, they called me from the concierge's desk at our hotel with an invitation to a pool party. Unfortunately it was a bad timing because we had barely crossed the street before I realized I was in need of feminine protection. So! We headed over to the nearest CVS and as most women know, the feminine hygiene section just happens to always be next to the condoms. One of my friends complained that the Trojan brand at the CVS we were at were much cheaper than at the CVS near Northwestern's campus. He proved it by pulling out a recent receipt, much to our amusement, and we all saw that the campus' CVS sold Trojan condoms for almost 3 dollars more.

I wouldn't think that CVS is a monopolist, but I do realize that they are taking part in what we learned in class as 'price-discrimination'. The CVS found all over Chicago charges retail price for condoms, or demand price, as well as its competitors. Condoms are a price-elastic good (ha - in more ways than one) in...most areas. However, the CVS on campus is the only drug/grocery store that students can get to conveniently, and sells above the demand price for condoms. Being on campus and in reach of students in their hormonal prime, they can accurately assume that Trojan brand condoms, America's most reliable, have a very low price elasticity (if it isn't price inelastic), and can therefore charge whatever it wants.

Why is the campus' CVS still in business, despite charging more than usual for condoms (and possibly other goods)? Perhaps students on campus also have higher utility for condoms and are more than willing to pay the price...Which they should because unprotected sex is never a good thing. My friend with the receipt therefore decided to "stock up" while he was in the city, thus receiving what we call a 'consumer surplus'.

I have actually looked around on UT's campus and saw that Jester and Dobie's internal drug stores sold a Trojan pack of 3 condoms for about 2.50. However, going to the Student Services Building I saw that Trojan condoms were being sold in home-made packages of 12 for the same price! It's not much of a price-discrimination because the three places aren't being owned by the same firm – but it does reinforce the idea of the different elasticities in different locations:

inelastic in dormitories, elastic on the way to class

[redacted]

A Kingly Catch

Deadliest Catch, a documentary series on the Discovery Channel, centers on the dangerous lives of crab fishermen who navigate the hostile waters of the Bering Sea. These men risk their lives in search of Alaskan king crabs, which are substantially valuable and consistently in demand by luxury cruise lines and tourists who visit Alaska. This scenario illustrates the concept of **compensating wage differentials**, by which risky, undesirable jobs pay higher wages than low-risk, highly desirable jobs.

King crab fishermen endure subzero temperatures cold enough to freeze ocean spray in midair. The "pots" (tremendous 700 lb. wire baskets) used to catch the crabs can freeze within seconds of being retrieved. The hazardous waters on which these fishermen travel can easily overturn a ship, throwing crew members overboard where they are only capable of surviving for mere minutes. Hypothermia and drowning are common causes of death among king crab fishermen, and the fatality rate among them is 60 times greater than that of average fishers in the United States, which is approximately 118.4/100,000 workers (This means that almost 10% of king crab fishers die on the job).

This job is certainly a life-threatening one, but it attracts fishermen because of the significant compensating wage differential. The *average annual salary* of a fisherman in the United States is $29,000. King crab fishers, on the other hand, can earn up to $100,000 during a good season. They do not work year round, as the time windows during which king crabs can be caught are very small. For *blue* and *gold* king crabs, the average season lasts three months, from October to January. For *red* king crabs, the average "season" is only four days long. Even during a particularly "dry" season, these fishermen can earn at least $50,000. This literally means that, if king crab fishers are fortunate enough, they can earn 72-244% more than an average fisherman's yearly salary in a fraction of the time. The increase in payoff is significant enough to warrant the risks involved.

There is no single party which directly pays a wage to king crab fishermen, but the demand for Alaskan king crabs is **inelastic**, due to their integral role in the appeal of Alaska's tourism industry. These creatures are also becoming increasingly rare due to fish predation as well as warmer ocean climates which prevent juvenile king crabs from reaching adult size (recruitment). Therefore, the going rate of about $29.95/lb. for king crab is *guaranteed* to those who make a catch. The popularity of *Deadliest Catch* has actually increased demand for king crab, further ensuring that the risks these fishermen take are worthwhile.

This summer my mother's side of the family decided to take a camping trip together. The adults, all having jobs, could only stay for the weekend, but my cousins, sister, and I went up two days early to have some extra bonding time. The first night as it started getting cold, I suggested that we make a fire. My cousins and sister all said that they were not really cold and could do without one. I, being very cold, decided to build the fire on my own. Once I had finished, I noticed everyone sitting around the fire warming their hands. As happens so often when you are the youngest, I had been tricked into creating a **public good** for our little society. The fire was **nonexcludable**, I could not very well stop the others from gaining the warmth (or at least not without a considerable amount of force). Knowing that they would reap the benefits of the fire weather they contributed to building it or not, my family members had no incentive to help and thus became **free-riders**.

The next night, when I suggested that we build a fire, my cousins and sister again claimed that they were not cold. This time I was not to be tricked and sat waiting for someone else to build the fire. As the night went on it got colder and colder and darker and darker, but no one was willing to build the fire, so all of us just sat there pretending not to care and hoping that eventually someone would give in allowing us to take a free-ride off of their work. Each of us was unwilling to do all the dirty work knowing that everyone else would enjoy the benefits without contributing any effort themselves. This went on all night, and although we were all cold and would have liked to have a fire, one was never built so the good was **under produced**.

When public goods are under produced, government involvement, or in our case parental involvement, may be called for. The next day when the parents arrived, I, being the younger sibling that I am, told the adults what had been going on. That night, all of us, under the treat of punishment, contributed to building the fire.

[redacted]

Hamermesh Eco 304K

Very good

Monopolistic Friendship

Economics is not just a subject in school, it is a way of life. This has become very apparent to me the last few months going in depth into the subject. On a random day, I got a random flashback of my life, I remembered about a friend I had named Justin in 5th grade that I ended my friendship with quite abruptly. Our teacher Ms. Eveler was quite prudent on writing, which explained our weekly book reports which averaged horribly compared to the rest of the school, as no one ever received an A. A stroke of luck came to me when I found a copy of the exact grading procedure Ms. E used to grade our reports in the trash. Using this I quickly became the kid who always got an A on their paper, which is why I started to offer my "amazing" writing ability to others by offering to proofread their paper for a large donation of pixy sticks and dill pickles. The only way to get an A on the paper was to have me proof read it. This service quickly spread like fire which is why I decided to expand my services by getting my friend Justin to work alongside me. As the inventor of my scheme I felt entitled to help myself to a large quantity of the pixy sticks and pickles, which Justin eventually did not like at all. We had a well working scheme for a while until Justin, knowing my secret decided to venture off on his own. He decided to start offering his own proofreading skills for a lower cost of tootsie rolls. Justin stole all my business away, and I did not know what to do, he was getting all the business and I was furious. So like any sore loser would do I decided to get back at him by telling on him to the teacher which entirely killed the proofreading services and our friendship all together.

In looking back at my 5th grade experience one can clearly see the principles of economics at its best. At the beginning I had a pure monopoly on my product of proofreading papers for a guaranteed A, a labor intensive technology. Since I had the only method of getting an A, and there were no other substitutes, thus entry to the market was blocked. As business expanded and demand became greater

my marginal product diminished until I hired one more worker to efficiently operate at an optimal point maximizing output and profits. Since my business experienced positive profits in the short run, this provided an incentive for Justin, now capable of producing a close substitute which allowed him to freely enter the market, to earn a profit on his own without having to split the total revenue with someone else. This created an Oligopoly in which Justin and I were the only dominant firms which meant we could effectively influence the total market price if we choose to do so. But lack of economic understanding by one firm failed to see the possibility of colluding to limit competition and increase joint profits. Instead one firm drove the other out of business by selling below average variable cost lowering profits in the short run, to eventually maximize profits in the long run by get getting all the clients and later raise product price. In the end one firm took a last desperate attempt using "legal action" to get compensation for being driven out of business.

[redacted]

Good!

The Joy of Cats

My boyfriend, John, and I have two cats, Harry and Molly. Let me rephrase that. I have two cats that we share and they are especially mine when it comes to "kitty duties." The worst of these duties is changing their litter boxes. There are two that are always done at the same time. Neither of us likes to do this but it has to be done, not just for our sakes (it can get stinky), but also for the cats' sakes which ultimately effect us. They seriously start acting out as a result of a dirty litter box. I started thinking about what a payoff bimatrix would look like in regards to performing this pesky duty.

If I don't change the boxes and John does, he is not very pleased at the fact that he has to go it alone but is glad that that area of our house is clean and I feel bad for not helping even though I got out of helping.

If I change it and John doesn't, I am not super excited about the job ahead of me but I feel better about it knowing that I won't have to hear complaints from John and my house is cleaner and the cats are happier.

If neither of us clean it, everyone involved suffers: cats, owners, house guests, etc.

If we both clean it, we are both relatively happy because we helped each other, we have a nice clean area and the cats aren't complaining.

This is what the bimatrix would look like:

John \ Cara	change	don't change
change	(12,12)	(5,5)
don't change	Nash Equilibrium Pareto Optimum (15,8)	(0,0)

After doing this little experiment, I found that I have a dominant strategy to clean the litter boxes no matter what. This is probably due to that fact that I would rather clean up after the cats than hear complaining about how dirty they are and need changing. I also found that the Nash Equilibrium is when I go it alone and it is also the Pareto Optimum because neither of us can be made better off without making the other worse off. I will definitely not be sharing this information with my boyfriend or I will never get any help with the litter boxes again.

[redacted]
ECO 304K – Story
Dr. Hamermesh

The market for computer graphics chips has changed drastically in the last decade. In the 1990's, a very large number of companies were founded to design graphics chips for computers. At one point there were over twenty different companies manufacturing these chips. However, around the turn of the century, almost all of them went bankrupt, were bought out or left the industry. In modern times there are only three major manufacturers of graphics chips: NVIDIA, ATI Technologies and Intel. Of those three, only NVIDIA and ATI develop chips for dedicated graphics cards; Intel only designs integrated graphics chipsets. What happened? The rapid progression of 3D graphics caused graphics chips to drastically increase in complexity, and the vast majority of graphics chip manufacturers simply could not handle the exponentially increasing costs necessary to develop these advanced chips. Before the turn of the century, graphics chips were relatively cheap to make because they only had to display simple 2D graphics. 3D graphics however required exponentially more transistors on the chip and thus the costs for making graphics chips ballooned.

This is a demonstration of long run equilibrium in a monopolistically competitive market. The point of minimum long run average cost shifted up and to the right because of the increasing complexity of graphics chips. In addition to development and production being more expensive, individual firms had to produce many more chips than before or they would suffer negative economic profit. Demand remained relatively constant so about the same total number of chips had to be produced. These two things combined resulted in the market changing from a large number of relatively small firms to a very small number of large corporations. A firm had to produce a large quantity of chips to avoid negative profit, but since the total number of chips demanded was about the same the amount, the number of firms decreased drastically. This is one situation where technological advancement drives up costs rather than decreases them – operations become much more expensive for the firms that have to develop and manufacture the technology.

ECO 304K Story: Nabisco Tie-in Sales

When I study for my Intro to Microeconomics tests and quizzes, I work up quite an appetite. I live in Jester, so I went down to the Jester City Market and picked up some Ritz crackers and some Oreo cookies to satiate my hunger. As I looked at each box, I was surprised to see attempts at tie-in sales on the back of the food packages. A tie-in sale is defined as a firm's use of monopoly or oligopoly power in one market or industry (product A) to promote the sale of product B in a separate, more competitive market. I believe that both of these products have substantial market power (Ritz and Oreo) and both attempted to influence other markets with their packaging.

On the Ritz box, there are recipes for "Ritz Bruschetta" and "Feta & Red Pepper Snacks." The Bruschetta recipe specifically demands "KRAFT 2% Milk Reduced Fat Shredded Mozzarella Cheese," "KRAFT LIGHT DONE RIGHT! House Italian Reduced Fat Dressing," and "KRAFT Shredded Parmesan Cheese." One could argue that Kraft foods, who owns Nabisco, who owns Ritz, is using it's market power in the cracker market to influence the more competitive shredded cheese and salad dressing markets. On the back of the Oreo Cookies package, there is an ad that demands we "Try a delicious new snack cake from OREO!", more specifically, "Oreo Cakesters." Oreo definitely has substantial power in the sandwich cookie market, and it is using this product to influence the sale of Oreo products in the snack cake market, which is arguably more competitive, with companies like Little Debbie and Hostess. Interestingly enough, both of these products are owned by Nabisco, which is owned by Kraft, which was (up until a year ago) owned by the Philip Morris Company. I do not think an ad on the back of a pack of Oreo's saying "Tastes better with Marlboro's!" would have been as successful.

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Economics Story
Elasticity of Demand

I teach swim lessons at a YMCA at Richardson, Texas. The first summer I worked there swim lessons were $40. That summer 1,000 kids enrolled and took swim lessons. Since the pool was always overcrowded that year the YMCA said they would raise the price next summer. The next year the YMCA raised the price of lessons to $50 and the total count at the end of the year barely 400 kids had enrolled in swim lessons. Having 400 people enrolled was an embarrassment because the pool always looked empty and it looked like nothing was getting done.

The demand for swim lessons is elastic. This quantity was decreased 60% and the price was increased only by 25%. Plugging the formula into the elasticity of demand equation the change in quantity is : [(400-1000)/.5(1000+400)]
and the change in price is: [(50-40)/.5(40+50)].
Dividing the change in quantity over the change in price showed in this case the elasticity of demand was 3.857, which is greater than 1 proving that the demand was very elastic. My third year will be an adventure to see what the price will be set at so we won't be overcrowded or completely empty.

[redacted]

D. Hamermesh ECO 304K

Catcher in the Rye

In the book *Catcher in the Rye,* Holden Caulfield is a troubled teen on a crooked path to find himself. He has just been kicked out of yet another prep school and is wondering aimlessly about New York City. After facing a night with a prostitute and her pimp, rejection from a former girlfriend, and a drunken night on a park bench that almost leads to death, Holden decides to run away and become a mute. However before he leaves, Holden goes to see his sister Phoebe, the one person he truly loves, who is very upset at the news of Holden running away. On his way out of town, Phoebe shows up with a suitcase and declares that she wants to go with him. Holden feels that he needs to leave the city, but he doesn't want Phoebe to miss out on her own childhood. Yet, Phoebe wishes to be with Holden but will miss her family and her upcoming school play. Holden and Phoebe thus face a decision that can be seen in a pay off matrix:

		Phoebe	
		Run Away	Stay in NYC
Holden	Run Away	(4,3)	(5,4)
	Stay in NYC	(-2,-2)	(6,6)

The game theory that is executed in the above pay off matrix leads to one decision. While Holden does not have a dominant strategy, Phoebe's dominant strategy is to stay in New York. She does not have a desire to leave the city but wants to be with her brother. She would be happier if Holden and she stayed; she could be with her parents and participate in her upcoming school play. Holden, however, desperately wants to escape from the crowds but feels remorse at the thought of Phoebe being alone; he deeply loves his little sister, and the idea of Phoebe traipsing after him, missing her childhood deeply distresses him. His remorse outweighs his desire to runaway, thus both staying in New York is the nash equilibrium. Since deviating from this decision would only make both less happy, staying in the city is also the pareto optimum. As J.D. Salinger wrote, "Life is a game, boy. Life is a game that one plays according to the rules."