

# Economics Honors-Allocation of Resources

## *Campus Parking*

Good parking spaces on the Stanford University campus (as on most campuses) are at a premium, especially on rainy days. Stanford has about 11,000 students — of whom about half live on campus — about 1,000 faculty and perhaps 8,000 nonteaching staff members and other such employees. Sampling suggests that perhaps 8,000 to 15,000 drivers may seek parking on a rainy day.

Although there is no simple way to indicate the number of desirable parking spaces available (desirability depends on where one wishes to go on the campus), perhaps 1,500 to 2,000 spaces are very convenient to different parts of the central campus. Including all outlying areas of the campus (perhaps three to five blocks from classrooms and offices), a large number of additional parking spaces are available.

For many years, by tradition the best parking spaces were exclusively set aside for faculty members (via free "A" parking stickers) and the next most desirable ones for staff members (via free "B" stickers). Other reasonably close-in spaces were allocated to students at a small charge ("C" stickers). Distant campus parking was free to all. Some special parking was provided for physically disabled persons.

Not surprisingly, students frequently complained, as indeed did faculty and staff from time to time, since on rainy days there was an excess demand for all three reserved-parking areas. In this setting, the president's office announced that the parking situation was being reassessed and invited all concerned to submit their views.

Five major approaches developed:

**1. Leave things as they have been.** This was quite popular with the faculty, who all got "A" stickers. Faculty were seldom made late to class by a shortage of good parking, and most staff and students could manage pretty well if they allowed a little extra time for getting where they were going. But you can guess what the antiestablishment students said.

**2. First-come, first-served.** This would let students, faculty and staff alike compete for the best parking places, which would presumably go to those who felt the greatest need for them. Your willingness to set the alarm ahead 10 minutes to get a reasonable parking space would be the best measure of how important the better place was to you. Who could make a better decision for you — and Stanford?

Advocates of this plan emphasized its equity in treatment of the various groups on campus. Everyone has the same chance at the parking spaces (faculty and students, rich and poor, sleepers and early risers), and all would have an equal chance to get there first — or would they?

**3. Markets and a price system.** A third alternative would allocate the spaces by selling them. Put a rent on each space, and let the person who is willing to pay the most for it rent it

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each semester or year. It would probably be convenient to group all the spaces into three or four classes: "A" spaces and stickers for the best locations, "B" for the next best and "C" for the least attractive. A price would be set for each sticker area that would roughly equate the number of stickers bought with the number of spaces available in that class. Thus, those who would pay the most would get the "A" spaces, the most desirable areas, at a higher price. Those who paid less would get the "B" stickers. Those who paid still less would get "C" stickers, and those unwilling to pay at all would use the outlying areas. There would be a liberal sprinkling of metered areas on campus for those who wanted to buy short-term parking.

Advocates of this plan argued that it would basically give the best parking spaces to those who were willing to pay for them, which is the way we allocate almost everything else in our society, and would in essence let the students and faculty themselves determine who got the best spaces. (In this plan, as in the others, special allowances would be made for handicapped students who needed special parking assistance; there was little dispute over this point.) Faculty members, staff and students would all have the same chance to get good parking. There would be no discrimination in price within each of the three groups.

**4. Democracy.** A fourth group argued that none of these approaches was obviously superior to the present system; and that in accordance with democracy, students, faculty and staff should all together elect a special parking committee to say who should get these places each year and how. There was some dispute over how this committee should be elected and what representation should be given to each of the various parking-demand groups on campus. Support for this alternative apparently depended in considerable part on the decision about how the representatives should be chosen.

**5. Random choice.** A few hearty souls, especially those from the statistics department, proposed an allocation of parking spaces through a random process. Tickets for the various classes of parking around the campus would be given out on a basis of random choice. That is, random numbers would be put in a bowl, with one number assigned to each person (faculty, students and staff) who wanted to be in on the drawing. Then the stickers would be allocated on the basis of the numbers drawn out of the bowl in a random fashion. Many observers said this was a wasteful way of doing it since it would obviously not take advantage of the preferences of different students and faculty members for different classes of lots. A few sophisticated souls suggested that this random process be used, and then let develop on campus a market for the tickets allocated through the random process. In this market, presumably the various stickers would be bid up in price until the people who wanted them the most had obtained them by paying a higher price for them than would be paid by parkers who wanted them less strongly. Many participants argued that this would be very unfair to those who needed parking space and had to pay for the space to those who won the best places in the drawing, even though some of the latter didn't even have cars.

## Campus Parking Activity

1. What central problem does Stanford face in parking spaces? Explain
  
2. What are the three ways societies deal with scarcity? (Hint: Look Below)
  
3. Categorize the five methods Stanford could use to allocate parking spaces.

	<b>Tradition</b>	<b>Market</b>	<b>Command</b>
Leave things as they've been			
First Come-First Served			
Markets & Price System			
Democracy			
Random Choice			

4. For each proposed method, explain what behaviors are encouraged or discouraged by different groups.
  
5. Is your main goal to maximize equity (fairness) or to obtain the most efficient allocation of resources (parking spaces)? If the goal is equity, which system would you adopt and why?
  
6. If the goal is efficiency, which system would you adopt and why?
  
7. Should people who live on or near the campus have the same chance of getting good parking spaces as people who live a considerable distance away?
  
8. Does democracy or the price system give a more-efficient allocation of resources here? A more-equitable allocation of resources?

