

How much will people pay for status?

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Peoples' concerns for status raise problems for traditional economic models. For example, concern for status leads people to have interdependent preferences. Recent empirical work has been done to determine the scope and magnitude of this concern with regard to income. This paper builds on these recent empirical findings. Using a survey, this paper shows that status-driven concerns for income are abundant and range in size from very little to very large. Based on information supplied by participants, women showed more concern for status than men. Family income and future expectations also were significant in an ordered probit regression.

I. Introduction

“For my part, I had rather be the first man among these fellows than the second man in Rome.”

-Caesar on passing by a small village of barbarians.¹

For whatever reason there have been people concerned about their status (i.e. relative position in society) for a long time, yet this issue has only recently begun to concern economists. This is probably because status complicates people's behavior so much. If people are concerned about their position, then individual's utility functions are no longer independent. Traditional utility functions assume that each person's satisfaction is independent of everyone else's possessions, but if I care about my position, then how much you have affects my satisfaction.²

Another complication is that if individual utility functions were only based on rank, then the total utility of society would resemble a zero-sum game. This is because anyone who gained utility through a higher position would cause someone to lose position and hence some utility. Of course utility functions are not entirely based on rank, since rank does not influence all decisions, like which potatoes you should buy. But if there is some status seeking behavior then this behavior will still hamper total utility.

The purpose of this paper is to build on existing evidence for the scope and magnitude of people's concern for status. The good that I chose to look at was income, since people's decisions about how much income they would like to make reflect their ideas about overall consumption decisions. The tool I used was a survey that asked respondents to choose between two hypothetical situations, one in which they would make more money than the average person and one in which they would make less but

¹ From Plutarch's *Caesar*

² The problem of interdependent utility functions is one that was originally raised by Duesenberry (1949).

absolutely more than in the first country.³ In the second part of the survey respondents were asked to provide some demographic information, which was used to identify any trends in responses to the first part of the survey.

The results of this survey show that a large percentage of people surveyed have some positional concern and that they would be willing to sacrifice a significant amount of income to gain status. Regressions run using the demographic data suggest that men are less concerned about status than women, and that people who expect higher salaries in the future are more concerned about status.

II. Literature Review

Though concern for status was first addressed by Veblen (1899), it has not attracted much attention from economists until recently. Recent literature has approached the issue from a variety of directions, including theoretical work, empirical evidence from national data, experimental results, and survey results.

Fred Hirsch (1976) first coined the term positional goods to describe goods that limit gains from growth. With growth consumption of these goods increases, but this extra consumption does not lead to an equivalent increase in welfare. This is because the value of these goods is derived from their relative position instead of some absolute measure. An example of such a good is higher education. There is a general perception that attending a higher ranked college leads to better opportunities after college, so individuals will want to spend more in order to attend these colleges. But if everyone does this, no one will attend a higher ranked college, and everyone will be stuck with the same rank as they would have had before. Hirsch claims that there are enough of these

³The survey drew from and expanded on a question given in a survey done by Solnick and Hemenway (1998)

goods to affect national welfare.

Richard Easterlin's (1974) empirical work supports Hirsch's claim. Easterlin compared survey data on happiness to material wealth for fourteen different countries. He discovered a seemingly paradoxical set of facts that were consistent across the countries: Within a country the rich are happier than the poor, but as the economy grows and everyone gets richer, overall happiness does not change.

Richard Frank (1997 and 1985) also argues that people are spending too much on positional goods, because they could be happier by agreeing to spend less on these goods and more on non-positional goods. For Example, he argues that in a society where everyone lives in 5,000 sqft houses everyone could be happier if they only built 3,000 sqft houses and spent the extra money on a better mass transportation system. He went so far as to suggest a special consumption tax on such wasteful spending (see also Layard 2003).

Recent work on positional concerns, which includes this paper, attempts to identify where these positional concerns lie, and have mainly focused on income and leisure time. Solnick and Hemenway (1998) directly asked participants about their positional concerns through a survey. The survey asked participants to choose between two hypothetical states: In the 'positional' state subjects could have more of a good than the typical person, and in the 'absolute' state they would have less than the typical person but more than they had in the 'positional' state. Participants showed positional concern for many of the goods, including income.⁴ Pingle and Mitchell (2002) conducted an experiment, in which they asked participants to report how much they would work, based on information given about their wages, and the wage and hours worked of the average

⁴This survey asked about the participants positional concern for 12 different goods, including leisure and income. About 50% chose the positional state for the income question.

person. They report that about 70% of the participants showed some positional concern. Zizzo and Oswald (2001) told participants that they could pay to reduce the income of other participants. Two thirds of the participants were willing to pay to “burn” the other's money. Instead of reducing other peoples' incomes, my paper allowed participants to purchase status by sacrificing some of their income.

III. Method

The survey I conducted for this paper is based on the survey done by Solnick and Hemenway (1998).⁵ As mentioned above, the Solnick survey asked respondents to choose between two different hypothetical states. The question they asked about income is given here:

A: Your current yearly income is \$50,000; others earn \$25,000.

B: Your current yearly income is \$100,000; others earn \$200,000.

(Prices are what they are currently and prices (therefore the purchasing power of money) are the same in states A and B).

My survey is essentially an expansion of this question with a few modifications.

First, I introduced a context to the question. A letter written by James Morley in response to Solnick's results motivated this addition. His letter suggested that participants in the Solnick survey were misinterpreting the results, as he says, “One suspects that this choice reflects the implicit assumption of a fixed overall quantity of goods and services.”⁶ If the respondents were in fact making this assumption, then they would have been confounding the difference between nominal and real income, thereby missing the goal of the question. This would have caused the survey to overestimate the number of people with positional concerns. Though the Solnick survey did tell participants to assume that the purchasing power was the same in both states, their question was abstract enough that

⁵Abbreviated to Solnick

⁶ This is articulated in Morley's letter to *The Economist* in response to an article that was published about Solnick and Hemenway's 1998 paper. The original article can be found in the August 9, 2003 issue, while Morley's letter is published in the August 23, 2003 issue.

I believe Morley's concern is plausible.

To mitigate this problem I added context to the question. My question was introduced as being a choice between two different hypothetical countries of different per capita wealth, which gave the respondents a more concrete way to think about their choice. The assumption that prices in both countries are exactly the same was strengthened by giving participants a specific example to consider. I used housing, because housing is probably the *last* good that one would expect to have a consistent price across a rich and a poor country. I intended to make it as difficult as possible for participants to choose the high-status country. An example of one of the questions is given below (The entire survey is in the appendix):

Assume that prices of goods are constant across both countries. For example, if a 2000 sqft house costs \$200,000 in Country A, then that same house costs \$200,000 in Country B, even though one country is richer than the other.

	Your Income	Average Person's Income
Country A	\$50,000	\$25,000
Country B	\$100,000	\$200,000

In addition to the figures used on the Solnick survey, my survey asked five more questions, for which the amount of income received and the average person's income in Country A was systematically changed, while Country B was kept constant. I did this to test the hypothesis that there is a price that most will pay to have a higher position in society. In each question the respondent must sacrifice a certain amount of income for a better position in society, which represents the price of that higher position. The numbers for Country B were the same in all six questions. The amount of income in Country A varied from \$10,000 to \$90,000 in increments of \$20,000 for the first five questions. For the sixth question the income in Country A was \$100,000, the same as in Country B. The Average income in A was always half of the respondent's income.

This survey was given to students and faculty at Washington University in St.

Louis in the fall and winter of 2003. Besides the printed instructions on the survey, the respondents were only told that this survey would be used to study their income preferences. 121 participants completed the survey. 57% were male. 97% were students. The average age of the respondents was 20.8.

As Solnick notes, it has been shown that people tend to prefer the status quo and that they are averse to losses (Tversky and Kahneman, 1981; Samuelson and Zeckhauser, 1988). Because respondents tend to view the first listed state as being the status quo, Solnick issued two versions of the survey. The second of the two versions had the same questions as the first, but the order of the states was reversed.⁷ Since they did find a bias towards choosing the first state, the survey for this paper used the same method, issuing two versions of the survey.

Subjects were also asked their gender, age, family income, size of city they grew up in, year of education (if student), area of study, if they gambled, the minimum income they would be happy with in 5 years, and their current occupation.

This survey had the same significant limitation that Solnick's survey did, which was that subjects were asked to choose between two hypothetical cases. One criticism to this sort of study is that the subjects may not be able to report how they would actually behave, if really faced with the hypothetical choice (Wallis and Friedman 1942). However, Roth (1995) and Thaler (1987), among others, have expressed confidence in hypothetical surveys. Both have asserted that there is no significant difference between subjects who respond to hypothetical questions and those who receive some monetary incentive.

Another concern about the usefulness of this survey is that it was primarily given

⁷ Solnick 377-9

to students. Since most students do not have much experience in the labor force, one could argue that their preferences with regards to income do not represent the entire population's preferences. Though this is a limitation of this survey, it was also a limitation to the others surveys and experiments done in this area, since almost all used students as their primary participants. One advantage to using students is that they have recent experience from a broad range of cultural backgrounds and from all parts of the country. In this respect, students are probably just as, if not more diverse than local residents.

IV. Results

About 55 percent of the participants in this survey chose to sacrifice some income from the high income country for a better position in the low income country. Using the values given in the survey, 55 percent were willing to sacrifice at least \$10,000 or 10 percent of their annual income for a better position. Many of these participants were willing to pay a much higher price. 45 percent chose to sacrifice \$30,000 (30% of income), and 37 percent would sacrifice half of their income, \$50,000 (see Table 1 for the results).

Evidence from this survey suggests that there is a price that most of the participants were willing to pay for higher status. The percentage of people choosing the high-status country rose as the difference in income between the two countries became less severe. And if a participant chose the high-status country in one of the questions, then the participant did so in all subsequent questions. For example, if the participant's first positional choice was at \$70,000, then that person chose the high-status country in both the \$90,000 question and the \$100,000 question. These two pieces of evidence

imply that there was one price that those who chose status were willing to pay (see Appendix for graph).

Table 1:

Income in high-status country	Percentage choosing high-status country			
	Version 1	Version 2	Combined	P value ⁸
	N= 83	N= 38	N= 121	
\$10,000	14	29	19	0.09
\$30,000	25	34	28	0.33
\$50,000	37	39	38	0.83
\$70,000	43	47	45	0.69
\$90,000	53	61	55	0.44
\$100,000	75	82	77	0.39

The extreme questions provided interesting results, and emphasized that people have very different ideas about how much status is worth. In the last question 77 percent of the participants chose to live in the country where they had higher status and the same income. This question stated that the participant could make \$100,000 in a country with an average income of \$50,000 or in one with an average income of \$200,000. If everyone has some concern for status, then we should expect that everyone would choose to live in the country with an average income of \$50,000, because there was no difference in personal wealth between the two countries. However, 23 percent chose to live in the \$200,000 country, showing no concern for status. Perhaps these people had altruistic interests,⁹ recognizing that if they had the same amount in either country, everyone else might as well have more. It is also possible that these people thought that the richer

⁸P-values for a two sided t test, using the null hypothesis that the results from versions one and two of the survey are the same.

⁹This reason was given by one of the participants, after he finished the survey.

country would have better available public goods, like mass transportation.¹⁰

On the other extreme, there were those who were willing to sacrifice at least 90 percent of their income for higher status. 17 percent of the participants chose this option. For these participants status is very valuable and worth a very high price. This type of sacrifice was suggested by Caesar in the quote at this beginning of the paper. If these people's only goal in life was to be the leader of their country, then this sacrifice might make sense. This is only speculation though, since this survey does not address the motivations behind each choice.

Compared to the Solnick survey, the results from this survey are lower by about twenty percent for the first version. Solnick reports that 56 percent (38 percent for version 2) of respondents chose the positional case for the \$50,000 question, where only 37 percent (39 percent for version 2) chose the positional case in this survey. Though this difference seems large, the data from the Solnick survey is not available, so no tests were run to determine if these results were statistically different. Differences in magnitude aside, my results do agree with Solnick's result that there is a significant positional concern for income.

The results for this paper do not show a bias between the two versions of the survey. Participants in the Solnick survey consistently showed a bias towards picking the first state. However, there is no statistical difference between results for the two versions of my survey, using a 95% level of significance.¹¹

With the demographic data collected in the second part of the survey, seven regressions were run. Using each of the six questions from the first part of the survey as binary dependent variables, I ran six probit regressions to estimate the probability that a

¹⁰Another reason given by a participant.

¹¹See note 9.

participant will choose the high-status country based on the collected demographic information. The seventh regression is an ordered probit model that estimates the level of concern for status, based on the demographic variables. The dependent variable for this seventh regression is an integer ranging from zero to six that represents the participants first choice of the high status country. For example, if they chose the high-status country in question three they were given a three, and if they never chose the high status country they were give a zero.

Table 2:

Factors influencing the level of concern for status			
Dependent variable: Level of concern			
Independent Variable: (Xi)	Coef.	S.E.	p value
Male (X1)	-0.58	0.225	0.01
Family Income Percentile			
2nd (X2)	1.07	0.756	0.16
3rd (X3)	1.64	0.699	0.02
4th (X4)	1.56	0.674	0.02
5th (X5)	1.30	0.669	0.05
Minimum Salary in 5 years (X6)	0.01	0.009	0.01

Table 2 shows the results of the ordered probit regression. Males showed less concern for status than females, and this result was significant to the 5% level. The coefficients for family income represent the difference between that income percentile and the participants in the first income percentile. Participants from the 3rd income percentile showed the most concern for status, while participants in the 1st percentile showed the least. The minimum salary variable represents the minimum salary (in thousands) that participants reported they would be satisfied with in 5 years. I had expected this coefficient to be positive, because I thought that people who felt they needed more income to be happier were not basing their decision on some particular combination of goods that they wanted, but rather on the perceived relative position that salary would

give them. I did not expect gender to be a significant factor, nor did I expect family income to be one. Both someone who grew up with status and someone who grew up lacking that status might desire future status. The results from the six individual probit regressions show that the variable which was significant in the most equations was gender.¹²

V. Conclusions

This paper suggests that two facts are true. First, most people show at least some concern for the relative position of their income level, independent of its absolute value, and second, this concern varies quite a bit from person to person. Both of these assertions pose problems for traditional economic theories explaining preferences, because these assertions suggest that individual preferences are interdependent, and to highly varying degrees.

If the results from this paper and its predecessors are representative of real behavior, then future empirical research should be able to use data from actual consumer decisions to validate these results.

¹²Gender was significant in five of the six regressions. See the appendix for a detailed report on these regressions, including a list of the omitted variables.

Appendix:

Graph 1:



Table 3:

Binary probit regressions for each question

Dependent Variable (a)	\$10,000	\$30,000	\$50,000	\$70,000	\$90,000	\$100,000
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
Male	-0.86***	-0.56*	-0.77***	-0.64**	-0.13	-0.56*
Family Income Percentile						
3rd	0.79	0.94	1.40**	1.39*	0.96*	0.56
4th	0.61	0.76	1.31**	1.47*	0.89*	0.33
5th	0.14	0.46	0.82	1.29*	0.97**	0.17
Salary	0.01**	0.006	0.006	0.003	0.006	0.02***
Rp2 (b)	73.8	68.3	61.3	57.1	53.9	64.0

(a) Dependent variable: Y= 1, if participant chose the high status country, 0 otherwise

(b) Rp2 is the percentage of decisions correctly predicted by the estimation.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Omitted Variables:

- *Age*
- *Size of Home City*
- *Year of Education*
- *Area of Study*
- *Participant Gambles*
- *Current Occupation*

Survey:

Part I:

Instructions (Questions 1-6): Imagine that you have the option of moving into one of two hypothetical countries, A and B, where your decision is between making more than the average in a poorer country and making less than average in a richer country.

Assume that prices of goods are constant across both countries. For example, if a 2000 sqft house costs \$200,000 in Country A, then that same house costs \$200,000 in Country B, even though one country is richer than the other.

1) I would prefer to Live in:

	Your Income	Average Person's Income	
Country A	\$10,000	\$5,000	<input type="checkbox"/>
Country B	\$100,000	\$200,000	<input type="checkbox"/>

2) I would prefer to Live in:

	Your Income	Average Person's Income	
Country A	\$30,000	\$15,000	<input type="checkbox"/>
Country B	\$100,000	\$200,000	<input type="checkbox"/>

3) I would prefer to Live in:

	Your Income	Average Person's Income	
Country A	\$50,000	\$25,000	<input type="checkbox"/>
Country B	\$100,000	\$200,000	<input type="checkbox"/>

4) I would prefer to Live in:

	Your Income	Average Person's Income	
Country A	\$70,000	\$35,000	<input type="checkbox"/>
Country B	\$100,000	\$200,000	<input type="checkbox"/>

- E. More than 80%
- 14) How would you describe the area you grew up in?
- A. Large City B. Medium City C. Small City D. Rural/Town
- 15) What is the lowest salary you think you would be satisfied with five years from now?

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