

Is Relative Income of Overriding Importance for Individuals?

Kenneth V. Greene
Phillip J. Nelson
Department of Economics
Binghamton University
Binghamton, New York
February 9, 2006

1. Introduction

Recently, the economics literature has given considerable attention to the issue of what is more important in determining well-being: a person's real income or that income relative to the income level of others. Probably, the bulk of that literature has come down on the side of the importance of relative income. This is so much so that a very recent article that documents how the growth in absolute income in East Germany from 1991 to 2001¹ positively affected perceived levels of well being is entitled "Money Does Matter!" [P. Fritjers, J. Hanken-DeNew & M. Shields 2004].

This paper is concerned with evaluating and adding to the empirical examination of that issue. But before launching such an examination, we want to briefly look at what one could reasonably expect to find. Priors are not irrelevant in determining posterior assessments especially when the empirical evidence is somewhat shaky.

There is a strong a priori case for the importance of real income. Independently of what others have, higher incomes open up more opportunities to living. For one thing, we can have better health, a good that is universally desired. It is hard to believe that all of our purchases with higher income have as their sole purpose showing off our higher relative income. Life seems more interesting when one can travel, get more education, buy more leisure time.

There is also a strong case for relative income affecting our well-being. However, it is not obvious what the sign of that effect will be. Most of us are concerned to some degree with status. Status is important in determining the purchase of social goods. With higher relative income one is in a position to choose better mates and friends, and more of them if so desired. As important as is that positive effect of relative income,

there are two considerations that will either dampen that effect or even convert that positive effect to a negative one.

First, one has to ask the question: In determining the effect of a person's relative income on his well-being, whose income is the relevant income of comparison? Most of the literature assumes that the relevant unit is some rather large group such as everybody in the country. But the real effects of status on one's life are confined to much smaller groups. What difference does the income of Bill Gates have on my ability to attract a wife or friends? One expects some positive relationship between a person's relative income among his close associates and his relative income in the nation as a whole, but it will be a tenuous relationship. Also, there can be some subjective status effect that extends beyond any of the real consequences of status. Just contemplating Bill Gates' billions might make us feel less satisfied with our lot in life, though that hardly explains why we visit the mansions of billionaires of the past.

It would be a big surprise to us that status as measured by one's income relative to average income in the nation would have a big effect on well-being. The only process that could lead to such a large effect is if we were told that we should be angry about Bill Gates' billions, and, then, maybe we would be sufficiently disturbed that relative income would have a significant effect on our well-being.

There is a second process at work. One that could produce a negative relationship between relative income and well-being. Others get some real returns from higher income people. High income people pay higher taxes which fund all sorts of amenities like education and sewers. They contribute more to charity and other pro-social activities. They commit fewer crimes. In general, they get higher reputational returns

from being good citizens and participate more in all sorts of pro bono political actions [Nelson & Greene 2003]. There are often external returns from more productive activities. For example, there are the returns to technological innovations that are not captured by the innovators as well as the contributions to the public wealth from what they do capture.

This positive return to other people's income should come as no surprise, though most of the literature on status ignores it. Social rules generating a return to status have always been with us because such rules contributed to group survival. Those social rules first arose among hunter-gatherers. Big game hunters who shared their food were rewarded by the assorted returns to higher status.

Some of these effects have a somewhat localized character, but many of these effects are national in scope such as those generated by national level taxes. Even when these effects are localized, the relevant area is far more extensive than the size of the association groups within which the large and important effects of status take place. At the most then, we would expect to see a weakly positive or possibly negative relationship between well-being and relative income on a national level.

2. The Evidence: "Happiness"

There have been two ways of investigating the relative income hypothesis. One approach has been to get a direct measure of well-being and determine how this measure responds to income levels and relative income. The other approach is to determine whether people choose relative income or income levels when they have an opportunity to so choose.

The direct measure of well-being used by the first approach is a person's own assessment of his well-being. For example, the General Social Statistics (NORC, 1996) asks, "Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy or not too happy?" Using such a measure, there have been a large number of studies that show subjective well-being rises with income for cross-sectional studies but that there is little or no rise in average happiness as income increases across time [Easterlin, 1995]. Easterlin's explanation [1974 and 2001] is that an individual's utility depends positively on own consumption but negatively on the consumption of others that she compares herself with. Moreover as the income and consumption of one's peers rise it requires more income to achieve the same satisfaction. Others such as McBride (2001) emphasize the possibility that individuals also compare their income and consumption levels with informal psychological norms which may be influenced, for instance, by childhood socioeconomic backgrounds as well as the phenomena stressed by Easterlin. McBride does present micro-based evidence from the General Social Survey that income relative to one's parents and relative to one's age cohort are important determinants of subjectively assessed well-being and that own absolute income has a positive but much smaller effect.²

Some [Frank 1999] conclude from this that the usual goal of high societal income is less than compelling. A rise in everyone's absolute income because of the relative income effects may leave a society no better than where it began – that we are engaged in an economic rat race without meaning or value. It must be pointed out that this is not a valid conclusion to be drawn in all cases. So, if absolute income hadn't risen through time, then presumably fewer people would have perceived their standard of living as

better than that of their parents and subjective well being could have fallen as a result of this. The strength of the negative effect of larger own cohort income in lowering subjective well-being might be insufficient to offset this.³ But in fact, given McBride's empirical results [2001] it was sufficient in the period 1970-2000 in the U.S.

As in all regression analysis, there is the potential for an excluded variable problem in this case. Income levels are not the only things systematically changing over time. There has been a decline in social capital over time as witnessed in the United States by the decline in voting participation rates over time. Throughout the world increased urbanization and increases in geographic mobility have increased the proportion of our interactions that occur among strangers and mere acquaintances rather than among friends. In consequence, the positive effect of income level on "happiness" could well be largely masked by the secular decline in many of the kinds of interpersonal relationships that also bring "happiness." This secular decline would not affect the impact of income in a particular country at a point in time. There is evidence that these social capital measures do, indeed, affect happiness. "Happiness" increases with trust, participation in local groups, and religious attendance (Donovan and Halpern, 2002, Greene & Yoon, 2004) - all measures which have been declining over time. Furthermore, there is a positive relationship between "happiness" and national income if one varies nations rather than time. The difference in results over time and by nation strongly suggests some excluded variables that produce a statistical inconsistency when the theory demands consistency.

But the more crucial question is how good is this "happiness" evidence? In some sense "happiness" is a synonym for "utility", and individual utility maximization is at the

core of economics. But that does not imply that this self-assessment of “happiness” is more than a partial measure of either. Run the following thought experiment. Suppose that these “happiness” studies showed that relative income determines “happiness” but people choose income levels over relative income when given the choice. Which study should one believe? There can be so many problems with the “happiness” measure.

There are lots of things we take for granted in assessing our “happiness”, and these tend to be things that we have in common with others or have had all along. But that does not imply that these forgotten “details” are unimportant. Suppose a person recently recovered from a serious illness or recently lost his spouse. In the process of that recovery he is elated – indeed happy—when he is able to walk downtown or not to have to see his spouse suffer. His brain waves would have probably shown more “happiness” than those before the illness. But he certainly would not have chosen this recovery phase of his existence to the pre-illness phase. There were many things lost after the illness. If we had to choose between choice or “happiness,” by definition, choice must win.

There is some internal evidence that these “happiness” studies have problems. Many of them overkill. They often show no effect of income levels on happiness. That result goes so strongly against our priors where “our” includes a far larger group than just the authors of this piece. Can anybody believe that the health advantages of higher incomes are just a trivial part of our preferences? These results suggest that there is something seriously wrong with the “happiness” measure.

Choice does have potential problems of its own. People might choose higher absolute income over relative income because they are uninformed. Conceivably, the “happiness” information would change their minds. We, however, are persuaded that, if

anything, the real advantages of higher income to a person in terms of health, and so forth are far more important than any status gain relative to strangers that one could gain. Such information would only serve to confirm the choice of higher income over higher relative income

3. Evidence: “Choice” in Surveys

Our thought experiment would appear to be largely moot. In one study of “choice” in surveys the results seemingly confirm at least some part of the “happiness” results: relative income dominates. However, the choice study does show that income levels play an important role as well. Furthermore, we will show later that this study vastly exaggerates the importance of relative income.

Solnick and Hemenway (1998) surveyed 155 students and 79 staff and faculty at Harvard’s School of Public Health in 1995 to determine how important positional concerns were. One of the questions was whether the respondents would prefer to live in a society where the respondent had an income of \$50,000 and the average person had an income of \$25,000 or in one where one has income of \$100,000 and the average person had an income of \$200,000 (prices were specified as constant.). Many chose higher relative income over a higher income level in spite of the fact that that higher relative income came at a very big price in terms of real absolute income levels. Among the 159 students, 52% preferred the higher relative income. 35% of the 75 faculty and staff answered similarly. The conclusion would seem to be that relative income and income levels are of approximately equal importance in determining decisions.

Even this reduced importance of relative income compared to the “happiness” studies still make it quite important. The argument of Frank (1995) that public

investment is undervalued compared to private consumption would still hold. While no longer a zero-sum game, there would still exist substantial negative externalities associated with private consumption. In contrast public investment represents a pure gain to society. (It is worth noting that the Frank argument disintegrates if the world behaved as the “happiness” adherents contend it does. If there were no return to higher income levels, there would be no return to public investment, which increases people’s real income.)

There are several problems with this study. There is a zero return to any respondent giving a correct answer to the questions of this survey. (While there need not be a universally correct answer, there should be a correct answer for any given student.) There is no incentive for the respondent to give careful thought to evaluating the alternatives.

Even if a student gave careful thought, he has little knowledge of the world on which to base his assessments. The difference between the response of students and staff is revealing in that regard. The faculty and staff are considerably more knowledgeable than the students, and they responded to that knowledge by giving statistically significantly, less weight to relative income than did the students.

There is a third problem, which is probably more important than these others, though its size is magnified by the zero-award scenario that generated the first problem. There is a framing problem. This survey was obviously about the relative importance of status – a survey that makes sense only if those designing the survey felt that status could be relatively important. Students don’t need a survey to convince them that income levels are important.

“Everybody knows what they might say even if they had never heard of Easterlin. A respondent might well say, “if it costs me nothing, why not give the survey makers what they want.”

But these are possible objections to the Solnick and Hemenway study. Just listing these objections does not imply that they play a sufficiently significant role to vitiate the results. We have created a survey of our own to show that the Solnick and Hemenway study vastly exaggerates the relative income effect. We, then, show how a far simpler approach suggests that there is virtually no relative income effect, or if anything that relative income effect is in just the opposite direction to that which the literature suggests

4. A Survey of Our Own: The Set-Up

We have designed a survey that in many ways duplicates the Solnick and Hemenway survey. Our survey was administered to all 793 students attending the first day’s session of either Principles of Microeconomics or Principles of Macroeconomics at Binghamton University on January 26 or 27, 2004 and 762 students doing the same on August 31, 2004. To make the income figures comparable in real terms to Solnick and Hemenway, we raised them to \$60,000, \$30,000, \$120,000 and \$240,000 and asked simply: “In the question below, there are three states of the world - you are asked to pick the one in which you most prefer to live,” with the same other wording as Solnick and Hemenway.

- State A] your current annual income is \$60,000 and others have \$30,000 in annual income.
- State B] your annual income is \$120,000 and others have \$240,000 in annual income.
- State C] your annual income is \$120,000 and others have \$120,000 in annual income.

For some of the students in the September survey, States ‘B’ and ‘C’ were substituted for States B and C respectively.

State ‘B’] your annual income is \$90,000 and others have \$240,000 in annual income.

State ‘C’] your annual income is \$90,000 and others have \$90,000 in annual income.

Students are, then, asked to choose first which option they most prefer and secondly which they least prefer. The answer AB, for example, means that a student most prefers A and least prefers B. State A and B are the real income equivalents of Solnick and Hemenway’s states, as is the question about which state the respondent most prefers. State C has been added, as has the question about which state one least prefers. These additions permit a richer treatment of respondent’s relative income preferences. It also permits us to determine the proportion of answers that are nonsense.

Another big change from the Solnick, Hemenway format, however, lies in providing students different levels of information. Students are randomly given surveys, which differ by the information provided in the instructions. We postpone discussing those differences until the section below.

5. A Survey of Our Own: Results

1. The Nonsense Answers: We regarded five of the possible nine answers as nonsense. The most obvious cases are those where the students answered that they most preferred a state and least preferred that same state: AA, BB, or CC, as Tables 1 and 2 show 6.4% in January, and 5.6% in September so answered. (In this first section we treat B’ and C’ the same as B and C.)

We also regarded two other answers as ridiculous. A student who answers AC asserts that he prefers high status at a very price in income level terms but prefers low status (B) to equality at no cost to himself. This answer makes sense only if some people found a big return to high status but were indifferent about having low status. This attitude might work for an exaggerated version of the chimpanzees: if α males get all the returns to status and there is no return to being anywhere else in the pecking order not even a return in terms of the prospects of becoming an α male. But the literature about humans seems to suggest, if anything, higher costs of low status than returns to high status. 5.2% in January and 6.4% answered AC.

We also found the answer BC unacceptable. Someone so answering must most prefer high income with low status and least prefer high income with equality. This requires that low status is more desirable than high status. 3.4% in January and 6.4% in September so answered. In total, then, 15.1% of the January students and 16.9% of the September students gave inappropriate answers.

What does this result mean? It does mean that students were making some effort to answer the questionnaire. Either 15.1% or 18.4%, for example, is a far lower percentage than can be attributable to random answers. That probability would be $5/9$, or 55.5%. Even the two less ridiculous answers of the ridiculous set, AC and BC had far lower percentages than for any of the sensible answers. However, 15.1% or 18.4% is not a miniscule number. A substantial number of our students were either making no effort or do not know how to read. It makes one wonder how many of the remaining students were answering without much thought.

The rest of our analysis excludes from the sample these nonsense answers.

2. The Demand for Status: A far higher percentage of our students wanted to buy status than in the Solnick-Hemenway survey. Their students were confronted with only two alternatives: A (high status, low income) and B (low status, high income). Our students also had the alternative C (middle status, high income). The equivalent of their students choosing A is our students choosing AB (big status preference) or CB (moderate status preference). In both these cases A is preferred to B. Tables 3 and 4 show that with the same information provided in their survey (our Survey 1) in January, 78% of our students made the AB or CB choice. In September, 79.7% of those confronted with B & C and 82% of those confronted with 'B' & 'C' so chose. 52% of their students did so. The difference in behavior between our students and theirs is both big in itself and hugely, statistically significant. For the first two differences the t values are: $t=5$ and 5.23 respectively.

Why the difference? We can think of two possible reasons. First, their students were graduate students; our students were those taking an elementary undergraduate economics course. Graduate students know more about the world than undergraduate students if for no other reason than they are older. This interpretation is consistent with one of Solnick and Hemenway's results. They found that faculty and staff had a far lower percentage of status buyers than their students: 33% compared to 52%. Supposedly the former were the more knowledgeable.

The second reason is more interesting. We had C as an alternative, they did not. In terms of strict logic, that should make no difference in the choice between A and B. But that logic is compelling only if a student were only interested in revealing preferences that existed prior to the survey. We suspect that most students have not

thought about their status preferences prior to the survey, and they have no incentive and little time to do much thinking about those preferences during the survey. (They had about 10 minutes to answer the questions.) Under those circumstances the CB answer seems to be the safe answer. It allows the student to give some weight to both status and high income, a nice moderate choice. In consequence the sum of the AB and CB answers include a lot of students whose answers have little to do with their own preferences. (We would suspect that at least some of the non-preference revealing answers in CB have no preferences or have CA or AC preferences, but not sufficiently strong to resist the temptation to appear moderate.) Later, we will investigate evidence that suggests that something peculiar in the framing of the questions is, indeed, at work.

3. Information and Status Preferences: Students were randomly assigned to four different surveys, which varied by the amount of information they were given.

Survey 1: The same information provided by Solnick and Hemenway (1997).

Survey 2: Following phrase added: "In all societies you will associate most closely with people who have income close to yours. In richer societies you will be slightly more likely to associate with people with somewhat higher incomes and you will be aware of the average income of those you do not meet."

Survey 3: Following phrase added to information provided in Survey 1: "If you earn less than the average income in a society, you and your children will be more likely to have your income move up in the future than if you earn more than the average. The higher the average income in the society the better the public services such as education, road maintenance etc. that you will receive."

Survey 4: The phrases of both Survey 2 and Survey 3 added to the information of Survey 1.

The case for Surveys 2 through 4 providing additional relevant information was made in the introductory section of this paper. We would predict that an increase in the information by these particular surveys would increase the proportion of those choosing income levels over status. The big income level choice should experience the greatest increase, while the big status choice should experience the greatest decline.

One of the information differences by surveys had large impacts on student choices. There were the same information differences between Survey 3 and Survey 1 on the one hand, and Survey 4 and Survey 2 on the other hand. The difference between both sets of surveys were that students were told that there were ways by which living in an area with higher average income could enhance one's own well-being. We'll call this real income information.

This information had a very significant effect on choices in both a statistical and magnitude sense (See Tables 5 & 6). As one moves from High Status to Moderate Status to Moderate Real Income Level to High Real Income Level there is a perfect order of the effect of real income information whether one looks at the differences in choices between Survey 3 and Survey 1 or the differences in choices between Survey 4 and Survey 2 whether one looks at the January or September surveys. The probability of this occurring by chance for both of these differences is extremely low -.0017 for the January and August surveys considered separately. Furthermore, the differences in choices for each of the extreme options, Big Status and Big Income Level is statistically significant for each of the Survey differences considered and for January and August. It is no wonder

that these differences are immensely significant statistically because they are so large. For example, the proportion of those choosing Big Income Levels goes up from just 4.3% in Survey 1, the no additional information case, to 25.9% in Survey 3 in January and from 2.8% to 25.5% in August.

The results are not nearly so impressive for the other kind of information examined: information that one's status for most associations is only modestly affected by one's income relative to average income. We call this status information. Status information affects Survey 2 relative to Survey 1 and Survey 4 relative to Survey 3. The predictions about how choices should behave in response to this information are the same as the predictions we made with respect to real income information. These predictions are only modestly realized for status information. There is a statistically significant reduction in the proportion choosing Big Status. $t = 2.22$ and 2.11 for January and August respectively. But, there is virtually no change, significant or not, in the proportion choosing Big Income Levels. In fact, for both the January and August surveys the sign of the difference between Surveys 3 and 4 are in the opposite from the predicted direction. Instead, more than the entire decrease in the choice of big Status is explained by an increase in the proportion choosing Moderate Status when the differences between Survey 1 and Survey 2 and the differences between Survey 3 and Survey 4 are combined.

What is really significant, again, both in terms of statistical significance and in terms of magnitude, is the difference in the impact of our two kinds of information. Real income information has a great impact on choices compared to status information and the former behaves exactly as predicted compared to the mixed-up effects of the latter. What makes this result so interesting is that it seems incongruous with the thrust of the overall

results. If one took our results at face value, they would suggest that our students are obsessed with status, that they are willing to give up a lot of income in order to have higher relative income. That would suggest that choices would be more sensitive to variation in information about the impact of relative income on status than it would be on information about real income. That is, suppose that status were more important than real income in determining utility. Then, information that leads to an $x\%$ decline in relative income's effect on status should have a bigger impact on decisions than information that leads to $x\%$ decline in relative income's effect on real income levels. We believe, if anything, the status information should be more important in determining the effect of status than the real income level information is in determining one's real income. But, in fact, the real income information affects our students' choices far more than the status information.

Why? We believe the answer is that students are in fact far more concerned with their real income levels than they are concerned about their status in spite of their answers that seem to suggest just the contrary. Alternatively, both the responses to information and to the choices are largely responses to students trying to deduce what the experimenters want. As discussed earlier, students might well choose status because they think the experimenters want them to choose status. The real income level information, we suspect, will have a bigger impact on revising students' views on experimenters' desires than the status information. The former explicitly gives reasons why the income level of others can increase one's own real income. The latter is couched in a more neutral matter. Without knowing what is commonly assumed to be the effect of the income of others on status, a student could not tell whether the additional information

about status should increase or decrease a desire for higher income relative to average income. In consequence, that information should have less effect in determining a student's prediction of experimenters' desires. At the very least, the observed differential effect of status and income level information on choices, should make one skeptical of the extent to which student answers to the choice between status and income levels reflects their true preferences.

4. Changing the Price of Status: In the September survey we varied the increase in one's own income that one could get by reducing one's status. Some students had the choice 'B' rather than B and 'C' rather than C in their choice set while some students continued to have B and C among their choices. Both 'B' and 'C' contained a lower own income gain from giving up the high status in A, an option available to both sets of students. Clearly, then, if status is important, more students should prefer A to either 'B' or 'C' than their preference for A over B and over C respectively. 'C' also reduces the amount that others get by the same amount that one's own income declines compared to C. If status is important that should also increase the number of students choosing 'C' compared to those who choose C when the choice is 'B' or B respectively.

These predictions are not born out by our results. (The information level chosen as the reference level for this experiment was that of Survey 1 – no additional information. In our Table 6 we label the case when 'B' and 'C' are substituted for B and C at this information level Survey

5. There are no statistically significant results when we compare students with the same amount of information, either when the September results are considered by themselves, or when they are pooled with the January results for Survey 1. Not only that,

the signs of the differences between Survey 1 and Survey 5 are all mixed up. In fact, there is a slight decrease in the highest status result (AB) when the price of status goes down: 3.9% and 4.3% when Survey 1 is un-pooled and pooled respectively. But that decline is more than matched by an increase in the moderate status choice (CB) with a reduction in the price of status: 6.2% and 7.5% for the un-pooled and pooled data respectively. The high income choice (BA) barely moves with a decrease in the price of status, + .7% and - .2% with the un-pooled and the pooled data respectively.

These results tend to confirm our other results. They indicate that students have little idea about their preferences for status, that they are simply playing a guessing game as to what they think are the kinds of answers that are either the socially acceptable results or the results that the researcher prefers. This is a guessing game they are playing when they not only do not know their own preferences, but prior to the experiment they have no idea about the socially accepted answer. There are huge differences in the price of status between Survey 1 and Survey 5. Those huge differences do not seem to make any difference in the choices that students make.

6. Evidence: Choice in Location

A much better approach to choice is to examine the actual choices that people make. The migration from one area to another is often accompanied by job mobility as well. Under those circumstances people choose jobs and the place to live simultaneously. How does the desire for status fit into that decision process? When a person wants higher relative income, with whom does he compare his income? Without at least some rough answer to this latter question, it is hard to infer anything about behavior from the status motivation. We will assume that a predominant part of the return to status is determined

by one's income relative to the people that one persistently associates with. Given that assumption, one gets more status if one's income is higher relative to those in an area just large enough to encompass one's persistent associates. This specification of area size is not a trivial detail. One might very well want to have a house in a wealthy neighborhood if most of one's friends were not confined to that neighborhood. Possibly the status return from a prestigious address would outweigh the status costs in associating with the wealthy people in the neighborhood. But that kind of argument would be less persuasive if the area was a city, since nearly all of one's persistent associates would live within the city. If, then, status were an important part of their decision process, one would expect individuals to move to cities where their own income would be relatively high, or holding their own income constant, they would desire to live in a low-income city.

We do not believe that that statement has to be modified by the fact that part of the status return might come from one's income relative to the income of the people with whom one continues contact in the place from which one came. Those people whom one is trying to impress are likely to gain little additional information about a person's income from knowing the city to which he has migrated. There is just too much variation in income within cities for that to be an important clue as to an individual's own income. The status return from the relatives and friends that a migrant left behind, therefore, would not lead a person to migrate to a high income city unless it also meant that he himself would have higher income. There would still remain a status return to moving to a low-income town holding one's own income constant. It just would not be as great as it would be if all of one's associates were confined to one's city of residence.

As far as we know, there is no evidence that people prefer low-income cities holding their own income constant, and lots of evidence that they prefer to migrate to increase their own incomes. The old fashion migration studies, for example Nelson (1959) and Sjaasted (1962), showed that people migrated to higher income areas. But these studies did not have any measures of people's own income gain. The supposition was that they would make more if they went to a high-income area and that this effect was sufficiently great to overcome any status loss from moving to such an area.

The modern literature takes on labor migration either takes a disequilibrium or an equilibrium perspective to analyzing migration decisions [Greenwood 1997]. The former reasons that people move if the discounted present value of their increased income stream is sufficiently great to offset the utility losses especially of friendship and family associations. Thus, they are ready to move for a smaller income gain if a place is physically closer. While it admits that high spending on health care and education and low crime rates in the destination place increases immigration, these high spending levels and low crime rates tend to be associated with high-income areas. The equilibrium perspective reasons that desirable aspects of places to which people tend to migrate tend to be capitalized in labor and asset markets in the form of lower wages and higher rents and higher prices. So attractive climatic and topological conditions tend to lead to migration to them if the demand for them is normal and incomes rise through times but wages in such areas fall and land rents rise. Empirical research in the area [Graves (1983)] find evidence for this phenomena, but others like Greenwood and Hunt (1989) and Powel (1982) find that while amenity affects are present they have not increased over time (as presumably they would with increasing income) and they tend to be dwarfed by

higher wages and employment opportunities. So the non-aged move to where growth of job opportunities is high. This suggests, but does not prove, that whatever the status effect of moving to high-income areas, it is outweighed by the amenity effects.

Everything we know about international migration supports these conclusions. People migrated to the United States, not because their relative income would go up by so doing, but because their absolute income increased. So, for instance, in the period between 1955 and 1959, Borjas' [1999] evidence implies that young male migrants into the United States were fairly highly skilled and earned a large amount, relatively speaking, in place of origin and relatively little, but still more absolutely, in the United States. Later immigrant groups were apparently less skilled but still were going places where this status would be considerably lower.

The same conclusion is reached if one examines help wanted advertisements in national markets. We looked at a sample of 33 advertisements for mechanical engineers and accountants for smaller towns from www.careerbuilder.com on November 15, 2004. Mechanical engineers and smaller towns were chosen because most job moves of that occupation to smaller towns would involve the migration decision. Smaller towns also were chosen because most potential job applicants would have relatively little knowledge of the characteristics of these towns. Eighteen of these help-wanted ads specified the salary for the job. Fifteen did not. The reason for non-specification of the latter is that the salary in those jobs was a function of the characteristics of the applicant so could not be specified prior to contact with an applicant. None of these help wanted adds specified area characteristics. Though these help wanted ads were only the beginning of the information process, evidently the employer did not think them sufficiently important to

initially sway potential applicants. Again, this is evidence that thoughts of status are not on the front burner of the minds of potential applicants, however much they are on the minds of a subset of social scientists. Yet another piece of evidence is the existence of a system devised to rate the quality of life and published as The Places Rated Almanac: Your Guide to Finding the Best Place to Live in North America. Again, while job availability, income related public services, and amenities are included, the only thing assumed to be important for people looking for places to live that could possibly be positively related to high status (and low amenities) is a low cost of living.

7. Conclusion

Much has been written about the supposed wide scale negative externalities that an individual's higher income is supposed to impose on others in his generation. It's presumed significance has not only been used to explain why people have not been found any happier across time as income levels grow, it has also been used as a justification for the introduction of very progressive taxation, particularly of consumption.

We believe that the evidence that supports these contentions is at best shaky. The evidence from happiness surveys across time, from surveys of whether people prefer to live in societies where their relative income is high even though their absolute income is low, and evidence from the real world choices people make about where to locate are much more likely to be consistent with people being unconcerned with their relative income (except relative to their close associates), and most concerned with absolute income than the social critics of modern day capitalism imply.

ENDNOTES

- ¹ And in many cases involves the simultaneous decrease in relative income in the newly formed polity.
- ² The Frijeffers et al [2004] finding may also be consistent with these findings in that the East Germans studied would undoubtedly have high income relative to their parents after federation and Frijeffers et al do not control for changes in the incomes of relevant exterior cohorts, such as the average incomes of those close in age.
- ³ It has been the American experience in the 1970-2000 period that McBride focuses upon that the per cent of people that do substantially better than their parents (by his own definition of receiving income that is 50% higher in real terms than their parents and receive less than 50%) is twice the percent who do substantially worse. Given his results this could raise the probability of subjective well-being as being “very happy” on net by $(.052 \times .14) 1.288\%$ and lower the per cent being not very happy by $(.11 \times .14) 1.54\%$. During the same period real average per capita income rose by 83% and this would mean that the loss of cohort income would rise from 10.236 to 10.840 or by .604 and according to his marginal effects this would lower the probability of subjective well being as being very happy by .0845 and raise the probability of being quite unhappy by .0477 $[(.604) \times (.075)]$. So, on net, rising incomes would reduce the percent very happy by 7.16% and raise the percent not very happy by 3.23%. The direct effect of a rise in real income would (since it raises log income from 10.133 to 10.737) raise the percent reporting they are very happy by $(0.27 \times .604) 1.63\%$ and lower that reporting not too happy by .91%. In total, percent happy would be down by 5.53%, and percent unhappy up by 1.62%.
- ⁴ While there may be some aberrations, such as that in the U.S. leisure time may have actually fallen in the last 30 years as real income grew, on average over large periods the fundamental goods like life expectancy, infant survivorship rates, health at give-age levels, leisure time and educational levels have grown with real income. In the Skeptical Environmentalist, Bjorn Lonberg [2001] presents sound evidence for all these associations.
- ⁵ This was significantly less than the student percent at the 5% level of significance.
- ⁶ Nearly 20% of the student responses fall into these categories.
- ⁷ This was followed by seven socioeconomic questions. The surveys are in the Appendix
- ⁸ So, in total we find more than a seventh, 14.7%, of the answers nonsense, irrational or inconsistent. If the same proportions of answers really contained no information in the Solnick and Hemenway study, then only 71 of the 159 or 45% of students gave true positional answers. Our Categories I and II total a little over 43% of the sample.

⁹ Since each of the variables is categorical, the means show the percentage of the sample with that characteristic. So for instance, 9% of the respondents were male, 27% of the respondents had family incomes between \$60,000 and \$100,000 etc.

¹⁰ Alternate specifications where all potential independent variables were included make no material difference for our results or inferences.

REFERENCES

- Borjas, George J. (1999), "Heaven's Door: Immigration Policy and the American Economy," Princeton University Press, Princeton.
- Donovan, Nick and Halpern, David (2002), "Life Satisfaction: The State of Knowledge and Implications for Government," United Kingdom Treasury Paper.
- Esterlin, Richard (1974), "Does Economic Growth Improve the Human Lot? Some Empirical Evidence" in David, P.D. and Reder, M.W. (eds), Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz, Academic Press, New York, pp. 89-125.
- _____ (1995), "Will Raising the Incomes of All Increase the Happiness of All?" Journal of Economic Behavior and Organization, 27 (1), pp. 35-47.
- _____ (2001), "Income & Happiness: Towards A Unified Theory", Economic Journal 111 (473), pp. 465-84.
- Frank, Robert (1995), "Luxury Fever: Why Money Fails to Satisfy in an Era of Excess," Princeton University Press, Princeton, New Jersey.
- Frijtes, Paul, Hanken-De-New, Robert and Shields, Robert (2004), "Money Does Matter? Evidence from Increasing Real Incomes and Life Satisfaction in Germany Following Reunification," American Economic Region, 94 (3) pp. 730-40.
- Graves, Phillip F. (1980), "Migration & Climate" Journal of Regional Science, 20, pp. 227-237.
- Greene, Kenneth V. & Yoon, Bong J. (2004), "Religiosity, Economics and Life Satisfaction," Review of Social Economy, 62, pp. 245-261.
- Greenwood, Michael J. & Hart, Gary L. (1989), "Jobs Versus Amenities in the Analysis of Metropolitan Migration," Journal of Urban Economics 25, pp. 1-16.
- Greenwood, Michael J. (1997), "Internal Migration in Developed Countries" pp. 647-720 in Handbook of Population and Family Economics Volume 1B, ed. Rosenzweig, Mark R. & Stark, et al Elsevier, Amesterdam.
- Lonberg, Bjorn (2001), The Skeptical Environmentalist: Measuring the Real State of the World, Cambridge, New York.
- McBride, Michael (2000), "Relative Income Effects on Subjective Well-Being in Cross Section," Journal of Economic Behavior and Organization, 45, pp. 251-278.
- Nelson, Phillip J. (1959), "Migration, Real Income and Information," Journal of Regional Science, 1, pp. 43-74.

Nelson, Phillip J. & Greene, Kenneth V. (2003), Signaling Goodness: Social Rules & Public Choice, University of Michigan Press, Ann Arbor.

Porel, F.W. 1982, "Intermetropolitan Migration and the Quality of Life," Journal of Regional Science 22, pp. 137-158.

Sjaastad, Larry A. (1962), "The Costs and Returns of Human Migration," Journal of Political Economy, 70, pp. 80-89.

Solnick, Sara and Hemenway, David "Is More Always Better? "A Survey of Positional Concerns" (1997), Journal of Economic Behavior and Organization, 37, pp. 373-83.

Table 1
January Survey Percentage Responses That Were Irrational

Survey Type	All	1	2	3	4
<u>Answers</u>					
AA	2.7%	3.2%	2.0%	2.0%	3.4%
BB	1.7%	1.1%	1.5%	2.6%	2.0%
CC	2.0%	.5%	3.5%	2.0%	2.6%
AC	5.2%	6.8%	4.4%	5.6%	4.4%
BC	3.4%	2.6%	3.5%	3.1%	4.4%
Total Irrational # in sample	15.1%	14.2%	14.8%	15.3%	16.2%

Table 2
August Survey Percentage Responses That Were Irrational

Survey Type	All	1	2	3	4	5
<u>Answers</u>						
AA	2.7%	1.5%	2.5%	2.2%	3.8%	3.2%
BB	1.6%	1.5%	2.5%	.7%	2.3%	1.2%
CC	1.3%	1.5%	2.5%	1.5%	0%	1.2%
AC	6.4%	7.6%	6.8%	11.6%	3.3%	4.1%
BC	6.4%	4.6%	1.7%	9.4%	6.1%	3.3%
Total Irrational # in sample	18.4%	16.7%	16.1%	25.4%	16.0%	13.0%

Table 3
January Survey Percentage of Rational Responses by Category

Survey Type	All	1	2	3	4
High Status (AB)	33.2%	45.5%	38.1%	28.9%	20.5%
Medium Status (CB)	33.8%	32.5%	36.3%	24.7%	37.4%
Medium Real Income (CA)	19.6%	17.7%	18.5%	20.5%	21.6%
High Real Income (BA)	14.4%	4.3%	6.9%	25.9%	20.5%
Number of such answers	673	163	173	166	171

Table 4
August Survey Percentage of Rational Responses by Category

Survey Type	All	1	2	3	4	5
High Status (AB)	31.4%	44.5%	29.3%	18.4%	16.3%	41.0%
Medium Status (CB)	37.2%	34.8%	46.5%	25.2%	34.5%	41.0%
Medium Real Income (CA)	18.4%	17.4%	18.2%	22.4%	23.7%	14.6%
High Real Income (BA)	13.0%	7.8%	6.0%	34.0%	25.5%	3.5%
Number of such answers	633	109	99	103	110	212

Table 5
January Differences in % Choosing a Particular Rational Answer

	Survey 1 minus 2	Survey 1 minus 3	Survey 3 minus 4	Survey 2 minus 4
High Status (AB)	+7.4	+16.6	+8.4	+17.6
Medium Status (CB)	-3.8	+7.8	-12.7	-1.1
Medium Real Income (CA)	-.8	-2.8	-1.1	-3.1
High Real Income (BA)	-2.6	-21.4	4.9	-13.6

Table 6
August Differences in % Choosing a Particular Rational Answer

	Survey 1 minus 2	Survey 1 minus 3	Survey 3 minus 4	Survey 2 minus 4	Survey 1 minus 5
High Status (AB)	15.6	26.5	2.1	13	3.9
Medium Status (CB)	-11.7	9.6	-9.3	12	-6.2
Medium Real Income (CA)	-.8	-5	-1.3	-5.5	2.8
High Real Income (BA)	-3.3	-31.2	8.5	-19.4	-.7