Race, Class, Gender, and the Happiness of College Students

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Abstract

Using data from students at 25 selective colleges from the National Longitudinal Survey of Freshman (NLSF), we estimate regressions with college-specific random effects and find that males, white students, those who have at least one parent who completed college, and those with higher family incomes relative to others at their college report higher levels of emotional well-being and life evaluation. We also investigate college characteristics that are correlated with student happiness and find that students report higher levels of happiness at schools that are more racially homogeneous, have lower tuition, and fewer students that have financial need. We show that fraternity dominance reduces the negative impact of greater racial diversity on student happiness, possibly because fraternities allow students to reduce the incidence of cross-racial interactions.

1 Introduction

Social scientists have become increasingly interested in the study of life satisfaction. Often referred to as "happiness," subjective well-being (SWB) has been studied in a wide variety of contexts. However, much of the literature focuses on the entire adult population and not exclusively on college students. In this paper, we explore how race, class, and gender affect the self-reported happiness of college students using a broad national survey of students at 25 selective colleges. We find that some results mirror those in the adult population, with males, white students, those who have at least one parent who completed college, and those with higher family incomes relative to others at their college having higher levels of happiness. We also find some interesting results about college characteristics that are correlated with student happiness. Specifically, students report higher levels of happiness at schools that are more racially homogeneous, have lower tuition, and fewer students that have financial need.

Should we care about student happiness? Much of the literature on higher education focuses on educational outcomes and not on the current self-reported life satisfaction of college students. However, research on the happiness of college students is important if students make choices based on what makes them happy. If voluntary participation of students in programs and reforms is important to improving the college experience and college outcomes, then understanding what is related to the happiness of college students is an important step in developing successful programs and reforms. Furthermore, as the inevitable demographic change begins to influence who attends college, understanding how specific demographic characteristics and the composition of the student body as a whole affects student happiness is also important to better understand the college experience.

Our work is broadly related to the study of life satisfaction and specifically to studies that explore relationships between race, income, and gender in the adult population. One particularly relevant strand of this literature is the work on how relative income affects happiness.

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Easterlin's (1974) seminal work on the relationship between income and SWB used country level data and concluded that relative income influences SWB, while absolute income appears to have no effect. More recent research has refuted Easterlin's (1974) claims, positing absolute income, not relative income, as a large determinant of SWB (Stevenson and Wolfers, 2013; Sacks et al., 2012). However, there is stronger evidence at the micro level for relative income's influence on SWB (Dolan et al., 2008; Ferrer-i-Carbonell, 2005; Luttmer, 2005; McBride, 2001). One key consideration when analyzing the effects of relative income on SWB is the idea of a reference group: to whom do people compare their incomes? Our work on college students provides an answer to this question as other students at the same college form an obvious peer group.

One of our more robust findings is that students of all races report lower levels of happiness when the college they attend is more racially diverse. This result is related to a relatively extensive literature on the effect of diversity on college campuses and in the workplace. Many authors have found positive benefits of cross-racial student interactions that are facilitated by increased campus diversity. These benefits include leadership skills and cultural understanding (Antonio, 2001; Jayakumar, 2008), greater improvements in critical thinking (Gurin, 1999; Pascarella et al., 1996), cognitive development, and self-confidence (Chang et al., 2006).

Similarly, studies of diversity in the workplace have shown that diverse groups are more innovative (Chattopadhyay and Duflo, 2004; Phillips et al., 2006; Freeman and Huang, forthcoming). Not all studies, however, find universally positive effects of diversity. For example, Ellison and Mullin (2014) find that more gender diverse workplaces have higher levels of social goods provision but are less productive overall. They hypothesize that the negative impact of diversity may be a result of lower levels of cooperation in a more diverse workplace. Sparber (2009) finds similarly mixed results for the impact of racial diversity in the workplace, showing that industries that rely more on creativity and customer service experience benefits from racial diversity while other industries suffer losses. These findings that highlight both costs

and benefits of diversity tie into our result that, in spite of the documented benefits of diverse campuses, they are associated with greater discomfort of students of all races.

Finally, it is important to note that the focus of our study is on overall happiness and life evaluation rather than on satisfaction with the college experience specifically.[1] One typical measure of satisfaction with college is the answer to a question asking students nearing graduation if they "had to do it all over again" would they choose to attend the college they are currently attending. Our measure of happiness (unhappiness) and positive (negative) life evaluation is positively (negatively) correlated with the response to this question, however, it explains only a very small fraction of the variation in the responses, suggesting that these are two fundamentally different concepts.[2]

Our results are developed in the following four sections. Section 2 discusses issues in measuring happiness and life satisfaction, Section 3 explains our data and methods, Section 4 contains the estimation results, and the remaining section provides some discussion and a conclusion.

2 Measuring Happiness

The terms subjective well-being (SWB), happiness, positive affect, and life satisfaction are often used interchangeably. While they address a similar concept, it is important to understand the differences between these terms in order to interpret and measure them properly. SWB, generally referred to colloquially as happiness, is an overall evaluation of one's life that, according to Diener (2000), encompasses "life satisfaction (global judgments of one's life),

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[1] Diener (2000) asserts that one major component of overall SWB is domain satisfaction so the two concepts should be related. Astin (1993) finds that a number of variables associated with personal involvement are related to college satisfaction: participating in student organizations, interacting with faculty outside of class, partying, socializing, and attending religious services. GPA is also associated with college satisfaction and has been suggested to positively affect students' overall life satisfaction (Xiao, Tang, & Shim, 2009).

[2] Specifically, the adjusted R^2 of regressions that use the four different measures of happiness and life evaluation to explain satisfaction with the college experience are only between .03 and .04.

satisfaction with important domains (e.g., work satisfaction), positive affect (experiencing many pleasant emotions and moods), and low levels of negative affect (experiencing few unpleasant emotions and moods)" (p. 34). Diener (2000) also notes that the frequency of positive emotions is a stronger indicator of happiness than the intensity of those emotions. Thus, according to Diener (2000), SWB is a blanket concept that can be broken down into its constituent parts of life satisfaction, domain satisfaction, and relative frequency of positive and negative affect.

Kahneman and Deaton (2010) propose a similar dissection of SWB into emotional well-being (EWB) and life evaluation. EWB measures one's emotional condition in everyday life and therefore encompasses the frequency and intensity of feelings like sadness, joy, anger, and anxiety (a similar construct to affect). Life evaluation concerns itself with overall judgments about one's life (a similar construct to life satisfaction) (Kahneman & Deaton, 2010).[3] This paper will use Kahneman and Deaton's (2010) specification; therefore, SWB should be thought of as an umbrella term that includes both EWB and life evaluation.

Given the multifaceted nature of SWB, most scholars agree that a single self-report item, such as "in general, how happy are you with your life?," is an inferior measure of SWB compared to a measure that incorporates multiple self-report items (Diener, 2000; Powdthavee, 2007). Ideally, a series of self-report items would measure different aspects of SWB. For example, Diener (2000) emphasizes the importance of measuring both positive and negative affect when developing a composite measure of SWB. Kahneman and Krueger (2006) also support the measurement of negative affect as an indicator of SWB, proposing the creation of a 'misery index.[4] In addition, Kahneman and Deaton (2010) differentiate between life evaluation, positive

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[3] Therefore, the problem with the term 'happiness' is that it is too vague. Day-to-day feelings of happiness, which would fall under the EWB/affect construct, need to be differentiated from an overall sense of happiness with one's life, which would fall under the life evaluation/life satisfaction construct.

[4] The 'misery index' is based on the use of the Day Reconstruction Method in which participants recall each event from the previous day and rate its level of pleasantness or unpleasantness, which differs from the commonly used survey approach to SWB measurement (Kahneman & Krueger, 2006). Nevertheless,

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EWB, and negative EWB in their study analyzing the relationship between income and SWB, further highlighting the value of employing dichotomous self-report items.

One of the largest obstacles in happiness research is identifying causal relationships. While in some cases, reverse causality can be ruled out logically (e.g., being happy does not change your race), in many cases it cannot. Therefore, caution must be used in interpreting results. They are often consistent with a causal relationship, but are not proof of it.

Ideally, SWB data would be gathered on a moment-to-moment basis (Kahneman and Krueger, 2006). This method, however, is much too costly and impractical to undertake for a large number of individuals. Given this limitation, the literature implies that the following are among the best elements to incorporate in SWB measurements: multiple self-report items, questions addressing the key components of the SWB construct (EWB and life evaluation), and emphasis on frequency of affect rather than intensity. The happiness measure we construct for this study contains all of these elements. In the following section we describe our methods and data more thoroughly.

3 Methods and Data

To explore how individual and school characteristics affect the happiness of college students, in our base specification we estimate a random effects model of the form:

$Happiness_i = \beta_0 + \beta_1 * Male_i + \beta_2 * Race_i + \beta_3 * Relative\ Income_i + \beta_4 * First\ Generation_i +$

$$B_5 * Diversity_{i,c} + \beta_6 * Tuition_{i,c} + \beta_7 * Debt_{i,c} + \beta_8 * Need_{i,c} + \alpha_c + \varepsilon_{i,c}$$

Where *Happiness_i* is one of four different measures of positive or negative affect or life evaluation of student *i*. Our independent variables can be briefly summarized as follows: *Male* is a dummy variable indicating gender, *Race* is a set of dummy variables indicating if a student self-identifies as White, Black, Asian, or Hispanic, *Relative Income* is the difference between a student's self-reported household income and the average income of the students at that college

their proposition underscores the value of measuring the amount of time individuals spend in an unpleasant state.

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(measured in $10,000), *First Generation* is a dummy variable indicating that neither the student's mother nor father completed college, *Diversity* is an index indicating racial diversity, *Tuition* is the log of the dollar value of tuition in the 2001-2002 school year, *Debt* is the log of the average debt of students at a school, and *Need* is the percent of students with financial need at the school. (More specifics on the data appear below.) The school-specific random effect is captured by α_c and $\varepsilon_{i,c}$ is a mean-zero normal disturbance term.

The first four types of variables are individual characteristics and the last four types of variables are institution-specific. Because we have multiple observations for each institution, we are also able to estimate an institution-specific random effect that should control for omitted institutional characteristics. Examining the coefficients on the first four types of variables should allow us to draw conclusions about the relationship between race, class, gender, and student happiness. Race, gender and first generation status are arguably not endogenous to happiness, thus facilitating an interpretation that these characteristics may play a causal role in determining students' happiness (i.e., being happy does not cause an individual to be a certain race, gender or influence parents' education). The interpretation of the coefficient on *Relative Income* is not quite as straightforward. While household income represents parent income, which is also likely to be largely out of the control of the individual student, one could argue that students might choose colleges based on their perception of how they would fit in. If students predisposed to be happier are more or less likely to choose schools based on relative income, then the interpretation of these results is potentially problematic. Based on findings in other literature, one would expect the coefficient on β_3 to be positive—higher income relative to peers should be associated with higher happiness. However, if happier students are more confident and willing to be in an environment in which other students have higher incomes, we could see a negative relationship as happier students are more likely to be at schools which generate negative relative income for them. Therefore, this type of bias is likely to reduce a positive effect, making it more difficult to

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find statistically significant results. This type of reasoning would allow us to interpret a positive coefficient as causal.

Similar reasoning can be applied to the interpretation of the institutional characteristics. If happier students are more confident and choose more diverse schools or more high tuition schools, then we might expect the coefficient on diversity and tuition to be upwardly biased. By extension, higher tuition schools might also have students with higher debt levels and more students in need. Therefore, positive coefficients on these variables may be difficult to interpret. In this case, we could be more confident, however, that negative coefficients on these variables are the result of the institutional characteristic playing a causal role in determining student happiness.

Data

The data used to estimate Equation 1 comes from the National Longitudinal Survey of Freshman (NLSF), a survey conducted between the years 1999 and 2004 at 28 selective higher education institutions.[5] The survey was administered in six waves, following the same 3,924 students through their college career: fall of freshman year, spring of freshman year, spring of sophomore year, spring of junior year, spring of senior year, and a post-grad follow-up in the spring after graduation.[6] The data is panel data; however, the survey does not ask the same questions in each survey wave. For example, out of the six waves, the survey only asks about emotional well-being and life evaluation in the fourth and fifth wave. Some of the survey items used to create explanatory variables are only asked once (for example, we have only one observation for each individual on the school's tuition or on individual's household income). Because of this, we are only able to form one independent observation per student. However, we

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[5] As a result, we must restrict the interpretation of our results to a subset of college students. However, the results will provide direction for follow-up studies with more representative samples.

[6] Those students who dropped out of college, transferred schools, or did not progress on a normal four-year track through college were retained in the survey so as to avoid selection bias. However, in our estimations, we examine only those students who remained in college through the fourth wave of the survey.

are still able to use panel estimation techniques and estimate a school-specific effect because we have multiple observations per school.

The NLSF sample is stratified by race, with roughly equal percentages of White, Black, Asian, and Hispanic students participating. Because we use race as one of the independent variables, our regression results can still be reliably interpreted, however, we do have to take care in calculating institutional averages from the data. Fortunately, most of the institutional characteristics that we use are provided in the data set and are based on the U.S. News and World Report, America's Best Colleges data for 2001-2002. One exception to this is the average income by college variable which we use to calculate relative income. Our procedures for obtaining an estimate of that college characteristic are described more thoroughly below.

That said, there are a few shortcomings with the data worth discussing. First, some schools have relatively few observations and there is low variability in college-aggregated average well-being levels, which ought to serve as a caution when interpreting the results of institutional-level factors' relationships to student well-being. Next, each survey item has a series of missing values due to respondents who left questions blank, refused to answer questions, or answered "I don't know." As a result, our sample size is reduced from 3924 to 1,799 in our main estimations. This reduction in sample size eliminates data from 3 out of the 28 original schools. One final shortcoming of the data is that the well-being survey items come at the end of the survey for wave 4 and about halfway through for wave 5. As such, it is possible that the preceding questions could exert some influence over students' responses to these questions.

As mentioned above, we use four different measures of "happiness" constructed from the data. Two of the measures are associated with more temporary emotional well-being (EWB), while the other two are associated with questions that are more related to life evaluation, or what is usually termed subjective well-being (SWB). The survey addresses emotional well-being by prompting respondents to report how often they felt 'x' in the preceding week, where 'x' is some measure of EWB. Students report the frequency of said feeling by using a 5-point scale: never (0),

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rarely (1), sometimes (2), often (3), or all the time (4). The positive EWB dependent variable is the sum of two SWB survey items: "you were happy" and "you enjoyed life." The negative EWB dependent variable is a combination of three SWB survey items: "you were sad," "you felt you could not shake off the blues even with help from your family and your friends," and "you had trouble keeping your mind on what you were doing." There are fewer questions on the survey related to more general life evaluation, but they are asked in the same way. We are able to create a positive life evaluation dependent variable using a survey item that asks how often in the preceding week: "you felt hopeful about the future." The negative life evaluation dependent variable represents one survey item: "you thought your life had been a failure."

These questions are asked in both the fourth and fifth wave, however, many of our explanatory variables are only asked once so we are only able to form one independent observation per student. Furthermore, individual answers to these questions are highly correlated across the two waves. Therefore, to construct our dependent variable, we average each happiness measure in waves four and five to create average values for each of our four measures of well-being.[7] As a result, even though the underlying data is ordinal, the averages of the data are continuous so we employ a random effects specification.

While several of our independent variables are self-explanatory, a few require additional explanation. Specifically, the income variable is constructed from a question in which students are asked to estimate their parents' overall income on an 11-point scale. The lowest category is "less than $20,000" and the highest category is "more than $200,000." We use the midpoint of each interval to estimate a dollar value of the income of the student's parents. In our estimation, however, we do not use absolute income, but income relative to the average income at the college.

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[7] If we run separate estimates for wave 4 happiness measures and wave 5 happiness measures using a random effects ordered probit model, we reach the same qualitative conclusions. In the interest of being concise, we report detailed results only for the average measures, but results for any estimations discussed in the text but not reported in detail are available from the authors upon request.

Unfortunately, the survey does not provide average household income at each college so we estimate it based on the data available. Specifically, we use the survey responses to calculate an average income by racial group. We then weight those estimates by the actual percentage of students of that racial group at each institution to create an estimate of the average income at each institution.[8] Relative income is measured by subtracting individuals' absolute incomes from the average income of their institutions.

The diversity index is calculated using the percentage of the student body that identify with one of the four racial categories as follows:

$$Diversity = 1 - \sum_i^4 s_i^2$$

Where s_i is the percent of students in category i. A value of zero for the diversity index would occur when all students identify with the same racial group. Higher values of the diversity index indicate a more even distribution of students across racial groups. Note that this is different from some measures of diversity that consider only the percentage of non-white students. This is particularly important for our sample that includes a historically Black college, which is considered less diverse with this measure.

Descriptive statistics for the data used in the main estimations appear in Table 1. Although students report a wide range of happiness levels, on average, college students are relatively happy. The average positive emotional well-being is close to six (maximum of eight possible) and the average score for students reporting that they have felt their life is a failure is .25 (maximum of four possible). As noted earlier, the composition of the survey respondents is equally spread across the four racial groups, however, the diversity index for the colleges ranges widely, indicating that students at different colleges have different experiences with diversity. The lowest value of the diversity score is associated with a college at which white students

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[8] Because the sample is stratified by race, simply taking the average income of the survey respondents would result in a biased estimated of the average income at the college.

comprise 92 percent of the student body, while the highest value is associated with a college at which white students comprise 50 percent of the student body. Almost 20 percent of our sample is first generation students. The negative average for relative income is expected given a skewed income distribution.

Results

Results for the estimation of Equation 1 appear in Table 2. Each column uses the same set of independent variables, but a different measure of happiness or life satisfaction. In the first column, the positive emotional well-being variable is used, the negative emotional well-being variable is used in the second column, while the third column presents results for a positive life evaluation and the fourth column uses the negative life evaluation data.

There are some consistent results across all four measures of happiness. First, male students are happier. They have higher levels of positive emotional well-being, lower levels of negative emotional well-being, higher levels of positive life evaluation, and lower levels of negative life evaluation. There are also fairly consistent results for Asian students relative to white students (the omitted race category). Asian students are less likely to report being happy, with lower levels of positive emotional well-being and life evaluation and higher values of negative life evaluation. The results for lower levels of reported happiness among Asians are consistent with results found in the general population (Scollon, Koh, and Au, 2011; Oishi, 2002).[9] However, the impact of gender on happiness in the general population is currently under debate.[10] Our results are in line with Stevenson and Wolfers' (2009) conclusion that men are slightly happier than women. The results in Table 2 also show some weak evidence that black students are less happy, reporting lower levels of positive emotional well-being. However, that

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[9] These authors suggest that cultural norms shape the reporting of emotional experiences, and, as a result, lower levels of retrospective reports of happiness for Asians may not reflect actual lower levels of happiness. Regardless of the interpretation, our findings in the college student population are consistent with those in the adult population.
[10] See for example, Blanchflower and Oswald (2004), Dolan et al. (2008), Stevenson and Wolfers (2009), and Herbst (2011).

result is not statistically significant in the other three measures of happiness. This is in contrast to results typically found in the adult population in which black adults report lower levels of life satisfaction (Yang, 2008; Hughes and Thomas, 1998).

Parental income relative to the parental income of other students at the college generates peer effects as seen in the broader population with own income. Higher relative income is associated with higher levels of positive emotional well-being and positive life evaluation, but lower levels of negative emotional well-being. Thus, even though many college students could be considered "poor" by many measures, the relative affluence of their parents affects their happiness levels. Interestingly, in the one specification in which relative income is not statistically significant, the first generation status of the student is, with first generation college students being more likely to have considered their lives a failure. There is a strong correlation between parental income and education status and, in fact, when we remove the first generation variable from this estimation, relative income becomes a statistically significant predictor of negative life evaluation. Nonetheless, when we include both income and first generation status in this estimation, there is still an effect of being a first generation student on negative life evaluation that is independent of income.[11]

There are several institutional characteristics that are correlated with the happiness of college students. Two of them are related to financial issue of paying for college. Higher tuition is associated with lower levels of positive emotional well-being and positive life evaluation and higher levels of negative emotional well-being. While this may affect students through its effect on students' individual financial circumstances, it is interesting that going to a school in which

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[11] Absolute parental income is highly correlated with the relative income measure so we are unable to include both absolute and relative income in each estimation. When we replace relative income with absolute income, we obtain similar results. Thus, we are able to draw a conclusion about the impact of parental income generally. However, because of the high degree of correlation between the two income measures, we are unable to use our data to distinguish between relative and absolute income effects. Nonetheless, we use relative income in our base specification to tie our work into previous literature.

more students have a financial need also has an impact. When there are more students with financial need, students report lower levels of positive affect, higher levels of negative affect, and lower levels of positive life evaluation. This result provides evidence that it is not only their own financial circumstances that affect college students, but also the environment created by the financial need of others. Taken together with the results relating to relative income, we can conclude that college students are happiest when they are better off financially than their peers, but also when their peers as a whole have less financial need.

A final institutional characteristic that is consistently correlated with student happiness is the level of diversity. The results in Table 2 indicate that students at more racially diverse institutions are less happy. They report lower levels of positive emotional well-being and higher levels of negative emotional well-being and of negative life evaluation. Although we do not report these results in Table 2, an interaction term between diversity and each of the race dummies does not produce statistically significant results. This implies that the effects of diversity on happiness are similar across all racial groups.[12] As mentioned in the introduction, these results are consistent with previous research on diversity in other contexts.

Additional Results

The results in Table 2 provide evidence that race, class, gender and institutional characteristics associated with different dimensions of race and class affect the happiness of college students. In this section, we seek further insight into these results and examine interactions between several individual and institutional characteristics.

Our first set of additional results delves into the results for first generation students by racial group. It is possible that treating all first generation students equally regardless of race is

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[12] Consistent with this interpretation, we find that when we replace the diversity index with the percent of each racial group on campus and test for differential reactions by student race that 1) Black and Hispanic students exhibit greater positive affect, 2) Hispanic students exhibit less negative affect, and 3) Black students are more hopeful when there are more students of their own race on campus.

masking important effects. Specifically, we interacted the race variables with the first generation variable to see if first generation students of particular races had different reactions. While the interaction terms for Hispanic and Asian students were insignificant, indicating that these students did not have different reactions than first generation white students, the interaction terms for black students were significant in two of the specifications, suggesting that first generation black students had different reactions to college life than first generation white students. These results are reported in Table 3. The interaction term of First Generation and Black is statistically significant in both Columns 2 and 3 in Table 3, suggesting that first generation black students are more likely to report a negative affect and less likely to report being hopeful about the future. As in Table 2, all first generation students are more likely to report that they have felt that their life is a failure. Therefore, this provides some evidence that first generation students have lower levels of life satisfaction but that the effect may be particularly pronounced for black students who also report and higher levels of negative life evaluation and negative affect.

We continue to explore some of the results reported in Table 2 by attempting to garner more insight into the lower levels of happiness and life satisfaction of Asian students. As a group, Asian students are more likely than other racial groups to be born in countries outside the U.S.[13] It is possible, then, that the lower levels of reported happiness and life satisfaction of Asian students is not due to an effect of race, but rather of studying in a foreign country. To test this hypothesis, we introduce a new variable, *Foreign Born*, that is equal to 1 if a student is born outside of the United States and we interact that variable with the indicator variable for Asian. The results of that estimation appear in Table 4. Surprisingly, we see very little change in the coefficients for Asian compared to those reported in Table 1, but the results in all four columns of Table 3 suggest that foreign born students are less happy and less satisfied with life than their American-born counterparts.

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[13] In our sample, 28% of Asian students, 19% of Hispanic students, and 9% of Black students are foreign born,

Finally, we use our data to try to understand better the way in which diversity affects student happiness and life satisfaction. We draw on the ideas in Putnam (2000) who explains two types of social capital that are relevant to understanding the effects of diversity, "bridging social capital" and "bonding social capital." Bonding social capital can be generated when individuals with something in common, such as race, bond over those commonalities. In such a case, individuals of other races would not be able to bond with the group. So, within racial groups, there could be very strong bonds, however, taken as a whole, the campus would not have high levels of social capital overall which could potentially lower student happiness and life satisfaction. Bridging social capital, however, can connect these different groups, raising the level of social capital on the campus.

While there are not many measures of campus-wide social capital in our data, there is an interesting example of an institution that enhances bonding social capital, fraternities. Fraternities can be the basis of an extreme form of bonding social capital because of the explicit pledges of loyalty that fraternity members make to each other (Buettner and Debies-Carl, 2012; Knudsen et al., 2008). While, theoretically, fraternities could potentially also serve as bridging social capital across racial groups if they help to facilitate interactions between heterogeneous students, research on Greek life suggests this is not the case. Specifically, Park and Young (2013) use the same data that we do and find that membership in Greek organizations is related to fewer interracial friendships.[14] In addition, Park (2014) finds that 97 percent of white students who participated in Greek life described that environment as being majority white. Finally, in our own data, we find statistically significant and positive relationships between fraternity dominance and student perception of racial separation on campus. Thus, the existing evidence indicates that the social capital created by Greek organizations does not serve to bridge racial groups.

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[14] Interestingly, they do not find similar results for students in ethnic-based or religious based student organizations.

To determine how fraternities exacerbate or mitigate the negative effects of diversity on

student happiness and life satisfaction, we create an indicator variable that is equal to 1 if more

than half of the male students who are sophomores, juniors, and seniors are in a fraternity.[15] We

add this variable to our base estimations and interact it with the diversity index. The results

appear in Table 5. Surprisingly, the results for the diversity index are no longer statistically

significant. Similarly, we do not find statistically significant results for the dominance of

fraternities independent of diversity. However, we do find that in schools in which fraternities

are dominant, greater diversity reduces student unhappiness (Column 2 of Table 5), and increases

their life satisfaction (Column 3 of Table 5). These results suggest that fraternities play a role in

decreasing the discomfort students experience by being in a diverse environment.[16] While greater

happiness may seem like a good outcome, the available evidence suggests that greater

participation in Greek life may protect students from cross-racial interactions that make them

uncomfortable. Thus, while students may be happier in the moment, they may be isolating

themselves from the longer-term benefits of diversity.

While fraternity dominance is an institutional characteristic that may influence the ways

in which diversity impacts student happiness, there may be individual characteristics that

influence how students experience campus diversity. Specifically, student perception of racial

separation on campus may influence how students view diversity. To test this hypothesis, we

construct a variable that is based on individual students' self-reported perception of the degree of

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[15] Specifically, we use college level statistics for fraternity membership. We approximate
fraternity dominance by assuming that roughly half the students are male. So, if more
than 19% of the entire student body belongs to a fraternity, we classify this school as
having fraternities that dominate the campus. Twenty-seven percent of the observations
in our estimation sample are from schools with fraternity dominance.

[16] Because we do not have data on fraternity membership for all the schools in our
original sample, the estimations with fraternities include fewer schools. However, the
smaller sample is not driving our results. When we re-estimate the equations in Table 1
on the smaller sample, we obtain qualitatively similar results about the effects of diversity.
In the smaller sample, campus diversity is negatively and significantly related to average
positive affect and positively and significantly related to the average negative affect and
the life failure variables.

racial separation on campus. We add this to our base specification and interact it with diversity as well. Results are reported in Table 6. Interestingly, there is some evidence that it affects student happiness: students who believe the degree of racial separation is higher report lower levels of positive affect and higher levels of negative affect. However, the interaction terms with the diversity index are not statistically significant. Although we do not report the detailed results here, we also did not find statistically significant interactions with the perceived degree of racial separation and the student's race. Thus, there is no evidence that students in any of the four racial groups react differently to greater degrees of racial separation.

5 Policy Implications and Conclusion

The results above suggest that race, class, and gender affect the happiness and life satisfaction of college students. In many ways, the results for college students are similar to those for the adult population. Male college students report higher levels of happiness and life satisfaction than females, Asian students report lower levels, and those with lower incomes relative to their peers are also less happy and satisfied. Some results, though, are unique to college students. In particular, the result that first generation black students are less happy and satisfied than other first generation students may suggest that it is these students that are less likely to find support systems to help them adapt to college life.

In addition, the results that a more diverse campus causes students to be less happy and satisfied with life mirror the results of studies in the workplace. These results, however, do not contradict other studies that find long-run benefits of studying in a diverse environment. They simply explain why, in spite of the long-run benefits, diversity initiatives can be difficult to implement: they can make individuals, regardless of race, uncomfortable and unhappy. Furthermore, the existence of campus institutions such as fraternities may allow students to find safe havens from cross-racial interaction. While this makes a diverse campus a more comfortable place for students, it does not allow for the benefits of diversity to accrue.

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There are several policy implications that can be drawn from this research. Of course, these policy implications are preliminary because they are based on results of student happiness and not results that directly evaluate specific programs. Nonetheless, the results are suggestive of some general principles that should be explored further. First, by studying the happiness of college students, this research provides some important information for those developing programs in which students need to voluntarily choose cross-racial interaction. These programs may be more successful in generating voluntary participation by promoting the benefits to the individual. In promoting these benefits, it is important to note that the costs and the benefits of increased diversity are not just experienced by white students. Existing research shows that all students benefit from cross-racial interaction and this paper show that discomfort with diversity is common to students of all races.

A second policy implication is that institutions of higher education should consider removing barriers to cross-racial interaction such as Greek life. The results of this paper suggest that while Greek life may help individual students build social capital, it may be the kind of social capital that only tightens the bonds within homogeneous groups. The decision to participate in Greek life may represent a classic negative externality to the social climate, with individuals joining a fraternity considering only the positive benefits that accrue to members and not considering the negative effects of fraternities on the overall campus climate.

A third result that has potential policy implications is related to the income and class of the student. Black first generation college students are likely to be less happy at these institutions, suggesting that support systems aimed at this demographic may be particularly important for its success. In addition, colleges should investigate the ways in which relative parental income affects student life in order to develop ways to mitigate its negative effects. For example, eliminating additional charges for campus services such as laundry, printing, or campus events may reduce the number of times that students are required to think about their financial resources.

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Finally, as an observational study, this study is subject to the general difficulty of identifying causal linkages. To the extent that different programs and approaches that institutions may implement rely on voluntary choice by the student, experimentation is necessary to identify cause and effect. For example, one problematic aspect of the current state of the literature on campus diversity is that individuals who currently have more voluntary cross-racial interaction may be fundamentally different than those who do not. Thus, the findings may not be generalizable to the population of college students as a whole. Randomized controlled experiments that study the effects of different interventions and program characteristics would be very useful in helping to design successful programs.

More research clearly needs to be done in order to provide stronger support for these tentative policy recommendations. However, the approach of examining the determinants of student happiness is a fruitful one if colleges and universities want to develop voluntary and sustainable student participation in programs that address issues of race, class, and gender.

References

Antonio, A. L. (2001). The Role of Interracial Interaction in the Development of Leadership Skills and Cultural Knowledge and Understanding. *Research in Higher Education*, 42(5), 593-617.

Argyle, M. (1999). Causes and correlates of happiness. In D. Kahneman, E. Diener & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 353-373). New York, NY: Russel Sage Foundation.

Astin, A. W. (1993). What matters in college? Four critical years revisited (pp. 273-311). San Francisco, California: Jossey-Bass.

Blanchflower, D. and Oswald A. (2004). Well-being over Time in Britain and the U.S.A. *Journal of Public Economics* 88: 1359-1386.

Buettner, C. and Debies-Carl, J. (2012). The Ties that Bond: Bonding and Bridging Social Capital and College Student Party Attendance, *Journal of Studies on Alcohol and Drugs,* 604-612.

Chattopadhyay, R. and Duflo, E. (2004). Women as Policymakers: Evidence from a Randomized Policy Experiment in India, *Econometrica,* 72(5), 1409-1443.

Chang, M. J., Denson, N., Saenz, V., and Misa, K. (2006). The Educational Benefits of Sustaining Cross-Racial Interaction among Undergraduates. *The Journal of Higher Education*, 77(3), 430-455.

Cherlin, A. J. (2013). In the Season of Marriage, a Question. Why Bother?, *New York Times*.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American psychologist, 55*(1), 34.

Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology, 29*(1), 94-122.

Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. *Nations and households in economic growth, 89*.

Ellison, S.F., and Mullin, W.P. (2014). Diversity, Social Goods Provision, and Performance in the Firm. *Journal of Economics and Management Strategy*, 23(2), 465-481.

Ferrer-i-Carbonell, A. (2005). Income and well-being: an empirical analysis of the comparison income effect. *Journal of Public Economics, 89*(5), 997-1019.

Freeman, R.B. and Huang, W. (forthcoming) Collaborating with People Like Me: Ethnic Co-authorship within the U.S. *Journal of Labor Economics*.

Frey, B. S., & Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic literature, 40*(2), 402-435.

Gundlach, E., & Opfinger, M. (2013). Religiosity as a Determinant of Happiness. *Review of Development Economics, 17*(3), 523-539.

Gurin, P. (1999). Expert report of Patricia Gurin. in Mich (Ed.), *The compelling need for diversity in higher education*, Gratz et al. v. Bollinger et al, No 97-75237 and Grutter et al. v. Bollinger et al. No. 97-75928. Ann Arbor, MI: The University of Michigan.

Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling, 20*(2), 331-360.

Herbst, C. (2011). 'Paradoxical' decline? Another look at the relative reduction in female happiness. Journal of Economic Psychology 32: 773-788.

Hughes, M. and Thomas, M. (1998). The Continuing Significance of Race Revisited: A Study of Race, Class, and Quality of Life in America, 1972-1996. *American Sociological Review* 63(6): 785-795.

Jayakumar, U. M. (2008). Can Higher Education Meet the Needs of an Incrasingly Diverse and Global Society? Campus Diversity and Cross-Cultural Workforce Competencies. *Harvard Educational Review* 78(4), 615-651.

Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences, 107*(38), 16489-16493.

Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *The journal of economic perspectives, 20*(1), 3-24.

Katsaiti, M. S. (2012). Obesity and happiness. *Applied Economics, 44*(31), 4101-4114.

Knudsen, B., Florida, R., and Rousseau, B. (2008) Bridging and Bonding: A Multidimensional Approach to Regional Social Capital *The Martin Prosperity Institute Working Paper*, University of Toronto.

Lim, C., & Putnam, R. D. (2010). Religion, social networks, and life satisfaction. *American Sociological Review, 75*(6), 914-933.

Luttmer, E. F. (2005). Neighbors as negatives: Relative earnings and well-being. *The Quarterly Journal of Economics, 120*(3), 963-1002.

McBride, M. (2001). Relative-income effects on subjective well-being in the cross-section. *Journal of Economic Behavior & Organization, 45*(3), 251-278.

Mochon, D., Norton, M. I., & Ariely, D. (2008). Getting off the hedonic treadmill, one step at a time: The impact of regular religious practice and exercise on well-being. *Journal of Economic Psychology, 29*(5), 632-642.

Oishi, S. (2002). Experiencing and Rememering of Well-Being: A Cross-Cultural Analysis. *Personality and Psychology Bulletin* 28: 1398-1406.

Pascarella, E.T., Edison, M., Nora, A. Hagedorn, L.S., and Terenzini, P.T. (1996). Influences on students openness to diversity and challenge in the first year of college. *Journal of Higher Education*, 67(2), 174-195.

Park, J.J. (2014). Clubs and the Campus Racial Climate: Student Organizations and Interracial Friendship in College. *Journal of College Student Development*, 55(7), 641-660.

Park, J. J. and Kim, Y.K. (2013). Interracial Friendship and Structural Diversity: Trends for Greek, Religious, and Ethnic Student Organizations. *The Review of Higher Education*, 37(1), 1-24.

Phillips, K.W., Northcraft, G.B.,and Neale, M.A. (2006). Surface-level diversity and decision-making in groups: When does deep-level similarity help? *Group Processes and Intergroup Relations,* 9: 467-482.

Powdthavee, N. (2007). Economics of happiness: A review of literature and applications. *Chulalongkorn Journal of Economics, 19*(1), 51-73.

Putnam, R. (2000). *Bowling alone: The collapse and revisval of American community*. New York, NY: Simon and Schuster.

Sacks, D. W., Stevenson, B., & Wolfers, J. (2012). The new stylized facts about income and subjective well-being. *Emotion, 12*(6), 1181.

Scollon, C. N., Koh, S., and Au E.W., (2011). Cultural Differences in the Subjective Experience of Emotion: When and Why They Occur. *Social and Personality Psychology Compass*, 5(11): 853-864.

Sparber, Chad, (2009). Racial Diversity and Aggregate Productivity in U.S. Industries: 1980-2000. *Southern Economic Journal*, 75(3), 829-56.

Stevenson, B., & Wolfers, J. (2013). Subjective Well-Being and Income: Is There Any Evidence of Satiation? : National Bureau of Economic Research.

Stevenson, B. A., & Wolfers, J. (2009). Paradox of Declining Female Happiness.*American Economic Journal: Economic Policy* 1(2): 190-225.

Van De Wetering, E., van Exel, N., & Brouwer, W. B. (2010). Piecing the jigsaw puzzle of adolescent happiness. *Journal of Economic Psychology, 31*(6), 923-935.

Verbakel, E. (2012). Subjective well-being by partnership status and its dependence on the normative climate. *European Journal of Population/Revue européenne de Démographie, 28*(2), 205-232.

Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicators Research, 92*(1), 53-68.

Yang, Y. (2008). Social Inequalities in Happines in the United States, 1972-2004: An Age-Period-Cohort Analysis. *American Sociological Review* 73(2): 204-226.