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“Strive for Gains!”: Perceived Fairness of College Tuition Price Increases

Rachel Powell

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1. Introduction:

College and university tuition has become extremely expensive, and continues to increase in price yearly. According to Archibald and Feldman (2008), this trend of increased costs has been occurring for at least the past seventy-five years, so this is not a new phenomenon. These increased costs are in part due to the effects of state financial aid programs from the 1980s which allowed states to shift more of the burden of educational funding onto the students (Andrew & Russo, 1989). The effects of these extremely high tuition costs are felt directly by the students who attend these schools, and in many cases it is found that these high costs serve as a deterrent as well as a barrier to many students when deciding if they should pursue higher education (Callender & Jackson, 2005; Heller, 1997; Hemelt & Marcotte, 2011; Leslie & Brinkman, 1988). This is particularly the case for middle income families who tend to be overlooked in the financial aid process (Napolitano et al., 2014). Additionally, colleges and universities care about how they are perceived by the public, giving them incentives to take the public's fairness perceptions of their actions into account when making tuition increasing decisions. Currently, although the literature on price fairness is vast and well-studied, the literature on how the public perceives increases in tuition is lacking. This study, however, will begin to fill that gap by gauging the public's fairness perceptions of increasing college tuition based on differing justifications and originating from different types of schools. Therefore, knowledge of the most fairly perceived ways to frame tuition price increases, in light of institutional differences, will allow colleges and universities to maximize their tuition in the most fairly perceived ways possible.

Colleges and universities care about how their decisions are perceived by the public. They want to stay in good standing with the public firstly so that their school will continue to attract accomplished students, and importantly not deter prospective students that might already feel burdened by the high

costs. Additionally, colleges and universities will want to be perceived as fair in their price increases because they depend heavily on government funding to support their services. This is most notably relevant for public colleges and universities which tend to be about 40 to 50 percent reliant on government funding to cover their educational expenses, but private institutions also rely on funding to a certain, although lesser, degree for government funded research and other projects: they are about 10 percent reliant on government funding to cover their educational expenses (The Lincoln Project, 2015; National Center for Education Statistics, 2019). More fairly perceived schools by the public, for example, ones that do not raise their tuition in ways that are perceived to be unfair, will receive more public support for acquiring governmentally allocated funds than ones that are perceived unfairly, making this a relevant and important topic to explore. Importantly, this idea of being perceived fairly is also extremely relevant during the current climate of the Covid-19 pandemic. The pandemic has been difficult for everyone, but it has also had noteworthy effects on colleges and universities; the shifts to remote learning and toward more Covid-19 safe practices significantly affected college enrollment and cost allocation (Friga, 2020). Therefore, it is especially important and would be of interest to schools to know how best to frame tuition increases so as to stay in good standing with the public even amidst the pandemic-associated losses.

Notably, colleges and universities use different justifications, or motives, to aid in explaining why they have increased their tuition. As will be explored more in depth below, these motives, which can be seen in colleges' public statements along being supported in the academic literature, fall into the following categories: increasing tuition to avoid losses, increasing tuition to strive for gains and enhance the student experience, and increasing tuition because doing so is the traditional norm. Despite the attention given to these different motives for increasing tuition, how these motives affect the perceived fairness of tuition increases has not been studied. Additionally, the effects of such motives have not been studied in light of institutional differences: colleges are heterogeneous; therefore, it is pertinent to explore whether any effects the type of motive has on fairness perceptions depend on the type of school the tuition increases originate from. These many differences, such as whether schools are private or public, or have

high or low prestige, may lead to varying public fairness perceptions on their own as well, however the literature on these variables in regard to price fairness perceptions is also lacking.

Given the clear importance of knowing how to fairly frame already disliked tuition increases, a study that tests that very question is extremely relevant, and to my knowledge, has not been directly tested in the literature. Therefore, the study described in this thesis uses an experimental design to examine how fairly tuition price increases are perceived to be depending on the type of motive given to justify the tuition increase, and depending on institutional individual characteristics such as whether the school is private or public, or has high or low prestige. The study's main variable of interest is whether the type of motive a college or university uses to justify their tuition increase has any effect on resulting fairness perceptions. This study puts motives into three categories based on Kahneman and Tversky (1979)'s Prospect Theory, which asserts that we put more weight into the negative feeling we experience from losses than the positive feeling associated with equal gains: this study tests two motives emphasizing increasing tuition in order to avoid losses (one with general losses and one with Covid-19 specific losses; from now on these motives will be referred to as the avoiding-losses and Covid-19 motives, respectively); another that emphasizes increasing tuition in order to strive for gains or enhance the student experience; and a control motive that emphasizes increasing tuition as a continued traditional norm. Prospect Theory predicts that the two avoiding-losses motives should yield significantly higher fairness perceptions than the striving-for-gains and control motives.

Furthermore, these motives were used because of strong links to the academic literature on why college tuition is so expensive and why it continues to increase. There are two theories, Cost Disease Theory and Revenue Theory, that support the validity of both increasing tuition from an avoiding-losses and striving-for-gains perspective, respectively. These will be explored in greater detail in the literature review section of this paper.

In addition to links to the academic literature, all the motives are clearly seen in examples of actual colleges and universities justifying their tuition increases. For example, Marquette University used an "avoiding-losses" justification when explaining that they are increasing tuition for the 2022-23 school

year in order “to account for the increasing costs of food products and operating and maintaining residence facilities” (Marquette University, 2021). On the other hand, Mount Holyoke College justified their 2022-23 tuition increase by explaining that they required “revenue growth to [...] invest in new initiatives,” which very clearly exemplifies a “striving-for-gains” justification through the implication that these “new initiatives” will enhance the college experience (Mount Holyoke College, 2022). Lastly, there are also examples of colleges and universities claiming that they are increasing tuition to fulfill a yearly traditional norm, which aligns with this study’s control motive. For example, the University of Southern California described their 2021-22 yearly tuition increase as “the lowest year-over-year increment since 1967” (University of Southern California, 2021). Although this is framed as the *lowest* increase in many years, and even though this justification was partially included to account for the stress of the widely felt pandemic, it still implies that tuition is a necessary yearly occurrence, and therefore must always occur to some extent.

In addition to testing whether certain motives are more fairly perceived than others when justifying tuition increases, this study’s experimental design also includes two institutional individual characteristic variables: whether the school increasing tuition is private or public, and if said school has high or low prestige. The private versus public variable was included because differences in the two types of schools, such as their average starting tuition prices and the degree to which they are reliant on government funding to cover their educational expenses, are potentially very relevant to how fairly the public would perceive their increases in tuition (The Lincoln Project, 2015; Epps, 2021; National Center for Education Statistics, 2019). The prestige variable was included because the related literature indicates a student preference for higher prestige, in addition to an association between higher spending and more prestigious rankings (Bowman & Bastedo, 2009; Buss et al., 2004; Iglesias, 2014; McClure & Titus, 2018; Meadows, 2009; Meredith, 2004). Therefore, given this potential willingness to “pay for prestige” and sympathy for more prestigious institutions to keep improving despite the costs, this was an important variable to include as well.

As will be discussed further in the results section of this paper, this study elicited significant findings. Most importantly, study participants found a school increasing tuition to be fairer when an avoiding-losses or striving-for-gains motive was used instead of a Covid-19 or control justification, and these differences were statistically significant. This indicates that the motives did matter in eliciting different public fairness perceptions, however not in the way that Prospect Theory predicted. In terms of the institutional individual characteristic variables, tuition price increases originating from schools that were public were perceived to be fairer than private schools doing the same, and schools with high prestige had higher fairness ratings compared to their less prestigious counterparts. Notably, there were some demographic differences and interaction effects between the variables that arose as well, and some of them point toward the striving-for-gains motive being perceived fairly more consistently than the avoiding-losses motive. This indicates that overall, framing tuition increases in a striving-for-gains light might be the optimal way to justify increasing tuition, regardless of any of the schools' individual characteristics.

2. Review of the Literature:

To my knowledge, no study has directly tested the public's fairness perceptions of tuition price increases under varying conditions. However, the literature that does exist includes price fairness studies more generally, and findings regarding why the treatment variables of this study should be taken into account for fairness perceptions. This literature will be explored in this section.

2.1: Seminal price fairness literature:

The literature involving price fairness begins with a few seminal works that were important motivators for this study. Kahneman, Knetsch, and Thaler (1986) conducted an important study which ultimately found that price fairness perceptions are very context-dependent, and follow strict implicit rules; in relation to reference prices, people tend to find price increases at the expense of the consumer but with direct benefits to the seller to be unfair, and only fair if the seller is acting in response to increasing costs. This paper was and still is an important work in the literature on the context-dependence of price

fairness. Similarly, a study by Vaidyanathan and Aggarwal (2001) also finds that fairness perceptions are higher when price increases are "cost-justified," and therefore are in direct response to increased costs. This finding that people are more sympathetic to price increases in response to increased vendor costs is also found in Bolton and Alba (2006). Another paper by Kahneman, Knetsch, and Thaler (1986) found that even profit-maximizing firms, such as some colleges and universities, have an incentive to set prices in a way that is perceived as fair, as the study showed how participants acting as consumers had a willingness to enforce fairness at the expense of the firm, and even at some cost to themselves. Additionally, a study by Xia, Monroe, and Cox (2004) showed how low perceptions of firm fairness signal low customer satisfaction, low purchase intention, and a lower assessment of product value. Similar results were found in Campbell (1999) where there was a positive relationship between how justifiable the price increase motive was and how fairly the price increase was perceived. These studies signal that people care about price increases in general, and they further raise questions about whether people care about price increases in the college tuition context in similar or different ways. This indicates the relevance of and motivation for this study.

2.2: Seminal prospect theory literature:

The literature on price fairness has strong links to Prospect Theory, and those links were strong motivators for this study. Prospect Theory, as proposed by Kahneman and Tversky (1979), served as a critique against the limitations of standard expected utility theory for describing human behavior in the face of risk. Among many findings, the authors discovered that people tend to weigh losses more heavily than equal gains. This idea of loss aversion is further expressed in Tversky and Kahneman (1991), where once again loss aversion is described as people weighing losses more heavily than equal gains, relative to a reference point; merely the way a situation is framed can make people view the situation as a loss or a gain. Furthermore, Prospect Theory has direct links to the price fairness literature through the seminal studies by Bolton and Alba (2006) and Kahneman, Knetsch, and Thaler (1986), both of which found that price increases are seen as fairer when they are in direct response to increased costs as opposed to in the pursuit of profits, thus in alignment with the overarching idea that firms "avoiding losses" are perceived

as fair. Therefore, Prospect Theory and loss aversion predict that people will avoid situations framed as losses more often than those framed as a pursuit for gains, and therefore should be more sympathetic toward price increases originating from an avoiding-losses justification as opposed to one more focused on striving-for-gains. This helps to form the hypothesis that the avoiding-losses motive will be perceived as fairer than the striving-for-gains motive, but this will be discussed further in the hypothesis section of this paper.

2.3: Student responses to high tuition:

The very high costs associated with paying college tuition have a significant impact on students' ability to pursue a higher education. Firstly, Calendar and Jackson (2005) found that for lower income students, the fear of debt is more prominent than for their more affluent peers, making these students more debt averse and more likely to be deterred from attending colleges with very high tuitions. This is especially true given that debt is not distributed equally, leaving poorer students completing school with more debt than their more affluent counterparts. These results are further supported in Cabrera and La Nasa (2000), which explains that 65 percent of low-income families go into debt while paying for their childrens' colleges as compared to 40 percent of upper-income families. Relatedly, Andrew and Russo (1989) find that difficulties in obtaining highly relied upon federal financial aid grants leads to fewer minority and lower income groups being represented in higher education. Further highlighting this disparity, Dynarski (2000) finds evidence that college financial aid policies can actually widen the income and racial gaps in higher education, especially given their tendency to overlook middle class individuals in favor of only helping students with the lowest socioeconomic statuses (Andrew & Russo, 1989; Napolitano et al., 2014). Furthermore, research consistently points to a negative relationship between enrollment and tuition price, as is shown in Hemelt and Marcotte (2011), Leslie and Brinkman (1988)'s review of twenty-five studies on college tuition's impact on student enrollment, and Heller (2007)'s consistent results. Additionally, Manski and Wise (1983) explain in general that tuition price plays an important role in the college choice process. These studies are relevant to this paper because they imply

that increases in tuition will matter in terms of enrollment, making the fairness perceptions of said increases important to be explored.

2.4: Private versus public institutions increasing tuition:

The academic literature on how fairly the public finds price increases originating from private versus public colleges is lacking, so this particular study will begin to fill that gap. The literature that does exist indicates that for the most part, there are not too many striking differences between the two types of schools. Many studies explain how the quality of education received from private schools tends to be very similar to that of public schools, even though the findings from an exploratory question in this study indicate that just under 80 percent of individuals associate prestige more with private colleges than with public ones (Brown, 2014; Hess, 2019; Naidu & Derani, 2015; Scott et al., 2006). Therefore, the largest differences between private and public schools are firstly, the average cost of tuition, and secondly, the degree of government funding each type of institution receives. On average, private institutions are more costly than their public counterparts (Epps, 2021). Additionally, public schools receive much more government funding than private institutions, with public institutions covering around 40 to 50 percent of their educational expenses with government funding, and private schools covering only about 10 percent of their educational expenses with government funding (The Lincoln Project, 2015; National Center for Education Statistics, 2019). These two factors are very relevant to this study, because higher or lower average costs of tuition likely has impacts on the fairness perceptions of tuition price increases. Also, the degree of government funding may influence fairness perceptions as well, since where schools most rely on their funding from, whether it be from governments or from student tuition, may or may not justify price increases. Therefore, whether a school is private or public is necessary to be explored in regards to what influences fairness perceptions of increasing tuition.

2.5: Prestige of institutions increasing tuition:

The academic literature on the effects of institutional prestige on student perceptions and school enrollments points to higher prestige being more favorable overall. This is relevant to this study because it indicates that people might be willing to "pay for prestige" through increases in tuition and consequently

might find those increases more warranted and justified than otherwise. This idea is strongly supported in multiple academic papers that show a positive relationship between the US News and World Report (USNWR) rankings and enrollment yield, as this indicates that students care about prestige and are more likely willing to attend such a school over their less prestigious counterparts (Bowman & Bastedo, 2009; Buss et al., 2004; Meredith, 2004). Furthermore, studies have also shown a strong link between increased spending and institutions that are striving for prestige (Iglesias, 2014; McClure & Titus, 2018); therefore, it seems that prestige is directly linked with higher prices, and people are still willing to pay those prices, indicating a bias towards preferring prestige. Additionally, Meadows (2009) is an important study in the literature on prestige despite not finding a direct link between prestige and enrollment given a price increase, as it still described ample evidence that indicates that students care about prestige and strive to achieve it; Meadows (2009) is therefore still relevant to this study despite the lack of direct findings because although enrollment may not have been impacted by prestige specifically when a price increase occurred, how people feel about said price increase is valuable information that might be affected by prestige, and will be further explored in this study.

2.6: Theories of increasing college tuition:

The academic literature on college tuition proposes a few theories for why tuition continues to increase to such high costs. These theories are relevant to this study because they helped validate using specific motives in this study's experimental design. Firstly, the academic literature proposes the Cost Disease Theory for why college tuition increases. This theory explains that tuition increases because of the inability for college professors to increase too much in productivity overtime; in order for colleges to retain their esteemed professors, these professors require regular salary increases even though they are not teaching more students per year as time goes on. Therefore, in order for the college to maintain their professors and avoid the losses associated with turnover, they need to increase salaries to a competitive level like would occur more naturally in other professions (Archibald & Feldman, 2008; Baumol & Bowen, 1965; Ehrenberg, 2007). This link to the academic literature supports using the avoiding-losses motive in this experimental design.

Secondly, the academic literature also proposes Bowen's Revenue Theory. This theory explains that tuition increases because colleges tend to spend everything they can raise, and therefore want to increase their revenue whenever possible to continue that spending (Bowen, 1980). Allocating ample new funds to novel projects can help to enhance the quality of institutions and the experience of their students, creating incentives for this increased revenue. This link to the academic literature supports using the striving-for-gains motive in this experimental design.

To summarize the relevant existing literature, research has been conducted on all the treatment variables of this study, such as the importance of framing on price fairness, the differences between private and public institutions, the impacts of prestige, and academic theories for why tuition continues to increase. Research has also been conducted on how students react to high tuition costs in general, indicating this study's relevance for colleges. However, to my knowledge, there have been no studies that directly test whether differences in the motive given and the individual characteristics of schools impact the public's fairness perceptions of tuition increases, making this an important and relevant study to perform.

3. Methods and Design:

This study was conducted with individuals from the United States through the online platform Amazon Mechanical Turk (MTurk). Through MTurk, participants were recruited, were paid $0.60, and took part in the study's experimental, general belief, and demographic questions.

This study sought to determine the participants' fairness perceptions of tuition price increases through the use of vignettes. In this experimental segment of the study, respondents read one version of a vignette that described an increase in college tuition, and then they were asked to rate their perceived fairness of the tuition increase. The vignette varied (1) whether the college increasing tuition was public or private, (2) whether the college increasing tuition was highly (15%) or moderately (50%) selective as a proxy for measuring prestige, and (3) the motive the college gave for increasing tuition; the motives involved two relating to avoiding losses (one general and one Covid-19 specific), one relating to

striving-for-gains, and a control motive relating to increasing tuition as a continued norm. Participants then rated their perceived fairness on a six-point Likert scale. The experiment can therefore be described as a 2 (public vs. private) X 2 (highly vs. moderately selective) X 4 (avoiding-losses vs. Covid-19 vs. striving-for-gains vs. control motive) design, with a total of sixteen combinations of treatment variables. All study questions and the experimental vignette with all the treatment differences are listed in Appendix B.

The study's main variable of interest is whether the type of motive a college gives for increasing tuition affects perceived feelings of fairness about the price increase (either emphasizing avoiding losses (general or Covid-19 specific), striving-for-gains, or a control motive that emphasizes increasing tuition because that is the traditional norm). Firstly, the control motive emphasizing yearly traditional tuition increases was included in order to provide a baseline for comparing the results of the other motives against. Additionally, having this control motive emphasize traditional tuition increases is preferred to having a control motive where no justification is given at all, because the latter case would likely lead to participants coming up with their own implicit justifications for why the tuition is increasing based on their homegrown biases. Providing an actual justification for the control takes away this potential bias, and thus resolves the issue. Secondly, the experimental motives included in this study were motivated by a desire to see if the findings from Prospect Theory's loss aversion, which have been found to affect perceptions of price fairness (Bolton & Alba, 2006; Kahneman et al., 1986; Tversky & Kahneman, 1991; Vaidyanathan & Aggarwal, 2001), hold up in the context of the perceived fairness of increasing tuition; Prospect Theory posits that we weigh gains and losses differently, and therefore are motivated to avoid losses more so than to strive for equal gains (Kahneman & Tversky, 1979; Tversky & Kahneman, 1991). Additionally, Archibald and Feldman (2008) note two theories of increasing tuition that directly align with the avoiding-losses and striving-for-gains motives: these theories are the Cost Disease Theory and Revenue Theory, respectively, which also motivated the use of these motives in the experimental design. Furthermore, actual motives given by colleges and universities for increasing tuition fit into these two

categories, in addition to within the control motive category of traditional tuition increases, further emphasizing the benefits of their inclusion.

Other individual characteristic variables, such as whether the school increasing tuition is private or public or has high or low prestige, were included in this study as well. The private versus public variable was stated in the vignette as either a private or public college increasing tuition coupled with a paragraph describing private or public college trends in terms of their relative average starting prices and the degree to which each is reliant on government funding. The prestige variable was proxied by how selective the school was in admitting students: in the vignette, a school was either described as highly (high prestige) or moderately (low prestige) selective, with the given selectivity rates being 15 and 50 percent, respectively. Selectivity was chosen as a proxy for prestige because the USNWR also uses selectivity as a model for prestige when ranking schools, and there is evidence in the literature that these USNWR rankings hold weight in student's minds (Bowman & Bastedo, 2009).

In the study, 1,550 participants were randomly assigned on MTurk to one of the sixteen treatment combinations. After dropping participants that did not fully complete the study or who answered crucial comprehension questions incorrectly, results were examined from 1,202 participants. Participants were presented with a vignette, see Appendix B, that first described the trend of high and increasing college and university tuition. After this introductory paragraph, a paragraph was dedicated to describing the specific trends of private or public college tuition depending on the treatment each participant was randomly assigned. This paragraph explained how private colleges are more expensive than public colleges on average ("public" was emphasized in the relevant public college conditions) and noted the exact percentage of private (or public) colleges' educational expenses that is covered by government funding (about 10 percent for private schools; about 40 to 50 percent for public schools). Next, the vignette described a situation in which a private or a public college with high (15 percent selectivity) or low (50 percent selectivity) prestige increased tuition by 5 percent justified by a particular motive (avoiding-losses, Covid-19, striving-for-gains, or control (traditional tuition increases)). Tuition was increased by 5 percent in this vignette because the literature indicates that yearly tuition increases

generally exist within the 3 to 8 percent range and have landed at about 5 percent for around the last decade (The Real Cost of Higher Education, 2015; Finaid, 2019). Participants were then asked to determine how fair they found that price increase to be given a six-point Likert scale, ranging from 'completely unfair' to 'completely fair.' After completing the vignette questions, participants were asked to respond to three comprehension check questions, and they were dropped from the study if they answered both questions one and two incorrectly (see Appendix B).

In addition to the experimental vignette, participants' demographics and their general beliefs along several dimensions were asked for in order to control for individual differences and to explore connections between personal characteristics and the perceived fairness of tuition price increases. All of these additional questions are also presented in Appendix B.

4. Hypotheses:

Previous research that has been expanded upon in the literature review section of this paper points to the importance of how justifications are framed in regards to price fairness perceptions, and these studies fueled this study's hypotheses (Bolton & Alba, 2006; Kahneman et al., 1986; Kahneman & Tversky, 1979; Vaidyanathan & Aggarwal, 2001). It is important to study how tuition price increases are framed and presented because colleges and universities care about how they are perceived in order to attract desired students, faculty, and government funding (The Lincoln Project, 2015; Bowman & Bastedo, 2009; Buss et al., 2004; Epps, 2021; Meadows, 2009; Meredith, 2004; National Center for Education Statistics, 2019).

Furthermore, beyond the issue of framing, the individual characteristics of schools, such as whether they are private or public, or their degree of prestige, may play a role in how fairly tuition increases originating from such schools are perceived as well, thus making them important variables to consider. It follows, then, that these institutional individual characteristic variables also helped fuel this study's hypotheses. Therefore, the results of this study will signal how colleges and universities should

frame increasing tuition given any individual characteristics so as to maximize their revenues and fairness perceptions.

4.1: Motives:

Firstly, as has been aforementioned, Kahneman and Tversky (1979)'s Prospect Theory and Tversky and Kahneman (1991)'s loss aversion posits that we weigh losses more heavily than we do equal gains. This connects to the studies by Bolton and Alba (2006) and Kahneman, Knetsch, and Thaler (1986) which find that these Prospect Theory and loss aversion concepts carry through into the price fairness literature; people find price increases on the basis of making up for losses due to increased input costs fairer than those enacted to make more of a profit or to strive for gains. Therefore, these theories predict that people should find the tuition increases framed under an avoiding-losses scenario fairer than under other justifications. This prediction yields this set of hypotheses:

H0: There is no difference in fairness perceptions between the different motives the college gives for increasing tuition.

H1: The avoiding-losses motives for increasing tuition will be perceived as fairer than the striving-for-gains or control motives.

However, it is also possible that there could be unforeseen differences in the motives that deviate from the findings of Prospect Theory, given that, to my knowledge, the case of fairness perceptions associated with increasing college tuition has not yet been explored. It is very possible that certain motives, outside of the predictions of Prospect Theory and loss aversion, will be more effective at yielding higher fairness ratings than will others. Therefore, these predictions yield this set of hypotheses:

H0: There is no difference in fairness perceptions between the different motives the college gives for increasing tuition.

H1: There are differences in fairness perceptions between the different motives the college gives for increasing tuition.

4.2: Avoiding-losses motives:

This particular study utilizes two different avoiding-losses motives: one general avoiding-losses justification, and one that is specific to the losses felt by colleges and universities due to Covid-19. Friga (2020) points to the severe losses colleges experienced over the pandemic due to the loss of student housing, dining, parking fees, and the revenues brought in by sporting events, to name a few sources of lost revenue. Therefore, due to the widely known and significant financial impacts the pandemic has had on colleges and universities, it is hypothesized that study participants will sympathize more with this particular source of losses over the general one, especially given Covid-19's persistent relevance in the world. However, it is also possible that due to the widespread and complicated effects of the Covid-19 pandemic, that the opposite effect could occur; everyone has had to deal with Covid-19's effects, not just colleges and universities, so feelings of sympathy toward colleges increasing tuition for that reason could be limited. Therefore, this reasoning leads to this set of hypotheses:

H0: There is no difference in fairness perceptions between the general avoiding-losses motive and the Covid-19 specific avoiding-losses motive.

H1: There are differences in fairness perceptions between the general avoiding-losses motive and the Covid-19 specific avoiding-losses motive.

4.3: Private versus Public:

The literature on how fairly people perceive price increases originating from private versus public colleges is lacking, so this study will serve as a starting point for bridging this gap. However, the research does indicate that on average, private colleges are more expensive than public colleges, and that they receive much less government funding than their public counterparts (The Lincoln Project, 2015; Epps, 2021; National Center for Education Statistics, 2019). Focusing on the fact that private colleges are more expensive than public colleges, it is possible that any increases from already very expensive private schools will be seen as more unfair than those from public schools, because the financial effects on students are always worse on average in the former case. On the other hand, however, one can also focus on the fact that private colleges are much more reliant than public colleges on revenue directly from tuition, given the less government funding they receive. Therefore, any increases in tuition private

colleges request may be more understandable and sympathized with. These opposing theories lead to this set of hypotheses:

H0: There is no difference in fairness perceptions between private and public colleges increasing tuition.

H1: There are differences in fairness perceptions between private and public colleges increasing tuition.

4.4: Prestige:

The academic literature, including Bowman and Bastedo (2009), Buss et al. (2004), Meadows (2009), and Meredith (2004), points to the fact that students care about prestige when making their college selections. Furthermore, the literature also indicates that schools that are striving for prestige tend to have higher overall spending than otherwise (Iglesias, 2014; McClure & Titus, 2018). These findings perhaps indicate that students will be more accepting of colleges increasing tuition when they have higher degrees of prestige; there is an association between spending and prestige, and an idea that students are willing to "pay" to be associated with a college of higher status, making any increases in tuition originating from more prestigious schools merely seem like the justifiable cost of purchasing the luxury that is prestige. These studies therefore fueled this fourth hypothesis:

H0: There is no difference in fairness perceptions between colleges with low or high prestige increasing tuition.

H1: Colleges with high prestige increasing tuition are perceived to be fairer than colleges with low prestige doing the same.

4.5: Interaction Effects:

Finally, there is the possibility of interaction effects between the different treatment variables yielding interesting and unforeseen results. It is more than likely that some of the treatment variables will yield results when they act in conjunction with each other. In particular, specific attention is paid to studying whether there are differences in the effectiveness of the motives and other demographic variables for specific types of schools, as this might yield important information about which justifications are the

most positively perceived overall and most consistently. These postulations fueled this speculative hypothesis that there will be evidence of interaction effects across the variables.

5. Results:

A total of 1,202 participants' responses were analyzed in this study. Their fairness ratings were analyzed statistically with Mann-Whitney rank sum tests and logit regressions, as seen in Tables 1-7. Summarizing the results, fairness perceptions were highest when the college used a striving-for-gains or an avoiding-losses motive, and this was significant as compared to the control. Relatedly, the Covid-19 motive had no difference as compared to the control motive. Additionally, public schools increasing tuition were perceived to be fairer than private schools doing the same, and prestige also had a positive effect on fairness perceptions. There also were numerous demographic and interaction effects across the variables, some of which indicate that the striving-for-gains motive elicits the highest fairness perceptions most consistently across all demographic groups. Each result will now be analyzed individually.

5.1: Mann-Whitney Rank Sum Test Results:

Table 1: Descriptive Statistics for Treatment Variables:

	N	Mean	SD
Losses	317	3.92	0.085
Striving	307	3.89	0.088
Covid-19	298	3.47	0.095
Control	280	3.55	0.097
Private	587	3.63	0.066
Public	615	3.80	0.064
High Prestige	596	3.81	0.065
Low Prestige	606	3.63	0.065

Table 2: Mann-Whitney Rank Sum Test Results for Treatment Variables:

	Control	Losses	Striving	Covid-19
Losses	U= 2.689 p= 0.0072	-	-	-
Striving	U= 2.499 p= 0.0125	U=0.163 p=0.8703	-	-
Covid-19	U= 0.549 p= 0.5829	U=3.337 p=0.0008	U=3.124 p=0.0018	-
	Rank Sum			
Private/Public	U= 1.853 p= 0.064			
High Prestige/Low Prestige	U= 1.905 p=0.057			

5.1a: Motives:

i. The avoiding-losses and striving-for-gains motives are not significantly different from each other.

In a Mann-Whitney test comparing the distributions of fairness perceptions of the avoiding-losses and striving-for-gains motives, it was found that the two distributions were not significantly different from each other. The mean fairness values were 3.92 and 3.89, respectively, which are not significantly different (U=0.163, p=0.8703); see Tables 1 and 2 above for information regarding the mean fairness values and the Mann-Whitney test results, respectively. Therefore, we fail to reject the null hypothesis 4.1 that there is no difference between the avoiding-losses and striving-for-gains motives.

ii. The avoiding-losses motive yields significantly higher fairness perceptions than the control motive.

In a Mann-Whitney test comparing the distributions of fairness perceptions of the avoiding-losses and control motives, it was found that the avoiding-losses motive yielded significantly higher fairness perceptions than did the control motive. The mean fairness values were 3.92 and 3.55, respectively, which are significantly different from each other (U=2.689, p=0.0072); see Tables 1 and 2 above. Therefore, we reject the null hypothesis 4.1 that the avoiding-losses motive has no difference from the control.

iii. The striving-for-gains motive yields significantly higher fairness perceptions than the Covid-19 and control motives.

In a Mann-Whitney test comparing the distributions of fairness perceptions of the striving-for-gains and Covid-19 motives, it was found that the striving-for-gains motive yielded significantly higher fairness perceptions than did the Covid-19 motive. The mean fairness values were 3.89 and 3.47, respectively, which are significantly different from each other (U=3.124, p=0.0018); see Tables 1 and 2 above. Therefore, we reject the null hypothesis 4.1 that the striving-for-gains and the Covid-19 motives have no difference from each other. This result directly aligns with hypothesis 4.1.

Additionally, in another Mann-Whitney test comparing the distributions of fairness perceptions of the striving-for-gains and control motives, it was found that the striving-for-gains motive yielded significantly higher fairness perceptions than the control motive, with the resulting mean fairness values being 3.89 and 3.55, respectively (U=2.499, p=0.0125); see Tables 1 and 2 above. Therefore, we reject the null hypothesis 4.1 that the striving-for-gains motive has no difference from the control.

iv. The avoiding-losses motive yields significantly higher fairness perceptions than the Covid-19 motive.

In a Mann-Whitney test comparing the distributions of fairness perceptions of the avoiding-losses and Covid-19 motives, it was found that the avoiding-losses motive yielded significantly higher fairness perceptions than did the Covid-19 motive. The mean fairness values were 3.92 and 3.47, respectively, which are significantly different from each other (U=3.337, p=0.0008); see Tables 1 and 2 above. Therefore, we reject the null hypothesis 4.2 that there is no difference between the two avoiding-losses motives.

v. The Covid-19 and control motives are not significantly different from each other.

In a Mann-Whitney test comparing the distributions of fairness perceptions of the Covid-19 and control motives, it was found that the two distributions were not significantly different from each other. The mean fairness values were 3.47 and 3.55, respectively, which are not significantly different (U=0.549, p=0.5829); see Tables 1 and 2 above. Therefore, we fail to reject the null hypothesis 4.1 that there is no difference between the Covid-19 and control motives.

5.1b: Private versus Public:

In a Mann-Whitney test comparing the distributions of fairness perceptions of the private and public variables, it was found that the public variable yielded higher fairness perceptions than did the private variable. The mean fairness values were 3.80 for public and 3.63 for private, and this difference approaches statistical significance (U=1.853, p=0.064); see Tables 1 and 2 above. Therefore, we tentatively reject the null hypothesis 4.3 that there is no difference between the public and private variables.

5.1c: Prestige:

In a Mann-Whitney test comparing the distributions of fairness perceptions of the high and low prestige variables, it was found that the high prestige variable yielded higher fairness perceptions than did the low prestige variable. The mean fairness values were 3.81 and 3.63, respectively, which approaches statistical significance (U=1.905, p=0.057); see Tables 1 and 2 above. Therefore, we tentatively reject the

null hypothesis 4.4 that there is no difference between the prestige variables in favor of the alternative hypothesis that high prestige yields higher fairness perceptions than low prestige.

5.2: Logit Regression Results:

Table 3: General Logit Regression:

	(1)	(2)	(3)	(4)
VARIABLES	I. Logit: treatments only	II. Logit: Add demographics	III. Logit: Add socioeconomics/politics	IV. Logit: Add how paying
Private	-0.236**	-0.258**	-0.242*	-0.238*
	(0.119)	(0.120)	(0.130)	(0.131)
Prestige	0.260**	0.258**	0.217*	0.217*
	(0.119)	(0.120)	(0.131)	(0.131)
Losses	0.390**	0.361**	0.377**	0.377**
	(0.169)	(0.171)	(0.185)	(0.185)
Striving	0.295*	0.266	0.331*	0.329*
	(0.170)	(0.172)	(0.184)	(0.185)
Covid-19	-0.169	-0.185	-0.197	-0.197
	(0.168)	(0.170)	(0.178)	(0.178)
Age		-0.0136***	-0.000482	-0.000551
		(0.00493)	(0.00542)	(0.00542)
Male		0.309**	0.180	0.174
		(0.122)	(0.131)	(0.132)
Black		0.485**	0.313	0.305
		(0.210)	(0.236)	(0.237)
Low H Income			-0.261	-0.257

	(0.182)	(0.182)
High H Income	-0.308*	-0.303*
	(0.183)	(0.184)
College Grad	0.869***	0.871***
	(0.154)	(0.154)
Advanced Degree	0.918***	0.910***
	(0.201)	(0.202)
Current College	1.342***	0.619
	(0.192)	(0.914)
Any Parents Private	0.642***	0.632***
	(0.153)	(0.154)
Any Parents Public	-0.0877	-0.0888
	(0.135)	(0.136)
Liberal	-0.254*	-0.256*
	(0.132)	(0.133)
Alone N Loans		0.648
		(0.971)
Alone Loans		0.680
		(0.945)
Help N Loans		0.993
		(0.988)
Help Loans		1.200
		(1.430)

Constant	0.217	0.558**	-0.675**	-0.666**
	(0.145)	(0.258)	(0.328)	(0.330)
Observations	1,202	1,202	1,202	1,202

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4: General Logit Regression Marginal Effects:

VARIABLES	IV. Marginal Effects General
Private	-0.0482*
	(0.0258)
Prestige	0.0432*
	(0.0258)
Losses	0.0749**
	(0.0363)
Striving	0.0657*
	(0.0363)
Covid-19	-0.0392
	(0.0353)
Age	-9.58e-05
	(0.00108)
Male	0.0359
	(0.0260)
Black	0.0621

	(0.0470)
Low H Income	-0.0518
	(0.0360)
High H Income	-0.0612*
	(0.0362)
College Grad	0.173***
	(0.0289)
Advanced Degree	0.182***
	(0.0389)
Current College	0.267***
	(0.0356)
Any Parents Private	0.128***
	(0.0297)
Any Parents Public	-0.0174
	(0.0269)
Liberal	-0.0505*
	(0.0261)
Observations	1,202

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.2a: Treatment Effects:

The logit regression results allow for second analysis of the treatment variables, as seen in Table 3 above. Table 3 consists of logit regressions (1) containing just the treatment variables, (2) adding in demographic variables, (3) adding in socioeconomic and politics variables, and (4) adding in variables

relating to how people are paying for college. Regression 4, which included the variables relating to how people are paying for college, found that those variables did not have a significant effect on fairness perceptions, so the results of regression 3 will be primarily analyzed in this section instead. Additionally, the results from regression 3 were analyzed in terms of marginal effects in Table 4.

Firstly, looking specifically at the motives the college gives for increasing tuition, it is found that using an avoiding-losses or striving-for-gains motive both lead to positive perceptions of the tuition increase at a 0.05 ($p=0.041$) and 0.1 ($p=0.073$) significance level, respectively, as compared to the control motive. The Covid-19 motive led to negative perceptions of the tuition increase as compared to the control motive, however this was not statistically significant at a 0.1 level of significance ($p=0.267$). Interpreting these results in terms of marginal effects (see Table 4), it was found that if the avoiding-losses motive was used, participants were 7.5 percentage points more likely to find the price increase fair than if they saw the control. Additionally, if the striving-for-gains motive was used, participants were 6.6 percentage points more likely to find the price increase fair than if they saw the control. Lastly, if the Covid-19 motive was used, participants were 3.9 percentage points less likely to find the price increase fair than if they saw the control. These results are consistent with those of the Mann-Whitney tests.

Looking more specifically at the effects of a college being private versus public (see Table 3), it was found that a college being private led to more negative fairness perceptions than did the public colleges, at a 0.1 level of significance ($p=0.063$). Interpreting this result in terms of marginal effects (see Table 4), it was found that if a college was private as opposed to public, participants were 4.8 percentage points less likely to find the price increase fair. These results are consistent with those of the Mann-Whitney tests.

In regard to the effects of prestige on fairness perceptions (see Table 3), it was found that having higher prestige led to more positive fairness perceptions than did lower prestige, at a 0.1 level of significance ($p=0.096$). Interpreting this result in terms of marginal effects (see Table 4), it was found that if a college had high prestige, participants were 4.3 percentage points more likely to find the price

increase fair than if the school had low prestige. These results are consistent with those of the Mann-Whitney tests.

5.2b: Demographics:

The logit regression results also revealed important differences in fairness ratings on the basis of demographic groups, as seen in Table 3 above. Firstly, the logit regression results indicate that people who identify with a liberal political affiliation overall find the tuition price increases unfair at a 0.1 significance level (p=0.054) (see Table 3). The mean fairness value was 3.58. Interpreting this result in terms of marginal effects (see Table 4), it was found that if someone identifies as liberal, they are 5.1 percentage points less likely to find the price increase fair than those with other political affiliations.

Focusing more on education levels, the logit regression results indicate that people both with college and more advanced degrees overall find the tuition price increases fair at a 0.01 significance level (p=0.000) (see Table 3). The mean fairness values for those with college degrees and those with advanced degrees were 3.93 and 4.16, respectively. Interpreting these results in terms of marginal effects (see Table 4), it was found that if someone is a college graduate, they are 17.3 percentage points more likely to find the price increase fair than if they do not have a college degree, and if they have an advanced degree, they are 18.2 percentage points more likely to find the price increase fair than if they do not have an advanced degree.

The logit regression results also indicate that people currently attending college overall find the tuition price increases fair at a 0.01 significance level (p=0.000) (see Table 3). The mean fairness value for those currently attending college was 4.73. Interpreting this result in terms of marginal effects (see Table 4), it was found that if someone is currently attending college, they are 26.7 percentage points more likely to find the price increase fair than someone not currently attending college.

Additionally, the logit regression results (see Table 3) indicate, firstly, that people who have at least one parent who attended a private college find the tuition price increases fair at a 0.01 significance level (p=0.000). Secondly, the results indicate that having at least one parent who went to a public college does not have an effect on fairness perceptions (p=0.517). The mean fairness values for those with at least

one parent who attended a private college and for those with at least one parent who attended a public college were 4.41 and 3.70, respectively. Therefore, it appears that there is an effect associated with having a private-college-parent that does not exist for those with public-college-parents. Interpreting the private-college parent result in terms of marginal effects (see Table 4), it was found that if someone has at least one private-college-parent, they are 12.8 percentage points more likely to find the price increase fair than if they do not have at least one parent who went to a private college.

Lastly, the logit regression results also indicate that the way former or current college students paid for college does not have a significant impact on fairness perceptions at a 0.1 level of significance (see Table 3). In other words, a student paying for college alone without federal loans (p=0.505), paying alone with federal loans (p=0.472), paying with (familial) assistance without federal loans (p=0.315), or paying with (familial) assistance with federal loans (p=0.402), did not impact how fairly those individuals found the tuition price increases.

5.3: Interaction Effects:

Table 5: Logit Regression on the Basis of Institutional Differences*:*

	(1)	(2)	(3)	(4)
VARIABLES	I. Logit: High Prestige	II. Logit: Low Prestige	III. Logit: Private	I. Logit: Public
Losses	0.462*	0.327	0.148	0.565**
	(0.273)	(0.253)	(0.268)	(0.253)
Striving	0.523**	0.120	0.267	0.416
	(0.265)	(0.258)	(0.270)	(0.254)
Covid-19	-0.142	-0.249	-0.478*	0.0841
	(0.252)	(0.250)	(0.259)	(0.255)
Age	-0.000159	3.73e-05	0.00979	-0.0101

	(0.00812)	(0.00735)	(0.00811)	(0.00753)
Male	0.0175	0.342*	0.169	0.187
	(0.188)	(0.186)	(0.192)	(0.184)
Black	0.0318	0.554*	0.462	0.205
	(0.322)	(0.329)	(0.329)	(0.336)
Low H Income	-0.299	-0.181	-0.629**	0.145
	(0.254)	(0.261)	(0.271)	(0.255)
High H Income	-0.286	-0.335	-0.616**	0.000318
	(0.254)	(0.274)	(0.257)	(0.269)
College Grad	0.819***	0.943***	0.899***	0.899***
	(0.225)	(0.214)	(0.217)	(0.218)
Advanced Degree	1.069***	0.786***	0.815***	1.045***
	(0.294)	(0.285)	(0.297)	(0.280)
Current College	1.291***	1.396***	1.314***	1.371***
	(0.277)	(0.266)	(0.276)	(0.279)
Any Parents Private	0.723***	0.555***	0.767***	0.589***
	(0.228)	(0.208)	(0.232)	(0.212)
Any Parents Public	-0.0346	-0.109	-0.0360	-0.0970
	(0.196)	(0.188)	(0.198)	(0.189)
Liberal	-0.215	-0.293	-0.153	-0.309*
	(0.191)	(0.183)	(0.192)	(0.185)
Constant	-0.632	-0.824*	-1.081**	-0.432
	(0.463)	(0.436)	(0.463)	(0.432)
Observations	596	606	587	615

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: Logit Regression on the Basis of Institutional Differences Marginal Effects:

	(1)	(2)	(3)	(4)
VARIABLES	IV. Marginal Effects HP	IV. Marginal Effects LP	IV. Marginal Effects Priv	IV. Marginal Effects Pub
Losses	0.0891*	0.0666	0.0294	0.110**
	(0.0520)	(0.0510)	(0.0532)	(0.0485)
Striving	0.101**	0.0245	0.0533	0.0810*
	(0.0502)	(0.0524)	(0.0535)	(0.0488)
Covid-19	-0.0273	-0.0508	-0.0951*	0.0164
	(0.0486)	(0.0509)	(0.0512)	(0.0496)
Age	-3.07e-05	7.60e-06	0.00195	-0.00197
	(0.00157)	(0.00150)	(0.00161)	(0.00146)
Male	0.00338	0.0696*	0.0336	0.0365
	(0.0363)	(0.0374)	(0.0381)	(0.0356)
Black	0.00613	0.113*	0.0920	0.0400
	(0.0622)	(0.0669)	(0.0653)	(0.0655)
Low H Income	-0.0577	-0.0368	-0.125**	0.0283
	(0.0486)	(0.0531)	(0.0530)	(0.0496)
High H Income	-0.0551	-0.0682	-0.123**	6.20e-05
	(0.0487)	(0.0554)	(0.0501)	(0.0524)
College Grad	0.158***	0.192***	0.179***	0.175***
	(0.0416)	(0.0406)	(0.0408)	(0.0404)

Advanced Degree	0.206***	0.160***	0.162***	0.204***
	(0.0548)	(0.0568)	(0.0580)	(0.0527)
Current College	0.249***	0.284***	0.262***	0.267***
	(0.0502)	(0.0503)	(0.0516)	(0.0512)
Any Parents Private	0.139***	0.113***	0.153***	0.115***
	(0.0423)	(0.0417)	(0.0446)	(0.0404)
Any Parents Public	-0.00666	-0.0223	-0.00717	-0.0189
	(0.0378)	(0.0383)	(0.0394)	(0.0369)
Liberal	-0.0414	-0.0597	-0.0304	-0.0601*
	(0.0367)	(0.0370)	(0.0383)	(0.0355)
Observations	596	606	587	615

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7: Logit Regression on the Basis of Different Motives:

	(1)	(2)	(3)	(4)
VARIABLES	I. Logit: Control	II. Logit: Losses	III. Logit: Striving	IV. Logit: Covid-19
Private	0.00338	-0.425	-0.159	-0.515*
	(0.293)	(0.260)	(0.261)	(0.274)
Prestige	-0.0271	0.179	0.457*	0.203
	(0.291)	(0.258)	(0.260)	(0.270)
Age	-0.0141	-0.00449	0.0108	0.00305
	(0.0123)	(0.0107)	(0.0119)	(0.0108)

Male	0.0318	0.320	0.271	0.137
	(0.295)	(0.260)	(0.274)	(0.273)
Black	0.0485	0.716	0.338	0.379
	(0.510)	(0.471)	(0.444)	(0.509)
Low H Income	-0.0494	-0.172	0.161	-1.071**
	(0.435)	(0.336)	(0.380)	(0.442)
High H Income	-0.601	-0.128	-0.220	-0.392
	(0.477)	(0.365)	(0.339)	(0.378)
College Grad	1.390***	0.886***	0.865***	0.551*
	(0.346)	(0.310)	(0.311)	(0.309)
Advanced Degree	1.299***	0.787*	0.687*	0.894**
	(0.462)	(0.410)	(0.386)	(0.411)
Current College	2.909***	0.817**	1.079***	1.294***
	(0.653)	(0.352)	(0.389)	(0.363)
Any Parents Private	0.584*	0.317	0.570*	1.177***
	(0.336)	(0.303)	(0.309)	(0.325)
Any Parents Public	-0.334	-0.409	-0.00813	0.269
	(0.306)	(0.279)	(0.268)	(0.285)
Liberal	-0.358	-0.267	-0.261	-0.0455
	(0.301)	(0.260)	(0.261)	(0.273)
Constant	-0.300	0.162	-1.027	-1.036*
	(0.705)	(0.616)	(0.655)	(0.625)
Observations	280	317	307	298

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

There was significant evidence of interaction effects between the variables, making it possible to reject the null hypothesis that there were no interaction effects existing in the data in favor of the speculative alternative hypothesis 4.5. Table 5 presents logit regressions controlling for the private/public variables and the prestige variables, and these results were analyzed in terms of marginal effects in Table 6. Table 7 presents logit regressions controlling for the differing motives.

Firstly, within the logit regressions specifically looking at the differing effects of prestige on the other variables (see Table 5), it was found that the effects of the avoiding-losses and striving-for-gains motives were stronger within the high prestige contexts as opposed to the low prestige contexts. This was found because the effects of the avoiding-losses motives were significant at a 0.1 significance level for high prestige ($p=0.091$), but not for low prestige ($p=0.195$). Similarly, the effects of the striving-for-gains motives were significant at a 0.05 level of significance for high prestige ($p=0.048$), but not for low prestige ($p=0.641$). Interpreting this result in terms of marginal effects (see Table 6), it was found that within the high prestige context, someone who sees the avoiding-losses motive is 8.9 percentage points more likely to find the price increase fair than someone who sees the control; in the low prestige context, someone who sees the avoiding-losses motive is only 6.7 percentage points more likely to find the price increase fair than someone who sees the control. Similarly, within the high prestige context, someone who sees the striving-for-gains motive is 10.1 percentage points more likely to find the price increase fair than someone who sees the control; in the low prestige context, someone who sees the striving-for gains motive is only 2.4 percentage points more likely to find the price increase fair than someone who sees the control. This result suggests that sensitivity to motives is stronger for high-prestige schools.

Within the logit regressions specifically looking at the differing effects of the school in question being private or public on the other variables (see Table 5), it was found that the effects of the avoiding-losses motives were stronger within the public college contexts as opposed to within the private college contexts. This was found because the effects of the avoiding-losses motive were significant at a 0.05 significance level for public ($p=0.025$), but not for private ($p=0.581$). Interpreting this result in terms of marginal effects (see Table 6), it was found that within the public context, someone who sees the

avoiding-losses motive is 11.0 percentage points more likely to find the price increase fair than someone who sees the control; within the private context, someone who sees the avoiding losses motive is only 2.9 percentage points more likely to find the price increase fair than someone who sees the control.

Also within the logit regressions specifically looking at the differing effects of the school in question being private or public on the other variables (see Table 5), it was found that people with a liberal political affiliation overall found the price increases unfair, but the effect was stronger when the school was public, as opposed to private. This was found because the effects of being liberal were significant at a 0.1 significance level for public schools ($p=0.095$), but not for private schools ($p=0.427$). Interpreting this result in terms of marginal effects (see Table 6), it was found that within the public context, if someone is liberal, they are 6.0 percentage points less likely to find the price increase fair than if they had another political affiliation; in the private context, if someone is liberal, they are only 3.0 percentage points less likely to find the price increase fair than if they had another political affiliation.

Within the logit regressions specifically looking at the differing effects of using different types of motives on the other variables (see Table 7), it was found that the negative effects of private colleges increasing tuition were the most pronounced under the Covid-19 motive. This was found because the effects of private colleges increasing tuition were significant at a 0.1 significance level under the Covid-19 motive ($p=0.061$), but not for any of the other motives. Therefore, private colleges increasing tuition under a Covid-19 justification yielded some of the lowest fairness perceptions.

Again within the logit regressions specifically looking at the differing effects of using different types of motives on the other variables (see Table 7), it was found that within the context of the striving-for-gains motive, the effects of high prestige were stronger there than within any of the other motives. This was found because the effects of high prestige were significant at a 0.1 significance level under the striving-for-gains motive ($p=0.079$), but not for any of the other motives. Therefore, the positive effects of high prestige were strongest when a striving-for-gains motive was used, yielding high fairness perceptions.

Again within the logit regressions specifically looking at the differing effects of using different types of motives on the other variables (see Table 7), it was found that within the context of the Covid-19 motive, the effects of having low household income were stronger there than within any of the other motives. This was found because the effects of having low household income were significant at a 0.05 significance level under the Covid-19 motive ($p=0.015$), but not for any of the other motives. Therefore, people with low household income who see the Covid-19 justification will overall report low fairness scores.

Again within the logit regressions specifically looking at the differing effects of using different types of motives on the other variables (see Table 7), it was found that within the Covid-19, striving-for-gains, and control motive contexts, the positive effects of having at least one parent who went to a private college are stronger than in the avoiding-losses contexts. This was found because the effects of having one private-college-parent were significant at a 0.1 level of significance under the control and striving-for-gains motive contexts ($p=0.082$; $p=0.065$) and at a 0.01 level of significance under the Covid-19 motive context ($p=0.000$), but not under the avoiding-losses context ($p=0.295$). Therefore, people with at least one parent who attended a private college have significantly high fairness perceptions under the Covid-19, striving-for-gains, and control motive contexts, but not under the avoiding-losses context.

6. Discussion:

Motivated by the importance of how colleges are perceived, the findings from Prospect Theory and loss aversion, and the seminal price fairness literature, this study examines how fairness perceptions in light of a tuition price increase are affected by the type of motive given to justify the tuition increase and by the type of school the tuition increases are originating from (Kahneman et al., 1986; Kahneman & Tversky, 1979; Tversky & Kahneman, 1991). In favor of hypotheses 4.1-4.4, there were significant differences in the fairness perceptions of the different motives and within different institutional individual characteristic contexts. Furthermore, the results align with the speculative hypothesis 4.5 as well, as there

were numerous interaction effects across the variables. To my knowledge, the particular question of what impacts fairness perceptions of tuition price increases has not yet been examined in the literature, however, the results of this study start to fill this gap. The results signal that the fairness perceptions of college tuition price increases are sensitive to context; as will be discussed further in this section, an interpretation of these results implies why colleges should care about how they frame their tuition increases in general, and in light of any of the individual characteristics of their particular school.

Firstly, it was found that either an avoiding-losses or a striving-for-gains motive was equally effective for colleges and universities to use to justify their tuition increases. Conversely, the Covid-19 and control motives were the least effective motives for colleges and universities to use. Despite the evidence that the type of motive did matter for fairness perceptions, this particular finding is not in support of Prospect Theory, or with the findings from seminal price fairness literature that indicate that people find cost-savings efforts by businesses fairer than ones used to increase their profits (Bolton & Alba, 2006; Kahneman et al., 1986; Kahneman & Tversky, 1979; Vaidyanathan & Aggarwal, 2001). In fact, in this case, it seems that cost-savings efforts are seen as just as fair as those used to improve and increase profits, indicating that these lessons from the price fairness literature do not extend to the college tuition context. More specifically, it appears that within the college tuition context, the way to induce the highest fairness perceptions is to do so by providing any direct reason, unconnected to the Covid-19 pandemic, for why tuition needs to increase; in other words, merely stating that tuition is increasing because it always has (control motive) will produce much lower fairness perceptions than a motive that clearly explains where the funds from the increase are going and how they will benefit all those involved. This may be the case because recipients of college degrees receive more direct benefits from their colleges acting to avoid losses or to strive for gains than in the case of a more generic business context. Given students' persistent use of colleges services, students benefit from colleges maintaining their esteemed staff and from obtaining new academic equipment through price increases, whereas in the case of more generic price increase examples, the customer merely pays the higher price without obtaining any obvious and tangible returns from the resulting maintenance and improvements to the business. It appears

that the generic price fairness literature deviates from the college tuition context because of a perceived positive relationship between tuition price and quality of experience in the college context, which does not exist for standard goods. Therefore, it seems that the findings from Prospect Theory may only hold when the consumer is more distanced from the benefits of the price increases, and thus only sympathizes in the more limited "avoiding-losses" context. This clearly points to a bias toward using the avoiding-losses and striving-for-gains motives in the case of framing increasing college tuition, regardless of any institutional individual differences.

The Covid-19 motive interestingly yielded very low fairness perceptions overall compared to the avoiding-losses and striving-for-gains motives and had insignificantly different results from those of the control. Despite one of the predictions that this motive would yield very high fairness perceptions given its extreme relevance for everyone globally and potential for universal sympathy, it appears that the opposite effect took place. It is possible that the Covid-19 motive was so negatively perceived because Covid-19 was not a hardship experienced only by colleges and universities; given that everyone had to endure the difficulties and financial constraints relating the pandemic, individuals may feel that the "Covid-19 excuse" is not a worthy or "fair" reason for large institutions to ask for more in tuition from those whom the pandemic has also adversely affected. Relatedly, these individuals may feel that the "Covid-19 excuse" has exhausted itself at this point in the pandemic, and consequently, now these individuals may immediately have negative perceptions towards anything relating to the global phenomenon.

There were also important interaction effects that arose in conjunction with the motives. These results help point toward which motives are most effective across all contexts. Firstly, it was found that the effects of the avoiding-losses and striving-for-gains motives were stronger when prestige was high as opposed to low. In other words, when the prestige of the school increasing tuition is high, using a loss- or gains-focused motive to justify the increase is more effective than with less prestigious schools. As this study already finds an overall positive effect of prestige, it is possible that any motive that indicates how the increase in tuition leads to either a maintenance of prestige (avoiding-losses) or striving for more of it

(striving-for-gains) would be perceived as fairer when prestige is already high than in the low prestige conditions. This is an important result that indicates that sensitivity to motives is stronger for high-prestige schools, and suggests that schools with higher prestige can "get away with" more increases in tuition than their less prestigious counterparts.

Additionally, it was found that the effects of the avoiding-losses motive are stronger when the school is public as opposed to private. Given that overall, relatively less expensive public colleges were perceived to be fairer when increasing tuition than their more expensive private counterparts, it follows that people would be more sympathetic toward public colleges needing to increase their tuition specifically to avoid any losses, since relative to private colleges, public colleges do not put their student body in as much debt or "losses" themselves. Therefore, the effects of the avoiding-losses motive being stronger when the school is public as opposed to private makes sense given the differences in the average starting prices of each type of school.

It was also found that the positive effects of high prestige were strongest when the school increasing tuition used a striving-for-gains motive, as opposed to any other justification. Since the striving-for-gains motive emphasizes improvements to the student experience that would also likely increase the school's degree of prestige, it follows that the public would find this particular combination extremely fair, as it involves justifiably paying for already fairly perceived high prestige schools to achieve even more improvements. This is especially true since the literature indicates an association between higher spending and prestige (Iglesias, 2014; McClure & Titus, 2018). Therefore, this result is understandable and unsurprising, and this combination points to the benefits of using a striving-for-gains motive in particular.

Lastly, it was found that within the Covid-19, striving-for-gains, and control motives, people with at least one parent who attended a private college find tuition increases fairer than in the avoiding-losses contexts. This interaction is an interesting result, as it indicates that something about the avoiding-losses motive leads to slightly lower fairness perceptions for this group of individuals, who overall find the price increases to be fair (this overall result will be discussed more in depth later on in this section), than within

the other motives. Perhaps this particular demographic group feels a strong aversion to helping colleges make up for their losses because they have a parent who experienced the high costs of private colleges firsthand, and therefore might not find it justified for said schools to ask already debt-ridden students for more funds. However, the reasoning for this result remains mostly unclear. Interestingly, this result directly goes against the findings of Prospect Theory and loss aversion, as it indicates that there is less sympathy for an avoiding-losses motive within this demographic than for all the other justifications. This result requires more research and does not point to a clear rationale, however, it does lead to the conclusion that the striving-for-gains motive might be a slightly better justification to use over the avoiding-losses motive, as the former more consistently yields high fairness ratings across all demographic groups.

These results indicate that some motives are more effective at eliciting higher fairness perceptions than others, and therefore colleges should care about these findings. In terms of overall results, the avoiding-losses and striving-for-gains motives yielded significantly higher fairness ratings than both the Covid-19 and control motives, making them excellent choices for justification. However, the results also signal that the striving-for-gains motive has more consistently positive fairness ratings across all demographic groups than the avoiding-losses motive. Additionally, the striving-for-gains motive's positive associations with the prestige variable point toward the potential for high fairness ratings accompanying the striving-for-gains motive over the avoiding-losses motive in the case of high prestige. Therefore, it appears that the striving-for-gains motive is the optimal choice for colleges to use when framing their tuition increases to be perceived as fairly as possible.

Relatedly, in the aforementioned examples of actual colleges justifying their tuition increases, the example from Mount Holyoke College, which stressed striving for gains "to invest in new initiatives", would be the justification that would yield the most consistently high fairness perceptions across all relevant demographic groups, and therefore is the optimal justification to use (Mount Holyoke, 2022). Overall, Mount Holyoke's motive would be statistically just as effective as the justification from Marquette University which stressed avoiding losses "to account for [their] increasing costs," however,

Marquette's justification would yield lower fairness perceptions than Mount Holyoke's specifically from the demographic that had at least one parent who attended a private college, making it less than ideal for use (Marquette University, 2021). Both Mount Holyoke College's and Marquette University's motives would certainly outperform the justification from the University of Southern California, however, which described their tuition increase as "the lowest year-over-year increment since 1967" (University of Southern California, 2021). The case of USC, which represents an example of the unfairly perceived control motive, would likely have extremely low fairness perceptions also taking into account that such a justification was used in the context of the Covid-19 pandemic, which was overall seen as a very unfair motive as well.

In addition to these overarching insights about the motives, there were also interesting differences in fairness perceptions within the individual characteristic variables of this study. Firstly, public colleges increasing tuition were perceived to be fairer than private colleges doing the same. The hypotheses for this particular result had predictions for either outcome, each one depending on the study's participants focusing more on the differences in the degrees of government funding, or on the average starting prices of each type of school. Although one hypothesis predicted that private colleges increasing tuition would be perceived as fairer than public colleges because private colleges are more tuition reliant, it appears that private colleges are actually perceived to be less fair than public colleges when increasing tuition. This is possibly the case because private colleges on average are more expensive than public colleges; therefore, any increases from private colleges will feel more unfair because the amount those students are paying is always higher on average than what students pay after a tuition increase at a public college. It appears, therefore, that individuals focus on the average starting prices when determining how fair tuition price increases are, making public colleges increasing tuition be perceived as fairer than private colleges doing the same.

Secondly, colleges with higher prestige increasing tuition were perceived to be fairer than those with lower prestige. This directly aligns with hypothesis 4.4 which predicted that colleges with higher prestige would be perceived more fairly when increasing tuition and aligns with the literature on

institutional prestige. Given that the literature shows that students care about and favor prestige when making their college selections, it makes sense that they would find "paying for prestige" through tuition price increases to be fair since they would be directly benefiting from the improvements brought by the increase (Bowman & Bastedo, 2009; Buss et al., 2004; Meadows, 2009; Meredith, 2004). Furthermore, the literature also indicates that higher spending is associated with higher prestige, so this also plays into the fairness of the "paying for prestige" idea (Iglesias, 2014; McClure & Titus, 2018). Even though not all of this study's participants are current or former college students themselves, this idea of prestige being a luxury that is worth paying extra for extends beyond those who attend college, as even those outside of the higher education sphere should be able to recognize that if someone cannot afford the cost of prestige, they could easily receive a similar, less-expensive education elsewhere. On the other hand, however, if a less prestigious institution were to increase tuition, it would be seen as unfair because students are no longer paying for the luxury that is prestige, making the increase feel more unwarranted. Therefore, higher prestige being associated with higher fairness ratings is an unsurprising result.

Focusing on the results pertaining to the demographic differences, it was found that people with a liberal political affiliation overall found the price increases to be unfair. This result feels unsurprising given that more liberal individuals tend to be concerned with enhancing equality for all and breaking down the barriers that disproportionately disadvantage certain groups socially and economically, which is certainly the case with the very high costs of college tuition. Since increasing tuition further worsens the barriers for lower income minority individuals to access higher education, it would make sense that liberals would find these actions by colleges to be unfair.

Focusing more on how differing education levels influence people's fairness perceptions, it was found that both college graduates and those with more advanced degrees overall found the tuition price increases to be fair. College graduates specifically may see the value in college as they experienced the benefits of college resources firsthand, and likely acquired their current job with the help of a college education. Therefore, they would be willing to be more sympathetic toward increases in tuition because they know where that money is going and how it will be used to benefit people like themselves. In the

case of people with more advanced degrees, more than likely they achieved a high paying occupation given their many years of higher education, and certainly should see the value in college given their lengthy commitment to schooling. Their probable well-paying job most likely helped them pay off any debt they had from attending college as well, signaling that college more than paid off for them. This likely makes these individuals find colleges increasing tuition, which will ultimately help others achieve a similar position in their lives to themselves, to be very justified.

Similarly, people who are currently attending college also find the price increases to be fair. Initially, this may seem like a surprising result, given that these are the individuals who would actually be paying for the increased tuition. However, like their graduated counterparts, they likely see the value in college given that they are currently able to access all of their college's resources, and likely thought college was worthwhile to begin with since they enrolled. Additionally, these individuals can likely directly see how they are benefitting from the increases in tuition; even though they will need to pay the increased cost to attend, they can see how those payments will return to them in the forms of an enhanced student experience with more resources on campus, or at least an experience that is not inferior to before despite increased input costs on the colleges' end. Therefore, this reasoning helps to explain why the very people who would be paying the increased tuition might overall find those increases to be in their best interests and fair.

The types of colleges people's parents attended also had a significant impact on fairness perceptions, in particular with people with at least one parent who attended a private college overall finding the price increases to be fair. This result was also initially surprising given that overall, participants found private colleges increasing tuition to be more unfair than public colleges doing the same. However, since private colleges on average are more expensive than public colleges, individuals with parents that went to a private school may know that their parent paid a lot for their schooling, and they therefore may implicitly associate the high price of college with positive life outcomes; for example, these individuals may have learned that the high price of private college led to their parents acquiring a desired job afterwards, making such prices feel justified. Additionally, these individuals may consider the

private education their parents acquired to be of high quality and therefore, given the overall positive effect of prestige found in this study, find price increases originating from such schools to be fair. This is especially true given that, in an exploratory question in this study, it was found that participants overwhelmingly associate private colleges with higher quality than public colleges (78.45% of respondents expected a private school to be more prestigious than a public one). On the other hand, however, having at least one parent who went to public school did not have a significant effect on fairness perceptions. Using similar reasoning as before, public colleges are not as expensive as private colleges on average, so there is likely not as extreme of an association between price and resulting positive life outcomes here than in the case of those with private-college-parents. This perhaps could explain why this variable did not have any relevant effects on fairness perceptions while the case of having a private-college-parent did. However, future research on this topic is certainly needed to make more concrete conclusions about these results.

Additionally, it was interestingly found that how people paid for college (with or without other-party assistance and/or with or without student loans) did not have any impact on fairness perceptions. This was surprising because those who were not directly involved with the payment of college (those whose college was paid for with other-party/familial assistance) might have been more likely to focus on the benefits of increased tuition rather than the unfair financial burden, and therefore find the price increases fair. Opposingly, those who needed student loans might have been more likely to find the price increases unfair than their non-loan counterparts because of their potential to go into debt and truly feel the weight of the financial burden. This is a puzzling result and therefore more in-depth research is required to determine why the way in which one pays for college does not have an effect on fairness perceptions.

This study's results also yielded many interesting interaction effects between the variables. Firstly, it was found that liberals overall find the price increases unfair, but the effect is stronger when the schools increasing tuition are public, as opposed to private. This is an interesting result, given that overall people found private schools increasing tuition to be more unfair than public schools doing the same;

therefore, it appears that against the norm, liberals have even more negative perceptions of public colleges increasing tuition than they do about private colleges. In an attempt to explain this confounding finding, it is possible that liberals care less about the differing average starting prices of tuition at private and public schools, and rather care more about the goals of each type of institution. Private colleges, with their higher prices, are likely viewed as more "profit-maximizing" and "business-like," as opposed to their public counterparts that likely have a stronger emphasis on being accessible to all given their lower average starting prices and large amounts of government funding. Given the generally liberal belief that college should be more accessible to people of all socioeconomic statuses, it would make sense that people of this political affiliation would find any action that makes public, government funded education less accessible to be very unfair. Perhaps there is less of a liberal concern about private colleges increasing tuition given that private colleges' goals on the surface appear to be less focused on making college accessible to everyone; liberals therefore might devote less care and focus to the actions of private colleges in favor of attempting to keep public colleges financially accessible for the majority of people. However, more research is needed to come to a definitive conclusion about this particular finding.

Looking more closely at the interaction effects within the different motives, it was found that the negative effects of private colleges increasing tuition were the most pronounced under the Covid-19 motive. This is an interesting result given that it indicates that the negative effects of private colleges are strongest under a relatively ineffective motive. However, this could be the case because people overall tend to find the Covid-19 motive unfair as compared to the other motives, and that in conjunction with the very high starting prices of private colleges could lead to significantly lower fairness perceptions; given private college's already initially high starting prices that therefore likely "create losses" and debt for many of their students, it follows that a motive explaining that the college needs to make up for jointly experienced Covid-19 losses at the expense of their already debt-ridden student body would be perceived as very unfair.

Additionally, it was found that within the Covid-19 motive, people with low household income find the tuition price increases most unfair as compared to within the other motives. This result is also

unsurprising because people with low income were disproportionately and adversely affected financially by the Covid-19 pandemic. Therefore, a motive that stresses how generally wealthy institutions want to make up for their losses at the expense of their less-wealthy students would be seen as very unfair, especially since the Covid-19 motive was seen as unfair overall. Therefore, the relevance of the Covid-19 pandemic for all and specifically the adverse effects it had on the lower income population would lead that demographic to find price increases with a Covid-19 justification to be unfair.

7. Conclusion:

The results from this study indicate that how a tuition increase is framed, in conjunction with institutional differences, does impact how fairly those increases are perceived by the public. The avoiding-losses and striving-for-gains motives are very effective at eliciting high fairness perceptions, as compared to the Covid-19 and control motives which are overall seen very negatively. However, specific interaction effects between the variables indicate that the striving-for-gains motive is the optimal choice for colleges to use when justifying their tuition increases, as it yields the most consistently high fairness perceptions across the demographic groups, and its positive associations with the prestige variable further indicate its effectiveness. Institutional differences mattered as well for fairness perceptions, as public colleges increasing tuition were perceived as fairer than private colleges doing the same, and more prestigious institutions increasing tuition were seen as fairer than their less prestigious counterparts. Overall, the results from this study exemplified that within the realm of price fairness perceptions, the college tuition context is fundamentally different from that of standard goods; how tuition price increases are justified in a college context does not align with the predictions of Prospect Theory, which is unlike the case of more generic price increases. This, therefore, importantly adds to the existing price fairness literature, and indicates to colleges how best to frame their tuition increases given any institutional differences.

8. Appendix:

A: Tables:

Table 8: Demographic Statistics:
Sample Compared to U.S. Population Estimates (all figures taken from 2019 U.S. Census Bureau "U.S. Population and Housing Unit Estimates," unless otherwise indicated)

Demographic variables	Population estimates	Current sample
Percent female	50.8%	40.5%
Median household income	$62,843	$45,001-60,000
Median age	38.4	36
Percentage with bachelor's degree or higher	32.1%	71.1%
Percent white (alone)	76.3%	75.5%
Percent African American (alone)	13.4%	10.3%
Percent liberal	25%[#]	51.3%
Percent moderate	35%[#]	13.4%
Percent conservative	36%[#]	35.3%
Percent 18-24 years olds enrolled in college	41.2%*	24.6%
Percent adults aged 25 and up who are college graduates	37.5%**	71.35%

[#]Gallop poll (2020)
*National Center for education statistics (2017)
**Statista (2021)

B: Study Questions:

College Tuition Price Increase Vignette:

College and university tuition has become extremely expensive, and has been on an upward trend of increased costs for the past seventy-five-plus years. These rising expenses pose a very real barrier to many when deciding whether or not to pursue a higher education. Furthermore, colleges and universities continue to raise their tuition prices for a variety of reasons even despite the already high expense.

[Private colleges historically have had higher tuition than public colleges. Their tuition tends to be higher because they are typically about 10% reliant on government funding to cover their educational expenses and instead are highly dependent on tuition to do so.]

[Public colleges historically have had lower tuition than private colleges. Their tuition tends to be lower because they are typically about 40-50% reliant on government funding to cover their educational expenses, making them less reliant on tuition to do so.]

Imagine a very/moderately selective private/public college with a 15%/50% acceptance rate, initially costing $60,000/$20,000 a year, decides to raise tuition 5% for the next year.

They chose to do this in order to [insert motive.]

Motives:

1. …make up for higher costs...
    a. attached to resources and personnel that support the student experience.
    b. stemming from lost tuition due to the pandemic.
2. …enhance the student experience through acquiring new resources and esteemed personnel.
3. …continue on with yearly traditional tuition increases.

Using the scale below, indicate how fair you find this decision to increase tuition.
(Completely Unfair, Moderately Unfair, Slightly Unfair, Slightly Fair, Moderately Fair, Completely Fair)

Comprehension Check Questions:

- What best describes the scenario you just read?
    - A highly selective college (15% acceptance rate) increases tuition.
    - A moderately selective college (50% acceptance rate) increases tuition
- What best describes the scenario you just read?
    - A public college increases tuition
    - A private college increases tuition
- What reason did the college give for raising tuition in the scenario you just read?
    - To continue on with traditional tuition increases.
    - To make up for higher costs.
    - To enhance the student experience.

General Belief Questions:

- Do you believe that more highly selective colleges are more prestigious than moderately selective colleges?
    - Yes
    - No
- In general, would you expect a private or a public college to be more prestigious?
    - Private
    - Public
- If you read about a college that increased tuition for the same reason as did the college in this study, would you believe it?

    - Yes
    - No
- If a school suddenly receives less government funding, is raising tuition now more fair?
    - Raising tuition is more fair after the decrease in government funding than before.
    - Raising tuition is less fair after the decrease in government funding than before.
    - Raising tuition before or after the decrease in funding has the same fairness.

Demographic Questions:

- How many years old are you?
- To which gender identity do you most identify:
    - Female; Male; Transgender Female; Transgender Male; Gender Variant/Non-Conforming; Not listed _____; Prefer Not to Answer
- What is the highest degree or level of school you have completed?
    - No schooling completed
    - 8th grade or lower
    - Some high school, no diploma
    - High school graduate, diploma or the equivalent (for example: GED)
    - Some college credit, no degree
    - Trade/technical/vocational training
    - Associate's degree
    - Bachelor's degree
    - Master's degree
    - Professional degree
    - Doctoral degree
    - Prefer not to answer
- Are you currently attending any type of undergraduate college/university?
    - Yes
    - No
    - Prefer not to answer
- If yes, is the college public or private?
    - Public
    - Private
    - I don't know
- If yes, how are you paying for your schooling?
    - Paying alone without federal loans
    - Paying alone with federal loans
    - Someone else is paying for you (ex. family) without federal loans
    - Someone else is paying for you (ex. family) with federal loans
    - Prefer not to answer
- What is the highest level degree or level of school your first parent/guardian completed?

    - No schooling completed
    - 8th grade or lower
    - Some high school, no diploma
    - High school graduate, diploma or the equivalent (for example: GED)
    - Some college credit, no degree
    - Trade/technical/vocational training
    - Associate's degree
    - Bachelor's degree
    - Master's degree
    - Professional degree
    - Doctoral degree
    - Unsure/Prefer not to answer

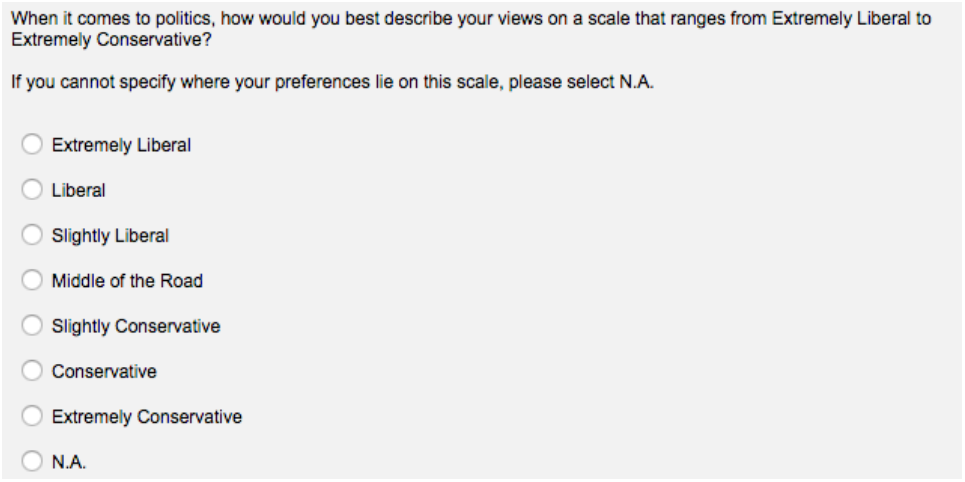
- If your first parent/guardian attended an undergraduate college/university, was that school (select all that apply):
    - Private
    - Public
    - Unsure

- What is the highest level degree or level of school your second parent/guardian completed?
    - No schooling completed
    - 8th grade or lower
    - Some high school, no diploma
    - High school graduate, diploma or the equivalent (for example: GED)
    - Some college credit, no degree
    - Trade/technical/vocational training
    - Associate's degree
    - Bachelor's degree
    - Master's degree
    - Professional degree
    - Doctoral degree
    - Unsure/Prefer not to answer
    - Not applicable

- If your second parent/guardian attended an undergraduate college/university, was that school (select all that apply):
    - Private
    - Public
    - Unsure

- What is your yearly household income (your personal income plus any other income from people living in your household)?
    - Less than $12,000; $12,001 to $30,000; $30,001 to $45,000; $45,001 to $60,000; $60,001 to $75,000; $75,001 to $100,000; $100,001 to $125,000; $125,001 to $150,000; more than $150,000; Prefer not to answer
- Please select one. Would you describe yourself as…
    - American Indian/Native American
    - Asian

    - Black/African American
    - Hispanic/Latino
    - White/Caucasian
    - Pacific Islander
    - Other (please describe)
    - Prefer not to answer
- What is your current employment status?
    - Working full time (30+ hours a week)
    - Working part-time (Less than 30 hours a week)
    - Looking for work, unemployed
    - Only temporarily laid off, sick leave or parental leave
    - Stay at home (not retired or disabled, not looking for work)
    - A student (regardless of working full or part time)
    - Disabled, permanently or temporarily
    - Retired
    - Other (please describe)
    - Prefer not to answer
- What is your personal yearly income?
    - Less than $12,000; $12,001 to $30,000; $30,001 to $45,000; $45,001 to $60,000; $60,001 to $75,000; more than $75,000; Prefer not to answer



Open:

If you want to, please use this space to provide us with any additional thoughts you have about colleges and/or college tuition that you would like to share. You are free to leave this space blank.

C: Informed Consent and Debriefing Statements:

Informed Consent:

I hereby consent to participate in a research study that examines people's attitudes toward contemporary economic issues. The research is being conducted by Rachel Powell, a student at Connecticut College, and is being advised by Prof. David Chavanne, who is a faculty member at Connecticut College. I understand that this research will involve completing a short survey, which takes no more than 15 minutes, and that I will be paid $0.65 for my time upon entering a valid completion code. My participation is voluntary. I have been told that there are no risks related to participating in this research other than those encountered in everyday life. I know that I can contact the researcher, Rachel Powell, or her adviser, David Chavanne, at rpowell4@conncoll.edu and dchavann@conncoll.edu, respectively, if I have any questions about this research.

I understand that I may decline to answer any questions as I see fit by withdrawing from the study without penalty at any time. I understand that all information will be identified with a code number and NOT with my name and that information from participants in the surveys will be combined in a way in which personal statements cannot be identified.

I have been advised that I may contact the researcher who will answer any questions that I may have about the purposes and procedures of this study. I understand that this study is not meant to gather information about specific individuals, and that my responses will be combined with other participants' data for the purpose of statistical analyses. I consent to publication of the study results as long as the identity of all participants is protected. I understand that the Connecticut College Human Participants Institutional Review Board (IRB) has approved this research. Concerns about any aspect of this study may be addressed to Professor Ann Devlin, Chairperson of the Connecticut College IRB (at irb@conncoll.edu).

By clicking the next button I confirm that I am at least 18 years of age, I have read these explanations and assurances, and I therefore voluntarily consent to participate in this research about contemporary economic issues.

Debriefing Statement:

I would like to thank you for participating in this study. If you have any questions, or if you are interested in this topic, please contact the researcher, Rachel Powell, or her adviser, David Chavanne, at rpowell4@conncoll.edu or dchavann@conncoll.edu, respectively.

The current study was designed to examine attitudes about fairness toward college and university tuition price increases under a variety of conditions. More specifically, responses to the survey questions will hopefully teach us more about what affects fairness perceptions in the context of college and university tuition increases, and will likely inform colleges of the best ways to

present increases in tuition.

Below, you will find some sources that may be of interest to you as they further relate to this topic:

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Callender, Claire, and Jonathan Jackson. "Does The Fear Of Debt Deter Students From Higher Education?". Journal Of Social Policy, vol 34, no. 4, 2005, pp. 509-540. Cambridge University Press (CUP), doi:10.1017/s004727940500913x.

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Hemelt, Steven W., and Dave E. Marcotte. "The Impact Of Tuition Increases On Enrollment At Public Colleges And Universities". Educational Evaluation And Policy Analysis, vol 33, no. 4, 2011, pp. 435-457. American Educational Research Association (AERA), doi:10.3102/0162373711415261.

Kahneman, D., Knetsch, J. L., & Thaler, R. (1986). Fairness as a constraint on profit seeking: Entitlements in the market. *The American economic review*, 76(4) 728-741.

Kahneman, Daniel, and Amos Tversky. "Prospect theory: an analysis of decisions and the psychology of choice." Econometrica 47 (1979): 313-327.

This study was reviewed by the Institutional Review Board (IRB) at Connecticut College. Any other questions can be addressed to the Chair of the IRB, Professor Ann Devlin at irb@conncoll.edu.

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