Black and White: How Motivated Beliefs in Racial Inequality Impact Educational Perceptions, ROI, and Behavior

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Abstract: This study examines Black and White American student's perceptions of the return on investment (ROI) of a college education and examines how material on racial inequality impacts information-seeking behaviors around the ROI of a college education. The survey results suggest that Black American students underestimate their group's educational returns and overestimate those of White Americans, while the experiment demonstrates that Black Americans over-select information on racial and economic inequalities over objective data, even when provided financial incentives to choose the latter. Taken together, these results highlight a growing misperception within the Black American community about the economic returns to a college education, perhaps fueled by racially charged content that highlights systemic economic inequalities. These results highlight how key decision-making around attending college can be based on mis-calibrated perceptions about the interplay between racial inequality and individual economic outcomes. Further research is needed to understand the nuances in Black American's decision-making around higher education and how their beliefs of racial inequality interplay with this decision.

1 Introduction

College is a key part of economic mobility in the U.S.. This is particularly true for Black Americans when considering the counterfactual economic reality of a black individual without a college education in the U.S. (Roland G. 2011). However, due to growing dissent around the necessity of college and rising focus on racial inequality and systematic discrimination, it is unclear how prospective American college students perceive the returns of a college degree and what role racial inequality plays in these perceptions. This research explores Black and White American students' beliefs about a college education's returns on investment (ROI) and how they seek information about these returns. It investigates whether the increasing focus on systemic inequalities leads Black students to perceive lower educational returns and select information emphasizing racial and economic disparities, potentially influencing their college decision-making and sphere of information.

The public opinion of college education in the U.S. has shifted drastically in the past few decades from being seen as an immutable part of the American Dream to being a questionable path with uncertain returns and higher costs (Anderson 2023). Previously, it was an unquestioned component of the American Dream, and the public considered higher education as a key source of economic mobility and stability. Recently, policies and conversations around higher education have shifted as the public demands alternative routes to employment that avoid the "paper ceiling", or the required college education needed to obtain certain jobs (Anderson 2023; Jubilee 2022). Interestingly, while the public questions the necessity of a college degree, research is demonstrating its continued, and potentially growing, importance on economic outcomes. For example, work by Case and Deaton (2022) demonstrates how college remains a key source of economic security for its graduates as well as a growing differentiator in non-pecuniary outcomes ranging from physical health to mental well-being. This became known as the "Great Divide" within the population, separating those with at least a college degree and those without (Case and Deaton 2022; Chetty et al. 2017; 2014; Oreopoulos and Salvanes 2011). Given the growing division about higher education within the populace and the increasing importance of education within the literature, it is critical for researchers to understand what perceptions prospective students hold of higher education, what might be shaping their perceptions, and how they are making decisions about pursuing a college degree. The first part of this paper is therefore interested in addressing these questions by shedding light on prospective students; current perceptions about the financial returns of a college education.

Additionally, the second element of this paper explores whether emphasizing racial and systemic inequalities might particularly impact Black Americans' decisions about college education by diverting their attention away from pecuniary and non-pecuniary gains from education and towards broader societal issues like the racial wealth gaps. While college is historically understood as an avenue to the American Dream and economic stability, particularly within immigrant and Black American families, are questions about the racial wealth gap and systemic inequality decreasing perceptions about the ROI to college (Mickelson 1990)? Growing conversions around race and economic inequalities have painted a different and darker picture of the American Dream and brought into question canonical conceptions of education and hard work. These conversations highlight important problems within the American system; however, they do not provide information on how to make the best decisions for individuals living within the system to ensure economic mobility in their lives. While higher education remains a safe and effective way to shield one's self and family from the trappings of poverty, increase job security, and preserve economic stability during difficult financial times, it may not be perceived by the

public as playing this role anymore (NCES 2016a; Zimmerman 2014; C. M. Hoxby and Avery 2012; C. Hoxby and Turner 2013; Higginbotham 2022). Education remains a vehicle through which individuals and families of color can escape poverty and provides an avenue through which greater economic stability and mobility can be obtained. However, the question remains: is higher education is being perceived in this way by the next generation of prospective college students?

1.1 Hypothesis:

This paper examines how Black and White American students perceive the benefits of a college education and how they select information about college's benefits. This is done in two parts, in a survey and an experiment, to test questions about perceptions and information-seeking behavior.

The first hypothesis, the perception hypothesis (H1), is as follows:

> H1: Black American students underestimate the returns to a college education for their respective group and overestimate the returns to a college education for White American students.

This hypothesis is based on the idea that the growing public discourse on racial inequality and systemic discrimination can shape perceptions differently across racial groups. Black students may overextend the messages about systemic barriers and end up mistrusting all systems. As a result, they will view the economic returns of a college education as less certain or less substantial for their racial group compared to their White counterparts. Black students are likely more aware of systemic inequalities and racial wealth gaps and, therefore, may be more skeptical about the return on investment (ROI) from a college degree. This hypothesis is tested by examining survey responses that measure perceived lifetime earnings, employment rates, and educational costs for both Black and White students and compare perceptions from Black and White perceptions within and across their racial groups.

The second hypothesis, the information selection hypothesis (H2), is as follows:

> H2: Black American students are more likely to select and focus on more political information that emphasizes racial-defined economic inequalities rather than more objective information on the returns to a college education compared to their White counterparts. Higher incentives will decrease this selection of political material by Black participants.

This hypothesis seeks to test H1 further and provide evidence that Black students' mis-calibrated beliefs are due to narratives around systemic inequality. If Black students are more exposed to or affected by discussions on inequality, they may gravitate towards information that reinforces these views, even when making decisions about education that are not race-relevant. Evidence suggests that individuals often select information that aligns with their pre-existing beliefs (Bursztyn et al. 2023; Zimmermann 2020). The experiment tests if Black participants select material on race more often and, by using variation in incentives, if motivated beliefs are at play in this information selection behavior.

To test for motivated beliefs, participants are told they will need to answer two final questions on employment and education, with a bonus provided if their answers are correct. They are then given a choice between reading an Op-Ed on racial inequality or a U.S. Labor Bureau report on the economic returns to schooling to help them answer the questions. The bonus amount varies for correctly answering the questions, thereby incentivizing those who initially select the Op-Ed to consider the more objective Labor Bureau report. If participants shift their selection in response to the increased stakes, it suggests motivated beliefs. This shift would demonstrate that as the stakes rise, participants' decision-making changes, indicating an internal tension between their beliefs and an objective truth.

These hypotheses suggest that motivated beliefs within the Black student body regarding their racial group's potential for economic returns have three significant implications for research, policy, and the future of education for Black American students. Firstly, if H1 and H2 are confirmed, it indicates that motivated beliefs significantly influence how Black American students perceive and seek information about the benefits of a college education. This may imply that systemic inequality rhetoric, while highlighting real societal issues, could also inadvertently impact individual decision-making in ways that hinder economic mobility. Secondly, understanding these dynamics is crucial for policymakers and educators aiming to provide accurate information and support to prospective students. If perceptions and information selection are skewed, interventions may be needed to ensure students have a balanced view of higher education's potential benefits. Thirdly, these findings could open avenues for future research into how different socio-political narratives influence educational choices across various demographics and how to counteract potential negative impacts through targeted communication and support strategies.

1.2 Methodology Overview

Two methodologies are deployed in this paper: a survey and an experiment. The survey measures perceptions of a college education's ROI, focusing on differences between Black and White Americans. The experiment tests if Black students are more likely to choose racially charged content over objective economic reports and if motivated beliefs are at play.

The survey design was inspired by Belfield et al. (2020) to understand perceptions of lifetime earnings, employment rates, and educational costs, all components of a basic ROI calculation (Belfield et al. 2020). The survey focuses on differences between Black and White Americans and collects individual information for each participant's perceived belief in their own perceived returns and costs to schooling. Finally, additional beliefs are collected to examine whether beliefs about non-economically relevant topics are well-calibrated within and across racial groups and juxtapose this with economically relevant beliefs. For example, high levels of misperceptions in economically relevant questions among Black participants, compared to accurate non-economic perceptions about their group, could indicate motivated beliefs about educational returns for their own racial group.

The experimental design, based on Bursztyn et al. (2023), examines information-seeking behavior and further tests if motivated beliefs are at play by asking participants to answer a non-race-related educational question. They were then given a choice between an Op-Ed on racial inequality and systemic discrimination, Article B, and a U.S. Labor Bureau report on economic returns to schooling, Article A, to help them answer the question and, therefore, win a bonus if their answer was correct. Financial bonuses varied to answer the question correctly. If Black participants change their selection from the Op-Ed to the Labor Bureau report when offered a higher incentive, it could highlight that they are willing to forgo a belief for the chance to answer the question correctly.

1.3 Literature Review

This paper ties together literature on educational perceptions, intergenerational mobility, and biased information-seeking. First, it deals with the importance of perceptions in educational choices, starting with the foundation research by Jensen (2010) in the Dominican Republic that highlighted the relationship between perceived returns to schooling and behavior. I build on subsequent work done by scholars to test the public's perceptions of ROI in education in the West as well as rely on evidence about the returns to higher education (Zimmerman 2014; Steffel 2020; Peter, Spiess, and Zambre 2021; Oreopoulos and Salvanes 2011; Oreopoulos and Petronijevic 2013; Oreopoulos and Dunn 2013; Nguyen 2008; Jensen 2010; C. Hoxby and Turner 2013; Belfield et al. 2020). This paper contributes to conversations about intergenerational mobility and the key role of education in combating economic instability for households and individuals (Chetty et al. 2017; 2014; Case and Deaton 2022; Zimmerman 2014). Finally, this paper examines how biased information-seeking can impact belief formation, particularly focusing on motivated beliefs, misperceptions, and education (Zimmermann 2020; Bursztyn et al. 2023a; Stötzer and Zimmermann 2022; Hagmann and Loewenstein 2016; Drobner 2022)

1.4 Results Overview

Overall, the results from the study show that racial biases do impact perceptions about ROI in education and that these perceptions do impact information-seeking behavior, particularly among Black Americans.

Perceptions about full-time employment with a college degree showcase how both Black and White respondents underestimated Black American employment rates, indicating an out-group bias or misinformation. Perceptions of full-time employment without a degree will show greater biases across racial groups, with Black participants overestimating White employment rates and underestimating their own group's employment. However, the reported drop-in perceived employment rates without a degree by both sets of participants highlights the recognized public value of education as well as the current perception of racial disparities. Regarding full-time earnings with and without a degree, both racial groups perceived a significant income disparity favoring White Americans, but they still overestimated White earnings. This suggests an acknowledgment of educational benefits but also a belief in persistent income gaps driven by race. Perceptions of earnings without a degree continue to reflect larger racial income disparities than the data suggests, as both White and Black participants overestimated the earnings of White Americans without a degree and underestimated those of Black Americans, indicating a belief in larger racial income gaps than exist. Critically, these perceptions highlight wages and employment, not wealth and capital. Finally, participants appear to have an inaccurate understanding of college costs and scholarship opportunities, especially across racial lines. They generally overestimated college costs and showed a wide range of beliefs about scholarship opportunities, indicating misinformation and a lack of knowledge about the financial aspects of higher education.

In the experiment, high incentives drove participants to choose the Op-Ed article over the data-driven report, contradicting the hypothesis. Higher incentives led both Black and White participants to choose the opinion piece more frequently, indicating a preference for racially charged material when stakes are higher. This suggests that beliefs about racial issues may influence decision-making more than the promise of financial rewards.

2 Methodology

This study investigates two main questions: i) whether Black Americans perceive the returns on a college degree to be lower for their racial group and higher for White Americans, and ii) if Black Americans engage in biased information seeking about the returns to schooling due to motivated beliefs. The study aims to establish 1) the perceptions of ROI to a college education both within and across racial groups and 2) how prospective students select information to learn about the ROI of college. To test these hypotheses, a survey and an experiment were conducted on Qualtrics, and participants were recruited via Prolific.

2.1 Survey

The survey design is inspired by Belfield et al. (2020) and focuses on understanding perceptions of lifetime earnings, employment rates, and educational costs to perform a basic ROI calculation (Belfield et al. 2020).

ROI in education refers to the financial benefits gained from investing in a college degree, calculated as the difference between the income earned by individuals with a college degree and those without, minus the cost of obtaining the degree. A rational decision would have a person deciding to go to college when the benefits outweigh the costs. Lifetime earnings, employment rates, and educational costs are the three basic metrics used in this survey to determine the basic costs and benefits that students consider when assessing the ROI of a college degree. Lifetime earnings are defined as the total amount of money earned by an individual over their entire working life, typically calculated from the time they enter the workforce until retirement. Employment probability refers to the likelihood or chance that an individual will secure and maintain employment, often expressed as a percentage. Finally, college costs are considered to include the cost of attending a public in-state university as well as an assessment of scholarship opportunities available at these institutions that help offset these costs.

To capture lifetime earnings and employment likelihoods, participants are asked to project their yearly salary 5 to 10 years post-graduation and to consider employment probabilities with and without a college degree for both Black and White Americans. Additional questions address perceptions of average educational costs and scholarship opportunities. The survey includes non-economically relevant questions about the differences between Black and White Americans to gauge the extent of motivated beliefs. This helps determine if beliefs about economic outcomes are systematically biased. If Black participants show high levels of misperception in economically relevant questions but accurate perceptions in non-economic questions, it may indicate motivated beliefs about the returns to education.

Employment probabilities and lifetime earnings are captured numerically to get more granular data on perceptions, whereas lifetime earnings and educational costs are asked in ordered bins. Questions are randomized whenever randomization does not impact the logical ordering of questions. Control or comprehension questions are not used to limit the time taken to complete the survey.

2.2 Experiment

The experimental design follows the methodology of Bursztyn et al. (2023), and tests motivated beliefs and information-seeking behavior (Bursztyn et al. 2023b) . Participants are told that they will be asked to answer two additional questions about employment rates and education. They are told they will receive a bonus if they answer within 1% of the target value. Next, they are given a choice between reading an Op-Ed on systemic discrimination and racial inequality or a U.S. Labor Bureau report on the economic returns to schooling. Experimental variation is added by changing the incentive bonus for answering the questions correctly from $1 to $20 to test if higher financial incentives affect the choice of reading material. It is explicitly stated that these materials are provided to help readers make a guess for the bonus questions.

The incentivized question focuses on economic returns to schooling without mentioning race, encouraging participants to select the most objective and relevant information, which is the Labor Bureau of Statistics option. The experiment examines if Black Americans are more likely to choose the Op-Ed, which aligns with narratives about racial inequality, over the objective report on educational returns. One caveat with this design is that this experiment follows a long list of questions about race, meaning subjects might be primed to believe that race is relevant to the question despite not being mentioned in the preamble to the question. To combat this problem, I provided an open-ended text for participants to explain why they selected which article and asked them to provide an estimated probability that either article held the relevant information for correctly answering the bonus question.

2.3 Sample

The sample included 75 Black American and 75 White American participants, aged 18-35, who expressed interest in enrolling in a four-year degree program and have completed high school. Participants were recruited via Prolific, an online platform that recruits representative samples for surveys and experiments. The total sample size was 149 after removing data points that had incomplete demographics, revoked consent, and did not fully complete the survey.

3 Results

In this section, I present the findings from the survey and experiment designed to investigate perceptions of the return on investment (ROI) in education and information-seeking behavior among Black and White Americans. The results are organized into two main parts: survey and experiment.

3.1 Survey

Participants were asked a set of questions about their perceptions of the ROI to education. Results from these questions were compared to a benchmarked truth using recent data from the National Center of Education Statistics (NCES 2023). Data was reported at the individual and group level to enable comparisons between and across racial groups.

3.1.1 Full-time employment with a college degree

Participants were asked about their perception of full-time employment probability for a White and Black American with a college degree. Full-time employment was defined as "a position where employees work at least 35 hours per week". Part-time or freelance work was explicitly excluded from consideration, for example, multiple part-time jobs could not equal one full-time job. Participants were first asked how likely they thought it was that the average White American would secure a full-time job within 5 to 10 years after graduating from a public four-year in-state college. Figure 1 shows the reported beliefs for perceptions of White Americans, with both Black and White respondents' responses falling within 2% of the true value of 84.7% (NCES 2022b).

Figure 1

Interestingly, when asked this same question for Black Americans, both Black and White respondents reported beliefs that were well below 10% points of the truth, 84.7% (NCES 2022b). Black Americans reported their own group as having a lower employment rate, while White American reported higher perceptions for their own group and for Black Americans.

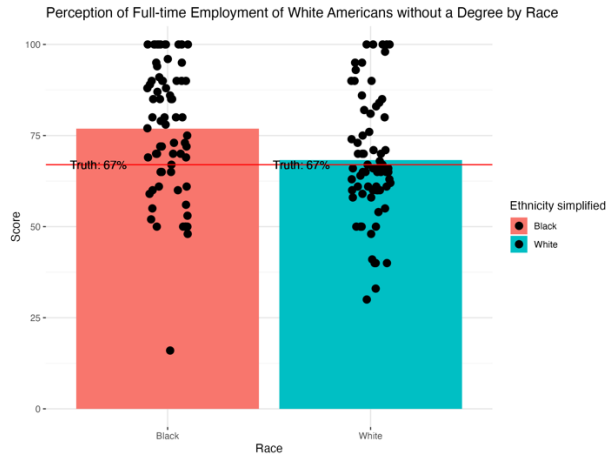
Figure 2

Perceptions about employment probabilities by racial group varied widely and Black American's perceived returns for their own racial group were lower when compared against the truth and against White American's perceptions. This second comparison is particularly important because the literature would predict that within-group perceptions are more well-calibrated than out-group perceptions, as people tend to have a better understand of what afflicts their group than an outside group (Bursztyn and Yang 2021). When in-group perceptions are more mis-calibrated than out-group perceptions, it raises questions of what is causing this in-group misperceptions.

3.1.2 Full-time employment without a college degree

Participants were surveyed about employment probabilities once more, this time asking about full-time employment probabilities without college degrees. Figure 3 summarizes the results for beliefs about White Americans. Black participants overestimate employment rates for Whites without a college degree by around 10% points. White participants, however, seem to have well-calibrated beliefs about employment for their own group.

Figure 3



When asked about Black American employment probabilities without a college degree, Black participants were closer to the truth for their own group than in the question of Black employment probabilities with a college degree, however White participants still reported the most accurate numbers. This again hints at perceptions within Black Americans being less well-calibrated.

Figure 4

Another interesting takeaway from Figures 3 and 4 were the sheer reductions in employment probabilities conditional on education. The NCES reported the 2023 employment probabilities as 84.7% with a college degree for both racial groups to 67% and 59.2% for White and Black Americans without a college degree, respectively (NCES 2022b). Responses indicated that participants were aware of the boost a college degree gives to employment probabilities. However, race and educational level appeared to be considered at least equally in responses by White Americans, while race appeared more heavily weighted by Black Americans in reporting their estimates. In both employment questions, Black participants perceived White Americans as having around a 20-25% positive difference in employment likelihoods as opposed to Black

Americans. Black participants did not report a shrinkage in this point difference as education increased, which might hint at underlying beliefs within Black Americans about the economic success of these two groups as being determined by race above education.

3.1.3 Full-time earnings with a degree

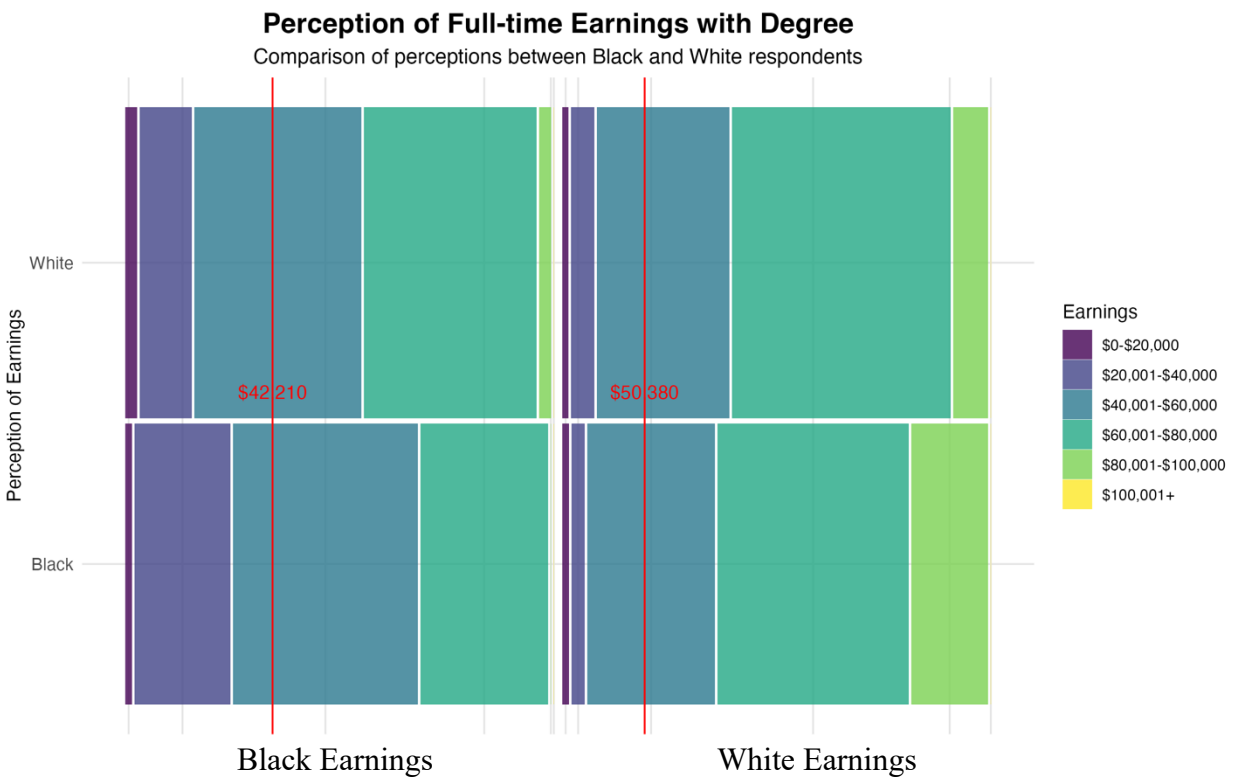
Next, perceptions about lifetime earnings were collected by asking participants to report what they believed to be the median annual earnings of White and Black Americans with full-time employment with and without a college degree. Full-time employment was defined as "a position where employees work at least 35 hours per week". Part-time or freelance work was excluded from these calculations, and they were asked to give their answers in US dollars and before tax. Questions were again broken down by race. Table 1 reports the main results.

Table 1

Earnings Type	Earnings	Count
Earnings_Black	$0-$20,000	3
Earnings_Black	$20,001-$40,000	24
Earnings_Black	$40,001-$60,000	58
Earnings_Black	$60,001-$80,000	50
Earnings_Black	$80,001-$100,000	2
Earnings_White	$0-$20,000	2
Earnings_White	$20,001-$40,000	6
Earnings_White	$40,001-$60,000	43
Earnings_White	$60,001-$80,000	68
Earnings_White	$80,001-$100,000	18

Overall, the median earnings of Black Americans were perceived by both Black and White participants to be less than the median earnings of White Americans. Median earnings for Black Americans sat somewhere in the range of $40,001-$60,000, while White American median earnings were perceived to lie in the $60,001-$80,000 range. Overall, the perception of Black earnings was closer to the truth, with the true median annual earnings reported for Black Americans, before controlling for sector, was $42,210 US dollars (NCES 2022b). True median annual earnings for White Americans, in contrast, were reported to be $50,380, before controlling for sector. It is important to note that this data did not control for employment sector and did not include salary data from Americans with master's or professional degrees. Therefore, it should not be interpreted that White Americans, in fact, make $8,000 more on average than Black Americans. However, it is interesting to note that both groups perceived White Americans as making a much higher salary than they indeed brought in for 2023 that well exceeds the $8,000 reported gap.

Figure 5



The same data from Table 1 is presented above in Figure 5 but perceptions are broken down by the participants' respective racial groups. On the y-axis are the perceptions of White participants at the top, reporting their perceptions of Black American earnings and White American earnings on the left and right of the x-axis. On the bottom of the y-axis are Black participants, reporting their perception of Black and White American earnings, respectively. Both Black and White participants overestimated the earnings of White Americans, a trend seen in the previous table, and White participants placed less emphasis on the difference between Black and White earnings than Black participants did.

3.1.4 Full-time earnings without a degree

Questions about median earnings without a college degree by race were asked in the same manner as with the previous median earnings questions with a college degree. There was a greater reported differentiation in beliefs about median earnings without a college degree, with White Americans once again being perceived as having significantly larger median earnings than a Black American. Interestingly, when considering those who do not complete high school, Black and White Americans earn the same amount. The NCES reported that in 2023, White Americans without high school completion earned roughly $33,670 and Black Americans without high school completion earned around $32,310. When considering White Americans with a high

school diploma, however, this value jumped to $41,810, whereas for Black Americans with a high school diploma, this number increased only slightly to $35,050 (NCES 2022a).

Table 2

Earnings Type	Earnings	Count
Earnings_Black	$0-$20,000	17
Earnings_Black	$20,001-$40,000	81
Earnings_Black	$40,001-$60,000	41
Earnings_Black	$60,001-$80,000	4
Earnings_Black	$80,001-$100,000	2
Earnings_White	$0-$20,000	6
Earnings_White	$20,001-$40,000	48
Earnings_White	$40,001-$60,000	66
Earnings_White	$60,001-$80,000	22
Earnings_White	$80,001-$100,000	3

Examining Table 2 by racial group, White Americans were again perceived by both Black and White participants of having a greater salary range available to them without a college degree and a higher median salary. Black participants overwhelmingly perceived the median income of Black Americans to be in the $20,001-$40,000 range while reporting a higher range for White Americans. White participants showed less variance in their responses for both racial groups but likewise perceived White Americans' earnings as being within the $40,001-$60,000 range, as opposed to the $20,001-$40,000 range they assigned to Black Americans.

Figure 6

To conclude, there appears to be a difference in how Black and White American earnings are perceived, both with and without a college degree, and this difference is driven more racial category than education level. There are true differences in earnings between Black and White Americans, particularly between groups without a college degree; however, these differences in truth are smaller than in perception. Additionally, an analysis of how these perceptions versus truths vary by sector would be helpful in deepening the understanding of how and if Black and White Americans emphasize race over other characteristics when understanding one's economic outcomes.

3.1.5 Costs of College

Participants were asked about the costs of attending a public, in-state, 4-year college per year. The estimated average tuition for a public, in-state, 4-year college in 2023 is reported to be $6,771, with scholarship benefits reported to average around $14,500 for White students and 13,700 for Black students (NCES 2022c; Cameron 2019). The average calculated living expenses can vary greatly by the participant, and therefore, a true average is not provided in this analysis.

Regarding the discrepancy between tuition costs and scholarship opportunities, it is important to note that public, in-state colleges offer some of the best returns to schooling with low costs and high scholarship possibilities, especially for in-state students. In fact, when calculating ROI for a college degree, mid-tier, public, in-state colleges are seen as offering the highest returns to higher schooling with the lowest costs (Steffel 2020). Therefore, it is of

interest if college-prospective participants were aware of both the scholarship opportunities and the cost of attendance at these types of schools.

Table 3

Tuition (avg yearly)	Count
$5,001-$10,000	24
$10,001-$15,000	40
$15,001-$20,000	38
$20,001-$25,000	25
$25,001+	15

Living Expenses (yearly)	Count
$5,001-$10,000	36
$10,001-$15,000	40
$15,001-$20,000	22
$20,001-$25,000	18
$25,001+	11

When looking at perceived yearly cost for college, beliefs varied drastically. Only about 1/5 of the participants correctly guessed the cost of attending a public in-state college, while a majority tended to overestimate the cost. Interestingly, yearly tuition was considered far more costly than yearly living expenses. However, it is unclear what went into the living expenses calculation for participants. For example, participants could be imagining that they would live with their parents or in a low-cost living arrangement due to the college in question being in-state.

Table 4

Scholarships Type	Value	Count
Scholarships_Black	$5,001-$10,000	40
Scholarships_Black	$10,001-$15,000	32
Scholarships_Black	$15,001-$20,000	26
Scholarships_Black	$20,001-$25,000	12
Scholarships_Black	$25,001+	14
Scholarships_White	$5,001-$10,000	35
Scholarships_White	$10,001-$15,000	33
Scholarships_White	$15,001-$20,000	20
Scholarships_White	$20,001-$25,000	16
Scholarships_White	$25,001+	20

Examining scholarship opportunities, participants again held a wide range of beliefs about what is available to a Black or White American student. Taken together, results suggest that participants in both racial categories were simply not well informed on the costs and scholarship opportunities available to them. This corresponds well with research that informs and educates students about college, with evidence supporting information gaps as a large source of confusion around the process of selecting, applying for, and funding a college education (Steffel 2020; C. Hoxby and Turner 2013; C. M. Hoxby 2001).

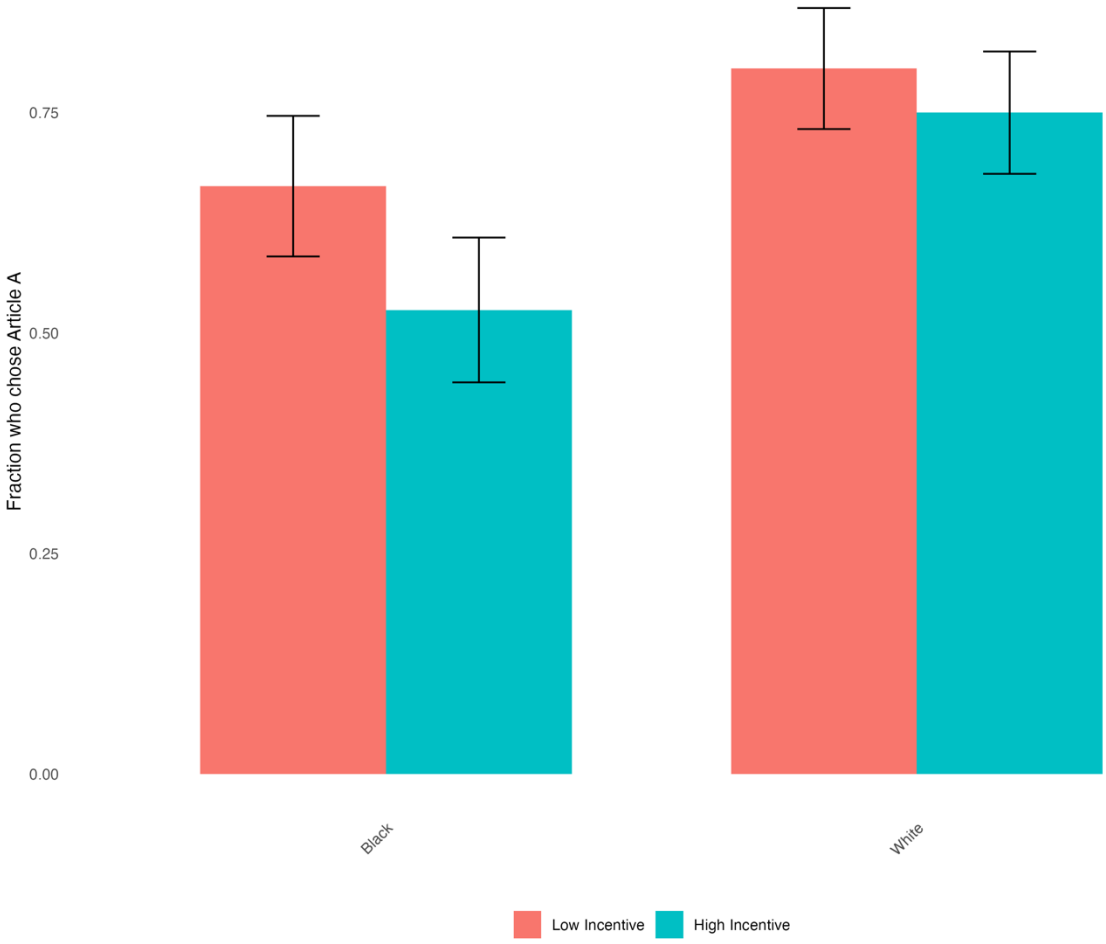
Figure 7

3.2 Experiment

Following the survey on perceptions, participants entered an experiment where they were told that they were going to be asked to make a guess at the end of the survey. Participants were told that they would be asked two additional questions about employment rates and education, and race was intentionally not mentioned in this question. They were told that if they answered these questions correctly, they were entitled to a bonus, with the bonus for answering the questions correctly randomized into a $1 or $20 bonus. Finally, they were provided with an option to select between two articles to help support their guess. They were told to select between a report about the 2023 US Labor Force Statistics, labeled Article A, or an Op-Ed on racial inequality and systemic racism, labeled Article B (see Appendix for articles and complete survey). This setup implied that Article A was the more topically relevant and objective source, whereas Article B represents an opinion-based article that is not relevant to the questions at hand without additional interpretation done by participants.

Results are presented by racial groups, with roughly 40 in treatment and 40 in control. Below are the experimental results.

Figure 8



Interestingly, high incentives decreased the selection of Article A for both Black and White participants. Black and White respondents were more willing to select Article B, an op-ed on racial discrimination and inequality, to help them answer the incentivized question. This contrasts with the hypothesis, which predicts that for Black Americans the share of Article A selections would increase as incentives increased. It is unclear how to interpret these results, however the open-ended text evidence does suggest that both Black and White participants selected Article B because of a belief that race played an important role in educational returns and employment.

Table 5 outlines the results of the paired t-tests, separated by race. Black participants in the low versus high incentive treatment had a proportional difference of 0.667 versus 0.526, meaning that around 2/3 of Black participants picked Article A in the low incentive treatment, whereas a little more than half selected Article A in the high incentive treatment. The change in selection was almost significant, with a p-value of 0.224 for the respective t-test. For White participants, results were similar in direction although not in magnitude or statistical

significance; they also selected Article B more as incentives increased. Overall, with higher incentives, both groups selected more racially charged material.

Table 5

Mean Value	Standard Error	Ethnicity	Incentive	Column Name	Condition Value	Article Type	p-value
0.667	0.080	1	Black	low: Article A or B	Article A: U.S. Bureau of Labor Statistics	Low Incentive	0.776
0.526	0.082	20	Black	high: Article A or B	Article A: U.S. Bureau of Labor Statistics	High Incentive	0.224
0.800	0.069	1	White	low: Article A or B	Article A: U.S. Bureau of Labor Statistics	Low Incentive	0.390
0.750	0.069	20	White	high: Article A or B	Article A: U.S. Bureau of Labor Statistics	High Incentive	0.610

The author does not have a sufficient explanation for these results currently. A preliminary analysis of the open-source text provided to participants to explain why they made their article selections confirmed that beliefs about racial injustice were prevalent in driving their decisions. Those who selected Article A, across both racial groups, reported that they believed Article A was a less biased and more objective source of data that was more relevant to answering the question. However, explanations for selecting Article B ranged from reported beliefs about the importance of race to a lack of trust in government database, of which Article A is sourced. There are some concerns on the author's side about priming and experimenter demand effects given that this experiment was run after a long list of race-based questions. However, these concerns do not explain the effect size seen, nor the differences between racial groups. Overall, these results act as an interesting anomaly and a pilot, as future research will need to be better designed to understand the effect as well as better powered to capture the full effect.

4 Discussion

To summarize the results, White respondents had well-calibrated beliefs for their own groups in terms of the financial returns to a college education and tended to have more accurate beliefs than Black participants about Black American ROI. Black participants, in turn, tended to overestimate the returns for White Americans and underestimated the economic returns for Black Americans.

These results hint at Black participants overemphasizing economic differences between Blacks and Whites. One potential reason for this is that Black participants are, in fact, confusing yearly salaries with overall wealth gaps; therefore, Black Americans may believe that the racial wealth gap stems from differences in employment and earnings, rather than deeper seated sources of inequality like assets, networks, and intergenerational wealth (Parsons 2021). This explanation aligns well with the proposed hypothesis of the paper, which is that beliefs about racial inequality drive misperceptions about Black Americans' ROI in education. Additional experiments about participants' ability to distinguish between wages, employment, and wealth would help further clarify these insights. In terms of policy relevance, it is also important to understand if Black Americans are, in fact, basing their education choices on these perceptions. The fact remains that along the key economic metrics of employment and earnings, as well as non-economic metrics like health and child welfare, the average person, regardless of race, is

more well-off by pursuing higher education (Zimmerman 2014; Case and Deaton 2022; Chetty et al. 2017; NCES 2016b). Therefore, if Black participants overemphasize the racial differences in perceived returns and underestimate overall returns for their respective groups, does this translate into a reduction in the overall pursuit of college and a change in individual decision-making?

The experiment was an attempt at answering this question, as it sought to establish a relationship between beliefs and information-seeking behavior. Black participants did seek out information related to race more when trying to answer non-race related questions. However, the results of this experiment were inconclusive and did not provide a clear understanding of why a change in incentive increased the likelihood that Black and White participant selected the racially charged Op-Ed at greater frequencies.

5 Conclusion

This study sheds light on the perceptions and information-seeking behaviors of prospective Black and White students regarding the return on investment (ROI) of a college education. I used surveys and experiments to understand if and how beliefs about racial inequality impacted prospective educational decision-making and individual's cost-benefit analysis. This paper suggests that there are racial differences in perceived returns, and these differences do not accurately account for the financial gains of higher education. Instead, race appears to be weighted above education in the reported perceptions of economic returns, especially for Black respondents. Experimentally, Black participants were more likely to choose information that emphasizes racial economic inequalities over more race-agnostic economic reports, suggesting that race is a critical component in their decision-making and information-seeking behavior.

The implications for this study are threefold. First, it provides cursory evidence of the role of motivated beliefs impacting Black students' perceptions and educational decision-making processes. Second, it highlights the importance of managing racial narratives with economic decision-making and understanding the connection between perceived inequalities and individual decisions. Third, it suggests deeper questions about how conversations of race inequality and economic welfare impact decision-making, a question as relevant to researchers as it is to policymakers and educators.

Further research is needed to understand the role of socio-political narratives in behavior and perceptions; however, this paper is an attempt to balance the importance of macro conversations around race and inequality with continuous questions about maximizing individual economic outcomes within a given circumstance.

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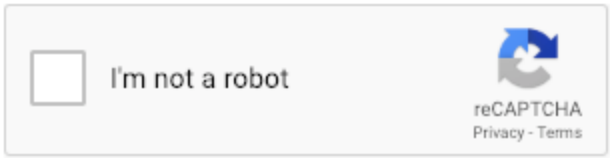
Consent

Q1.1. Before you proceed to the survey, please complete the captcha below.



Q1.2. **Study Number: IRB24-1032**

Study Title: *Educational Beliefs*

Researcher: Sydney Callaway

Principal Investigator: Alex Imas

Sponsor: The Normal Lab

Description:

We are non-partisan researchers at the University of Chicago doing a research study about beliefs and decision making. This form will give you some information about the study. Please read the form carefully and feel free to email and ask any questions that you may have.

1. In this study, you will answer a set of questions about your beliefs

2. The estimated time to complete this study is approximately **20 minutes**.

3. Your participation is voluntary.

Incentives:

You will receive **$12.00 per hour** for your participation, with eligibility for a bonus based on a chosen question. Partially completed survey responses will not be compensated. The compensation will be determined based on what was completed.

Risks and Benefits:

1. Your participation in this study does not involve any physical risk or emotional risk to you beyond the risks of daily life.

2. You have the right to withdraw your consent or discontinue participation at any time for any reason. Your decision to withdraw will not involve any penalty or loss of benefits to which you are entitled.

3. The potential benefit of the study is a better scientific understanding of people's behavior in activities.

Confidentiality:

All of the data will be only used for scientific purposes and will be appropriately protected during and after the research. If you decide to withdraw from this study, any data already collected will be destroyed. Identifiable data will never be shared outside the research team. De-identified information from this study may be used for future research studies or shared with other researchers for future research without your additional informed consent.

Contacts & Questions:

If you have questions or concerns about the study, you can contact the researcher at callaways@uchicago.edu

If you have any questions about your rights as a participant in this research, feel you have been harmed, or

wish to discuss other study-related concerns with someone who is not part of the research team, you can contact the University of Chicago Social & Behavioral Sciences Institutional Review Board (IRB) Office by phone at (773) 702-2915, or by email at sbs-irb@uchicago.edu.

Consent:

Participation is voluntary. Refusal to participate or withdraw from the research will involve no penalty or loss of benefits to which you might otherwise be entitled.

By clicking “Agree” below, you confirm that you have read the consent form, are at least 18 years old, and agree to participate in the research. Please print or save a copy of this page for your records.

- ○ Agree
- ○ I do NOT agree to participate (If you don’t agree, you will see a screen that exits the survey.)

Identity Validation

Q2.1. Before starting the survey, please provide your age, nationality, and country of residency.

Q2.2. Age:

Q2.3. What is your nationality?

Q2.4. What country do you live in now? (It can be the same or a different country from where you currently live.)

Q2.5. Unfortunately, you are not eligible to proceed with this survey. Thank you for participating!

Introduction

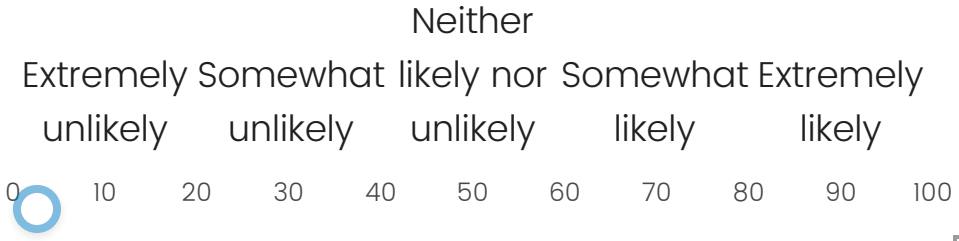
Q3.1. Thank you for choosing this survey. I will ask you a series of questions; please try and give your best guess. One of these questions can make you eligible for a bonus-- therefore, pay attention to the questions!

Please do not use other resources to answer these questions. It is not helpful for answering correctly; what matters most is that you are answering honestly. Have fun!

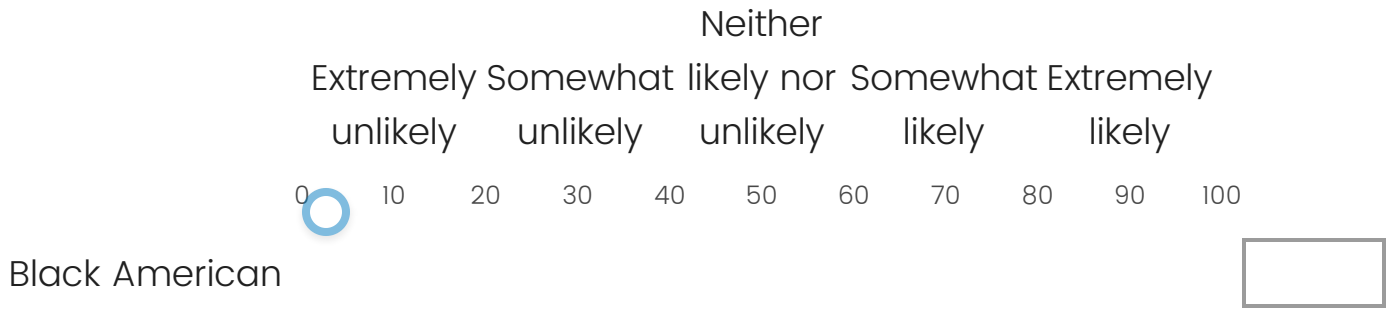
ROI: Full-Time Employment

Q4.1. I am interested in your expectations regarding full-time employment for individuals **with and without a college degree.** For this survey, please consider a "full-time job" as a position where employees work at least 35 hours per week.

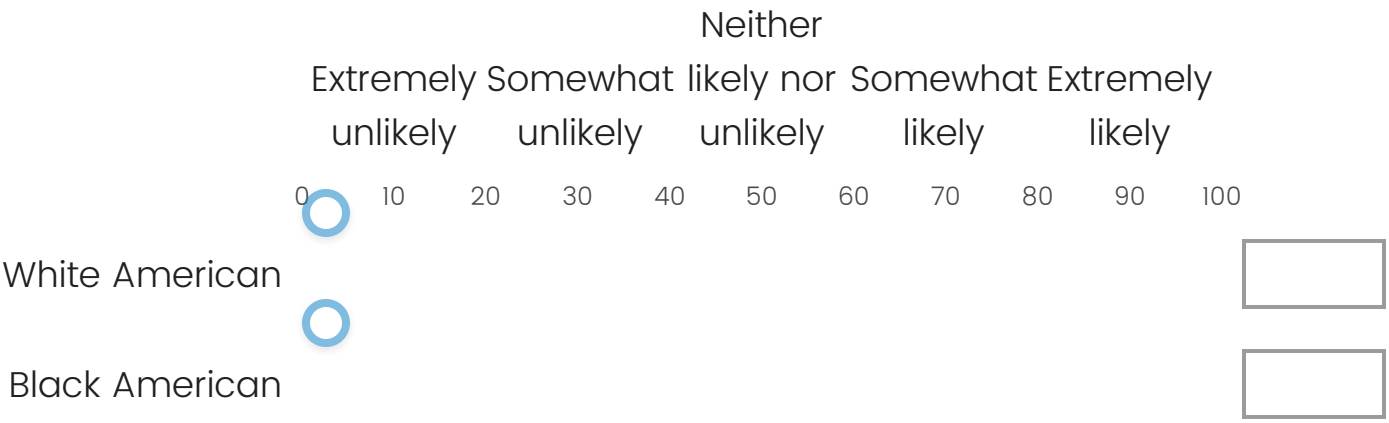
Q4.2. How likely do you think it is that the average White American will secure a full-time job within 5 to 10 years **after graduating** from a public four-year in-state college? How about the average Black American?



White American



Q4.3. How likely do you think it is that the average White American will secure a full-time job within 5 to 10 years **after not graduating or attending** a public four-year in-state college? How about the average Black American?



ROI: Lifetime Earnings

Q5.1. I am interested in your expectations regarding the median annual earnings of individuals with full-time employment **with and without a college degree**. For the

purposes of this survey, please consider a "full-time job" as a position where employees work at least 35 hours per week.

Please exclude any income from part-time or freelance work, as well as earnings from sources other than formal employment (e.g., income from social media). Your estimate should be in US dollars and before taxes.

Q5.2. What do you estimate the median annual earnings will be for the average White American in the next 5 to 10 years **after graduating** from a public four-year in-state college, regardless of the sector they are employed in?

- $0-$20,000
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,000+

Q5.3. What do you estimate the median annual earnings will be for the average Black American in the next 5 to 10

years **after graduating** from a public four-year in-state college, regardless of the sector they are employed in?

- $0-$20,000
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,000+

Q5.4. What do you estimate the median annual earnings will be for the average Black American in the next 5 to 10 years **without enrolling or graduating** from a public four-year in-state college, regardless of the sector they are employed in?

- $0-$20,000
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,000+

Q5.5. What do you estimate the median annual earnings will be for the average White American in the next 5 to 10

years **without enrolling or graduating** from a public four-year in-state college, regardless of the sector they are employed in?

- ○ $0-$20,000
- ○ $20,001-$40,000
- ○ $40,001-$60,000
- ○ $60,001-$80,000
- ○ $80,001-$100,000
- ○ $100,000+

Individual earnings

Q6.1. We are interested in your expectations of **your own** median annual earnings when you have full-time employment, **with and without a college degree**. Please assume that a "full-time job" refers to a position where you work at least 35 hours per week.

Exclude income from part-time or freelance work or any earnings from sources other than formal employment, for example, exclude income from social media. Your estimate should be in US dollars and before taxes.

Q6.2. What do you estimate your median annual earnings will be for yourself in the next 5 to 10 years **without enrolling or graduating** from a public four-year in-state college, regardless of the sector you are employed in?

- $0-$20,000
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,000+

Q6.3. If you decided to pursue a college degree, what do you think you'd major in?

We know this is a hard question, please give us your best guess.

- Information Technology
- Social Sciences
- Communications
- Vocational Training
- Agriculture + Natural Resources
- Liberal Arts
- Physical Sciences + Math

- Biology + Health
- Engineering + Architecture
- Business + Economics

Q6.4. How likely do you think it is that you will

	0 10 20 30 40 50 60 70 80 90 100
Obtain a 4-year college degree	
Enroll in a 4-year college degree program	
Enroll but drop out of a 4-year college degree program	
Enroll into a technical or 2 year degree program	
Not pursue higher education [only obtain a high school diploma]	

Q6.5. Suppose you majored in the area you selected.

What do you estimate your median annual earnings will be for yourself in the next 5 to 10 years **after graduating** from a public four-year in-state college?

- $0-$20,000
- $20,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- $100,000+

ROI: Tuition

Q7.1. Please consider the **yearly** tuition cost for a public four-year in-state college. This tuition refers to the fees paid directly to the university and **does not include** other expenses such as room and board. Do not offset this amount by any aid, scholarships, or loans, as these will be addressed in a different question.

What do you estimate the **average yearly tuition** to

be for a full-time undergraduate student to attend a public four-year in-state college?

- ○ $0-$5,0000
- ○ $5,001-$10,000
- ○ $10,001-$15,000
- ○ $15,001-$20,000
- ○ $20,001-$25,000
- ○ $25,001+

Q7.2. Please consider the **yearly expense**s to attend a public four-year in-state college. These expenses refer to books, room and board, and other daily costs associated with living near and attending university. This **does not include** tuition fees paid to the university. Do not offset this amount by any aid, scholarships, or loans, as these will be addressed in a different question.

What do you estimate the **average yearly expenses** to be for a full-time undergraduate student to attend a public four-year in-state college?

- ○ $0-$5,0000
- ○ $5,001-$10,000
- ○ $10,001-$15,000
- ○ $15,001-$20,000

- ○ $20,001-$25,000
- ○ $25,001+

ROI: Costs

Q8.1. Please consider the **yearly total aid package** provided to the average student attending a public four-year in-state college over one academic year. This aid package can include the following:

1. The cost of attendance (tuition and required fees)
2. Room and board expenses
3. Any additional costs associated with the day-to-day life of a college student

Q8.2. How much total aid do you think the average White American student receives to attend a public four-year in-state college?

- ○ $0-$5,0000
- ○ $5,001-$10,000
- ○ $10,001-$15,000
- ○ $15,001-$20,000

- $20,001-$25,000
- $25,001+

Q8.3. How much total aid do you think the average Black American student receives to attend a public four-year in-state college?

- $0-$5,0000
- $5,001-$10,000
- $10,001-$15,000
- $15,001-$20,000
- $20,001-$25,000
- $25,001+

Q8.4. How much total aid do you think you would receive to attend a public four-year in-state college?

- $0-$5,0000
- $5,001-$10,000
- $10,001-$15,000
- $15,001-$20,000
- $20,001-$25,000
- $25,001+

Finances

Q9.1.
Please consider your personal knowledge and comfort with debt and student loans.

Please rate the level to which you agree or disagree with these statements.

Q9.2. I feel comfortable taking a loan to pay for college.

- Strongly Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Q9.3. My parents can help pay for most or all of my costs if I choose to go to a four-year university.

- Strongly Disagree
- Somewhat disagree
- Neither agree nor disagree

- ○ Somewhat agree
- ○ Strongly agree

Q9.4. Given your current financial situation and pretend that you decided to go to college, please select the ways you would be able to pay for attending at least one year of a public four-year in-state college:

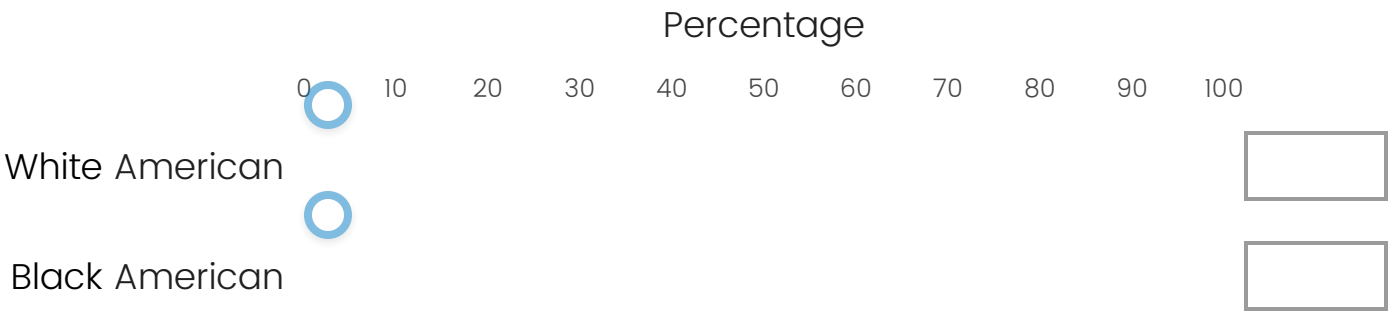
- ☐ Scholarships and grants
- ☐ Family contributions
- ☐ Working a full or part-time job
- ☐ Loans
- ☐ Military benefits
- ☐ Work-study programs
- ☐ Fundraising and crowdfunding (including but not limited to family members)
- ☐ Personal funds
- ☐ Family money
- ☐ Credit card debt
- ☐ Employer tuition assistance
- ☐ Others

Placebos: Demographics

Q10.1.

Please consider all American citizens in the U.S. population.

What percentage of U.S. adults do you estimate are Black American? What percentage are White Americans?



Placebo: Life Expectancy

Q11.1.

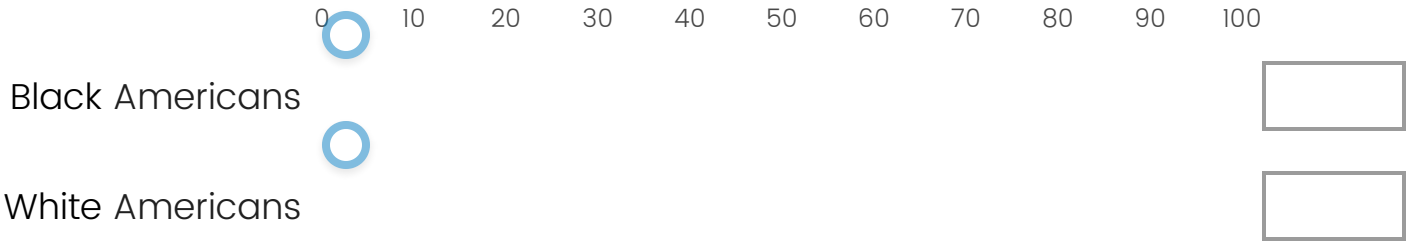
Please consider all American citizens in the U.S. population.

What do you think is the average life expectancy (in years lived) for White and Black Americans?

Placebos: Religion

Q12.1.
Please consider the entire population of Black Americans when answering questions about their belief. Similarly, consider the entire population of White Americans.

What percentage of Black American adults do you think believe in God or a higher power? What percentage of White American adults do you think believe in God or a higher power?



Experiment: $1 incentive

Q13.1. At the end of this survey, I will ask you two additional questions about employment rates and education.

You will have only a few seconds to answer this question, so you will not have the chance to look up the answers online. Please make your best guess.

If your answer lies within 1% of the actual value, you will win a **$1 bonus**. I will use Prolific to send you this additional payment along with your baseline pay.

To help you make your guess, you will be able to choose either:

- Article A, a report of the 2023 US Labor Force Statistics by education level and is sourced from the U.S. Bureau of Labor Statistics

- Article B, an Op-Ed on racial inequality and systemic racism in the U.S. sourced from a newspaper's Opinion section.

Please pick which source you would like to use to help support your guess:

- ○ Article A: U.S. Bureau of Labor Statistics
- ○ Article B: Op-Ed on U.S. Racial Inequality and Systemic Racism

Q13.2. Before viewing your selected choice, please answer a few questions:

Why did you choose the source that you did? Please answer in at least 2 sentences:

Q13.3. If you had to guess, what do you think is the probability that the article from either source contains the information you need to make your guess?

0 10 20 30 40 50 60 70 80 90 100

Article A: U.S. Bureau of Labor Statistics

Article B: Op-Ed on U.S. Racial Inequality and Systemic Racism

Q13.4. The link below leads you to the article you selected. Please return to this page when you are done reading.

Q13.5.
Please read the following article before proceeding:
Article A

Q13.6.
Please read the following article before proceeding:
Article B

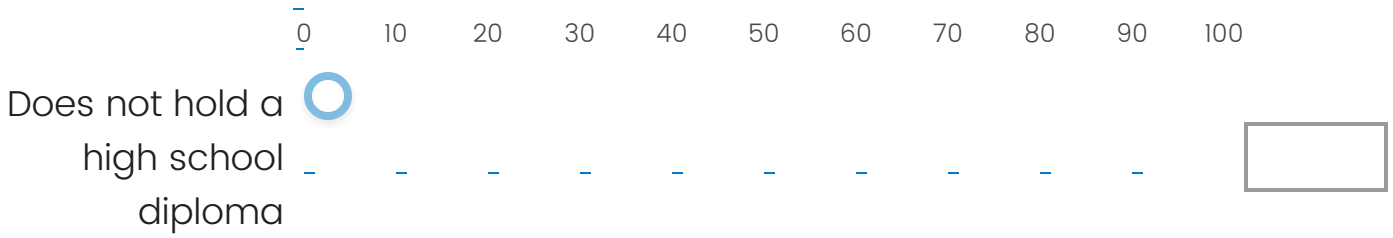
Q13.7. Did you watch or read the entire segment linked on the previous page?

- No, I read only parts of it
- Yes, I read all of it
- No, I did not read any of it

Q13.8. On the next pages, I will ask you to make two guesses about employment rates and education. You will only have 10 seconds to make the guess for each question.

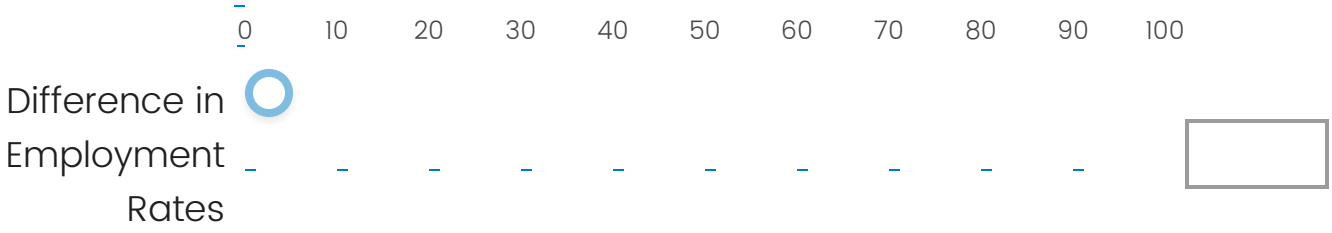
10

Q13.10. What are the chances that an American adult without a high school diploma will move from middle-income to lower-income tier?



10

Q13.12. What is the difference in employment rates between high school graduates and those with a bachelor's degree?



Q13.13. Did the article you read positively or negatively influence your choice to pursue a college degree?

- Negatively
- Neutral
- Postively

Experiment: $20 incentive

Q14.1. At the end of this survey, I will ask you two additional questions about employment rates and education.

You will have only a few seconds to answer this question, so you will not have the chance to look up the answers online. Please make your best guess.

If your answer lies within 1% of the actual value, you will win a **$20 bonus**. I will use Prolific to send you this additional payment along with your baseline pay.

To help you make your guess, you will be able to choose either:

- Article A, a report of the 2023 US Labor Force Statistics by education level and is sourced from the U.S. Bureau of Labor Statistics

- Article B, an Op-Ed on racial inequality and systemic racism in the U.S. sourced from a newspaper's Opinion section.

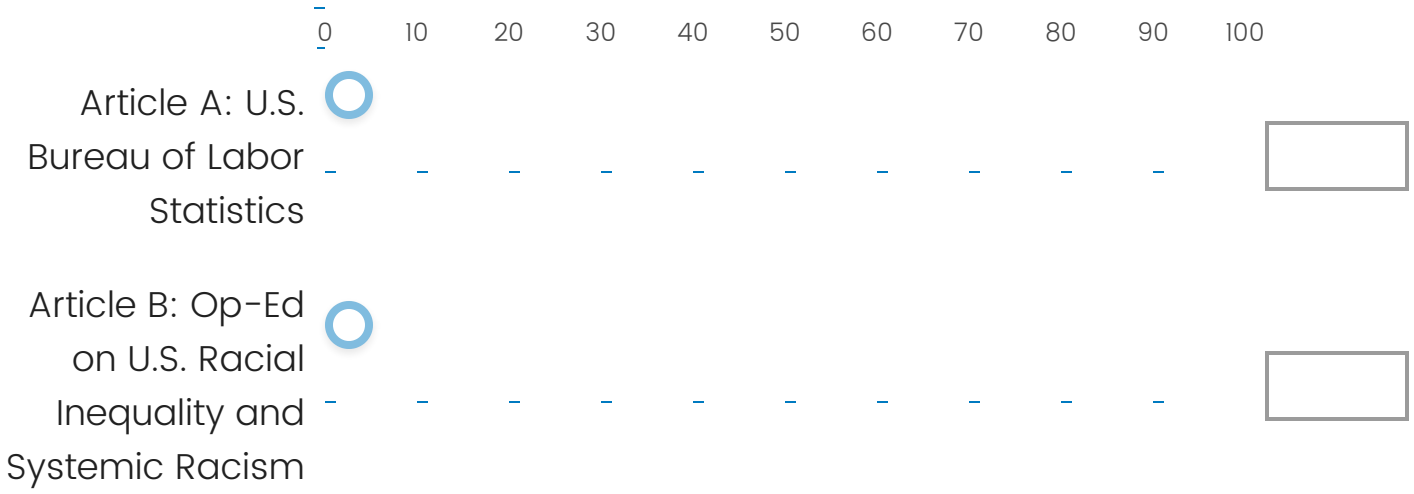
Please pick which source you would like to use to help support your guess:

- ○ Article B: Op-Ed on U.S. Racial Inequality and Systemic Racism
- ○ Article A: U.S. Bureau of Labor Statistics

Q14.2. Before viewing your selected choice, please answer a few questions:

Why did you choose the source that you did? Please answer in at least 2 sentences:

Q14.3. If you had to guess, what do you think is the probability that the article from either source contains the information you need to make your guess?



Q14.4. The link below leads you to the article you selected. Please return to this page when you are done reading.

Q14.5.
Please read the following article before proceeding:

Article A

Q14.6.
Please read the following article before proceeding:
Article B

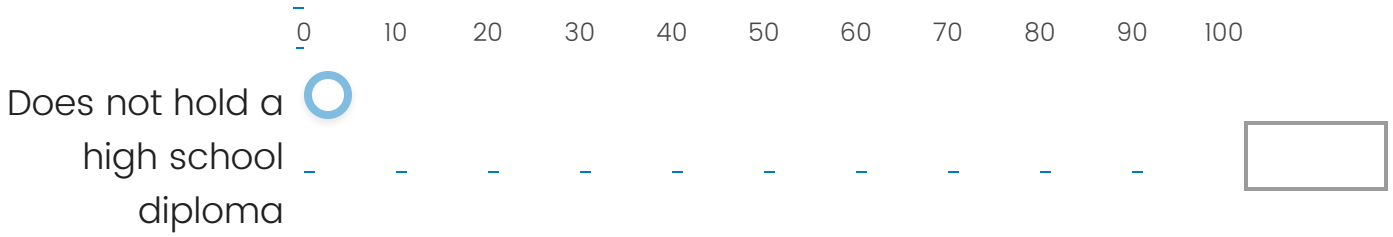
Q14.7. Did you watch or read the entire segment linked on the previous page?

- Yes, I read all of it
- No, I did not read any of it
- No, I read only parts of it

Q14.8. On the next pages, I will ask you to make two guesses about employment rates and education. You will only have 10 seconds to make the guess for each question.

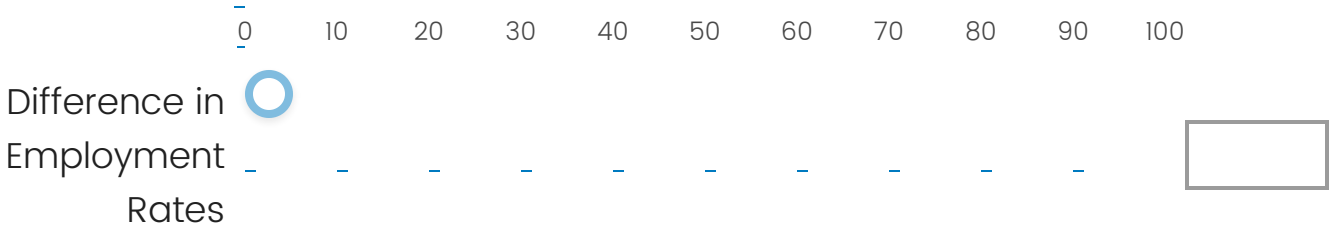
10

Q14.10. What are the chances that an American adult without a high school diploma will move from middle-income to lower-income tier?



10

Q14.12. What is the difference in employment rates between high school graduates and those with a bachelor's degree?



Q14.13. Did the article you read positively or negatively influence your choice to pursue a college degree?

- Neutral
- Postively
- Negatively

Data Quality

Q15.1.
I understand that completing online studies can sometimes be challenging, and it may be difficult to maintain full attention throughout.

With this in mind, I kindly ask you to consider the question below. I value your participation and honesty, and your response to this question will NOT affect your payment.

Do you feel confident that the answers you provided in this study accurately reflect your honest opinions and were given with careful attention?

- Yes, I am confident in the accuracy and attentiveness of my responses.
- No, I do not feel confident in the accuracy or attentiveness of my responses.

Q15.2. I value your opinions.

Do you have any suggestions or feedback for us on how we might enhance this study for future participants? Feel free to share any thoughts on the study's format, length, clarity of the questions, or any other aspect you believe could be improved.

(See other file formats and annual average tables or tables for other years.)

HOUSEHOLD DATA

ANNUAL AVERAGES

7. Employment status of the civilian noninstitutional population 25 years and over by educational attainment, sex, race, and Hispanic or Latino ethnicity

[Numbers in thousands]

Employment status, sex, race, and Hispanic or Latino ethnicity	2023							
	Less than a high school diploma	High school graduates, no college(1)	Some college or associate degree			Bachelor's degree and higher		
			Total	Some college, no degree	Associate degree	Total(2)	Bachelor's degree only	Advanced degree
TOTAL								
Civilian noninstitutional population	19,480	63,419	56,926	32,847	24,079	87,778	54,106	33,672
Civilian labor force	9,180	35,928	35,803	19,911	15,891	64,077	39,357	24,720
Participation rate	47.1	56.7	62.9	60.6	66.0	73.0	72.7	73.4
Employed	8,669	34,529	34,714	19,256	15,457	62,752	38,489	24,263
Employment-population ratio	44.5	54.4	61.0	58.6	64.2	71.5	71.1	72.1
Unemployed	511	1,399	1,089	655	434	1,324	868	456
Unemployment rate	5.6	3.9	3.0	3.3	2.7	2.1	2.2	1.8
Men								
Civilian noninstitutional population	9,967	32,446	26,821	16,051	10,770	41,402	25,774	15,628
Civilian labor force	5,919	21,412	18,500	10,783	7,717	31,821	20,100	11,721
Participation rate	59.4	66.0	69.0	67.2	71.7	76.9	78.0	75.0
Employed	5,617	20,559	17,928	10,431	7,497	31,153	19,661	11,493
Employment-population ratio	56.4	63.4	66.8	65.0	69.6	75.2	76.3	73.5
Unemployed	302	852	573	352	220	668	439	229
Unemployment rate	5.1	4.0	3.1	3.3	2.9	2.1	2.2	1.9
Women								
Civilian noninstitutional population	9,513	30,973	30,105	16,796	13,309	46,376	28,331	18,044
Civilian labor force	3,262	14,516	17,302	9,128	8,174	32,256	19,257	12,998
Participation rate	34.3	46.9	57.5	54.3	61.4	69.6	68.0	72.0
Employed	3,052	13,970	16,786	8,826	7,960	31,599	18,828	12,771

Footnotes

(1) Includes persons with a high school diploma or equivalent.

(2) Includes persons with bachelor`s, master`s, professional, and doctoral degrees.

NOTE: Estimates for the above race groups (White, Black or African American, and Asian) do not sum to totals because data are not presented for all races. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. Updated population controls are introduced annually with the release of January data.

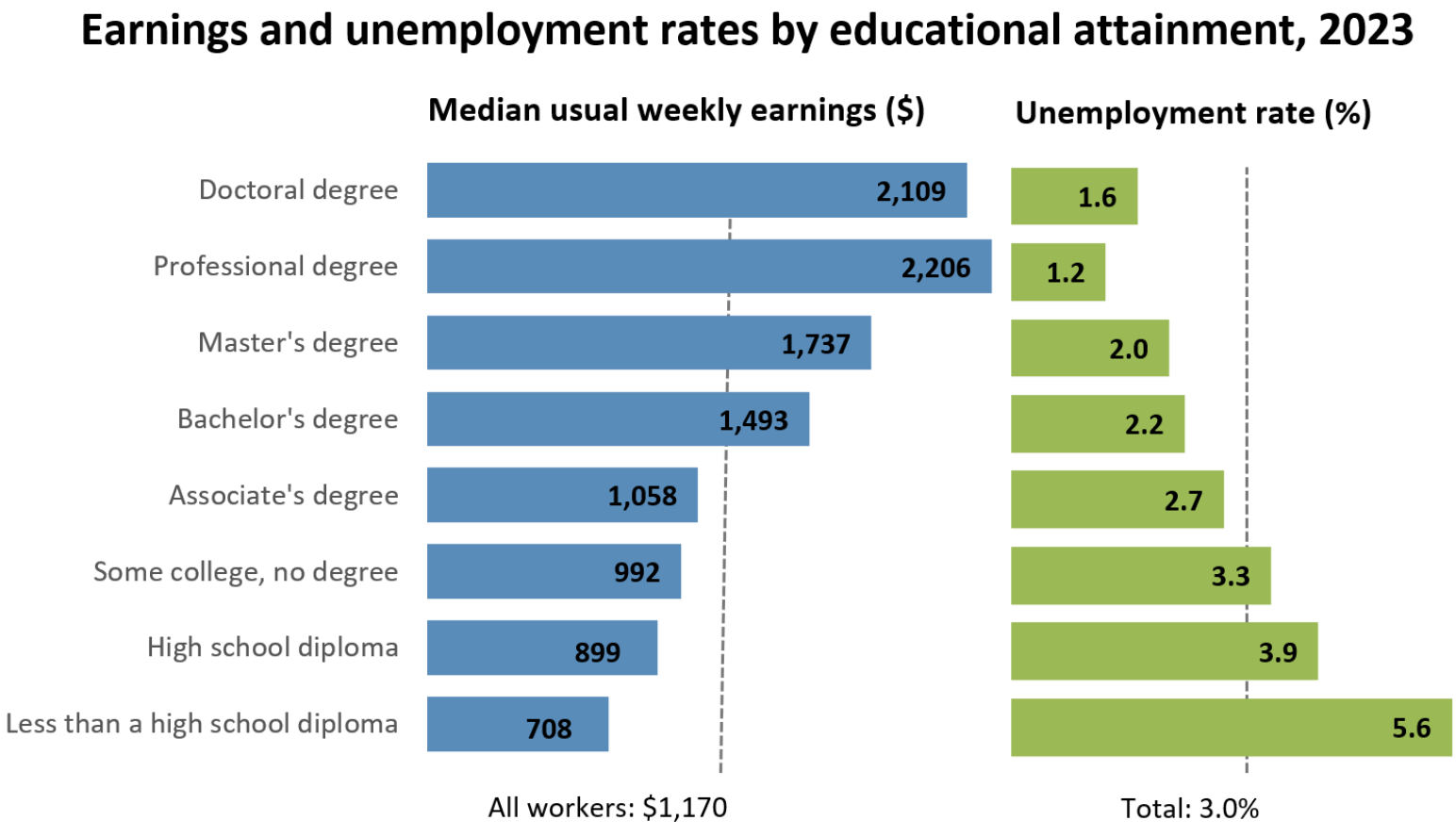
Employment status, sex, race, and Hispanic or Latino ethnicity	2023							
			Some college or associate degree			Bachelor's degree and higher		
	Less than a high school diploma	High school graduates, no college(1)	Total	Some college, no degree	Associate degree	Total(2)	Bachelor's degree only	Advanced degree
Employment-population ratio	32.1	45.1	55.8	52.5	59.8	68.1	66.5	70.8
Unemployed	209	547	516	303	214	657	429	228
Unemployment rate	6.4	3.8	3.0	3.3	2.6	2.0	2.2	1.8
White								
Civilian noninstitutional population	14,776	48,957	44,376	25,347	19,029	67,744	42,178	25,567
Civilian labor force	7,266	27,358	27,375	15,066	12,309	48,602	30,361	18,241
Participation rate	49.2	55.9	61.7	59.4	64.7	71.7	72.0	71.3
Employed	6,896	26,430	26,638	14,630	12,008	47,661	29,727	17,933
Employment-population ratio	46.7	54.0	60.0	57.7	63.1	70.4	70.5	70.1
Unemployed	369	928	737	436	301	941	633	308
Unemployment rate	5.1	3.4	2.7	2.9	2.4	1.9	2.1	1.7
Black or African American								
Civilian noninstitutional population	2,616	9,460	8,213	5,041	3,172	8,607	5,385	3,222
Civilian labor force	1,032	5,610	5,535	3,243	2,291	6,733	4,179	2,553
Participation rate	39.5	59.3	67.4	64.3	72.2	78.2	77.6	79.2
Employed	936	5,269	5,287	3,085	2,202	6,568	4,064	2,504
Employment-population ratio	35.8	55.7	64.4	61.2	69.4	76.3	75.5	77.7
Unemployed	96	341	248	159	89	164	115	49
Unemployment rate	9.3	6.1	4.5	4.9	3.9	2.4	2.8	1.9
Asian								
Civilian noninstitutional population	1,157	2,685	2,088	1,119	969	9,272	5,132	4,139
Civilian labor force	452	1,510	1,380	717	663	7,052	3,721	3,330
Participation rate	39.1	56.2	66.1	64.1	68.4	76.1	72.5	80.5
Employed	436	1,464	1,339	698	641	6,877	3,636	3,241
Employment-population ratio	37.7	54.5	64.1	62.3	66.2	74.2	70.8	78.3
Unemployed	16	46	41	20	22	175	86	89
Unemployment rate	3.6	3.0	3.0	2.8	3.3	2.5	2.3	2.7
Hispanic or Latino ethnicity								
Civilian noninstitutional population	9,207	12,315	8,087	4,825	3,262	8,228	5,689	2,540
Civilian labor force	5,363	8,513	5,969	3,510	2,459	6,582	4,540	2,042
Participation rate	58.3	69.1	73.8	72.8	75.4	80.0	79.8	80.4
Employed	5,098	8,152	5,764	3,385	2,380	6,419	4,414	2,005
Employment-population ratio	55.4	66.2	71.3	70.2	72.9	78.0	77.6	78.9
Unemployed	265	361	205	125	79	163	126	37
Unemployment rate	4.9	4.2	3.4	3.6	3.2	2.5	2.8	1.8

Footnotes
(1) Includes persons with a high school diploma or equivalent.
(2) Includes persons with bachelor`s, master`s, professional, and doctoral degrees.

NOTE: Estimates for the above race groups (White, Black or African American, and Asian) do not sum to totals because data are not presented for all races. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. Updated population controls are introduced annually with the release of January data.

Last Modified Date: January 26, 2024

Education pays



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.
Source: U.S. Bureau of Labor Statistics, Current Population Survey.

Data Table

These education categories reflect only the highest level of educational attainment. They do not take into account completion of training programs in the form of apprenticeships and other on-the-job training, which may also influence earnings and unemployment rates. For more information on training, see: https://www.bls.gov/emp/documentation/education-training-system.htm.

BLS has some data on the employment status of the civilian noninstitutional population 25 years and over by educational attainment, sex, race, and Hispanic origin online.

The Census Bureau also has some data on educational attainment online.

Last Modified Date: September 6, 2023

OPINION

Op-Ed: Deep racial inequality persists in the U.S. — but many Americans don't want to believe it

(iStockphoto / Getty Images)

By Michael Kraus

Feb. 28, 2022 3:15 AM PT

Progress toward racial equality in the United States is real — and possible — if we look, for instance, at changes in racial attitudes across time.

However, a rigid belief that progress is automatic, natural, linear or always forward moving, lends itself to the denial of the persistence of racial inequality in the funding gaps between public schools serving majority white students versus those serving children of color, the disproportionate death and hospitalization rate during the COVID-

19 pandemic in communities of color, and the Black-white wealth gap. This denial remains a big obstacle to real progress in so many spheres.

My colleagues and I study perceptions of racial inequality in society, and we find that Americans largely believe that society has made more progress toward equality than we have.

In one study, we asked a sample of 1,008 American adults that represented the U.S. in terms of race, region and income, to estimate the average wealth of Black families compared with white families in 1963. Respondents thought that for every $100 in wealth held by white families, Black families had $50 on average. They believed there was inequality, but the scale was entirely wrong. In reality, according to federal data, the median Black family only had $6 in wealth for every $100 held by white families.

When asked to make the same comparison for 2016, they estimated that for every $100 held by white families, Black families had $90 on average. Federal data, however, show that Black families in 2016 held $11 for every $100 held by white families. The Black-white wealth gap was nearly as large as it was in 1963.

Many Americans have a hard time recognizing the magnitude and persistence of racial inequality because, psychologically, we resist these truths. Psychologists refer to this kind of broad bias in perception as “motivated cognition” — that is, most Americans want to live in a society that is more racially equal, and so they engage in mental actions that ignore, discount or downplay contradictory evidence to maintain coherence between belief and reality.

Current efforts to ban the teaching of America’s violent and unjust racial history in public schools are a form of motivated cognition. Another example, from one of our studies, is how the perception of Asian Americans as high-achieving leads to a significant underestimation of the wealth gap between Asian and white Americans,

which downplays the economic inequality that burdens some Asian American communities.

Our data suggest a profound, and possibly willful, ignorance about the persistence of racial inequality among those most likely to benefit from it. In one study, among white and high-income respondents, we saw an insistence that more racial progress has been achieved — measured by overestimates of current racial equality — than among Black and low-income respondents. When progress toward equality is seen as inevitable, incentives for equitable political action are low.

We have also been examining ways to cut through motivated cognition on racial inequality. In a recent study, we created three tests to see whether stories or data would be more effective in helping people grasp the magnitude of current Black-white wealth inequality.

In one test, we discussed Black-white inequality through the perspective of a single Black family contending with significant challenges in their housing, financial wealth and educational circumstances. In another version, we discussed Black-white inequality through large summaries of data in the domains of housing, wealth and education. A third version combined the two approaches. After these sessions, a diverse sample of participants from New Haven, Conn., had a chance to express their views and think through solutions about inequality in a nonjudgmental setting.

We found that communicating with data, rather than a story, promoted more accurate estimates of the magnitude of current Black-white wealth inequality, increased acknowledgment of systemic white advantage in society, and did so equally for both white respondents and respondents of color. We believe that using data in a context where respondents could learn and speak freely about racial inequality, without being judged by our research staff, made it easier for the participants to absorb information about the magnitude of racial inequality in society.

Interestingly, the story of a single Black family did not change incorrect estimates of the Black-white wealth gap — possibly because it focused too narrowly on one case and heightened thoughts about what that particular family could do to overcome bias. In contrast, explanations based on data cast racism as a structural, rather than an individual, problem affecting whole groups based on their racial identity.

Although the effect of these sessions waned over time, the study suggests that educational initiatives of this sort, if made widespread, might be effective in helping people grasp the persistence of structural racism.

Progress toward racial equality is possible, but it will not unfold automatically, even with better education. Nevertheless, awareness and education are necessary precursors to action — whether that involves school board decisions, federal protection of voting rights or equity-focused employment programs. Unless Americans understand and acknowledge inequality as a fact, we won't be able to build the political consensus needed for real change.

Michael Kraus is a social psychologist and an associate professor at Yale University.

More to Read

How the GI Bill widened the Black-white wealth gap

June 23, 2024

A majority of Black Americans believe U.S. institutions are conspiring against them, a Pew poll finds

June 10, 2024

Editorial: Four years after George Floyd, the backlash is underway

May 24, 2024