SAMPLE LOI #1

Racial Inequality in Police Violence: Injuries and Fatalities from Police Use of Force

Project Summary

Since the 2014 police killings of Michael Brown, Eric Garner and Tamir Rice, and through the recent killings of George Floyd, Breonna Taylor and Rayshard Brooks, national attention has focused on police killings of African Americans and other non-white civilians, in turn renewing research interest in police killings and use of force more generally, and the prospect of racial bias in its use. While research on inequalities in police violence is growing, this project addresses two limitations: the emphasis on fatal injuries in studies of police violence, and in turn, the limited data on non-fatal injuries. For each of these, the challenges of consistent and accurate coding of police deaths and non-fatal injuries remains urgent.

Recognizing the limitations of government databases on police killings, several crowd-sourced databases have been created to track police killings.[1] Relying on media and police reports, information in these databases have been analyzed to estimate the circumstances and racial disparities in fatal police violence. By their estimates, about 1,000 persons are killed each year by the police.[2] Theories motivating these studies have examined racial inequality, policing tactics and organizational design, social and crime conditions, and threat situations. Recent studies[3] have decomposed these killings into situational interactions to better understand the factors that explain lethal force and assess racial disparities in both the macro and granular details of fatal police violence.

Killings by police are a critical but censored portion of the totality of police use of force. Compared to the growing body of data and research on police killings, very little, if any, research has focused on the incidence of non-lethal police use of force at a national level.[4] Unlike police killings, there are no, single reliable nationwide reporting systems or databases for non-lethal police use of force. The few studies on non-lethal police force typically count self-reported incidents, catalog the types of force used, and correlate force with the outcomes of police-civilian encounters. Most are limited in their scope to a few agencies and places.[5] Only one captures the range of injuries to civilians: an observational study in three cities[6] It evaluated the validity of police reports of injury violence through confirmation by physicians, but the supply of cases was controlled by police, censoring cases where injuries are either unreported and or cases selected by police decisions to seek medical attention for suspects. This censoring and sample limitation complicate estimates of the extent of police use of force, and estimates of the medical and social "distance" between non-lethal and lethal force.

To address these limitations and further research on racial inequalities in police use of force, this project will proceed through three phases. First, we will develop, augment and harmonize a series of national medical and criminal justice databases that use varied methods to record fatal and non-fatal police use of force. Sources will include public health and police jurisdiction records of mortality and nonfatal injury at the hands of police, using detailed coding methods to identify intentional injuries through legal intervention. We will resolve estimates of police use of lethal and non-lethal force across datasets. The result will be a unique database that we will publish for broad use.

Second, we will analyze the relative risks of police-caused injury or death by civilian race, institutional contexts of police agencies and actions, and population demography. We will integrate details of the contexts of police injuries and deaths including agency characteristics, level and intensity of police-civilian contacts, and social and economic dimensions of crime and inequality. Additional integration will include data on civilians' exposure to police enforcement activity, and threats/risks to police. Data on lethal and non-lethal police violence will be aggregated for all US counties to ease comparisons and facilitate integration and harmonizing. This integration will allow us to create a continuum of police use of force across a spectrum of county-types as well as nonfatal injury and death.

Using this continuous measure of police use of force, the third component will be a series of analyses to respond to two related dimensions of race and threat. We will expand on recent studies of police use of deadly force to examine police violence across a range of force as mechanisms of coercion and social control of subordinate groups that threaten both dominant groups and also that are perceived as threats to the police. We will estimate the effects of a range of measures of inequality and racial threat to

understand and explain civilian injuries and fatalities in police-civilian interactions. The second dimension will incorporate measures of policing - specific tactics, frequency of police civilian contact, the racial composition of police departments, and the organizational design of police agencies - to understand how variations in policing may contribute to levels of police use of lethal and non-lethal force. For police killings, we will include measures of threats to police as an additional source to explain patterns of police violence. These will include measures of threats to police (injuries and deaths) and incorporate details of the interactions and circumstances of civilian deaths to test racial disparities in the pat police shootings.

Project Design

Building the Injury and Fatality Database

A database on the continuum of police violence will integrate data on fatalities and non-lethal injuries. We will harmonize a series of national public health and criminal justice datasets on police killings, both private crowd-sourced data and data of government origin. Several private sources of data on police killings have been created since 2014 and some include events that predate the Michael Brown killing. Overall, many of the crowd-sourced records have identified nearly twice the number of police killings that appear in the F.B.I. Supplementary Homicide Reports (SHR) archives, the major criminal justice archive of homicides, including police killings. Accordingly, we focus our attention initially on the integration of privately archived datasets, including Fatal Encounters, Mapping Police Violence, The Counted and the Washington Post database of police killings.[7]

Medical and public health archives provide additional - and in many instances richer - data on police killings. These data to date have not been integrated to create a common archive. Table 1 briefly summarizes the public health data archives that we will integrate with criminal justice and private archives to provide an enhanced database of police killings that overcome the biases and reporting limitations of the existing sources. Public health data are coded for intentional injury and also for the source of the injury or death, including legal intervention. In particular, the Restricted Access files from the NVDRS combine data from law enforcement, medical examiner and coroner investigations.[8] The NVDRS records include consistent and detailed coding on the cause or means of death (e.g., "weapons," traumatic brain injury"), and a uniform determination of police action as the cause of death (e.g., a classification for "legal intervention" to mark police killings). Prior studies have shown their efficacy in verifying police killings that maybe unreported elsewhere.[9] These archives have been used to estimate the volume, demography and situational patterns of fatal police violence. Some date back to 2005.[10] Data will be coded to the county level, a concise unit that captures boundaries of both policing and public health agencies.

Nationwide datasets on hospital admissions and emergency room treatment will provide the basis for estimating non-fatal police violence. As in the fatality databases, each record is coded with an ICD-10 code indicating the nature of the injury and the source. We will focus on intentional injuries by type of injury (e.g., gunshot, blunt instrument trauma, and source of injury. In this study, we focus on injuries through 'legal intervention,' a determination made based on patient reports and secondary intake evaluations by medical staff. The records will be coded to county, and a county will be constructed from 2010-2019.

These data will be integrated and scaled by county and year to a develop a continuum of police injury-violence. Counts of incidents can be aggregated by county to show type and severity of injury, medical care received, outcome (fatal or non-fatal), and victim demographics for each year in the panel. The counts and details about the incidents can be scaled and arrayed to show the medical space or "distance" from non-lethal to lethal violence using common metrics of violence. And there is a space that combines severity of police violence by its frequency that invites careful measurement and multidimensional scaling methods.

Risk and threat to police will be assessed from an archive of data reporting injuries and deaths in the line of duty, *Law Enforcement Officers Killed in the Line of Duty* (LEOKA). The database is maintained by Department of Justice through annual reports by police agencies. We also will estimate police contact with civilians through datasets on arrests in the Uniform Crime Reports, and two police stops from the *Stanford Open Policing Project*.

Additional data on county contexts will be compiled from census archives, and data on administrative expenditures on policing and health/mental health, and education. Measures of inequality and racial threat and conflict will be estimated from census data. Diversity by race and gender will be estimated by county and year from the and information on police agencies from the *Law Enforcement Management and Administrative Statistics* (LEMAS) data series collected by the U.S. Bureau of Justice Statistics.

Table 1. Data sources reporting police-related injuries and fatalities

Source	URL and Description
Newspaper and Advocacy Sources	*The Guardian: The Counted* -- http://www theguardian com/us-news/ng-interactive/2015/jun/01/the-counted-police-killings-us-database# -- Features real-time and detailed data, inclusive of any cause of death due to police action (e g , gun, Taser, physical force, etc), starting as of January 1, 2015
	The Washington Post -- http://www washingtonpost com/graphics/national/police-shootings/ -- Features real-time data for "only shootings in which a police officer, while on duty, shot and killed a civilian," starting as of January 1, 2015
	Fatal Encounters -- http://www fatalencounters org/ -- Includes **records of people who've been killed through interactions with law enforcement since Jan. 1, 2000.**
	Mapping Police Violence - https://mappingpoliceviolence org - Aggregates data from three private archives: Fatal Encounters, Killed by Police, U S Police Shootings database - Includes deaths cause by police in the line of duty and off-duty, including bystanders - Detailed codes for attack, armed, threat of suspect
US Vital Statistics	Compressed mortality data (publicly available county-level data back, for 1968-2018) -- http://wonder cdc gov/mortSQL html
	CDC Wonder detailed mortality data (publicly available county-level data, for 1999-2013) -- http://wonder cdc gov/ucd-icd10 html
	National Violent Death Reporting System (publicly available state level data for 32 states, presently covering 2003-2012) -- http://www cdc gov/ViolencePrevention/NVDRS/
Federal Bureau of Investigation, U.S. Department of Justice	Unified Crime Reporting Program: Supplementary Homicide Reports (SHR) -- https://www fbi gov/about-us/cjis/ucr/crime-in-the-u s/2012/crime-in-the-u s -2012/offenses-known-to-law-enforcement/expanded-homicide/expandhomicidemain -- Records provide provide the age, sex, and race of the murder victim and offender; the type of weapon used; the relationship of the victim to the offender; and the circumstance surrounding the incident -- Data include self-determined "justifiable homicides" by law enforcement officers--Dataset available at: http://www icpsr umich edu/icpsrweb/NACJD/studies/36124)
Hospitalizations and Emergency Department Treatment	State Emergency Department Databases (SEDD) via the US Agency for Healthcare Research and Quality (AHRQ) - Annual data starting 1999 for up to 42 states of all hospital emergency department visits; contains ICD10/external cause codes (E-codes) with Y35 93XA, legal intervention, as well as several other key supporting data fields (see https://www hcup-us ahrq gov/seddoverview jsp) National Trauma Databank (NTDB) via the American College of Surgeons – annual data of all US trauma center hospital patients; contains ICD10/external cause codes (E-codes) with Y35 93XA, legal intervention, as well as several other key supporting data fields (see https://www facs org/quality-programs/trauma/tqp/center-programs/ntdb)

Estimate Risk of Injury and Fatal Violence Based on Parameters of Police Contact

Using a set of contemporary epidemiological methods, we will estimate the risks of injury and death by population groups with differential exposure to police. Contact with police takes several forms, including street stops and arrests, and the estimates will be disaggregated to different types of exposure adjusted for population risk. Specifically, we can estimate the risk ratios of injury and violence by race, gender, and type of police contact. The risk estimates are likely to vary by county structure, and we will introduce these factors as moderators of risk for injury or fatality. In addition to risk ratios, we will also consider absolute risks, attributable risk, and attributable fractions.[11] We also will estimate risks for a sample of 30 counties, based on a sorting process for counties reflecting variation in policing regimes, variation in population parameters across cities, and variation in crime and other exposure variables. Variation in risks to officers will also be included in the sampling and selection of counties for closer analysis. Injury risks to civilians will be arrayed over time starting in 2010, with marginal effects incorporated to show differences in injury and fatality risks between racial and ethnic groups.

Understanding Racial Inequality in Police Violence and Injury

We plan to analyze these data to expand our understanding of police violence and fatal and non-fatal injury to civilians. First, we will revisit earlier findings about political and threat explanations for the use of police force that focus on the share and change in the minority population, local crime and social conditions, and policing models and activity. The analyzes will focus on the ways in which police behavior and coercive crime control can deepen social divisions and disadvantage of subordinate racial

and ethnic groups.[12] Using the injury and fatality measures, as well as a measure of the continuum of police violence, we will estimate a series of regressions to identify differences in injuries to Black and LatinX populations. Policing variables will be the core predictors, with controls for county contexts. Following recent work on the effects of police encounters on educational attainment and mental health indicia,[13] we will develop a second set of models estimating the impacts of police violence and injury on those outcomes, by racial and ethnic group, controlling for the social contexts in counties. Separate models by racial and ethnic groups will be estimated, with county and state fixed effects.

We will develop a set of negative binomial models based on both event counts (fatalities and non-fatal injuries) and population rates, with county and state fixed effects. The first set of models will estimate the number of police killings in a particular year as a function of various city-level predictors including the size and change of the minority population as measures of group threat. A second set of models will elaborate on those risks by adding both violent crime rates and specific crime patterns that address group threat: black-white homicide rates, as well as threats to police.[14]

Implications and Scholarly Products

This project focuses on one of the most critical issues in an era of social and political conflict: racial disparities in police violence. It directly addresses one of the core foci of the Foundation: racial inequality before the law and in racial inequality in health risks from police violence. The debate over democratic regulation of policing has become a leading indicator of broader tensions and crises in race in the U.S., with the question of systemic racism in criminal justice at the forefront. This project will provide evidence with unique contributions: the use of public health data to estimate injuries and deaths, the integration of the "dark" measures of non-fatal force with police-caused fatalities. The project also will test a set of research questions designed to resolve important questions of racial threats from police, and the justifying ideologies of the "thin blue line" that are a source of political resistance to reform.

Three contributions will result from this work. First, a set of papers will address the core questions of racial disparities and inequalities in police violence and fatalities. Second, a measurement design and integrative method will contribute to future research. Third, the database produced in the study will be publicly available for further research and theoretical development in sociology, public health, and law. It will provide an important alternative to the current reliance on data produced by criminal justice agencies, including the police themselves, to measure the effects of policing on the policed.

Investigators, Management and Budget

The research team integrates the disciplines criminology and law with injury epidemiology and health disparities. Jeffrey Fagan is a professor of law at Columbia Law School and a leading police researcher on racial disparities in policing. He also is a professor of epidemiology in the Mailman School of Public Health at Columbia. Charles Branas is the Chair of the Department of Epidemiology, and a member of the Institute of Medicine. His work on violence and community includes experiments on reducing firearm violence through urban design, and a series of studies on the epidemiology of gun violence and its health implications. The research team will also include a Project Manager, a doctoral student in epidemiology who will collaborate with the PIs on the design of the database, scaling and measurement of the critical variables, and the theoretical models. A research assistant will be work half-time on the project for two years, assisting in data collection and integration, and development and maintenance of the databases. In addition to RSF funding, Fagan's time will be contributed by Columbia Law School, and Branas' time will be contributed by the School of Public Health. Project support will fund the Project Manager and the Research Assistant at 50% time. Funds will also be used to purchase databases that have been privatized in recent years. Columbia law students will be supported in-kind to issue public records requests for data from states and counties as well as local agencies, as needed. The project will take two years, and the direct cost budget is estimated at [redacted].

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14 Legewie 2016 (note 4 above)

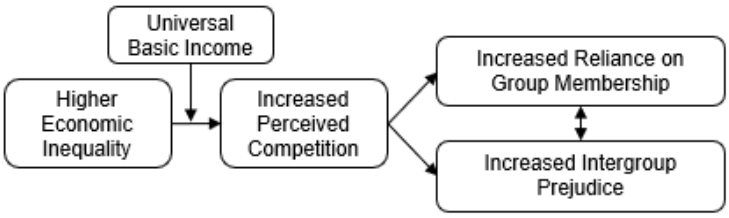
SAMPLE LOI #2

Racial Inequality at the Brink: How Economic Inequality Exacerbates Racial Prejudice and the Potential Alleviating Role of a Universal Basic Income

In the U.S., both economic inequality and racial economic inequality – or the unequal distribution of financial resources across racial groups – is large and growing. From 1983 to 2016, the median White family went from approximately 8 times to 13 times more wealth than the median Black family (Pew, 2016). More recently, the pandemic has left Black families more vulnerable to death by COVID-19 and its economic shocks (Hardy & Logan, 2020; Wrigley-Field, 2020). Making matters worse, data suggest that income inequality precedes rises in White-on-Black racial prejudice (Connor et al., 2019; see also Hovland & Sears, 1940). **Unfortunately, little empirical data investigates *how* inequality impacts individuals' psychological processing and, in turn, increases prejudice. And, almost no work investigates the impact of inequality on racial minorities (Bianchi, 2020). Critically, inequality could also exacerbate prejudice between low-social power groups, stifling coalition building across these groups. The global pandemic's widening of economic inequality makes now a crucial moment for understanding how inequality may exacerbate prejudice and for developing effective strategies to mitigate this process's dire outcomes.**

The current application (1) puts forth a new hypothesis: *inequality group-competition hypothesis,* and (2) examines whether a policy, such as universal basic income, could mitigate the impact of inequality on prejudice (see Figure 1). We hypothesize that higher inequality triggers beliefs that people are in competition for limited resources because people tend to think the economy is zero-sum, meaning that one person's higher earnings implies others' lower earnings (Friedman & Friedman, 1990; related work see Buttrick & Oishi, 2017; Sommet et al., 2017). Perceiving others as competitors for scarce resources increases individuals' concerns about their individual position and their groups' position within society (Elliot, 2006; Esses et al., 2001). Status concerns activate both the desire to gain more resources for the self and group, as well as fear of losing relative position in the socioeconomic hierarchy (e.g., Davidai & Ongis, 2019; Sommet et al., 2017). Further, because inequality fosters the mindset of living in an intensely competitive environment, residents may be particularly attuned to group membership cues, such as race, as a way to determine whether someone has the potential to be economically beneficial (because they are ingroup member) or harmful (because they are an outgroup member).

Figure 1. Inequality group-competition theoretical model.



Providing for basic needs via a universal basic income may mitigate the impact of higher inequality on increasing prejudice by assuaging people's zero-sum biases and their fears that others are competing for limited resources. However, to whom basic income is provided must be carefully considered to mitigate resentment toward a specific income and racial group.

Overall, we have four research questions investigating the predictive and explanatory potential of the inequality group-competition hypothesis for racial prejudice. Findings will inform both basic understanding of the (causal) relationship between inequality and prejudice, and the psychological consequences of specific policies in mitigating racial prejudice.

1. Does economic inequality increase perceived competition?
2. Does inequality exacerbate prejudice via perceived intergroup competition?
3. Does inequality increase reliance on social group membership to determine trustworthiness of others?
4. Does providing basic income mitigate prejudice under conditions of higher inequality?

Research Approach. These questions will be investigated through a series of social-psychological experiments and archival studies. For all experimental studies, sample sizes are determined based on having adequate power ($1\text{-}\beta > .80$) to detect a small-to-medium effect ($d = .30$). Studies will be pre-

registered and data/analysis code will be posted on Open Science Framework. Subsequent studies replicate and extend upon aspects of previous studies. For internally valid studies (see below), we will use a combination of undergraduate student samples, local community samples, and online samples. For externally valid studies (see below), we will recruit representative samples (using TurkPanels and Lucid) to investigate how these processes impacts both higher- (e.g., Asian and White Americans) and lower- (e.g., Black and Latinx Americans) social power groups. For all studies, we will investigate relative moderators: political ideology, social dominance orientation, system justifying beliefs, internal and external motivation to control prejudice, race centrality, and gender.

Research Plan

Question 1: **Does economic inequality increase perceived competition?** We anticipate that higher inequality increases beliefs that people are in competition for limited resources.

Pilot Data. Participants (N = 273) were randomly assigned to imagine that in the U.S. in the year 3000, economic resources were distributed relatively equally or unequally across society. Then, participants were asked about perceived competition and zero-sum beliefs between social groups. In the high- (vs. low-) inequality condition, participants thought social groups would be more competitive (t = 11.90, p < .001, d = 1.42), and that zero-sum between groups was more plausible (t = 7.83, p < .001, d = 0.95). One limitation of these data was that the manipulation was about imagining a hypothetical future. Therefore, we will test perceived competition using an internally and externally valid manipulation of inequality.

Study 1: Internally valid manipulation of inequality. Participants (N = 400) will be asked to play an economic game in which they invest tokens to earn more tokens. Participants are asked to play this game with ostensibly five other players (in reality, the game is pre-programmed and there are no other players). To create groups, we will use a minimal groups approach where the participant and two other players will be randomly assigned to a color team (e.g., blue), and the remaining three players will be assigned to a different color team (e.g., green). To manipulate inequality, participants are told a lottery will determine the number of tokens they start the game with. In a between-subjects manipulation, the lottery will distribute tokens across the players in a relatively equal or unequal manner. To control for position within the distribution of resources, the participant will always be given a moderate amount of resources. Before participants are given any more details about how to play the game, the participant will be asked how competitive they think the game will be between the color teams and the extent to which they endorse a zero-sum belief between teams. We anticipate that when resources are distributed more unequally, participants will perceive more competition and hold a stronger zero-sum belief between groups.

Study 2: Externally valid manipulation of inequality. Because many Americans are unaware of the extent of economic inequality in the U.S. (Norton & Ariely, 2011), giving this information can serve as an inequality manipulation. A representative sample of participants (N = 800) will be randomly assigned to learn economic inequality in their state is relatively high or low (see manipulation from Côté et al., 2015). Then, participants will report their individual and group-based zero-sum beliefs. We anticipate that when the distribution of resources is relatively unequal (vs. equal), participants will report more zero-sum bias.

Question 2: **Does inequality exacerbate intergroup prejudice via perceived competition?** We will replicate and extend the previous studies by measuring implicit (automatic) and explicit (self-reported) prejudice. We anticipate that higher inequality exacerbates prejudice via perceived competition.

Pilot Data. In a pilot study (N = 378), participants were randomly assigned to imagine that in the U.S. in the year 3000, economic resources were distributed relatively equally or unequally across society. Participants in the high (vs. low) inequality condition anticipated greater intergroup competition (t = 19.88, p < .001, d = 2.02) and prejudice (t = 8.66, p < .001, d = .90). Further, intergroup competition mediated the relationship between inequality condition and prejudice.

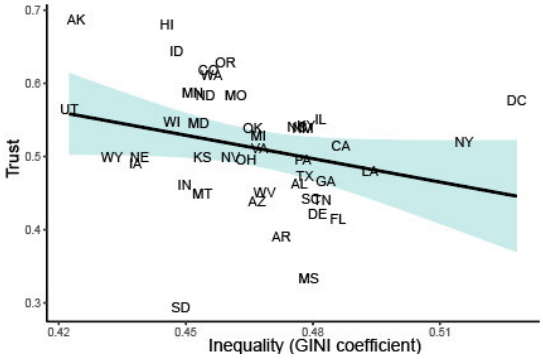
Study 3 (internally valid approach). In the context of the economic game with ostensibly 5 other players, participants (N = 400) will be assigned to one of two color teams and to the high vs. low inequality condition. They will be asked to play a variant of the public goods game – where teams can discuss how many tokens they want to place into a public pot which then gets multiplied by a factor and evenly split across all players, regardless of team membership. Through this game, we can assess the extent of competitive *behavior* between groups for a monetary reward. Then, participants will complete the following measures of prejudice toward the minimal outgroup: feeling thermometer, perceived trust, and the Implicit Association Test (IAT; Greenwald et al., 1998).

Study 4 (externally valid approach). A representative sample of participants (N = 800) will be randomly assigned to learn economic inequality in their state is relatively high or low. We will measure prejudice toward racial groups using warmth/competence measures (Fiske et al., 2002), perceived intergroup competition and trust, and the IAT toward racial groups.

Question 3: **Does inequality increase reliance on social group membership to determine the trustworthiness of others?** We anticipate that higher inequality decreases intergroup trust and increases beliefs that ingroup members may be more economically beneficial to the self.

Archival Pilot Data. Using survey data from Project Implicit and US Census data on inequality, we investigated the relationship between trust and inequality. The findings of our multilevel model suggest that residents of more unequal states report less intergroup trust (see Figure 2). We build upon this archival finding using experimental approaches.

Figure 2. The relationship between inequality and trust.



Study 5 (internally valid approach). Using the context of an economic game that has either high or low inequality and two three-person minimal groups, participants (N = 800) will be presented with a new ostensible player. This player will either be part of their color team, or not (i.e., ingroup or outgroup). Then, participants will be asked how trustworthy they think this new player is. We will measure both automatic and self-reported perceptions of trust. Finally, we will measure the extent to which they think this new player will be economically beneficial to the self.

Study 6 (externally valid approach). A representative sample of participants (N = 800) will be randomly assigned to learn economic inequality in their state is relatively high or low. We will measure prejudice toward racial groups using warmth/competence measures (Fiske et al., 2002), perceived intergroup trust, and the extent to which people believe ingroup members are more likely be economically beneficial to the self as compared to outgroup members.

Question 4: **Does providing basic needs mitigate prejudice under conditions of higher inequality?** Universal basic income (UBI) policies seek to provide money to community members on an individual basis, without means test or work requirement. We anticipate that providing a UBI to *all* residents will mitigate perceived intergroup competition and zero-sum beliefs, and that in turn will reduce prejudice. We will also test whether a UBI to residents *below* a specified income may exacerbate the relationship between higher inequality and prejudice, particularly when outgroup members benefit.

Study 7 (internally valid approach). Using the context of an economic investment game and minimal groups, participants will again be given starting tokens based on a lottery. However, all participants will be in the high inequality condition. Then, participants will be randomly assigned to one of four UBI conditions. In the control condition, there will be no mention or provision of a UBI. In the subset-outgroup UBI condition, participants will be told that players who received below a specified amount of tokens in the lottery will be given a certain number of tokens to mitigate the difference between their

standing and the other players. In this situation, the player who receives the extra tokens is an outgroup member. In the subset-ingroup UBI condition, participants are given the same explanation as the previous condition, but the player who receives the extra tokens is an ingroup member. In the population UBI condition, all players will be given a certain number of tokens. Then, we will measure perceived competition, perceived fairness of the policy, and intergroup prejudice.

Study 8 (externally valid approach). We will collect a demographically representative sample of online participants (N = 800) and objectively as well as subjectively measure the level of inequality in their state. Then, we will measure stereotypes that those in poverty are a specific race (e.g., stereotypes that poor people are Black). Participants will be told that 500 residents in their state have randomly been selected to receive a monetary benefit that would subsidize basic needs on a monthly basis. In a between-subjects manipulation, participants are told residents were selected regardless of their income, or that only residents whose annual income was at or below a specified number could be selected. Then, we will measure perceived fairness of the policy, the extent to which people believe certain races of residents will benefit from the policy, racial resentment, and intergroup prejudice.

Additionally, we are in talks with the Economic Security Project, which has helped implement UBI trials across the US, to collect data on perceived intergroup competitiveness, trust and prejudice in an upcoming UBI trial in Jackson, MS with Magnolia Mother's Trust.

Addressing the Foundation's Goals

The current proposal addresses the Foundation's "Social, Political and Economic inequality" program by providing a psychological framework linking the impact of inequality to intergroup attitudes and policy attitudes. In addition, the current proposal addresses the goals of the "Race, Ethnicity, and Immigration" program by investigating the psychological mechanism through which the context of economic inequality may exacerbate racism. Together, this work has important implications for intergroup attitudes and policy attitudes more generally.

Qualifications

Jazmin Brown-Iannuzzi (PI) is an assistant professor at the University of Virginia who investigates how the context of inequality influences individuals' psychology and, in turn, perpetuates inequality. She has published in journals such as *Psychological Science*, the *Proceedings of the National Academy of Sciences*, and recently received the "Rising Star" award from the American Psychological Association.

Shigehiro Oishi (Co-PI) is a professor of psychology at the University of Virginia. He has published over 160 articles on culture, social ecology, and well-being, including several papers on income inequality and redistribution policies. He is the 2017 winner of the Society of Experimental Social Psychology's Career Trajectory Award as well as the 2018 winner of the Society for Personality and Social Psychology's Mid-Career Award in social psychology.

Budget and Justification

Salary Support. PIs will oversee participants recruitment, study design and implementation, data analysis, and manuscript preparation. For each PI: 0.5 Summer month (Year 1); 0.5 Summer month (Year 2); *Subtotal*: [redacted]. Graduate Student will assist the PIs with participant recruitment, study design, data analysis, and manuscript preparation. Year 1: 9 Months; Year 2: 9 Months; *Subtotal*: [redacted].
Participant Payment. We are requesting participant payment to collect representative online and community samples. Year 1: [redacted]; Year 2: [redacted]; *Subtotal*: [redacted]. **Indirect Costs.** An indirect rate of 15% has been applied to proposed total direct costs. Subtotal: [redacted].
Total Requested Funds: [redacted].

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SAMPLE LOI #3

Introduction, hypotheses, and research questions

The racial wealth gap is the largest of the economic gaps between Black and white Americans, with a ratio of white-to-Black average wealth of 10 to 1 in 2020. Further, the gap has been remarkably stable over the late 20th century. Although there is a large literature focusing on the wealth gap in the contemporary period, little is known about the historical evolution of the racial wealth gap prior to 1968. In this project, we use historical Census data, the Census of Agriculture, state level tax records from the late 19th and early 20th centuries, the historical and modern Survey of Consumer Finances ("SCF"), and additional data sources to document the racial wealth gap from 1850 onwards. A key contribution of this work will be a harmonized series of Black and white wealth in the US from 1850 to 2020. Our dataset, which we plan to make public, will allow us to analyze the full evolution of the wealth gap from emancipation to the present in order to inform policy discussions around reparations and the reduction of Black-white economic disparities.

Our project asks the following specific questions: What has been the long-run evolution of the racial wealth gap? What historical factors have shaped the gap? And finally, under what counterfactual policy scenarios would the wealth gap have converged by 2020, 2050 or 2100?

Initial patterns in our data suggest that despite sharp episodes of income convergence in the 20th century (WWII and the Civil Rights Era), racial wealth convergence stalled by the 1920s. We hypothesize that vastly different starting conditions, the end of Reconstruction, and diverging wealth-to-income ratios have contributed to persistent racial wealth inequality. Our project will explore the causes of wealth-to-income ratio divergence and consider the efficacy of policies such as a wealth tax versus reparations in accelerating convergence.

Background and motivation

The limited availability of wealth data for Black and white individuals before 1968 has restricted the scope of empirical analysis on the racial wealth gap, and this is particularly true for the period following the Civil War through the early 20th century. The few empirical studies that have been conducted rely on tax assessment data for available Southern states to investigate trends in and causes of Black and white wealth disparities in the late 19th and early 20th centuries.

Foundational work in this area was conducted by Robert Margo and Robert Higgs. Higgs (1982) used race-specific data from W. E. B. Du Bois (1901) and the Comptroller-General of Georgia to illustrate a substantial increase in the total assessed value of Black wealth in that state over the period 1874-1915. Margo (1983) built on this work by incorporating property tax data with race identifiers from the additional states of Louisiana, North Carolina, Virginia, and Kentucky. Margo also found sustained increases in aggregate Black wealth over this same period and declines in the per capita wealth gap in all states but Louisiana.

A study by Canaday (2008) focused on the Black-White wealth gap in one South Carolina county during the 1910s. Though South Carolina's tax records did not tabulate Black and white wealth separately, Canaday linked individuals in the tax records to the complete count US

censuses from 1910 and 1920 to obtain information on race and found that both Black men and women experienced faster wealth accumulation than white men and women over the decade.

A related literature focuses on racial inequality in housing. We draw inspiration from the work of Collins and Margo (2011), who traced the evolution of the racial homeownership gap from 1870 to 2007. The gap narrows in the 1870 to 1920 period but shows remarkable stability thereafter. These data do not incorporate information on the value of homes, however, which is only available starting in 1930 and for which complete count census data do not exist after 1940 (the full count 1950 census will not be declassified until 2022). A study by Akbar et al. (2019) documented how neighborhood racial transition in 10 northern cities during the first Great Migration led to changes in rental and house prices that eroded the value of Black homes and thus posed a barrier to Black wealth accumulation by 1940.

In prior work of two of this current project's coauthors, Kuhn, Schularick, and Steins (2020) harmonized the historical and modern files of the SCF creating a new dataset of household level wealth and income information for the US from 1949 to 2016. Although primarily focused on the role of asset prices and portfolio composition in wealth dynamics in the postwar period, the authors also provide a brief analysis of the racial wealth gap confirming stability and persistence in this large gap over the postwar period.

Methods and data

Our project will provide the first comprehensive picture of the racial wealth gap from the Civil War through the present. A key contribution will be a harmonized series of Black and white wealth per capita created by drawing on a number of previously underutilized data sources. First, the 1850-1870 Censuses of population elicited household wealth information, the Census of Agriculture provides land ownership and land values by race in 1900, and the Census of population elicits home values in 1930 and 1940. Second, we re-digitize the tax records of several states used in Margo (1983), where wealth was assessed separately by race and often by county for the late 19th and early 20th century. We draw on work by W. E. B. Du Bois compiling information from Georgia's tax records, and we bring in previously underutilized estimates of aggregate Black wealth from Monroe Nathan Work's *Negro Year Book* series for the early 20th century. We collect additional data on the total deposits of Black banks from 1900-1932. Finally, we will connect this completed pre-WWII series to Kuhn, Schularick, and Steins' (2020) harmonized historical SCF from 1949 to 2016 with information on race and a variety of other household characteristics.

We have already digitized the tax records of states used in Margo (1983), which tabulate assessed wealth separately by race. The first graph charts aggregate Black wealth in Southern states with the available data, and the second tracks the per capita Black-white wealth ratio. Both figures also incorporate data from Work (1914, 1917) and the latter figure from Saez and Zucman (2016) as well, from which we impute white wealth as the difference between total wealth and aggregate Black wealth from Work. Population data used to convert these figures to per capita measures are drawn from Census.

The bulk of our data collection work for which we are seeking support from the Russell Sage Foundation is the digitization of individual-level pre-WWII tax records from additional southern states for linking to the historical Census, where we observe racial identity. This extends the method of Canaday (2008)—who linked individuals from a single county in South Carolina—to all counties in all states where records are available. Funding will support retrieval of microfilm records for Virginia, Texas, and Tennessee and digitization of these plus Mississippi's, which are available as pdfs online. We have already begun the process for Orleans Parish, LA. We plan to hire research assistants to digitize names and addresses for automatic record linking to Census.

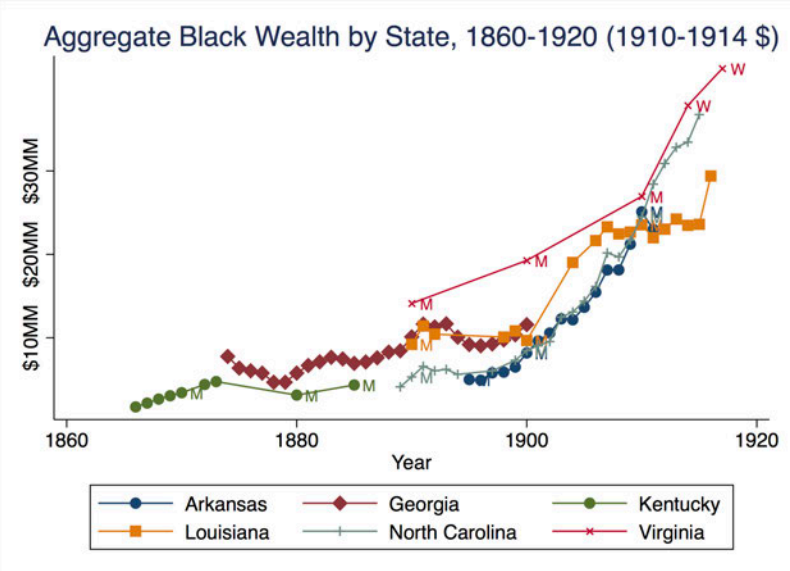

Figure 1: This figure plots our aggregate Black wealth series from 1866-1917 using data we digitized from state tax records, supplemented with Virginia data from Margo (1983) and Work (1914, 1917-18).

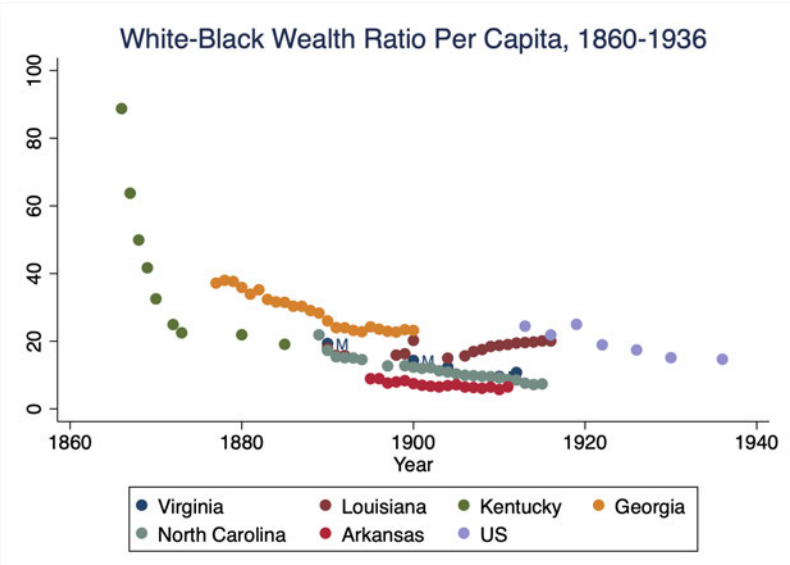

Figure 2: This figure plots our white-to-Black per capita wealth ratio series from 1866-1936 using data we digitized from state tax records, supplemented with data on Virginia from Margo (1983) and Work (1913-1936) and Saez and Zucman (2016), whose figures on aggregate wealth we use to construct white wealth measures (by subtracting aggregate Black wealth) for 1913-1936.

Relationship to RSF's core interests

This proposal responds directly to RSF's current interest in research focused on systemic racial inequality in the US. Wealth determines a plethora of intergenerational outcomes, limits or expands scope for educational investment, provides a buffer against financial shocks, and secures access to capital for personal, professional, and entrepreneurial development. The starkness of the racial wealth gap and the notion of reparations to address it was reinvigorated in the public discourse with the publication of Ta-Nehisi Coates's 2014 *Atlantic* essay "The Case for Reparations" and Darity and Mullen's 2020 book *From Here to Equality.* Despite countless articles, policy pieces, books, and essays, there is no work that provides a complete series of the racial wealth gap from emancipation to the present. We believe that this work will contribute to our understanding of which policies have historically reduced the wealth gap and which have led to its stagnation. Understanding the forces that have shaped the wealth gap over the last 170 years can help inform the design of policies that can successfully eliminate it.

Qualifications and responsibilities of key investigators

Ellora Derenoncourt is an assistant professor at UC Berkeley Department pf Economics and Goldman School of Public Policy whose specialization is the long-run evolution of US racial inequality. Recently, she examined the impact of northern backlash against the Great Migration on Black upward mobility and the role of minimum wage policy on racial earnings convergence. Her work on the latter subject was recently published in *The Quarterly Journal of Economics*.

Moritz Kuhn is a Professor of Economics at the University of Bonn. His work on the postwar evolution of American wealth and income inequality was recently published in the *Journal of Political Economy*.

Moritz Schularick is a Professor of Economics at the University of Bonn. His work on the postwar evolution of American wealth and income inequality was recently published in the *Journal of Political Economy*.

Chi Hyun Kim is a PhD candidate at Free University of Berlin who works on empirical macro-finance with a focus on micro-level data analysis.

Budget

We anticipate hiring up to 10 undergraduate RAs for three semesters of part-time digitization work at UC Berkeley. We estimate costs of about [redacted] per semester per RA (hourly rate of $20 X 10 hours per week X 10 weeks per semester), totaling about [redacted]. We will also use the funding to hire a full-time research assistant at UC Berkeley to supervise the undergraduate RAs and assist with database management, data cleaning, and analysis. The salary and benefits for the RA total [redacted]. Indirect costs will be 15% of total costs. Thus, our total budget is [redacted].

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SAMPLE LOI #4

Emergency Relief Fund for the Most Vulnerable and Disenfranchised: Evidence from CUNY, the Public University System in New York City

1. Motivation and Problem Under Study

Worldwide, the COVID-19 pandemic has disrupted the educational careers of students. Closing college campuses and moving learning online has disrupted the educational careers of students and raised significant concerns about those students who depend on college housing, meal plans, jobs, and other support to stay safe and secure. Moreover, the pandemic has suddenly changed the economic environment many students depend on in maintaining the financial support for their studies. Jobs and internships ensuring the financial well-being during their studies have vanished overnight. In addition, the grim labor-market prospects have halted graduates' career prospects and professional dreams.

As working-class neighborhoods in New York City's outer boroughs have become the epicenter of the COVID-19 outbreak, many in those dense, lower-income areas have been struggling due to lack of resources or because of the emotional impacts of isolation. The unsettling and difficult health and economic implications of this crisis appear to be disproportionately felt by the most vulnerable people in these communities. ***At the City University of New York (CUNY), the public university system in New York city*** (NYC), 38 percent of students reported having lost their job due to the COVID-19 pandemic, of which two thirds had worked at least 21 hours per week pre-COVID-19, and one fifth at least 35 hours per week. When asked about need for support or assistance since the COVID-19 pandemic began, 90 percent of CUNY students indicated increased need in food, childcare, housing, and utilities. However, because of tidal explosion of unemployment claims (1.6 million in NY state in mid-March alone), NY state unemployment system was overwhelmed causing major delays in unemployment insurance payments.

To assist students who were coping with the severe economic fallout of this extraordinary public health emergency, CUNY responded by rapidly providing adequate technology, supplies, and in some cases, basic needs such as shelter and food for those students most in need. In addition, to provide rapid-response financial support to the most vulnerable and disenfranchised students and to help ensure that they could remain in school and complete their degrees, ***an unprecedented emergency relief fund amounting to over $3 million US dollars*** was built from generous donations from several foundations.

This fund, named ***the Chancellor's Emergency Relief (CER) fund***, was distributed starting the week of April 20th 2020 via ***one-time individual grants of $500 each to 6,000 qualifying students***. The recipients were ***chosen by lottery from a pool of 19,168 students who were eligible and had applied to the grant.*** To be eligible students had to: (1) seek a degree at CUNY during school year 2019-2020, and (2) belong to one of the following groups: ***undocumented or low-income students.***[1] Eligible students amounted to about 25,000 students or 9 percent of CUNY's undergraduate and graduate student population of 275,000 students. Close to 77 percent of the eligible students (19,168 students) applied for the CER grant.

This project aims at analyzing how the COVID-19 pandemic and the subsequent city's shutdown has impacted the educational careers and economic wellbeing of the student population of CUNY in the epicenter of the United States' outbreak. We propose a threefold project consisting of:

1. ***COVID-19 Consequences on Students' Economic Well-Being and Academic Performance.*** Combining originally collected survey data with academic administrative records, we propose to document the financial and personal burdens faced by CUNY students during the pandemic, and trace the mid- and long-run consequences of the pandemic on these students' economic well-being and academic performance. Special attention will be given to CUNY's most vulnerable and

[1] In the case of low-income students, eligibility is determined by being within 12 credits of earning an undergraduate degree, and having an Expected Family Contribution of zero on their federal financial aid application (FAFSA). Undocumented students could be seeking an undergraduate or graduate degree.

disenfranchised students: undocumented and low-income students, who were also eligible to receive the *Chancellor's Emergency Relief (CER) grant* of $500.

2. ***Causal Impact of the Chancellor's Emergency Relief (CER) Grants.*** Using academic administrative records, we will exploit the randomization in the distribution of the *CER grant* to evaluate the impact these grants have on the academic continuity and performance, college completion, as well as housing and food security, of CUNY's most vulnerable and disenfranchised students.

3. ***COVID-19 and the Transformation of Neighborhoods and Communities.*** Third, using in-depth group interviews, we will explore how COVID-19 has affected CUNY students' communities. Post-pandemic qualitative data will be compared to pre-pandemic qualitative data, collected during 2019 by the co-PI Professor Rafael de Balanzó Joue. Topics explored will include mobility, housing, racial/ethnic disparities/discrimination, food security, and social safety networks.

The analysis will focus in both the short-, medium- and long-term effects, covering the period spanning from summer 2020 to spring 2022. The CUNY student population arguably is a population of specific interest given its social and economic vulnerability and ethnic diversity. Overall, we plan to cover ***a population of 275,000 students at CUNY's 25 campuses located across all five NYC boroughs***. The university has one of the most diverse student bodies in the United States. Both Black and Hispanic students make up for about a quarter of the student population and students originate from about 150 countries. Their economic fragility is signaled by over half of the students receiving the Federal Pell Grant and close to two thirds working to sustain themselves or their families. The median household income is about $40,000 a year and 38 percent are from families earning less than $20,000. We want to stress that the high economic vulnerability and diversity of CUNY, while making it a specifically interesting setting to analyze, does not impair the external validity of lessons learned about student behavior, as extensively analyzed by Marx and Turner (2018) by comparing Pell-eligible students of CUNY with a representative sample from the National Postsecondary Student Aid Study.

2. Literature Review

By describing the immediate, medium- and long-run effects of the pandemic on financial and personal well-being as well as educational performance, we connect to a well-developed literature that documented the ***effect of crises on student well-being***, such as violent conflicts (Brück et al. 2019), natural disasters (Sacerdote 2012) or financial crises (Oreopoulos et al. 2012). We add to this literature a timely perspective on the arguably most severe disruption of educational careers that has been observed in recent history.

By estimating the causal effect of the emergency grant, we additionally contribute to the literature on the ***effectiveness on student grants*** as a measure to increase students' well-being and educational performance. In general, financial aid can affect both college enrollment and graduation. Aid eligibility has been shown to increase undergraduate and graduate degree completion (Page et al. 2019, Castleman & Long 2016, Fack & Grenet 2015, Dynarski 2003), to shorten time to degree (Denning 2019) and to raise longer-run annual earnings (Bettinger et al. 2019). Student aid can act as a powerful substitute for paid work (Broton et al. 2016). Denning et al. (2019) show that financial aid, despite being a costly policy measure, is cost-effective. Despite this ample evidence on grant efficiency in general, we are not aware of any impact evaluation of emergency funds, such like the Dreamkeepers or Angel fund program—see Geckeler et al. (2008) for descriptive analysis and lessons learned on the Dreamkeeper and Angel fund emergency financial aid programs.

3. Data and Proposed Research Methods

By focusing on both the individual and its community, we will get a better understanding of the short-, medium- and long-term social and economic consequences of COVID-19 on a frequently

underserved and vulnerable population. The inter-disciplinary project, rich in ***original data collection***, will combine ***descriptive methods, a randomized field experiment, and in-depth qualitative interviews.*** While the descriptive analysis will enable us to compare the effects of COVID-19 on the economic wellbeing and academic performance of students, and compare differential effect of COVID-19 based on students' undocumented and poverty status; the randomly-designed analysis will give us ***causal estimates of the Chancellor's Emergency Relief Grants*** on students' academic continuity, performance and completion; and the qualitative analysis will allow us to fine-tune pre-conceived notions and identify potential ***mechanisms.*** Appendix Table A.1 summarizes the key research elements for the proposed project.

3.1. The Survey

The first part of the project entails a series of ***large-scale follow-up surveys*** that will cover the ***entire student population of CUNY*** to ***understand the impact of the pandemic on student financial and personal well-being as well as student coping behavior***. The surveys will be administered via email, sent from an official email address of the CUNY administration. For the full project, we aim at combining data of three survey waves, fielded in fall 2020, and spring 2021 and 2022. Appendix Table A.2 summarizes the risk assessment and preliminary work. The first survey will cover the ***immediate experience of students during the COVID-19 pandemic and the associated NYC lockdown***. We will ask students about own financial and personal well-being and specifically focus on their financial situation, both retrospectively and during the lockdown. This will entail detailed income measures including eligibility and receipt of student relief aid. Further, we will elicit ***expectation measures on how students believe the lockdown to affect their own educational progress and economic well-being***. The second survey will focus on ***middle-run changes in personal and financial student well-being as well as the labor-market situation of students who depend on paid work***. We expect this period to be vital as we will have more clarity on whether the public health crisis has ignited a financial and economic crisis or has, instead, vanish, allowing the labor market to recover. Therefore, a focus of this questionnaire will also be put on ***student's expectations on graduation probabilities, labor market prospects, and job choice after graduation. Beyond repeating modules on financial and personal well-being and economic expectations***, we will use the third survey to gain additional ***insight into how the COVID-19 crisis has changed the academic environment*** (such as the higher usage of distance learning and digital environments) and in how far students believe to benefit from these changes. ***The responses to all three surveys will be merged to the administrative student records of CUNY***. The combination of survey responses with the administrative data will allow us to track students above and beyond the topics covered by the survey by observing ***their full academic career*** (including grades, credits, and major choice) ***from their early college experience up until graduation.*** It will further enable us to analyze in how far survey response is selective with regard to student demographics and student performance. We have already signed the ***De-Identified Data Transfer Agreement*** with the ***Office of Institutional Research & Assessment*** at CUNY to have access to students' de-identified academic administrative records. We also received ***IRB approval*** (IRB File #2020-0475) to conduct the survey, collect the de-identify academic records, and merge both data sources using students' CUNY ID. Both documents are attached at the end of this proposal.

3.2. The Experiment

The second part of the project will utilize the lottery-based provision of a part of relief aid offered (the CER grant) to the most vulnerable and disenfranchised CUNY student population to ***estimate causal effects of this aid on students' financial and personal well-being, academic success and students' expectations***. As explained above, out of about 19,168 eligible students who applied for the CER grant, 6,000 recipients were randomly drawn by a lottery. ***The analysis will cover the universe of eligible students, namely 25,000 students***. The lottery-based assignment of payments alleviates concerns about selection into relief receipt based on observable and unobservable characteristics and allows to estimate the ***causal impact of the aid receipt*** on the aforementioned outcomes. While external validity is initially restricted to eligible students who applied to the CER grant only, we will further use the extensive information provided by survey

responses and administrative data for a model-based extrapolation of the experimental effects to a broader population. The main hypotheses and the detailed research design will be worked out and pre-registered at the America Economic Association RCT Registry before data sources are merged.

3.3. The Resilient Thinking Approach

We will conduct ***seven qualitative in-depth semi-structured group interviews***: three of these group interviews were conducted before the coronavirus pandemic at Queens College (one of the four-year colleges in the CUNY system) during the fall 2019. The other four will be conducted, also at Queens College, at four different points in time between fall 2020 and spring 2022. Each time, between 20 and 30 students from different majors, racial, ethnic and religious backgrounds, and graduating years will be invited to participate. They will be interviewed in a discussion setting in the presence of the session moderator (the co-PI Rafael de Balanzó Joue) and, generally, these discussions will last for 90 minutes. These interviews will collect information on students' perceptions of their community's ***challenges before and after COVID-19***. Among the community's challenges discussed are those related to mobility, housing, racial/ethnic disparities/discrimination, food security, and social safety networks. Post-pandemic qualitative data will be compared to pre-pandemic qualitative data to identify how COVID-19 has modified student's perceptions, needs, challenges and priorities within their community. In addition to providing insight on the mechanisms driving our findings, these qualitative in-depth group interviews will generate important information on the key challenges that New York city needs to address as a consequence of the coronavirus pandemic using ***the resilient thinking approach***. This novel approach in social sciences[2] focuses on bottom-up and multi-governance participatory process. It allows the researcher to observe how interacting systems of people and nature cope and continue to develop in the face of disturbances and uncertainty caused by a crisis such as the coronavirus pandemic. The timeline is described in an attached separate document attached.

4. Dissemination and Team's Qualifications and Responsibilities

To maximize the outreach and impact of our results, we will adopt a range of different approaches. We emphasize that while academic excellence and publication at a high level is a key aim, the nature of the research is inherently policy-orientated. As a result, our aim is to reach both the academic audience but also stakeholders and policy makers in the realm of tertiary education. We describe some of our strategies to these joint aims in Appendix Table A.3. The research team consists of two principal investigators, Núria Rodríguez-Planas (CUNY, and IZA) and Rafael de Balanzó Joue (Urban Resilience Thinking Institute, and CUNY). ***Professor Rodríguez-Planas*** will be responsible for ensuring the project's success in the design and fielding of the surveys, methodology development and design, data management, data analysis and writing of reports, policy briefs, and the academic paper on the evaluation of the COVID-19 Emergency Relief Fund. Most importantly, the research team will be strengthened by the participation of the ***Office of Research, Evaluation, and Program Support (REPS)*** in the central Office of Academic Affairs at CUNY. REPS has agreed to provide support with extraction and management of student-level educational administrative data, survey administration, data analysis, and contributing to the writing of policy briefs or reports (see supporting documents and Appendix Table A.2). Requested funds to cover graduate student will mainly support data collection by REPS. ***Professor Rafael De Balanzó Joue*** (Civil Engineer Ph.D. in Sustainability) will lead the in-depth group interviews. His ample experience applying the *Resilient Thinking Approach* to urban design and planning participatory processes and facilitating community engagement in different communities will guarantee the success of the qualitative analysis. To bridge the quantitative and qualitative analyses, he will collaborate closely with Professor Núria Rodríguez-Planas. He will also receive the support of a junior researcher with mixed-methods expertise from REPS. Both professors have co-authored and published an article together focusing applying the resilient thinking approach to analyze urban planning cycles in the city of Barcelona.

[2] See Berkes (2007), Fazey (2010), Berbés-Blázquez et al. (2014), De Balanzó Joue & Rodríguez-Planas (2018) and Elmqvist et al. (2019) for discussions on resilient thinking and different applications in a variety of fields.

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