What is Enough? Examining Americans' Estimates of a Living Wage

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Abstract

The myth of the American Dream entices people to pursue the accumulation of wealth as a fundamental aspiration in life. This focus on material success is likely to inflate people's expectations of what is enough to live on (i.e., a living wage). This study examines Americans' estimates of a living wage, defined as "the amount of money that individuals must earn to sufficiently meet their basic needs if they are the sole source of income and are working fulltime." In addition, we investigate socioeconomic factors that are associated with higher (vs. lower) living wage estimates. We recruited 1,000 Americans currently residing in the US who reported their estimates of a living wage in terms of monthly wages, before taxes, for the average working adult in their county. Participants also answered a battery of items measuring their socioeconomic backgrounds and related concepts. On average, participants' estimates of a living wage were significantly higher than those derived from the living wage calculator. Furthermore, when controlling for political (e.g., conservatism), financial (e.g., food spending), and demographic (e.g., age) variables, we also find a robust positive association between participants' household income and living wage estimates: Americans from higher income households were more likely to report that the average adult requires a higher wage to maintain a minimum subsistence level. We discuss the implications of these findings on people's support for minimum wage policy in relation to social class as well as expectations for one's cost of living.

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The federal minimum wage has decreased 14% in real value since it was last raised over a decade ago, marking the longest period without a raise in U.S. history (Cooper, 2019). Though the minimum wage is loosely related to federal poverty guidelines, the \$7.25 value is not tied to any objective criteria outside congressional approval.¹ Political organizations like the Fight for 15 have launched campaigns advocating for an increase in the value and as these movements gain momentum, the question of what constitutes a sufficient minimum wage has become salient for companies, lawmakers, and the general public alike. In particular to Fight for 15, the motivations behind their titular request become especially scrutinized – why is fifteen dollars an hour the decided wage? Fight for 15 argues for raising the wage due to the inability of the minimum wage to adequately cover the most fundamental costs of daily life. In other words, one of the core motivations of Fight for 15 is establishing a baseline for economic self-sufficiency. This raises the fundamental question: what do people think is enough money for someone to live on?

Other organizations endorse answers similar to Fight for 15. The Economic Policy Institute determined that by 2024 a single adult without children in any part of the United States will require at least \$31,200, which is what a full time worker who earns \$15 an hour makes in a

1 The federal minimum wage, \$7.25 since 2009, is known to generally adhere to federal poverty guidelines, which state that an individual would need to earn less than \$12,760 per year (approximately \$6-7 dollars an hour) to be considered living in poverty (U.S. Department of Labor, 2020; U.S. Department of Health and Human Services, 2020). The origins of this initial calculation come from a 1955 survey conducted by U.S. Department of Agriculture that assessed the cost of food as comprising a third of the average American family's budget after tax (U.S Department of Agriculture, 1955). That ratio was used in 1964 to establish the federal poverty guideline; multiplying the annual cost of food, as determined by Department's economy food plan, by three. Since then, the formula has not been altered, the value first determined then has only been altered to account for changes in the price of food as measured by the Consumer Price Index (U.S. Bureau of Labor Statistics However, such a calculation neglects the uneven increase in costs of goods over time, resulting in a guideline that doesn't adequately capture how many Americans are living in poverty.

year, in order to have an adequate standard of living (Economic Policy Institute, 2019). Others disagree. For example, congresswoman Rashida Tlaib (D-MI) recently recommended a \$20 federal minimum wage, adjusting Fight for \$15's demands for inflation (The Hill, 2019).

The question of what is enough brings to the fore the concept of a living wage, an operationalization of what is enough money to live on. While the minimum wage is a legal and enforceable wage floor (minimum compensation level), the living wage is a calculation of what individuals and families would need to earn to meet their basic needs (minimum subsistence level). Calculating a living wage is a difficult task, as decisions must be made regarding what counts as a basic need and what amount is sufficient to cover each basic need. A widely used tool is MIT's Living Wage Calculator (LWC; CITE), which utilizes a market-based approach that evaluates costs related to food, as well as housing, child care, transportation, and miscellaneous costs accounting for other aspects of daily life like clothing and taxes. In this interpretation of a living wage, the calculations are intended to represent a minimum threshold that would allow households of different sizes financial autonomy without the need for public assistance. Major companies like IKEA and Patagonia have relied on the LWC in setting their wage floor. However, there are many aspects of daily life that are not included in calculator's estimates: leisure time, entertainment, the possibility of saving and investing for retirement or home ownership. Given that the living wage calculator excludes these important aspects of an enjoyable life, the estimates that it derives are still relatively conservative.

While economic models such as the LWC provide an "objective" calculation, individuals' own estimates of what is enough may be different from these modelled estimates. Unlike economic models, individuals do not rely on discrete and standardized ways of assessing what is enough. Rather, their estimates are subject to influence by various social and psychological motives. Taking this into account, it becomes equally important to understand how and what people interpret the living wage to be in order to understand the eventual policy implications of minimum and living wages. In particular, this research sets out to understand (1) what Americans think is enough money to live on and (2) what factors are associated with people's estimates of a living wage.

Literature Review

Americans' Estimates of a Living Wage

Given individuals' familiarity with their own expenditures and costs of living, one might expect their estimations of living wage to be accurate based on these factors alone. However, we expect several psychological and social factors to be influential in people's estimates of a living wage. Drawing on the findings from research relating to materialism and consumerism, beliefs in socioeconomic meritocracy, hedonic treadmill theory, social comparison, and status related personality traits as well as their general estimations of equality, we find substantial evidence to suggest the significance of these motives in living wage estimates.

Materialism and Consumerism. Over the past several decades, societies have seen a significant growth in materialism, "the belief that it is important to pursue the culturally sanctioned goals of attaining financial success, having nice possessions, having the right image (produced, in large part, through consumer goods), and having a high status" (Kasser, Ryan, Couchman & Sheldon, 2004, p. 13). The United States, even amongst other capitalist countries, is recognized as especially materialist (Shwartz, 2007). While such aims are often central to human value and goal systems, studies have confirmed a significant increase in materialism over the past fifty years (Twenge and Kasser, 2013). Materialism can be intensified by social influences, including peers, family, as well as societies and cultures at large—citizens of "free-

market" oriented economies are especially likely to value money, wealth and status to a greater extent than those who do not (Kasser 2016; Schwartz, 2007). The rising prevalence of materialism in mainstream society has consequences for American's estimates of what is enough because that may reflect an expansion of what individuals consider necessary for a satisfactory life. This documented societal shift may also be responsible for an overestimate of living wage, because the consistent exposure to social modelling and cultural messaging that wealth and possessions are necessary facets of daily life may lead individuals to make broader claims about what a living wage would entail. In a society that is as explicitly capitalist as America is, one would expect the effects of societal posture towards materialism to be at its greatest, therefore leading to expansive expectations of a living wage. Given the literature's documentation of individuals' inaccuracies with regard to the state of economic equality and mobility and their societal disposition towards materialism, our expectation is that people will perform similarly when estimating current living and minimum wages.

Hedonic Treadmill Theory. Hedonic decline, the psychological phenomena in which hedonic response to a stimulus decreases after repeated exposure, has implications for wage estimates as well (Galak & Redden, 2018). Hedonic decline informs the hedonic treadmill theory, the claim that individuals must continually search for experiences of higher intensity and magnitude in order to maintain previously held levels of satisfaction and enjoyment (Brickman & Campbell, 1971). In the context of wealth and income, the hedonic treadmill theory would represent an endogenous personal drive towards consumerist and materialistic tendencies, amplifying societal predispositions that are already present. Lottery winners showed no difference in general well-being compared to those who had not won only 1-18 months after winning. Lottery winners did, however, find everyday experiences significantly *less* enjoyable after winning, possibly due to the heightened resting benchmark of pleasure after winning the lottery (Brickman, Coates & Janoff-Bulman, 1978). Despite vast income inequality in the U.S. there was only a modest positive relationship between income and sense of well-being in a study conducted by Diener et al. (1993). Besides individuals who had been in very low socioeconomic statuses and became able to achieve certain basic needs like shelter and food, there were no strong and permanent effects of increasing income on well-being (Diener & Biswas-Diener, 2002). The consensus of these findings seems to be that the positive impacts that income can have on well-being and happiness are often fleeting, if significant. These studies contribute to the theory of hedonic decline in positing that in order to achieve consistent positive changes in wellbeing, one must also pursue higher and higher levels of income. When thinking about how this factor may impact estimates of living wage, the expectation is that individuals who have higher income will provide values of the living wage that are higher than ones created by economic models. Given that individuals may evaluate pleasure as a prerequisite for what a living wage can provide₂ and that they will use personal experience to inform their estimates of what level of enjoyment is average, they may be likely to use their own income and related enjoyment as a baseline for their estimates, which would result in a positive relationship between SES and living wage estimates.

Social Comparison and Relative Deprivation. Another factor that contributes to our secondary hypothesis is relative deprivation—resentment that occurs due to the belief that, relative to others, one is especially deprived of outcomes or resources that are desired and

² Findings from this research stream also lead to the hypothesis that richer participants will also include more "luxury" living costs as part of their basic needs, since based on interpretations of the hedonic treadmill theory, these activities would be necessary to maintain satisfactory levels of well-being.

deserved (Feather, 2015). Relative deprivation may drive individuals to compensate for those sensations of financial and socioeconomic inadequacies by engaging in more materialistic behaviors. Materialistic beliefs, more so than self-esteem or SES, was found to be positively correlated with self reports of relative deprivation, which was defined as resulting from social comparison (Kim et al., 2017). Those who learned they earned less discretionary income than their peers became more likely to prefer receiving more money over donating to a charity (Kim et al., 2017). Materialistic tendencies and dissatisfaction can be elicited via relative deprivation regardless of absolute or objective values of income or wealth. The largest predictor of a lower level manager's likelihood of leaving a company was found to be not their rate of being over- or under-paid in their position, but that rate relative to CEO's rate of being over- or under-paid (Wade, O'Reilly & Pollock, 2006). Having wealthier neighbors can reduce individual happiness through prompting sensations of relative deprivation, which provide cues to an individual that their current resources are insufficient (Cheung & Lucas, 2016). In such instances, sensations of relative deprivation that are met with displays of materialistic values can be mutually amplifying, with individuals feeling more and more deprived due to the compensatory materialism of their peers, and engaging in more materialistic behaviors themselves. Other effects of social comparison, like perceived peer pressure, have also proven correlative with materialistic values (Banerjee & Dittmar, 2008). In general, the previous research on social comparison and relative deprivation outline the significant influence of socioeconomic environment and reference points on an individual's own evaluation of their needs and resources. In relation to estimates of living wage, this literature implies that those who have consistent visual reminders of individuals who are perceived to be experiencing a higher quality of life may be more likely to experience

relative deprivation, and compensate by increasing their estimates of what they need in order to have an adequate quality of life.

Status Characteristics. This body of research is particularly relevant to our second hypothesis that higher SES will be correlated with higher estimates of a living wage. Individuals with higher status were found to have stronger desires for wealth and status as well as use wealth and status as significant factors in self-identification and categorization (Wang, Jetten & Steffens, 2019). Other work has found that living in a high SES neighborhood is positively correlated with greater desires for material consumption (Zhang, Howell & Howell 2014). Previous literature has cited greater levels of overconfidence (Belmi, Neale, Reiff, & Ulfe, 2019), entitlement (Piff, 2014), and self-worth (Kraus & Park, 2014; Twenge & Campbell, 2002) in higher SES individuals. These heightened levels of self-perception are important factors in estimates of a living wage because when thinking about what constitutes a living wage, higher SES individuals are more like to employ egocentric perspectives given that more resources and higher status are correlated with individualistic focus on personal motivations, goals and internal states (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012; Piff, 2014). Therefore, individuals who are higher status may consider their current needs and resources more heavily when estimating a living wage than those with lower SES, which would lead to an estimation that is greater than that generated by purely economic models. Individuals of higher SES, by virtue of their higher rates of entitlement, self-esteem and solipsistic tendencies, may also be more likely to consider what they deserve as a factor in estimating a general living wage, which would also contribute to an overestimate relative to economic models.

Wealth and Racial Inequality. Individual's estimates of a living wage are likely to be shaped by their general perceptions of equality in society. Those who are more sensitive to the

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disparities between current society and their ideal may be more likely to suggest living wages that are higher than economic models. Those who perceive current standards and systems to be just and fair may conversely estimate lower values. To that end, there are significant findings regarding people's estimations of equality that can inform our research questions about living wage. Norton and Ariely (2011) illustrated a significant discrepancy between what individuals estimate the wealth disparity to be between the top and bottom quintiles in America. Participants in the study estimated the average ratio of wealth between the richest and poorest quintiles to be 19.8 to 1, which dwarfs in comparison to the actual ratio of 1000 to 1 (Norton & Ariely, 2013). However, there were concerns that the method that participants used to estimate wealth was too conceptually and computationally demanding, resulting in values that do not reflect their actual perceptions (Eriksson & Simpson, 2012; Eriksson and Simpson, 2013; Chambers, Swan & Heesacker, 2013). In an alternative task, participants estimated the ratio of inequality to be greater than reality; with the proportion being 1:1500 (Eriksson & Simpson, 2012). Despite conflicting in the direction of the trends, both studies describe a finding of inaccurate estimates of wealth inequality. Similarly to wealth inequality, Americans' estimates of racial inequality are incongruent with reality. Sampling across races and income levels in the United States, Kraus, Rucker and Richeson (2017) found that participants overestimated current levels of racial economic equality in a variety of domains: college and high school wages; health benefits; and income and wealth. With respect to the present study, these findings suggest a similar level of accuracy for participants measuring another macro-economic measure of living wage.

To contextualize people's estimates of a living wage, we also need to know what they believe is the minimum and the average wage. The former captures people's beliefs about the "worst-case scenario" whereas the latter captures people's beliefs about how well the average person is doing. In addition, participants' estimates of these different types of wages can also help us answer whether people's inaccuracies are specific to the living wage or wages more broadly. Lastly, we can examine the political implications of people's wage estimates in the domain of redistributive policies. That is, examining the discrepancies between people's estimates of the living wage and the average wage might reveal competing forces behind people's support for redistributive policies. Higher estimates of a living wage, which captures people's beliefs about what is enough to live on, will be positively associated with policy support whereas higher levels of the average wage, which reflect people's beliefs about the current state, will be negatively associated with policy support.

Research Questions

It is based on the above evidence that we put forward the following hypotheses relating to perceptions of the living wage:

Hypothesis 1a: Individuals' estimates of the living wage will deviate significantly from federal estimates as well as economic models.

Hypothesis 1b: Overall, estimates will be higher than estimates calculated by economic models.

Hypothesis 2: Individuals with higher socioeconomic statuses will estimate larger values for the living wage.

Method

Sample

We recruited a sample of 1000 American adults ($M_{age} = 38.28$, $SD_{age} = 13.87$) currently residing in the United States using Prolific Academic (www.prolific.ac), an online

crowdsourcing platform (Peer, Brandimarte, Samat, & Acquisti, 2017). We screened out potential participants whose approval rates on past assignments were below 95%. All participants were compensated \$2.00 for completing this 15-minute study, a rate comparable to other studies of similarly short duration. Americans from 46 states (plus Washington D.C. and Puerto Rico) completed the survey.

Procedure

At the start of the survey, we informed participants that the study assessed people's "opinions on wages" and that they would be asked to estimate different quantities related to how much people receive from wages. After participants indicated their consent, we first asked participants to report what they think is a living wage and what they consider to be a basic need that is covered by a living wage. Next, participants estimated the average wage for all working adults as well as those who work for minimum wage. All wage estimates were assessed in terms of monthly wages in dollars, before taxes, for working adults residing in the same county as the participant. Following these wage items, participants to answer questions related to their monthly spending, employment context, relationships with and attitudes toward other people, financial worry, quality of life, housing circumstances, and financial literacy. Lastly, participants answered a host of individual difference measures and reported their demographic information.

Measures

Wage Estimates

Living wage. On a slider scale ranging from 0 to 10,000,3 participants reported what

3 We chose to use a slider scale instead of an open-ended response to minimize outliers or unintended errors involved with typing. There is evidence that participants' economic estimates on slider scales are similar to the estimates they make on different question forms, including open-ended responses (Kraus & Richeson, 2020).

amount they consider to be the living wage in terms of monthly wages, before taxes, for the average working adult in their county. We defined a living wage for participants as "the amount of money that individuals must earn to sufficiently meet their basic needs if they are the sole source of income and are working full-time. In other words, "the living wage is the minimum income standard that, if met, draws a very fine line between financial independence and the need to seek out public assistance."⁴

Average wage. On a slider scale ranging from 0 to 10,000, participants reported what they think is the average monthly wage for all working adults in their county, before taxes.

Minimum wage. On a slider scale ranging from 0 to 10,000, participants reported what they think is the average monthly wage for working adults who work for minimum wage in their county, before taxes.

Basic Needs Covered by a Living Wage

Participants reported what they considered to be a basic need that is covered by a living wage by selecting any of the following categories that apply (modified from the Consumer Expenditure Survey; CEX): "Housing"; "Utilities and Other Household Maintenance"; "Transportation"; "Income Tax"; "Food from Supermarkets (Groceries)"; "Food from Restaurants (Take-Out, Delivery, Dine In)"; "Retirement Plans"; "Debt Payments"; "Healthcare"; "Entertainment"; "Charitable Contributions"; "Clothing"; "Education (Post High School)"; "Personal Care Products and Services"; "Alcohol or Tobacco Products"; "Childcare"; "Internet"; "Telephone"; "Cable (TV)"; "Savings"; "Other (Please Specify)".

⁴ This language was chosen to reflect the description of the living wage based on the Living Wage Calculator (https://livingwage.mit.edu/). A pilot study using the phrase "minimum subsistence level" also led to similar mean estimates of a living wage. The ways that people conceptualize the living wage may vary across countries (e.g., in the US versus New Zealand or the UK), but in this study, we take a conservative estimate which closely resembles a minimum subsistence wage.

Support for Welfare and Labor Policies

Minimum wage. Participants reported their opinions about the minimum wage by answering an item from the American National Election Studies (ANES, 2016): "Should the minimum wage be *raised*, *kept the same*, *lowered but not eliminated*, or *eliminated altogether*?"

Redistributive policies. Participants reported their support or opposition for redistributive policies using a modified scale consisting of items from Ordabeyeva et al. (2017) and Page et al. (2013) These items were: "Creating a new tax bracket for incomes over \$1 million in order to collect more taxes," "Expanding programs and initiatives that improve the economic opportunities of low-income people (e.g., training)," "Expanding programs and initiatives that improve the living standards (e.g., access to healthcare, education) of disadvantaged groups," and "Creating a federal job guarantee program, which provides a job to anyone willing to work" ($\alpha = .84$, M = 5.81, SD = 1.32). The response scale ranged from *strongly oppose* (1) to *strongly support* (7).

Monthly Spending

Participants reported what they considered to be a basic need that is covered by a living wage by selecting any of the following categories that apply (modified from the Consumer Expenditure Survey; CEX): "Rent/Mortgage"; "Utilities and Other Household Maintenance"; "Transportation"; "Income Tax"; "Food"; "Social Security Contributions, Personal Insurance, and Pensions"; "Debt Payments"; "Healthcare"; "Entertainment"; "Charitable Contributions"; "Clothing"; "Education"; "Personal Care Products and Services"; "Other (Please Specify)" (M =\$2,867.21, SD =\$4,719.01).

Employment Context

Employment status. Participants reported their employment status at their main job

using one of the following categories: "Full-Time Hourly Employee", "Full-Time Salary Employee", "Part-Time Hourly Employee", "Part-Time Salary Employee", "Self-Employed", "Temporary Layoff from a Job", "Looking for Work", "Not Looking for Work", and "Other (Please Specify)" (75.6% employed). Participants also indicated whether they belonged to any of the following categories: "Retired," "Student," "Disabled," "Homemaker," or "Unpaid Caregiver."

Occupation. Participants indicated their occupation category using the 2010 Census Occupation Codes. If their occupation was not listed as one of the options, they typed in their occupation title as a free response. We converted occupation into prestige scores (M = 46.31, SD = 13.70).

Pay fairness. Participants reported their perception of how fairly they were being paid given their skills and effort using a modified item from the General Social Survey (GSS; Smith, Hout, & Marsden, 2016). The response scale ranged from *much more than I deserve* (1) to *much less than I deserve* (5). If participants were not currently employed, they answered with respect to their most recent work experience or indicated that they never worked (M = 3.72, SD = 0.93).

Job insecurity. Currently employed participants indicated their perceived job security using two items from the GSS (Smith et al., 2016). The two items were "Thinking about the next 12 months, how likely do you think it is that you will lose your job or be laid off? *Not at all likely, not too likely, fairly likely,* or *very likely*?" (M = 1.67, SD = 0.68) and "About how easy would it be for you to find a job with another employer with approximately the same income and fringe benefits you now have? *Not easy at all, not too easy, fairly easy,* or *very easy*?" (M = 2.45, SD = 0.86).

Quality of working life. Three items from the GSS (Smith et al., 2016) measured

participants' quality of working life. Currently employed participants reported how many hours they work in a typical week as well as the number of hours they have to pursue leisure activities after an average work day. Currently employed participants also reported how easy it is to take time off to take care of personal or family matters (*not easy at all, not too easy, fairly easy*, or *very easy*) (M = 2.83, SD = 0.89).

Relationships with, Attitudes toward, and Contact with Other People

Sociometric status. Using a six-item scale of sociometric status, participants indicated the level of social status they receive from others in three different domains: their workplace, their family, and their friendships. A sample item, adapted from Anderson et al., (2012), is "In my workplace, I am treated with respect" (α work = .86, *M*work =55.10, *SD*work = 1.36; α friends/fam = .88, *M*friends/fam = 5.51, *SD*friends/fam = 1.22). The response scale ranged from *strongly disagree* (1) to *strongly agree* (7).

Personal relative deprivation. Participants reported their feelings of personal relative deprivation using a five-item scale from Callan et al. (2011) (e.g., "I feel deprived when I think about what I have compared to what other people like me have"; 1 = strongly disagree to 7 = strongly agree; $\alpha = .84$, M = 3.07, SD = 1.16).

Instrumental social support. Participants answered four "yes" or "no" questions, taken from (Reid et al., 2015), regarding the financial support they might receive from people in their life during times of need. A sample item is "Could you count on someone to loan you \$1000 in the next year?" (M = 2.74, SD = 1.41).

Attitudes toward poor people and rich people. Participants reported their attitudes toward poor people and rich people using a feeling thermometer (adapted from ANES, 2018), which ranged from *very cold or unfavorable feeling* (0) to *very warm or favorable feeling* (100)

 $(M_{poor} = 67.82, SD_{poor} = 19.44; M_{rich} = 44.63, SD_{rich} = 24.74).$

Contact with poor people and rich people. Participants reported how much contact they have with poor people using a four-item measure adapted from Pettigrew (1997) on a slider scale anchored *none* to *a lot*. A sample item is "how many poor people live in your neighborhood currently?" ($\alpha = .75$, $M_{poor} = 37.82$, $SD_{poor} = 23.06$). Participants answered the same set of measures for rich people ($\alpha = .77$, $M_{rich} = 26.66$, $SD_{rich} = 20.87$).

Financial Worry

Participants reported their level of financial worry using a five-item scale adapted from the National Health Interview Survey (NHIS). Participants were asked to report how worried they were about not being able to pay for the following expenses: medical costs; food; normal monthly bills; rent, mortgage, or other housing costs; and minimum credit card payments. The response scale ranged from *not worried at all* (1) to *extremely worried* (7) ($\alpha = .91$, M = 3.05, SD = 1.71).

Quality of Life

Health and quality of life. Participants reported their general health by answering the following question: "In general, would you say your health is *poor* (1), *fair* (2), *good* (3), *very good* (4), or *excellent* (5)?" (M = 3.19, SD = 0.99). Participants reported their quality of life using the same response scale (M = 3.20, SD = 1.01).

Insurance. Participants indicated whether they have any of the following types of insurance: "Health Insurance," "Property Insurance," "Life Insurance," "Disability Insurance," and "Auto Insurance."

Benefits received. Participants whether they or someone in their current household received, in the past 12 months, any of the following governmental benefits: Supplemental

Nutrition Assistance Program (SNAP), Social Security or Railroad Retirement, Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF), Unemployment Compensation, Medicaid, Subsidized Housing, and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Participants could also report that they were unsure.

Housing Circumstances

Participants reported whether their current residence was owned (with or without a mortgage), rented, or occupied without the payment of rent using an item from the Census. Participants also reported the state, county, city, and ZIP code of their current residence as well as their household size.

Financial Literacy

We assessed participants' financial literacy using a three-item measure based on prior research (Lusardi & Mitchell, 2011). Participants answered three multiple-choice questions: "Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?" (*More than \$102, Exactly \$102, Less than \$102, Do Not Know*), "Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?" (*More than today, Exactly the same, Less than today, Do Not Know*), and "Buying a single company's stock usually provides a safer return than a stock mutual fund" (*True, False, Do Not Know*) (M = 2.31, SD = 0.89).

Individual Differences

Personality. Participants completed a 10-item measure of the Big Five Personality Inventory (Gosling et al., 2003) using a 7-point scale ranging from *strongly disagree* (1) to

strongly agree (7).

Locus of Control. We measured participants' locus of control using a four-item scale from Kovaleva (2012), consisting of two internal locus of control items and two external locus of control items. Example items are: "If I work hard, I will succeed." (internal; $\alpha = .44$, M = 4.67, SD = 1.37) or "Fate often gets in the way of my plans" (external; $\alpha = .44$, M = 3.35, SD = 1.27), and the response scale ranged from *strongly disagree* (1) to *strongly agree* (7).

Materialism. We measured participants' level of materialism using a three-item version of the Material Values Scale (Richins, 2004). A sample item is "I like a lot of luxury in my life," and the response scale ranged from *strongly disagree* (1) to *strongly agree* (7) ($\alpha = .69$, M = 3.57, SD = 1.40).

Belief in a Just World. We measured participants' belief in a just world using a six-item version of the Belief in a Just World Scale (Lipkus, 1991), captured on a 6-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (6) (α = .93, M = 2.94, SD = 1.13).

Self-Esteem. We measured participants' self-esteem using the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965), captured on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7) ($\alpha = .94$, M = 4.91, SD = 1.39).

Entitlement. We measured participants' level of entitlement using a four-item subscale from the Grandiose Narcissism Scale (Foster et al., 2015). A sample item is "I expect to be treated better than average," and the response scale ranged from *strongly disagree* (1) to *strongly agree* (6) ($\alpha = .83$, M = 2.70, SD = 1.11).

Demographics

Participants reported their age, gender identity(Men = 470, Women = 518, Nonbinary = 13), marital status (37.5%), number of dependents (M = 0.56, SD = 1.02), race and ethnicity

(White = 741, Asian = 72, Black = 82, Latinx = 33, Multiracial = 64, Native = 5, Middle Eastern = 1), political affiliation (Democrat = 487, Republican = 169, Independent = 278, No preference = 45), social and economic conservatism (M_{social} = 32.91, M_{Fiscal} = 32.26, SD_{Social} = 27.98, SD_{Fiscal} = 29.00), personal and household income ($Mdn_{personal}$ = \$25,000—\$34,999; $Mdn_{household}$ = \$50,000—\$74,999), highest personal and parental educational attainment (Personal College Degree = 63.7%, Parental College Degree = 54.3%), and subjective social rank (M_{Rank} = 5.07, SD_{Rank} = 1.81).

Results

Americans' Estimates of Living, Average, and Minimum Wages

To test our first hypothesis, we compared participants' living wage estimates with the estimates generated by the Living Wage Calculator (LWC) at the county-level.⁵ As depicted in Figure 1, results confirmed our hypothesis that, on average, Americans' estimates of a living wage (M = 2756.71, SD = 1134.37) are higher than those generated by the LWC (M = 2150.18, SD = 313.92), t(976) = 17.45, p < .001, d = 0.56. In accordance to our initial hypotheses, participants' living wage estimates were (a) significantly different from the economic reality computed by a widely used economic model, and (b) significantly greater in value.

One reasonable concern about the validity of this finding is the possibility that participants are bad at estimating wages in general and that their misperceptions of a living wage are an artifact of this domain-general task of estimating wages. However, we find that, on average, Americans in our sample are accurate about the monthly wage of minimum wage workers: Participants' estimates of a monthly wage for minimum wage workers (M = 1595.41,

⁵ We removed estimate outliers that were 5 SDs away from the mean living wage estimate (n = 18), average wage estimate (n = 16), and minimum wage estimate (n = 13). Thirty-eight participants had at least one estimate removed. Of the 38, five participants had two estimates removed and two participants had all three estimates removed. Results are consistent when we include outliers, but we present results with exclusions for clarity, especially for our figures.

SD = 600.14) were not significantly different from the monthly wage equivalent of their state's minimum wage (M = 1608.16, SD = 362.99), t(985) = -0.57, p = .569, d = 0.02. Participants' accuracy about the minimum wage offers some evidence that their misperceptions of a living wage is not reflective of an inability to accurately perceive wages in general.

To further situate participants' living wage estimates, we compare their estimates to various economic wage standards in the US; namely, the poverty wage, the federal minimum wage, and the state-level minimum wage. Table 1 presents descriptive statistics for these comparisons, including the percentage of participants whose estimates were higher or lower than these various wage standards. Overall, participants' estimates of a living wage were significantly higher than the monthly equivalent of a workers' earnings at the current poverty wage (1,063.33), the federal minimum wage (1,256.67), and their state's minimum wage (range = 1,257-2,427). Additionally, the vast majority of participants reported a living wage that was higher than the current poverty wage (97.15%), the federal minimum wage (95.01%), and their state's minimum wage (86.85%).

Table 1

Comparison	0	Overall Difference		Est. Higher than Comparison			Est. Lower than Comparison		
Standard	n	M (SD)	t	%	M(SD)	t	%	M(SD)	t
LWC Living Wage	977	615.46 (1102.58)	17.45	68.58	1125.01 (929.06)	31.34	31.42	-496.59 (425.70)	-20.44
Poverty Wage	982	1693.38 (1134.37)	46.78	97.15	1754.62 (1090.70)	49.69	2.85	-392.90 (343.98)	-6.04
Fed. Min. Wage	982	1500.04 (1134.37)	41.44	95.01	1597.86 (1074.94)	45.40	4.99	-362.51 (368.60)	-6.88
State Min. Wage	981	1155.10 (1127.28)	32.09	86.85	1389.61 (1013.13)	40.04	13.15	-393.75 (348.42)	-12.84
Est. Min. Wage	974	1144.42 (1006.16)	35.50	90.35	1299.81 (925.60)	41.66	9.65	-309.31 (359.93)	-8.33
Est. Ave. Wage	970	-278.35 (1282.19)	-6.76	39.90	930.63 (753.60)	24.29	60.10	-1080.89 (862.23)	-30.27

Descriptive Statistics of Living Wage Estimate Comparisons with Various Economic Standards

Note. All *t*-values were significant (*ps* < .001). LWC = Living Wage Calculator.

Figure 1

Frequency Distribution of County-Level Living Wage Estimates



Note. Hourly wages were converted to monthly wages by multiplying the hourly wage by 40 (hours per week) * 52 (weeks per year) / 12 (months in a year). LWC = Living Wage Calculator.

We find strong evidence that, for many Americans, there is a large gap between the amount of money people need to live on (living wage) and the amount of money the government defines as the threshold for poverty (poverty wage) or the wage floor (minimum wage).⁶ Comparing participants' estimates of a living wage with their estimates of the minimum wage reveals a similar pattern of results. Around 90% of participants estimated a living wage that was higher than their estimate of a minimum wage, which offers further evidence to support the notion that, for most Americans, the minimum wage does not provide a living wage. However, when we compare participants' living wage estimates with their estimates of the average wage, we find that only 40% of participants reported a living wage that was higher than their estimate of the average wage (M = 3042.52, SD = 1274.84) of all adult workers in their county. Taken together, this set of results suggests that while the majority of participants acknowledge that a minimum wage is not high enough to provide a living wage, participants are more evenly split when it comes to whether the average wage is something we return to in the next set of analyses.

Socioeconomic Predictors of Living Wage Estimates

Recall that we also expected participants' socioeconomic status to be positively associated with their estimates of a living wage. Out of the categories typically used to operationalize socioeconomic status (e.g., income, occupation, education, subjective rank), we find that household income is the most robust socioeconomic predictor of living wage estimates,

⁶After our next round of coding, we will conduct county-level minimum wage comparisons. Results are unlikely to change given that only a minority of localities significantly differ from their state's minimum wage laws.

⁷ A more technically accurate phrasing is that participants are split when it comes to whether the "average wage of all working adults" is higher than a living wage, which reflects estimates of the average wage instead of the mean wage of the average worker (i.e., median wage). Though they are conceptually different, the difference between participants' responses when asked about an average versus the median is minimal, at least in the context of economic estimates (Kraus & Richeson, 2020).

r(976) = .27, p < .001.8 As depicted in Figure 2, we find support for our prediction when we examine living wage estimates for different income brackets as used in the Census. On average, participants from higher income households reported a greater living wage estimate.

Though we observe a general increasing pattern as predicted, it is possible that this significant association between household income and living wage estimates will disappear when we include additional variables, especially indicators of socioeconomic status. Table 2 presents the OLS regression results. For clarity, I present each model based on different groupings of statistically significant variables: Model 1 consists of the base model; Model 2 includes the additional socioeconomic indicators; Model 3 includes financial variables; Model 4 includes relational variables; Model 5 includes living condition variables; and Model 6 includes individual difference and demographic variables. Each subsequent model includes all of the previous variables, with non-significant variables remaining in the model but omitted for the purpose of presentation. As shown in Table 2, household income is a robust predictor of living wage estimates. Even when controlling for all other variables in our study, we find that Americans from higher income households report, on average, higher estimates of living wage.9

Given the robust association between household income and estimates of a living wage, we re-examine participants' accuracy of the living wage by income category (Figure 3). Participants from households with incomes less than \$25,000 (the first three categories) did not significantly differ, on average, from the LWC living wage, ts < 1.62, ps > .11. However,

⁸ Regressions involving various composites of socioeconomic indicators are less robust to the inclusion of controls relative to a regression that includes household income as a separate variable.

⁹ A bidirectional stepwise regression was largely consistent with the results from Model 6, except for significant associations for Age (B = 7.01) and Belief in a Just World (B = -72.63). We also conducted a Least Absolute Shrinkage and Selection Operator (LASSO) regression and an elastic net regression and find consistent evidence for Household Income being a significant predictor of living wage estimates. In these penalized regression models, all of the significant variables in Model 6 remained.

participants from households with incomes greater than \$25,000 all differed significantly from the LWC living wage, ts > 3.70, ps < .001. Participants who reside in households that are at or below the annual equivalent of the LWC living wage (M = \$25,802.16) were, on average, more accurate with their living wage estimates than participants from higher income households.

A related outcome measure is the percentage of participants who estimated a living wage that is below the LWC living wage. A significantly greater proportion of participants (47.09%) from households with incomes less than \$25,000 reported a living wage estimate that was below the LWC living wage compared with only 27.55% of participants from higher income households who did the same. A significant association between household income less than \$25,000 and estimating below the LWC living wage was observed, $\chi_2(1) = 26.12$, p < .001. Nearly half of the participants from lower income households reported a living wage estimate that was less than the minimum subsistence level calculated by the LWC.

The finding that participants from higher income households report a living wage estimate that is higher than the LWC living wage may be surprising given the tendency for higher income individuals to be less supportive of progressive labor and wage policies. One explanation for this puzzle is that people from higher income households also tend to report a higher average wage estimate. As shown in Figure 4, participants' household income is a robust predictor of their estimates of the average wage, r(978) = .29, p < .001. Alongside higher estimates of a living wage, participants from higher income households also believe that the average wage is higher than do participants from lower income households.

Figure 2

Violin Plot of Living Wage Estimates by Census Income Categories



Income Brackets

Table 2

Significant Predictors of Living Wage Estimates

		Living Wage Estimate						
	(1)	(2)	(3)	(4)	(5)	(6)		
Household Income	135.91***	140.59***	156.88***	151.68***	127.36***	128.67***		
	(15.50)	(20.20)	(20.47)	(21.10)	(23.01)	(23.70)		
Educational Attainment		-21.86	-13.79	-22.67	-36.17	-37.03		
		(30.89)	(29.43)	(30.03)	(29.94)	(30.39)		
Occupational Prestige		8.55**	5.03^{+}	5.34^{+}	4.57	4.54		
		(3.00)	(2.86)	(2.89)	(2.84)	(2.87)		
Subjective Rank		-26.27	2.52	-13.19	-3.00	3.32		
		(26.41)	(26.36)	(29.16)	(29.05)	(30.19)		
Number of Basic Needs			85.82***	82.84***	83.41***	82.89***		
			(10.23)	(10.61)	(10.42)	(10.77)		
Total Spending (Logged)			116.94^{**}	120.65**	84.23*	62.68		
			(38.25)	(38.57)	(40.12)	(41.19)		
Financial Worry			94.25***	89.33***	71.16**	68.31*		
			(24.81)	(27.05)	(27.49)	(27.90)		
Employed				-163.78^{+}	-138.91	-123.94		
				(95.35)	(95.24)	(98.53)		
Respect at Work				76.02*	76.03^{*}	74.82^{*}		
				(31.49)	(31.26)	(31.92)		
Contact with Rich People				3.64^{+}	2.88	3.11		
				(1.96)	(1.95)	(2.01)		
Number of Dependents					107.91*	74.98		
					(45.09)	(47.49)		
County-Level Living Wage					0.72***	0.71***		
					(0.12)	(0.12)		
Agreeableness						65.78^{+}		
						(35.99)		
Entitlement						74.39^{+}		
						(38.22)		
Constant	1,996.15***	1,829.38***	-284.67	-623.98	$-1,\!558.74^{**}$	$-1,908.05^{**}$		
	(93.79)	(178.31)	(323.04)	(456.79)	(527.98)	(606.20)		
Observations	978	867	867	858	852	850		
Adjusted \mathbb{R}^2	0.07	0.08	0.18	0.19	0.22	0.23		

+p < .10. *p < .05. **p < .01. ***p < .001

Figure 3

Violin Plot of Living Wage Difference Scores by Census Income Category



Income Brackets

Figure 4

Violin Plot of Average Wage Estimates by Census Income Category



Income Brackets

To demonstrate the tension between living wage and average wage estimates, we regressed support for redistributive policies on participants' living wage and average wage estimates. As shown in Table 3, participants' living wage estimates were positively associated with support for redistributive policies, but their average wage estimates were negatively associated with support for redistributive policies. That is, participants supported redistributive policies more when they reported a higher living wage estimate and a lower average wage estimate. These associations were robust to the inclusion of various controls, including political conservatism (Model 3), socioeconomic indicators (Model 4), attitudes toward poor people and rich people (Model 5), as well as individual differences and demographic factors (Model 6).

Table 3

	Support for Redistributive Policies							
	(1)	(2)	(3)	(4)	(5)	(6)		
Living Wage Estimate	$\begin{array}{c} 0.0002^{***} \\ (0.0000) \end{array}$		$\begin{array}{c} 0.0002^{***} \\ (0.0000) \end{array}$	$\begin{array}{c} 0.0002^{***} \\ (0.0000) \end{array}$	$\begin{array}{c} 0.0002^{***} \\ (0.0000) \end{array}$	$\begin{array}{c} 0.0001^{***} \\ (0.0000) \end{array}$		
Average Wage Estimate		-0.0001^{*} (0.0000)	-0.0001^{***} (0.0000)	-0.0001^{*} (0.0000)	-0.0001^{*} (0.0000)	-0.0001^{*} (0.0000)		
Political Conservatism			-0.03^{***} (0.001)	-0.03^{***} (0.001)	-0.02^{***} (0.002)	-0.02^{***} (0.002)		
Household Income				$\begin{array}{c} 0.01 \\ (0.02) \end{array}$	$\begin{array}{c} 0.004 \\ (0.02) \end{array}$	$\begin{array}{c} 0.01 \\ (0.02) \end{array}$		
Educational Attainment				-0.04 (0.03)	-0.03 (0.03)	-0.04 (0.03)		
Occupational Prestige				-0.0002 (0.003)	-0.0000 (0.003)	$0.001 \\ (0.003)$		
Subjective Rank				-0.01 (0.03)	$0.02 \\ (0.03)$	$\begin{array}{c} 0.02 \\ (0.03) \end{array}$		
Financial Worry				$\begin{array}{c} 0.11^{***} \\ (0.03) \end{array}$	0.08^{**} (0.02)	0.07^{**} (0.03)		
Attitudes Toward Rich People					-0.01^{***} (0.002)	-0.01^{***} (0.002)		
Attitudes Toward Poor People					0.01^{***} (0.002)	0.01^{***} (0.002)		
Belief in a Just World						-0.12^{**} (0.04)		
Age						-0.001 (0.003)		
Male						-0.16^{*} (0.07)		
Person of Color						$0.07 \\ (0.09)$		
Constant	5.37^{***} (0.11)	6.03^{***} (0.11)	6.66^{***} (0.12)	6.43^{***} (0.24)	5.65^{***} (0.27)	6.04^{***} (0.30)		
$\begin{array}{c} \hline \\ Observations \\ Adjusted \ R^2 \end{array}$	982 0.02	984 0.004	970 0.33	$\begin{array}{c} 859 \\ 0.35 \end{array}$	859 0.39	$856 \\ 0.40$		

Predictors of Support for Redistributive Policies

*p < .05. **p < .01. ***p < .001.

Discussion

Despite its absence from policy considerations, the *perception* of what is enough is incredibly revealing of the socioeconomic lives of Americans. Previous related research has documented the mismatch between individual's perceptions of economic realities and economic modelling. The results of the present study confirm our hypotheses that participants would estimate a living wage that is higher than those provided by economic models and that household income would be a significant positive variable in individual's estimates. Aside from corroborating the trends outlined in previous literature, these findings also contribute to our understanding of the relationship between socioeconomic status, psychosocial factors and appreciations of a living wage.

Theoretical Contributions

In addition to documenting people's inaccuracies in another important economic domain and demonstrating its associations with status characteristics, this research begins to articulate how SES relates to individual's policy preferences and downstream decisions. The study's results suggest that people calibrate their estimates of what others have and what others need based on their own socioeconomic circumstances. The findings lead us to speculate that while these results are driven at least in part by participant's information processing, they are also influenced by psychosocial motivations. The effects of the latter are especially influential when analyzing support for redistributive policies. Aspects like conservatism, attitudes towards wealthy and poor people, and belief in a just world were found to be predictive of support for the kinds of redistributive policies that would be integral to achieving substantial living wages. In general, the conclusions drawn from this study help us detangle the complex psychological forces that constitute and influence our economic realities.

Practical Implications

Public support is not only an engine of the political processes that influence the living wage, but it is a manifestation of social and psychological realities that are overlooked by purely economic models of what is enough. The purpose of this research is to shed light on the influence of those realities, making more apparent the relationship between certain psychological and social factors and estimates of the living wage. The value of a living wage, like other socioeconomic policies such as wealth redistribution and welfare, is a political application of prosocial behavior that provides insight into the psychosocial mechanisms of perceiving, rationalizing, and reckoning with inequality. To that end, understanding how closely individuals own estimates of a living wage align with economic models allows us to isolate the impact of assumptions that are embedded in either calculation and interpret the influence of those factors on the economic and political behavior of individuals.

Current psychologically-informed support for raising in minimum wage relies largely on documenting the numerous cognitive, emotional, and psychosocial harms that are caused by poverty and are left unresolved by minimum wage laws (Smith, 2015; Rosenthal, 2016; Thompson & Dahling, 2019). These studies and perspectives seek to convey the necessity of minimum wage reform through highlighting the psychological inequities that accompany the apparent economic and social kinds as a result of current laws concerning wage. Further research also shows the benefits of increasing minimum wage towards increasing life satisfaction and well-being (Flavin & Shufeldt, 2016; Rao & Min, 2018). The present study contributes to this discourse by confirming what is already a fixture in pro-reform rhetoric; people imagine and desire a society where individuals are paid more, where average wages are sufficient to provide a satisfying quality of life, and few, if any, people are forced to live below the poverty line.

Through recognizing that these psychosocial expectations for socioeconomic well-being are perhaps more uniform across individuals than broad political distinctions, such research endorses the bipartisan support for increasing the minimum wage.

These findings are particularly insightful in providing context in the disparity between estimates of living wage and support for redistributive policies. Initial reviews of the results make apparent a paradoxical relationship, with the participants with the highest household income having the highest average estimates for living wage, yet the lowest support for redistributive policies. The theoretical tension is resolved by contextualizing the average wage estimates. These same participants also have the highest estimates for the average wage, suggesting that the individuals who are the least supportive of engaging in policy efforts to raise the minimum wage do so because they are unaware of the economic realities of many Americans. Understanding psychological discrepancies like these that hinder universal support for raising the minimum wage offers a vital perspective in psychology's contributions to the movement for economic equity.

Limitations and Future Directions

While the present study considers individual's estimates of a living wage, a more precise analysis of the cognitive process of wage estimation is required to comprehensively interpret the influence of psychosocial factors. Further research would focus on identifying the demographics of the theoretical "average worker" that participants are anchoring on when making these estimates; specifically determining which races, occupations, and income brackets are most prevalent. Stereotypes and misperceptions of these categories may prove influential in individual's estimates, especially considering the history of movements for and against social welfare policies that have utilized such factors (Hancock, 2004).

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The question of who participants think *should* earn a living wage is also left unanswered by current methods, as well as whether this is a belief that changes when thinking about different classes of workers. If participants assume that certain workers like fast food workers, teachers or nurses, whose occupations are laden with implicit moral judgements (Lott, 2012), constitute greater or lesser proportions of the general workforce, this may in turn influence their opinions and estimates of a living wage. Participant's knowledge of the monthly wages of different occupations may be an informative component of measures such as well; there might be certain classes of jobs that individuals over- or under-estimate the current incomes of. If these classes are themselves over- or under-represented in a participant's theoretical workforce, this composition might impact their perceptions of the necessity of a universal standard for a living wage.

The concept of deservingness is also closely tied with perceptions of meritocracy, it may be the case that individuals *are* aware of the discrepancy between their estimates of a living wage and the current minimum wage, but their tolerance for the disparity is sustained by a belief in a high degree of social mobility. Previous research indicates that nations that have higher rates of mobility have less dissatisfaction with inequality (Coark, 2013). In a study of 500 American participants, researchers found that people's interpretations of society being highly mobile increased their acceptance of income inequality (Shariff, Wiwad, & Aknin, 2016). Regardless of whether this belief is itself true, the literature suggests that it may buoy tolerance for current inequalities.

Ultimately conclusions from such research questions would be aimed towards developing interventions that are capable of correcting people's misperceptions of living and average wages. Studies that incorporate an experimental design will allow us to make causal claims about the

influence of income and perceptions of status on an individual's estimates of a living wage, which is a current constraint due to the present study's observational framework. Furthermore, understanding the kinds of information and means of presentation that are most salient in living wage estimates will prove integral to motivating individuals to address the discrepancies between their estimates and those of economic models.

Conclusion

The living wage is incredibly difficult to ascertain by purely object means. In fact, the developer of the federal poverty guideline, Mollie Orshansky, said as much; "There is not, and indeed in a rapidly changing pluralistic society there cannot be, one standard universally accepted and uniformly applicable way by which it can be decided who is poor." (Orshansky, 1965). This is precisely why an analysis of what Americans perceive to be enough to live on can prove to be so valuable. The discrepancy between economic models of a living wage and the legal state of minimum wage is stark. The fact that objective, standardized approaches to calculating what is enough to live on can only roughly approximate reality mean that estimates that are reliant on subjective experience may shed more light on the political outcomes of living and minimum wages.

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