

Some Psychological Determinants of Broad Union Attitudes

Owen McAleese¹, Martin V. Day¹

[1] *Department of Psychology, Memorial University of Newfoundland, St. John's, Canada.*

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Corresponding Author: Martin V. Day, Department of Psychology, Memorial University of Newfoundland, St. John's, NL, A1B 3X9, Canada. E-mail: mvday@mun.ca

Supplementary Materials: Materials, Preregistration [see [Index of Supplementary Materials](#)]



Abstract

Many societies are grappling with how to reduce high levels of economic inequality. Although often overlooked, labor unions can have significant flattening effects on inequality. However, unions are not highly supported by the general public. To provide some psychological explanation as to why this may be the case, we examined five potential predictors of general union attitudes (i.e., political orientation, prejudice toward union members, meritocratic beliefs, union knowledge and social mobility beliefs). We tested each variable at least twice across three studies (two in the U.S., one in Canada, total N = 1756). Results indicated that stronger political conservative orientation, prejudice feelings towards union members and less accurate knowledge of union activities uniquely explained lower pro-union attitudes across studies. Meritocratic and social mobility beliefs did not meaningfully explain union attitudes. Although mostly correlational, this research provides insight into potential reasons why everyday citizens may support or condemn unions in an increasingly unequal world. Implications for altering union attitudes and support for related policies are discussed.

Keywords

public attitudes, unions, political orientation, prejudice, knowledge

Non-Technical Summary

Background

Large gaps between the rich and poor are associated with a range of health and social problems in many countries. Labor unions can serve to significantly reduce income gaps among populations. However, little is known psychologically about why the general public tends to have mixed attitudes towards them.

Why was this study done?

Unions can influence broader societal conditions beyond their members. Their continued existence also partly depends on support from the broader public. Thus, it is critical to better understand why the general public may wish these organizations to flourish or fail.

What did the researchers find?

We studied five psychological factors that may help explain general attitudes toward labor unions. Across three studies we found that lower pro-union attitudes were related to having stronger political conservative orientation, feelings of prejudice



toward union members and less accurate knowledge of union activities. Other factors, such as people's background characteristics, or their beliefs about hard work leading to success or about the chances of changing social classes, generally did not explain their attitudes toward unions.

What do these findings mean?

By identifying relevant psychological variables that uniquely show consistent patterns, this research sheds light on why people may feel positively or negatively toward unions, that is, inequality-reducing institutions. These findings also open up possibilities for improving our understanding of people's union attitudes, including how they may be altered. As unions can serve to reduce economic gaps among people, research into understanding why they are supported by the public may be critical to shaping society.

With the gap between the rich and the poor growing markedly in the last three decades, the potential impact of economic inequality has become increasingly salient (Alvaredo et al., 2018). From reduced physical and mental health, to higher rates of school bullying and imprisonment, a range of problems have been associated with high economic inequality (Buttrick et al., 2017; Elgar et al., 2019; Pickett & Wilkinson, 2015). Thus, narrowing the gap between the top and the bottom has become one of the most important issues in developed countries.

In general, individuals believe the gap between the richest and the poorest in a nation should be significantly smaller than it actually is (Kelley & Evans, 1993; Kiatpongsan & Norton, 2014; Norton & Ariely, 2011; Willis et al., 2015). Despite equality-promoting ideals, people tend to do little in response to inequality and have mixed attitudes towards economic redistribution (Ashok et al., 2015).

In one approach to better understand this societal problem, a variety of factors have been examined to help explain people's attitudes toward inequality-reducing programs and policies. This research has mainly focused on reducing income or wealth at the very top or increasing it at the very bottom. For instance, support for increased income taxes on those with annual incomes above 1 million dollars (Alesina et al., 2018; Chow & Galak, 2012) and estate taxes on those with 5 million in wealth (Kuziemko et al., 2015). Some example factors that explain support for redistributive taxes include how the policy is framed, social sampling bias, and respondents' political orientation (Chow & Galak, 2012; Dawtry et al., 2015; McCaffery & Baron, 2006). Other research has examined attitudes toward increases to minimum wage and welfare programs (Brown-Iannuzzi et al., 2017; Henry et al., 2004; Kuziemko et al., 2014; Shepherd & Campbell, 2020), with factors such as stereotypes, egocentric preferences, and respondents' relative wage partly explaining attitudes. Although such research is promising, economic inequality is not solely affected by taxation and welfare programs.

Notably, labor unions serve as a major driver of equality (Krugman, 2007, p. 51; Stiglitz, 2012, p. 38). Through raising the wages of members (who tend to be of the lower and middle classes) and limiting large income discrepancies between management and employees, unions have had steady equalizing effects on income distribution since the 1930s (Bennett & Kaufman, 2007, p. 115-116; Farber et al., 2018). As unions can change social norms of what is adequate pay, they can critically influence the standards for non-unionized workers as well (Mishel et al., 2012, p. 176; Western & Rosenfeld, 2011).

However, unions, such as in Canada and the U.S., are not strongly endorsed (CAUT, 2013; Saad, 2018). For example, union approval in the U.S. has fluctuated between 48-62% in the last decade. Rather than desire union influence to strengthen (e.g., to combat growing inequality), most Americans wish it to either stay the same (26%) or weaken (29%) (Saad, 2018).

What are some of the psychological factors that can provide insight into such varied union attitudes among the public? Beyond polling data, limited research has provided answers (Lipset & Schneider, 1983). Instead, existing research on unions has examined their impacts and relevant actions (e.g., decisions to join, turnover intentions), with a focus on union members or potential members (Aryee & Chay, 2001; Barling et al., 1991; Blader, 2007; Friedman et al., 2006; Kelly & Kelly, 1994; Mellor et al., 2012; Pohler & Luchak, 2015; Tessema et al., 2013; Waddington & Whitston, 1997). While such research sometimes involves a psychological perspective (e.g., socialization, group identification),

according to Lott (2014), organized labor has generally been understudied by much of psychology. In particular, there has been little psychological examination of why the general public (rather than union members) may feel positively or negatively towards unions, especially compared to research on other inequality-reducing mechanisms. However, rules, regulations and legislation that affect unions can be shaped by the broader voting population (e.g., through politicians, propositions). Citizens, including non-unionized workers, may also have interest in organized labor, given that they can influence general economic outcomes, workplace standards, and well-being. Thus, to help broaden our understanding, the present research aims to determine whether several psychological factors uniquely and consistently explain people's general attitudes toward unions. As unions ultimately depend on people's interest in their continued existence, this research will take a step toward identifying factors that may influence their expansion or decline. As limited applied tests have been conducted, we focus this initial investigation on general union attitudes in Canada and the U.S.

To clarify, although we generally refer to unions and some of their overall patterns, in practice, unions vary along many dimensions (e.g., industry, governance, social justice vs. social movement-focus, etc.), and evolve over time (Ahlquist, 2017; for a discussion of union trends, see Scipes, 2014; Upchurch & Mathers, 2012). Unions also have a variety of positive and negative aspects beyond helping to flatten the income distribution. For example, unions tend to reduce political inequality by encouraging political engagement of individuals from lower socioeconomic classes (Ahlquist, 2017; Leighley & Nagler, 2007). Although racial issues persist, union policies can provide some protection from racial discrimination and appear to partly buffer against increases in racial income inequality (Rosenfeld & Kleykamp, 2012). Unions also have positive effects on workplace safety, employee benefit programs, healthcare coverage and psychological health (Freeman & Medoff, 1984, p. 64; Leigh & Chakalov, 2021; Lott, 2014). There are also concerning issues involving unions. Sometimes union leaders are convicted of corruption and other illegal acts (Jacobs, 2013). Unions have been hostile to immigration, including temporary migrant workers (Ahlquist, 2017; Foster et al., 2015). Many unions have also struggled to properly address sexual harassment of women (Avendaño, 2018). While some of these issues occur in other organizations and institutions, there is clearly opportunity for unions to improve. Rather than specific issues, however, the present research focuses on underlying psychological variables that may help consistently explain people's overall union attitudes.

Potential Psychological Determinants

Given unions' role in inequality-reduction we consider theoretically-grounded psychological factors that may help explain public attitudes toward institutions and policies related to economic inequality (see Son Hing et al., 2019). As evident below, we also consider predictors of public attitudes in general, as well as factors relevant to social judgment, as unions are composed of individuals in society. To clarify, for this initial research we focus on individual-level factors that may be particularly relevant to people's general attitudes toward unions, rather than factors more relevant to other union-related topics (e.g., collective action of current or future union members, union satisfaction, etc.). Although many variables may impact general attitudes toward unions, we have limited our selection to five possible psychological predictors (i.e., political orientation, prejudice toward union members, meritocratic beliefs, union knowledge, and social mobility beliefs). While some of these associations are previously untested, we have reason to expect all selected variables will relate to general union attitudes. In the next section we outline each of these factors, explain their selection and basis in existing theory, and how they may relate to union attitudes.

The present investigation of psychological factors involves respondents from the U.S. and Canada. Contextual and cultural factors may also influence general union attitudes. For example, although cultural similarities exist between the U.S. and Canada, there are societal differences such as degree of economic inequality, social mobility, and rates of unionization (U.S.: 10.3%; Canada: 28.3%; Statistics Canada, 2021; U.S. Bureau of Labor Statistics, 2020). While it is beyond the scope of our studies to examine the influence of such factors, we revisit this point in the General Discussion, including potential cultural variations beyond these countries.

Political Orientation

Several indicators suggest that individuals' political orientation may influence their general union attitudes. People's indication of their political orientation along the liberal-conservative spectrum tends to relate to social and economic

policy endorsement (Jost, 2006). For example, theory and research suggests that those with a stronger liberal orientation show stronger support for inequality-reducing policies relating to progressive taxation, health care and social aid, and weaker resistance to societal change than those with a stronger conservative orientation (Jost et al., 2003; Kuziemko et al., 2015; Sterling et al., 2019). Liberal interests are typically well represented by unions. The presence of unionization has been linked to increases in government redistribution (Iversen & Soskice, 2015) and unions tend to support legislation with widespread benefits to most working people, such as increases in worker rights and healthcare coverage (Freeman & Medoff, 1984, p. 200). There is also an organized antiunion climate with conservative roots (Richards, 2008, p. 39; Rosenfeld, 2014, pp. 16-17) and conservative political forces are partly attributed with the decades-long erosion of union power and resulting rise in inequality (Hertel-Fernandez, 2018). For instance, recent legal developments, such as the U.S. Supreme Court's ruling that unions can no longer compel members to pay dues (Barnes & Marimow, 2018) highlight how organized labor's ability to function has been purposively undermined (see also Kane & Newman, 2019).

Political orientation and voting behavior appear to predict attitudes toward labor unions. For instance, U.S. polling data indicates that approval of unions diminishes politically left-to-right: 80% of Democrats, 62% of Independents, 45% of Republicans (Furnham, 1984; Saad, 2018). Although limited prior research has examined whether political orientation is uniquely associated with union attitudes beyond other psychological factors, we expect political orientation will partly explain union attitudes, with a stronger conservative orientation relating to lower pro-union attitudes.

Prejudice Towards Union Members

Consistent with theories of social judgment as well as inequality-policy research (e.g., Brown-Iannuzzi et al., 2017), people's general attitudes toward unions may be guided, in part, by existing stereotypes and prejudice feelings against union members. Initially defined as negative or hostile attitudes toward an identifiable outgroup (Allport, 1954), prejudice can involve aspects that are emotional (e.g., feelings of dislike), cognitive (e.g., stereotype traits) or behavioural (e.g., acts of discrimination). As outlined by theory, prejudice can be influenced by many factors, including individual and intergroup dynamics as well as normal social judgment processes (Dovidio, 2001; Duckitt, 1992; Fiske, 1998). In general, preconceived judgments of groups and their members tend not only to be a characteristic of the ignorant or hateful, but represent an enduring, societal-wide problem.

In the case of unions, evidence suggests that members are perceived generally as part of the labor movement (Freeman & Rogers, 1999, p. 79). Union members are viewed somewhat ambivalently, with positive and negative traits (Gibney et al., 2018), like other stereotyped groups (Fiske et al., 2007). Many people also hold negative assumptions about union leaders and their intentions (Kochan, 1979). In addition, strikes and public protests are salient union activities that can cultivate negative feelings among citizens, with members broadly described as autocratic, irresponsible and even corrupt during periods of strike (Cosco, 1989). Overall, the public's feelings may be mixed, with somewhat fewer individuals agreeing that they "have a negative perception of union members" (29.7%) than disagreeing (40.8%) (Gibney et al., 2018). While prejudice research has been integral to broadly informing public policy (Stangor, 2009), there is limited documentation of its potential role in general union attitudes. Thus, as an initial test, we examine whether prejudice feelings toward union members may help uniquely explain lower pro-union attitudes.

Meritocratic Beliefs

The notion that hard work, motivation and ability can determine success or failure in life may also help explain why some individuals oppose unions. This possibility dovetails with a variety of inequality-related theory and research linking meritocratic beliefs as a reason for weaker redistribution attitudes (Alesina & La Ferrara, 2005; Kluegel & Smith, 1986; Lane, 2001; Mijs, 2021). Those that strongly rely on meritocratic beliefs may view failure as due to individual weaknesses and perceive achievement as the result of self-reliance and hard work (Jost & Hunyady, 2005). These beliefs are widespread (Duru-Bellat & Tenret, 2012) and can be a powerful rationalizing device (Day & Fiske, 2017; Ledgerwood et al., 2011). In contrast to this emphasis on individual merit, labor unions prioritize the well-being of the collective and strive for equality among workers (Bennett & Kaufman, 2007). Some union policies may also violate meritocratic beliefs, such as those that prioritize seniority over potential achievement indicators (Freeman & Medoff, 1979). Although scarce prior research has examined the link between meritocratic beliefs and general union attitudes some indirect evidence

suggests that it may exist. For example, among non-union workers, the individualistic notions of self-sufficiency and ambitions of self-enhancement are related to lower union interest (Mellor et al., 2012). Based on the reasoning above, we expect stronger meritocratic beliefs to relate to less positive attitudes toward unions.

Union Knowledge

Attitudes toward organized labor may be influenced by individuals' knowledge regarding the purpose and activities of unions. In general, knowledge and awareness of information is commonly considered in research on public attitudes, such as regarding inequality and the environment (Kuziemko et al., 2015; Lee et al., 2015). According to attitude theory, people's knowledge, thoughts and beliefs of an attitude-target can shape their overall attitude evaluation and related behaviors (Ajzen, 2001). In the case of organized labor, existing knowledge may create mental frameworks that affect subsequent cognitive processes (Johnson-Laird, 1983). Although many people seem to know some aspects of union practices, such as protecting workers from unfair practices (Kochan, 1979), misinformation regarding the functions of unions exists. For instance, unions are often misrepresented as monopolies whose sole function is to raise member wages (Freeman & Medoff, 1979). As mentioned previously, their goals are varied and effects broad. Other beliefs regarding unions' supposed interference with the economy and productivity also appear to be incorrect (Bennett & Kaufman, 2007, p. 602, p. 625; Freeman & Medoff, 1979). Considering such misconceptions regarding unions, and that knowledge is generally a central component of attitudes, we thus expect less accurate knowledge of the goals and functions of unions to uniquely predict lower pro-union attitudes.

Social Mobility Beliefs

People's social mobility beliefs (i.e., perceived chances to change socioeconomic positions) may provide additional explanation, in part as labor unions can facilitate organizational and social change, including changes to inequality. According to inequality-related theory, negative attitudes toward equality and redistribution policies should partly depend on perceptions of opportunity to improve social class (e.g., Benabou & Ok, 2001; Kluegel & Smith, 1986). Similarly, experimental evidence indicates that lower societal social mobility beliefs (relative to higher), can reduce support for the status quo and inequality tolerance (Day & Fiske, 2017; Shariff et al., 2016). However, this link between social mobility beliefs and inequality may exist more strongly at an abstract level (Day & Fiske, 2019). For instance, social mobility beliefs consistently relate to general inequality tolerance, but do not appear to impact concrete inequality policies (e.g., income tax on the top 10%; Alesina et al., 2018). Unions are not entirely an abstract concept and grouping them with concrete policies may be an oversimplification. In reality, they may fall somewhere between the two. For example, they may be perceived as serving general workplace as well as societal functions (e.g., improve safety, reduce inequality), but they also have specific policy positions and goals to help their workers. Although social mobility beliefs and their impact on attitudes and behaviors are only beginning to be understood (Day & Fiske, 2019), based on the conceptualizations and findings above it seems plausible that social mobility beliefs may relate to union attitudes, for example, with lower mobility beliefs explaining more positive union attitudes.

Overview of Present Research

Across three studies we aim to determine which factors outlined above may consistently and uniquely explain general union attitudes. Subsets of the predictors will be explored in Studies 1-2, and then all significant factors will be examined in a preregistered Study 3. As union membership was assessed in Studies 1 and 3 but not Study 2, we rely on patterns across studies to interpret results with and without union members. In alternating studies, we also rely on attitudes of American and Canadian residents. In Study 1, we examine whether political orientation, union knowledge and social mobility beliefs explain the public's attitudes toward unions. Notably, this includes a preregistered experimental test of whether social mobility beliefs affect union attitudes. In Study 2 we examine whether political orientation, prejudice toward union members, meritocratic beliefs and social mobility beliefs predict union attitudes. Finally, Study 3 further clarifies which relevant factors predict union attitudes using a large sample. Although these studies were not designed to specifically examine whether unions are believed to be associated with economic equality, in Study 3 we explore some relevant evidence, including associations between the main variables (e.g., union attitudes)

and economic equality-focused variables. Together, this research will help shed light on why unions, despite their equalizing effects on income distribution, may not experience popular support.

Study 1

We explore how social mobility beliefs, as well as political orientation, and knowledge of unions relate to general union attitudes. This first involves a preregistered experimental test of mobility beliefs on pro-union attitudes. After, we explore the potentially unique associations among the other predictors and union attitudes.

Method

Participants

Following our preregistration plan, we aimed to recruit a sample of $n = 150$. We recruited 152 U.S. residents from Prolific, an online crowdsourcing platform found to provide adequate quality data for psychological research (Peer et al., 2017). Participants signed up for a study on “Societal Beliefs” and were compensated with approximately US\$1. Following our exclusion criteria, we removed one participant for completing less than 50% of the measures and 10 for spending less than 5 seconds reading the manipulation, leaving an effective sample of 141. Demographic information was as follows: 48.2% women; $M_{age} = 33.34$, $SD_{age} = 11.75$; 72.9% White; 50.7% had a Bachelor’s degree or higher; median household income was \$45,001-\$60,000; 69.1% were employed; and 6.4% were union members. Perceived socioeconomic status was near the scale mid-point ($M = 4.99$, $SD = 1.80$). Political orientation was varied: 60.3% liberal, 12.7% moderate, 18.5% conservative, 1.4% libertarian and 7.1% other. See the [Supplementary Materials](#) for study materials, analyses and preregistration.

Procedure

The study was conducted using Qualtrics online software. Participants were randomly assigned to either a moderate or low social mobility condition. In both conditions, participants read real statistics regarding social mobility in America. Next, participants completed the main study measures and a manipulation check. Political orientation was completed among the demographic questions.

Materials

Social Mobility Beliefs Manipulation — To alter mobility beliefs, participants read one of two versions of a report describing the relative likelihood Americans can change their social class (Day & Fiske, 2017). Those in the moderate social mobility condition read a brief excerpt titled, “Movin’ on Up!”, in which statistical information about social classes, e.g., bottom 20%, was framed to suggest that changes in social standing were somewhat likely, e.g., “many of the people at the bottom move up.” Those in the low social mobility condition read similarly worded information, titled “Movin’ on Up?”, but with statistics framed to suggest that changes in social class were unlikely.

Union Knowledge — Participants completed a measure that assessed their understanding of what unions do. They indicated how much they agreed that statements about unions were true, such as, “In general, unions improve and protect the wages of union members” (1 = *strongly disagree*, 7 = *strongly agree*). Although participants rated seven items, we removed two-items because exploratory factor analysis revealed that they poorly related to other items. The remaining items showed conceptual unity and positively correlated with each other (see [Supplementary Materials](#)). We thus created an average index of accurate union knowledge (5-items, $\alpha = .881$).

Subsequent exploratory and confirmatory factor analyses indicated that the five union knowledge items may be accounted by two correlated factors (.590). The first factor reflects *internal* knowledge of how unions may impact union workers (example item above) and the second factor reflects *external* knowledge of how unions may impact society, e.g., “Unions help reduce the income differences between the richest and poorest,” (Factor-1 loadings: .800-.945; Factor-2 loadings: .798-.953). We cautiously approach these factors, in part, as the sample size and pool of items were limited

(Furr, 2017), and model fit was mixed (CFI = .965, RMSEA = .180). However, using the modified measure, all original items or either sub-scale does not affect the study conclusions. We return to this point in the discussion and Study 3. See the Supplemental for factor analyses and suggestions for measure improvement.

Political Orientation — We assessed political orientation in general, fiscally and socially (3-items, $\alpha = .944$), similar to prior research (e.g., Genge & Day, 2021). Responses were indicated along a liberal to conservative scale (1 = *very liberal*, 7 = *very conservative*), with additional responses (for general: 8 = *don't know/not political*, 9 = *libertarian*, 10 = *other*; and for fiscal and social: 8 = *other*).

Pro-Union Attitudes — We assessed general attitudes toward labor unions with a measure that was partly based on previous research (e.g., Furnham, 1984; Getman et al., 1976). Participants indicated their agreement with seven statements such as, “All things considered, workers’ unions are good for society,” (1 = *strongly disagree*, 7 = *strongly agree*). Although the original measure showed some indication of good internal reliability ($\alpha = .926$), based on the reasons outlined below, as well as factor analyses, we removed two items and created an average index of pro-union attitudes (5-items, $\alpha = .925$). Specifically, we removed one item that did not clearly identify unions “I support organizations that protect workers.” For consistency across studies and parsimony, we removed another item not included in Study 2. Exploratory and confirmatory factor analyses supported a single factor solution (Factor loadings: .718-.921; Model fit: CFI = .994, RMSEA = .081). Although this measure was modified, the study conclusions are the same if the original measure was used.

Manipulation Check — To assess the effectiveness of the mobility manipulation we measured participants’ societal social mobility beliefs (Day & Fiske, 2017). Participants responded to statements that reflected beliefs about expected social class change (8-items, $\alpha = .936$). For example, “Many Americans can change their social class,” (1 = *strongly disagree*, 7 = *strongly agree*).

Additional Measures and Demographics — We included several other measures for exploratory analyses. This included a measure of personal relative deprivation (5-items, $\alpha = .842$; Callan et al., 2011), consequential beliefs about inequality (4-items, $\alpha = .921$; Wiwad et al., 2019) and personal social mobility beliefs (8-items, $\alpha = .941$; Day & Fiske, 2017). We also assessed a variety of background factors including gender, age, ethnicity, education (8-levels), household income (12-levels), perceived socioeconomic status (SES, 10-point ladder), employment, and union membership.

Results

We conducted an analysis of variance (ANOVA) to examine whether social mobility beliefs differed between mobility conditions. As expected, social mobility beliefs were significantly higher in the moderate mobility condition ($M = 4.03$, $SD = 1.22$), compared to the low mobility condition ($M = 2.85$, $SD = 1.04$), $F(1,139) = 37.90$, $p < .001$, $d = 1.04$. Next, we conducted an ANOVA to determine whether the two conditions differed in union attitudes. Contrary to our hypothesis, pro-union attitudes in the moderate mobility condition ($M = 5.15$, $SD = 1.42$) did not significantly differ from the low mobility condition ($M = 5.16$, $SD = 1.12$), $F(1,139) = 0.01$, $p = .974$, $d = 0.01$. In other words, despite successfully altering participants’ social mobility beliefs, this factor did not influence union attitudes. Given that this was our first test, we also explored whether an effect of social mobility beliefs on union attitudes may have depended on other factors (i.e., personal relative deprivation, perceived SES, consequential beliefs about inequality). However, none of these factors were significant moderators.

Next, we conducted exploratory analyses (i.e., not preregistered) that examined whether political orientation and union knowledge may help explain pro-union attitudes. To conduct these analyses we excluded participants that reported a political orientation beyond the 7-point liberal-to-conservative scale, leaving an effective sample of 129. Zero-order correlations revealed that lower pro-union attitudes were strongly associated with greater conservative political orientation and less union knowledge (Table 1). We entered these variables as well as the social mobility manipulation factor into a regression with union attitudes as the dependent variable (Table 2). Both conservative political orientation and less union knowledge significantly explained lower pro-union attitudes among the public, but

again, not social mobility beliefs. Although there may be some concern that the strong initial associations among some variables may have affected the pattern of results observed, we did not find suggestive evidence of multicollinearity in these analyses or in Studies 2-3. We also observe lower correlations among these variables in Studies 2-3.

Table 1

Overall Means, Standard Deviations and Correlations, Study 1

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Pro-Union Attitudes	5.23	1.23	–	-.659***	.828***	.030
2. Political Orientation	3.09	1.66		–	.570***	.036
3. Union Knowledge	5.19	0.95			–	-.001
4. Social Mobility Beliefs	0.51	0.50				–

*** $p < .001$.

Table 2

Regression of Primary Predictors on Pro-Union Attitudes, Study 1

Variable	<i>b</i>	<i>SE</i>	<i>b</i> 95% CI	β	<i>t</i>	<i>p</i>
Political Orientation	-.207	.041	[-.288, -.125]	-.280	-5.020	< .001
Union Knowledge	.868	.072	[.725, 1.012]	.668	12.007	< .001
Social Mobility Beliefs	.101	.112	[-.121, .323]	.041	.898	.371
R^2 (adjusted R^2)					.739	(.732)

We also explored whether these factors would predict union attitudes beyond any variance explained by background factors. Thus, we conducted a two-step regression on union attitudes. We entered potentially relevant demographic variables on Step 1: gender (0 = *female*, 1 = *male*), age, ethnicity (0 = *minority group member*, 1 = *majority group member*), education, household income, perceived SES, employment (0 = *not employed*, 1 = *employed*) and union membership (0 = *not union member*, 1 = *union member*). Step 2 included political orientation, union knowledge and social mobility beliefs. Step 2 factors led to a significant increase in variance explained relative to Step 1, $\Delta R^2 = .652$. On step 2, conservative political orientation $\beta = -.274$, $p < .001$, and less union knowledge, $\beta = .658$, $p < .001$, continued to uniquely predict lower pro-union attitudes, but not social mobility beliefs, $\beta = .045$, $p = .380$. Non-union membership also appeared to be associated with lower pro-union attitudes, but this pattern did not reach statistical significance, $\beta = .094$, $p = .057$. We note the union membership association as a similar pattern emerges in Study 3. We also conducted the regression analyses again including only non-union members, with the overall pattern and significance of results being the same. A similar pattern of results also emerges when using either of the union knowledge sub-scales (see Supplementary Materials).

Discussion

Study 1 provided insight into whether several factors explained general union attitudes. Although our manipulation of social mobility beliefs was successful, we did not observe the hypothesized impact on union attitudes. However, in exploratory analyses conservative political orientation and less accurate knowledge of unions' functions uniquely explained lower pro-union attitudes, even when controlling for a variety of background factors. This pattern also emerged when only examining non-union members. While these results are encouraging, our confidence would be increased with replication.

Study 2

In Study 2, we first sought to broaden our understanding of the predictors of general union attitudes and examine the consistency of some of the findings from Study 1. Specifically, Study 2 aims to determine whether prejudice toward union members and meritocratic beliefs relate to union attitudes, and further clarify the roles of political orientation and social mobility beliefs. Study 2 is exploratory and based on a dataset collected concurrently with Study 1. As such, the results of Study 1 were not known during the design of Study 2.

Method

Participants

Responses were based on a sample of 212 Canadian participants recruited from Prolific for prior research (Genge & Day, 2021). The study was titled “Opinions of People and Programs in Canada.” Because of different study goals and restrictions, total participants retained differed slightly from the original preregistered research. One participant chose to have their data removed. We also excluded 21 participants who reported political orientations outside of the 7-point liberal-to-conservative scale, leaving an effective sample of 190. Demographic information was as follows: 48.9% women, $M_{age} = 30.89$, $SD_{age} = 8.95$, 70.0% White; 64.2% Bachelor’s degree or higher; \$60,001-\$80,000 median household income; and 77.4% employed. Perceived socioeconomic status was at the scale middle ($M = 5.03$, $SD = 1.39$) and political orientation was varied: 61.5% liberal, 17.4% moderate and 21.1% conservative. Unlike Studies 1 and 3, union membership was not assessed. See the [Supplementary Materials](#) for additional study details.

Procedure

The study was completed using Qualtrics and included measures of meritocratic beliefs, prejudice towards union members and social mobility beliefs, among measures for other research purposes. The order of the first three variables above was counterbalanced. After, participants completed a measure of union attitudes. Political orientation was reported among the demographic information.

Materials

Meritocratic Beliefs – We assessed beliefs that a person’s successes can be attributed to hard work and talent using a 6-item measure ($\alpha = .887$) based on prior research (Day & Fiske, 2017; Quinn & Crocker, 1999). For example, “Anyone who is willing and able to work hard has a good chance of succeeding” (1 = *strongly disagree*, 7 = *strongly agree*).

Prejudice Feelings Toward Union Members – We assessed prejudiced affect towards union members with the widely used feeling thermometer (Correll et al., 2010). Researchers often measure subtle expressions of prejudice, in part, as the expression of explicit prejudice is rarely acceptable by the public (Meertens & Pettigrew, 1997). Participants provided favorability ratings of how “coldly” or “warmly” they felt towards union members on a scale from 0 = *coldest*, to 100 = *warmest*, with 50 = *neutral* (Haddock et al., 1993). This evaluation was among ratings for 7 additional groups (e.g., teachers, welfare recipients, firefighters). Ratings were reversed-scored such that higher numbers indicated more negative feelings.

The remaining measures were very similar to those in Study 1. Specifically, we used the same 8-item measure of societal social mobility beliefs ($\alpha = .791$) and 3-item measure of political orientation ($\alpha = .901$). Pro-union attitudes was assessed using the same 5-items ($\alpha = .934$) as the modified measure in Study 1.

Demographics – Similar to Study 1, participants provided a variety of background information regarding their gender, age, ethnicity, education, household income, perceived SES and employment status.

Results

Although the original study was preregistered for other research, the analyses reported here are all exploratory. All four predictor variables negatively related to union attitudes, however, the association involving social mobility beliefs was not significant (Table 3). To examine which factors were uniquely related to union attitudes we conducted a linear regression with political orientation, prejudice feelings toward union members, meritocratic beliefs and social mobility beliefs as predictors (Table 4). This analysis revealed that stronger conservative beliefs and prejudice feelings toward union members were significantly related to lower pro-union attitudes. Stronger meritocratic beliefs also appeared to be associated with lower pro-union attitudes, but this pattern did not reach statistical significance. Social mobility beliefs did not significantly relate to union attitudes.

Table 3

Means, Standard Deviations and Correlations Among Main Variables, Study 2

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Pro-Union Attitudes	4.65	1.34	–	-.413***	-.642***	-.244***	-.118
2. Political Orientation	3.12	1.40		–	.376***	.475***	.381***
3. Prejudice Feelings Toward Union Members	37.25	22.08			–	.127	.043
4. Meritocratic Beliefs	4.61	1.20				–	.585***
5. Social Mobility Beliefs	4.01	0.84					–

*** $p < .001$.

Table 4

Regression of Primary Predictors on Union Support, Study 2

Variable	<i>b</i>	<i>SE</i>	<i>b</i> 95% CI	β	<i>t</i>	<i>p</i>
Political Orientation	-.149	.064	[-.276, -.023]	-.156	-2.328	.021
Prejudice Feelings Toward Union Members	-.034	.004	[-.042, -.027]	-.570	-9.664	< .001
Meritocratic Beliefs	-.133	.079	[-.290, .024]	-.119	-1.677	.095
Social Mobility Beliefs	.057	.108	[-.157, .271]	.036	.526	.600
R^2 (Adjusted R^2)					.455	(.443)

As in Study 1, we also examined whether the same variables would relate to union attitudes when controlling for background characteristics. We conducted a two-step regression with union attitudes as the dependent variable. The first step included demographic variables (gender, age, ethnicity, education, income, perceived SES and employment) and on the second step we added the four psychological variables tested above. Compared to the first step, the second step explained significantly more variance, $\Delta R^2 = .441$. On the second step, gender (men) emerged as positively related to union attitudes, $\beta = .118$, $p = .037$. Of the main factors, conservative political orientation, $\beta = -.118$, $p = .099$, showed a slightly weaker, nonsignificant pattern. Prejudice feelings toward union members, $\beta = -.586$, $p < .001$, and meritocratic beliefs, $\beta = -.145$, $p = .050$, predicted lower pro-union attitudes, and social mobility beliefs did not significantly relate, $\beta = .019$, $p = .785$.

Discussion

Consistent with Study 1, we found a relationship between conservative political orientation and lower pro-union attitudes. Unique to Study 2, prejudice feelings toward union members also explained lower union attitudes. These associations were generally robust to the inclusion of several background characteristics (although the role of conservative political orientation was weaker). People's beliefs about merit also related to lower pro-union attitudes, however

this association neared significance only when controlling for background variables, possibly indicating an unreliable relationship. Study 2 also revealed that social mobility beliefs had little relation to union attitudes, as was found in Study 1. Together, experimental and correlational evidence suggests that beliefs about social class change may not be relevant to union attitudes. Gender also emerged as a predictor of union attitudes in Study 2, when controlling for all other variables. However, this association does not appear to be consistent, as it was not observed in Study 1, and does not emerge in Study 3.

A limitation of Study 2 stems from union membership not being assessed. In particular, this may muddle the precise interpretation of the association between prejudice feelings toward union members (i.e., an outgroup assessment) and lower pro-union attitudes. Although Study 1 results were unchanged when only non-union members were examined, to improve our confidence in the above association, Study 3 again tests the role of prejudice in general union attitudes, with union membership among participants known.

Study 3

In our final study, we seek additional evidence about which factors predict union attitudes. Specifically, in a preregistered study with a large sample we test factors found to significantly relate to union attitudes in Studies 1 and 2 (i.e., political orientation, prejudice toward union members, meritocratic beliefs and union knowledge).

To shore up conceptual validity of several main variables, including union attitudes, political orientation, and union knowledge, we also explore whether they relate to two indicators of caring about greater economic equality (i.e., support for income and wealth redistribution).

Method

Participants

A sample of 2000 U.S. residents were recruited from Qualtrics Panel service. Participants were compensated with \$5-15 US for completing four studies designed by different researchers, one of which was our study on “Policy issues.” To meet requirements by one study, the recruited sample was composed of approximately equal White and Black participants. We excluded 28 participants for requesting their data omitted, 116 for failing an attention check, 350 for indicating political orientations beyond our 7-point scale, 16 for skipping a main measure, and 65 for a combination of these reasons, leaving an effective sample of 1425. The exclusion criteria were preregistered, except for omitting a main measure, which was necessary for analyses. Demographic information was as follows: 50.7% women, $M_{age} = 48.54$, $SD_{age} = 16.92$, 51.6% White (47.0% Black); 31.5% Bachelor’s degree or higher, \$30,001-\$45,000 median household income; 53.6% employed, and 12.1% union members. Perceived socioeconomic status was above the scale mid-point ($M = 6.00$, $SD = 2.03$). Political orientation was balanced: 36.9% liberal, 30.5% moderate, 32.6% conservative. See the Supplementary File for study materials and analyses.

Procedure and Materials

Participants completed the study using Qualtrics. This included the key study variables, among other psychological measures, in the following order: meritocratic beliefs, union knowledge, prejudice toward union members, political orientation and union attitudes. Because space was limited, measures were reduced to 2-3 of the same items from Studies 1-2. Items thought to conceptually represent the original measure were selected, with reliability also taken into account. Specifically, we assessed meritocratic beliefs with a 2-item ($r_{SB} = .793$) measure. Union knowledge was initially assessed using a 3-item true vs. false measure (0 = false, 1 = true). However, item 2 showed poor reliability (i.e., negatively related to items 1 and 3), thus the measure was shortened to 2-items ($r_{SB} = .407$). The results were similar when the original 3-item measure or either union knowledge items were used. As in Study 2, prejudice feelings towards union members were assessed using a 100-point warm-cold feeling thermometer. This was embedded among prejudice feelings for three other groups: welfare recipients, college graduates, and music fan club members. As in Studies 1-2, we used the same 3-item ($\alpha = .922$) measure of political orientation, and a reduced 2-item ($r_{SB} = .900$) measure of pro-union

attitudes. Although not preregistered for this study, participants also completed a 2-item measure of support for income redistribution ($r_{SB} = .869$), e.g., “Incomes in this country should be more evenly redistributed,” and a 2-item measure of wealth redistribution focused on the estate tax ($r_{SB} = .769$), e.g., “Do you support the idea of the Estate Tax?” Participants provided demographic information regarding their gender, age, ethnicity, citizenship, country of residence, education, household income, employment, and as in Study 1, union membership.

Results

Correlations between predictor variables and union attitudes generally showed a pattern similar to Studies 1-2, except for meritocratic beliefs, which showed a nonsignificant association (Table 5). There were also notable conceptual associations between predictor variables and support for income and wealth redistribution. For example, stronger pro-union attitudes were positively linked with support for both redistribution measures (i.e., desires for greater economic equality). Union knowledge, which only partly involved inequality content, showed modest positive associations with the redistribution measures, while conservative political orientation negatively correlated with support for both redistribution measures (e.g., Jost et al., 2003).

Table 5

Means, Standard Deviations and Correlations Among Variables, Study 3

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Pro-Union Attitudes	4.71	1.54	–	-.377***	-.532***	.458***	.047	.610***	.414***
2. Political Orientation	3.95	1.69		–	.273***	-.266***	.193***	-.421***	-.312***
3. Prejudice Feelings Toward Union Members	35.21	26.16			–	-.399***	-.039	-.343**	-.267***
4. Union Knowledge	0.72	0.35				–	-.019	.312***	.215***
5. Meritocratic Beliefs	5.66	1.18					–	-.031	-.071**
6. Income Redistribution	4.98	1.61						–	.455***
7. Wealth Redistribution	4.32	1.79							–

** $p < .01$. *** $p < .001$.

As planned, we conducted a multiple regression to determine whether political orientation, prejudice toward union members, meritocratic beliefs and union knowledge uniquely explained union attitudes (Table 6). As predicted, conservative political orientation, $\beta = -.226$, $p < .001$, prejudice feelings toward union members, $\beta = -.367$, $p < .001$, and less union knowledge, $\beta = .253$, $p < .001$, were significantly related to lower pro-union attitudes. Contrary to expectations, meritocratic beliefs appeared to show a small positive (rather than negative) relation with union attitudes, $\beta = .081$, $p < .001$. Given the modest reliability among the two union knowledge items, additional analyses revealed a similar pattern for the main regression results when either item was used to represent union knowledge (e.g., item 1-improving workplace safety ($M = 0.82$, $SD = 0.38$): $\beta = .250$, $p < .001$; item 3-reducing income differences among the rich and poor ($M = 0.61$, $SD = 0.49$): $\beta = .145$, $p < .001$).

Table 6

Regression Analysis of Main Variables on Union Attitudes, Study 3

Variable	<i>b</i>	<i>SE</i>	<i>b</i> 95% CI	β	<i>t</i>	<i>p</i>
Political Orientation	-.206	.020	[-.246, -.166]	-.226	-10.058	< .001
Prejudice Feelings Toward Union Members	-.022	.001	[-.024, -.019]	-.367	-15.983	< .001
Union Knowledge	1.130	.102	[.930, 1.330]	.253	11.091	< .001
Meritocratic Beliefs	.105	.027	[.051, .159]	.081	3.832	< .001
R^2 (Adjusted R^2)					.400	(.398)

Next, we conducted a two-step regression to examine whether these results would be robust to the inclusion of participants' background characteristics. The first step included gender, age, ethnicity, education, household income, perceived socioeconomic status, employment and union membership, and in the second step we added the four main variables. Step 2 factors explained significantly more variance than Step 1 factors, $\Delta R^2 = .330$. On Step 2, conservative political orientation, $\beta = -.185$, $p < .001$, prejudice feelings toward union members, $\beta = -.365$, $p < .001$, less union knowledge, $\beta = .236$, $p < .001$, and weaker meritocratic beliefs, $\beta = .083$, $p < .001$, all significantly predicted lower pro-union attitudes. Of background factors, older age, $\beta = -.129$, $p < .001$, majority group ethnicity, $\beta = -.122$, $p < .001$, and non-union membership, $\beta = .089$, $p < .001$, also significantly explained lower pro-union attitudes. As in Study 1, the overall pattern and significance of results were very similar when we conducted Study 3 regression analyses including only non-union members (see [Supplementary Materials](#)).

Discussion

Findings from Study 3 were mostly consistent with Studies 1 and 2. We found that lower pro-union attitudes were linked to conservative political orientation, prejudice toward union members and less knowledge about the functions of unions. Meritocratic beliefs appeared as a weak predictor of union attitudes. This latter association is doubtful as it only appeared after controlling for the other main predictors and was opposite to the pattern in Study 2. Thus, meritocratic beliefs may not consistently explain union attitudes.

Although most findings were unchanged when controlling for background variables, some participant characteristics were weakly related to union attitudes in Study 3. When controlling for all other variables, older participants held stronger negative union attitudes. Among the young there appears to be recent interest in unions, the labor movement and related activism (Tapia & Turner, 2018), which partly corroborates this finding. Majority group (i.e., White) relative to minority group (i.e., Black) ethnicity also predicted negative union attitudes, which appears to be in line with social dominance orientation (Pratto et al., 1994), including the greater tendency to oppose challenges to equality among advantaged group members (to the extent unions are viewed in such ways) and support them among disadvantaged group members. However, the consistency of the role of age or ethnicity as predictors of union support remains uncertain, as these patterns were not observed in Studies 1 or 2. Additional measures, such as perceived racial discrimination and inclusion (e.g., in union and non-union workplaces) could provide greater insight into these findings. Union membership partly associated with pro-union attitudes, although the overall pattern of findings was unaffected when union members were removed.

Finally, Study 3 provides some indication that unions may be partly perceived as inequality-reducing institutions, supporting the relevance of inequality-related theory and research to the present findings. Specifically, around 60% of participants believed that unions help reduce income inequality (i.e., based on the union knowledge assessment) which was related to their pro-union attitudes. Moreover, caring about economic equality (positive attitudes toward inequality-reducing policies) was also positively associated with pro-union attitudes.

General Discussion

High levels of economic inequality are becoming increasingly apparent. For example, in 2019 the average income of the richest 10% of the population across thirty-seven countries was approximately nine times that of the poorest 10% (OECD, 2019). Although labor unions can have powerful flattening effects on income distribution, much of the American and Canadian public does not think very positively of them. We examined some of the psychological reasons why this may be in the case in three studies, with a focus on factors that consistently and uniquely explained general attitudes toward unions. We found that stronger conservative political orientation, prejudice towards union members and less accurate knowledge of union activities uniquely helped explain negative union attitudes (or in other words, stronger liberal orientation, less prejudice and more accurate knowledge related to positive union attitudes).

These novel findings advance our understanding of the distinct roles of several factors in people's general union attitudes and thus provide critical applied feedback to related theorizing and research. For instance, while political orien-

tation predicted union attitudes consistent with theory and research, including patterns observed for inequality-related attitudes (e.g., Jost et al., 2003), the association was quite modest across studies when other relevant psychological factors were considered. The moderate role of the public's prejudice feelings toward union members in overall union attitudes is also consistent with theories of prejudice and social judgment (e.g., Dovidio, 2001; Fiske, 1998), and research examining inequality policy judgments (e.g., Brown-Iannuzzi et al., 2017). This finding also highlights the importance of the social perceptions of the people that make up unions in understanding general union attitudes. While the association between knowledge of union activities and union attitudes is consistent with attitude theory and related union research (e.g., Ajzen, 2001; Freeman & Medoff, 1979), awareness of relevant information (e.g., regarding inequality) does not always relate to judgments (Kuziemko et al., 2015), which makes such tests necessary in understanding when relevant knowledge may matter.

Unexpectedly, social mobility and meritocratic beliefs did not consistently explain general union attitudes. Critically, this suggests that theories predicting attitudes toward inequality-reducing mechanisms that include beliefs about mobility (e.g., Benabou & Ok, 2001; Kluegel & Smith, 1986) and merit (e.g., Alesina & La Ferrara, 2005; Mijs, 2021), may not extend to attitudes toward unions. While the present research provided some evidence that unions are believed to be associated with reducing income inequality, this association may not be salient or unions may not evoke notions of opportunity or concerns about merit when people evaluate them. Future research could confirm these explanations.

Most of participants' background variables (e.g., perceived SES, education) also did not relate to union attitudes across studies. While union membership showed a reasonably consistent (albeit weak) association with general union attitudes in two studies, importantly, the factors explaining general union attitudes were unchanged when union members were excluded.

Limitations and Future Research

This research is subject to some limitations. Aside from the experimental test of social mobility beliefs in Study 1, we cannot make inferences about causation. Several consistent patterns emerged, but additional investigation would be necessary to determine causality.

Also, as these studies are a starting point in the investigation of predictors of union attitudes, we limited our tests to North American samples. We detected some similarity in findings based on American and Canadian participants. Although we controlled for union membership, these countries differ in overall rates of unionization and other macroeconomic conditions (e.g., inequality), which could be examined in future research. It is difficult to predict when or which tested factors may vary across countries and cultural contexts, in part, because of limited prior research. In one example, general union attitudes related to different dimensions of individualism in Indian as compared to British samples and were not at all explained by cultural collectivism, contrary to expectations (Sarkar & Charlwood, 2014). While the processes underlying prejudice feelings suggest they may partly relate to union attitudes cross-culturally (e.g., Duckitt, 1992), the roles of political orientation and union knowledge in general union attitudes may vary considerably by world region, culture or country. For instance, in some global south countries unions are strongly tied to ruling governments, which can change (Ahlquist, 2017). In other countries, such as Turkey, two dominant but conflicting forms of unions have existed (e.g., business vs. socialist unionism), which may involve knowledge of different union activities and associations with different political orientations (Mello, 2010). Additional cross-cultural research is needed to better ascertain when variations in predictors of union attitudes may occur and why.

There are also limitations to some of our measures. Although prejudice feelings typically associate positively with other prejudice attitudes (Meertens & Pettigrew, 1997), additional indicators could broaden our understanding of the role of prejudice, such as those that assess social evaluation more broadly (Fiske et al., 2007). While accurate knowledge of the function of unions consistently explained union attitudes, even when using separate union knowledge factors (Study 1) or items (Study 3), our confidence in these findings could be bolstered by improving measurement of this construct and testing the findings experimentally as described below.

The present findings also point toward the potential value in how unions are framed and presented to individuals (Gahan & Pekarek, 2013). For example, given the role of people's accurate knowledge of unions' functions, it could be tested whether specifically highlighting certain union goals or functions (e.g., raise wages for workers; reduce

inequality in society) affect union attitudes. Learning how unions affect broader society may be especially persuasive for non-union members of the public that value those outcomes. Although the role of political orientation suggests that people may be motivated to partly protect their general union attitudes (Taber & Lodge, 2006), to appeal to a broader political demographic, it could be examined whether framing unions as longstanding institutions that value workers affects union attitudes (Lammers & Baldwin, 2018). Finally, although prejudice toward union members may be a significant barrier entrenched in society, it may be helpful to dissuade the use of stereotype-confirming union images (e.g., men in traditional blue-collar jobs; Gibney et al., 2018) and examine whether providing individuating information of union members, such as from specific groups (e.g., teachers, nurses), alters union attitudes and related behaviors (Crawford et al., 2011; Shepherd & Campbell, 2020). As noted above, culture may also affect the potential influence of such factors. Although we are encouraged by such possibilities, changes in union attitudes may also depend, in part, on the everyday operations of unions themselves, as well as broader societal and contextual factors. Unions have been going through a period of revitalization (Greenhouse, 2022), but they may benefit from continued improvement.

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Supplementary Materials

The Supplementary Materials contain the following items (for access see [Index of Supplementary Materials](#) below).

- The preregistration protocol for Study 1
- The preregistration protocol for Study 3
- All study materials, as well as additional analyses (e.g., correlations, multiple regressions, exploratory and confirmatory factor analyses), Tables (S1-S27), and Figures (S1-S11) for Studies 1-3

Index of Supplementary Materials

McAleese, O., & Day, M. V. (2019). *Perceived social mobility and union support (#19762)* [Preregistration protocol for Study 1]. AsPredicted. <https://aspredicted.org/e8ei9.pdf>

McAleese, O., & Day, M. V. (2019). *Predictors of broad union support (#27195)* [Preregistration protocol for Study 3]. AsPredicted. <https://aspredicted.org/j9zx8.pdf>

McAleese, O., & Day, M. V. (2022). *Supplementary materials to "Some psychological determinants of broad union attitudes"* [Additional materials, analyses, tables, and figures for Studies 1-3]. PsychOpen GOLD. <https://doi.org/10.23668/psycharchives.8111>

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