

Singapore Management University

## Institutional Knowledge at Singapore Management University

---

Research Collection Lee Kong Chian School Of  
Business

Lee Kong Chian School of Business

---

11-2023

### Going beyond the call of duty under conditions of economic threat: Integrating life history and temporal dilemma perspectives

Nina SIROLA

Singapore Management University, [nsirola@smu.edu.sg](mailto:nsirola@smu.edu.sg)

Follow this and additional works at: [https://ink.library.smu.edu.sg/lkcsb\\_research](https://ink.library.smu.edu.sg/lkcsb_research)



Part of the [Applied Behavior Analysis Commons](#), and the [Organizational Behavior and Theory Commons](#)

---

#### Citation

SIROLA, Nina. Going beyond the call of duty under conditions of economic threat: Integrating life history and temporal dilemma perspectives. (2023). *Organizational Behavior and Human Decision Processes*. 179, 1-16.

Available at: [https://ink.library.smu.edu.sg/lkcsb\\_research/7315](https://ink.library.smu.edu.sg/lkcsb_research/7315)

This Journal Article is brought to you for free and open access by the Lee Kong Chian School of Business at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection Lee Kong Chian School Of Business by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email [cherylds@smu.edu.sg](mailto:cherylds@smu.edu.sg).

# Going beyond the call of duty under conditions of economic threat: Integrating life history and temporal dilemma perspectives

Nina Sirola<sup>1</sup>

Organisational Behaviour & Human Resources, Singapore Management University, Lee Kong Chian School of Business, 50 Stamford Road, Singapore 178899, Singapore

Published in *Organizational Behaviour and Human Decision Processes*, 2023, 179, 104292

DOI: 10.1016/j.obhdp.2023.104292

**Abstract:** Under conditions of economic threat, such as during economic downturns, organizations can benefit from employees' willingness to go beyond the call of duty and engage in organization-directed citizenship behavior (OCBO). Yet, such behavior is discretionary and competes for time with employees' other interests and priorities. I integrate life history theory with the temporal dilemma perspective on organizational citizenship behavior to propose that childhood environments sensitize individuals to prioritize different goals in response to economic threat later in life. Consistent with strategies for responding to threat that are functional in their childhood environments, employees from wealthier backgrounds respond to economic threat by focusing on the future and allocating more time to OCBO, whereas employees from poorer backgrounds exhibit the opposite response. Two pre-registered multi-source field surveys found support for the theory and also showed that the effects of economic threat may lead to a reproduction of childhood inequalities by impacting employees' promotion potential. A pre-registered experiment replicated the effects on future focus and OCBO and found that they can be attenuated through a future focus induction. I discuss implications for research on employee responses to economic threat, influences of early-life conditions on employee psychology and behavior later in life, and organizational dynamics as drivers of inequality.

**Keywords:** Economic threat, Organizational citizenship behavior, OCBO, Life history theory, Temporal dilemma

## 1. Introduction

Under conditions of economic threat, such as during economic downturns, do employees step up and go beyond the call of duty in support of their organization? Such discretionary behavior undertaken by employees is referred to as organizational citizenship behavior directed at the organization (OCBO), and it can make a difference in the functioning of firms and thus their ability to navigate conditions of economic threat (Organ, 1988). For example, employees may voluntarily stay longer at work to manage a higher workload introduced by a crisis, or offer ideas for how the organization could avert threats or realize opportunities presented by the changing conditions (Williams & Anderson, 1991). Given the utility of OCBO to organizations, managers might certainly hope that employees will display higher levels of OCBO when economic threat is salient. At the same time, because OCBO is discretionary, economic threat might motivate employees to focus on other priorities and interests that may compete for time with discretionary engagements at work. I present a novel theoretical model that explains how employees resolve this dilemma, casting economic threat as a broad factor linking early-life conditions and OCBO, with ultimate implications for the reproduction of childhood inequalities.

I draw on life history theory (Ellis and Del Giudice, 2014, Ellis and Del Giudice, 2019), which argues that the strategies people use to respond to conditions of threat in adulthood are conditioned in a functional manner during childhood, similar to the early "critical period" for language acquisition (Belsky et al., 2010, Boyce and Ellis, 2005). This perspective suggests that individuals who spend their childhoods in a poorer (vs. wealthier) environment respond to threat later in life by acting in ways that maximize immediate benefits (vs. future-oriented investments) (Griskevicius et al., 2011, Griskevicius et al., 2013). I integrate life history theory with the temporal dilemma perspective on organizational

---

<sup>1</sup> This research was funded by the Singapore Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 1 grant OR Ref No. 20-C207-SMU-009.

citizenship behavior (OCB), which conceptualizes such behaviors as future-oriented investments benefiting both one's organization and one's career (Joireman et al., 2006, Strobel et al., 2013). I predict that employees will respond to economic threat in ways that are functional in their childhood environments, with employees from wealthier backgrounds responding by focusing on the future and allocating more time to OCBO, and employees from poorer backgrounds exhibiting the opposite response.

I focus on OCBO because it involves support for broader organizational activities and functioning and may as such be particularly relevant in times of economic threat when organizations need to adapt their processes to survive. In addition, OCBO is particularly relevant from the perspective of employees' own careers. Specifically, while other discretionary behaviors, such as interpersonally-directed citizenship behavior (OCBI), can be detrimental to one's success at work (Bergeron, 2007, Bergeron et al., 2011), OCBO tends to be positively associated with promotions (Allen, 2006).<sup>2</sup> Therefore, it is possible that economic threat undermines the promotability of workers from poorer backgrounds through its effect on OCBO, while having the opposite effect for workers from wealthier backgrounds, an effect that would effectively act as a mechanism that amplifies and reproduces childhood inequalities.

I conducted three pre-registered studies to test the life history perspective on economic threat and OCBO (Fig. 1 summarizes the model). Studies 1a and 1b tested the theory in the field using multi-source surveys and two different strategies of proxying economic threat. Study 1a used data on objective levels of economic threat (unemployment rates) across 414 local economic environments in the United States (U.S.). Study 1b used perceptions of economic threat as reported by employees from 93 organizations in India. Both field studies measured leaders' ratings of employees' promotion potential, a key proxy of objective career success (Ng et al., 2005), to test the proposed negative implications for the career outcomes of employees from poorer backgrounds. Study 2 was an experiment among employees in which their perception of economic threat was manipulated. The experiment also included a manipulation designed to attenuate the predicted drop in future focus and OCBO among workers from poorer backgrounds. The manipulation targeted the key identified psychological mechanism of future focus, thereby providing a moderation-of-process test of the mechanism (Spencer et al., 2005) as well as pointing to a way to override the responses to threat conditioned during childhood.

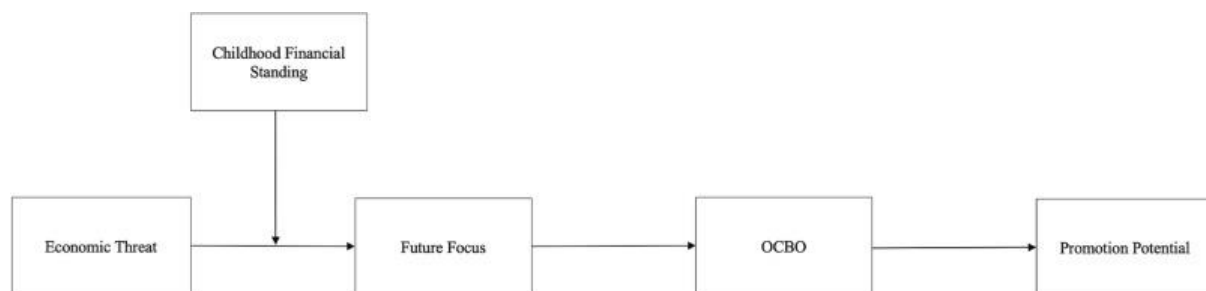


Fig. 1. Conceptual model.

The intended contributions of this work are as follows. I contribute to organizational research on employee responses to economic threat (for reviews, see Bianchi, 2020, Sirola, 2020), which has thus far not investigated how employees' willingness to engage in OCBO is impacted by economic threat, despite the importance of OCBO under such conditions. This body of research has also not considered that the effects of economic threat on individual psychology might be socioeconomically stratified. This insight is important because it means that the broad phenomenon of economic threat may in itself act as a mechanism through which childhood inequalities are reproduced in organizations (Amis et al., 2020). The study of economic threat in conjunction with employee childhood conditions also adds to the research on social class background, which has examined how coming from poorer versus wealthier environments influences whether individuals act in ways that benefit others, finding heterogeneous

<sup>2</sup> As I elaborate in the theory section, another reason for focusing on OCBO rather than OCBI is that OCBO much more clearly fits the temporal dilemma perspective on OCB that I leverage as the theoretical scaffolding for my model.

results (Kraus et al., 2010, Piff et al., 2010, Varnum et al., 2015). I show that the expression of other-oriented tendencies as a function of employee background might fundamentally depend on the salience of economic threat, thereby identifying a novel and broad factor that may shape various other effects of employee background. Finally, this research extends the life history theory literature to the domain of other-benefiting behaviors by refining the conceptualization of the underlying mechanism (temporal focus) and integrating it with the temporal dilemma perspective, as well as by providing one of the first attempts to situationally override and thus regulate the influence of childhood environments on responses to threat later in life.

## 2. Theory

### 2.1. Economic threat, life history, and OCBO

Economic threat, typically proxied by rising unemployment rates and other indicators of declining economic activity (Bureau of Labor Statistics, 2012, Eurofund, 2009), is a common and consequential factor impacting organizations and employees. Most employees experience an economic downturn several times during their careers; an average employee in the U.S., for example, has experienced a recession about every five years over the past century and a half (National Bureau of Economic Research, 2011). For organizations, adverse economic conditions represent a threat to their economic viability due to a host of interrelated factors, such as the tightening of credit conditions, lower demand, and the need to adapt to changing contextual pressures and shocks. For most employees, adverse economic conditions threaten the security and prospects of their current employment and constrain labor market options (Elsby et al., 2010, Hall, 2005, March and Simon, 1958).

To explain how individuals respond to economic threat, I draw on life history theory, an evolutionary framework that explains developmental adaptations to contextual threat (Belsky et al., 1991, Ellis and Del Giudice, 2014, Ellis and Del Giudice, 2019; K. Hill & Kaplan, 1999). Much research in developmental psychology has examined how coming from a poorer versus wealthier family impacts cognitive functioning in adulthood (Duncan et al., 2017, Evans and Schamberg, 2009). Life history theory falls within this line of inquiry, but focuses specifically on how coming from a poorer versus wealthier background shapes people's responses to threat, as opposed to cognitive ability more generally. In contrast to the earlier "deficits" perspectives, which assumed that coming from a poorer family uniformly impairs cognitive functioning (Duncan et al., 2017, Evans, 2004), life history theory suggests that differences in childhood environments sensitize people to respond to threat later in life in ways that are adaptive and functional for the environment they grew up in (Ellis et al., 2020, Frankenhuis and Nettle, 2020).

Coming from a poorer (vs. wealthier) family is associated with more scarcity, also referred to as harshness, and unpredictability. In such environments, it is functional to be maximally attentive to the context, particularly under conditions of threat. The future is less predictable and less certain in harsh (vs. abundant) environments; accordingly, it is functional to cope with situational threat by focusing on the here and now, as opposed to investing in the future. By contrast, in abundant environments, the future is more predictable and more likely to be positive. In such contexts, it is functional to invest in future fitness-maximizing payoffs. When situational threat is salient, people from wealthier families look to and invest in the future, as they are accustomed to adversity passing and their future remaining predictable and positive.

In the early years of development, the stress response system adapts to respond functionally to such differences in the nature of threat occurring in the environment (Del Giudice et al., 2011, McEwen, 2012, Taylor, 2010). Resource-scarce versus resource-abundant environments differentially condition responses to the release of stress hormones (e.g., cortisol) in situations of contextual threat in adulthood (McEwen and Stellar, 1993, Taylor et al., 2004). The conditioning of the stress response system early in life means that those who grew up in poorer versus wealthier families exhibit different responses to threat in adulthood, even if their adult conditions are comparable. Consequently, conditioned responses to threat show some measure of long-term stability, meaning that even people in similar situations (e.g.,

two employees performing the same job and receiving comparable pay) might respond differently to the same type of threat (e.g., news of an economic downturn) as a function of their childhood environment.<sup>3</sup>

A recent body of research in psychology has found support for this perspective. Studies have typically induced economic concerns (vs. no concerns) and observed the implications for decision-making and different types of cognitive performance (see Frankenhuis et al., 2016, Ellis et al., 2020, for reviews of the area). Consistent with the tenets of life history theory—and in contrast to the broad “deficits” notion—participants from poorer (vs. wealthier) backgrounds behave and perform similarly when threat is not induced. However, when economic threat is primed (e.g., by having participants read that the economy is deteriorating), participants from poorer backgrounds show less future-focused responses, for example, in the form of steeper temporal discounting (Griskevicius et al., 2013) and the desire to have children sooner (Griskevicius et al., 2011a). Participants from wealthier backgrounds show the opposite response when threatened, i.e., *more* future-focused tendencies, including a willingness to wait for a greater reward (Griskevicius et al., 2013) and the desire to postpone having children (Griskevicius et al., 2011a). These tendencies emerge regardless of participants’ current financial standing, in line with the idea that such tendencies represent an expression of strategies for responding to threat that are conditioned during childhood.

I integrate life history theory with the temporal dilemma perspective on OCB to construct my model. As illustrated above, psychological research guided by life history theory has relied on laboratory tasks to infer the extent to which people are future-oriented as a function of threat. The organizational literature has proposed a related construct of future “temporal focus,” which concerns the extent to which one is attentive to the future (Shipp & Cole, 2015). The tendency to engage in future-maximizing behaviors, such as delaying gratification, can be conceptualized as reflective of the extent to which one is, in a given moment, psychologically focused on the future. As noted earlier, when exposed to threat, those who experienced poorer childhoods are more likely to engage in different forms of immediate gratification than to make future-oriented investments. The opposite response occurs among those who experienced wealthier childhoods, i.e., they engage less in immediate gratification and more in future-oriented investments. Consequently, for those from wealthier backgrounds, economic threat seems to induce a stronger focus on the future, whereas the opposite is true for those from poorer backgrounds.

The temporal dilemma perspective on OCB (Joireman et al., 2006) highlights the temporal tradeoffs inherent in engaging in OCB. Because OCBO is discretionary, engaging in it represents a choice to invest some of one’s current time and energy to create benefits for the organization. Such organizational benefits can translate into longer term benefits for the self (Allen, 2006), creating a temporal tradeoff between immediate gratification (e.g., enjoying free time) and investment in the future (e.g., attending work above the norm). Joireman et al. (2006) found that people indeed understand OCB as a tradeoff between short-term costs to the self and long-term benefits to both the self and the organization. Given this, we would expect the extent to which a person is focused on the future to predict their willingness to go above and beyond in support of the organization. Research indeed finds that future focus positively predicts OCB (Strobel et al., 2013), as does the parallel construct of concern for future consequences (Joireman et al., 2006).

I thus argue that economic threat will lead to divergent responses in terms of employees making future-oriented investments (i.e., investments that bring long-term benefits) in the form of OCBO, as a function of their childhood background. When exposed to economic threat, those coming from wealthier backgrounds should be more likely to make such future-oriented investments in the form of OCBO, whereas those coming from poorer backgrounds should exhibit the opposite response. The latter group should be more likely to withhold non-discretionary contributions to the organization and instead opt to allocate their time to other priorities and interests.

Note that this argument does not assume that OCBO is motivated only by the prospect of future career benefits or that people always prefer to engage in activities other than OCBO in the short term. OCBO can, in some part, be driven by genuine other-oriented motives (Rioux and Penner, 2001, Takeuchi et al.,

---

<sup>3</sup> In line with the life history perspective, I focus on the role of childhood financial standing given its influence on the early-life sensitization of the stress response system. Current financial standing is treated as a control variable conceptually and analytically. However, in the general discussion, I describe exploratory tests of the role of current financial standing in shaping responses to threat.

2015) and therefore some people might enjoy spending their time engaging in OCBO. Nevertheless, on average, OCBO is seen as a personal cost rather than a benefit, given that it competes for time with other interests a person might have (Joireman et al., 2006). Therefore, the extent to which economic threat motivates employees from wealthier backgrounds to increase future-oriented investments should translate into higher levels of OCBO. Conversely, the extent to which economic threat motivates employees from poorer backgrounds to reduce future-oriented investments (perhaps in favor of interests and activities seen as less of a short-term cost to the self) should translate into lower levels of OCBO. I predict as follows:

### **Hypothesis 1**

*Economic threat is associated with lower (higher) levels of OCBO among workers from poorer (wealthier) backgrounds.*

### **Hypothesis 2**

*Future focus mediates the negative (positive) effect of economic threat on OCBO among workers from poorer (wealthier) backgrounds.*

## **2.2. Implications for promotability**

Although individuals' responses to threat are functional for the (childhood) environment in which those responses were sensitized, they might be "normatively mismatched" (Ellis et al., 2020) with the demands of the individual's current environment. Specifically, lower levels of future focus (and OCBO) resulting from the perception of economic threat among workers from poorer backgrounds might harm workers' own career prospects in the context of modern organizations. Higher levels of OCBO benefit the functioning of teams and organizations and should, as such, be valued by superiors (Podsakoff et al., 2000). Particularly when facing economic threat, a decline in OCBO among some employees might undermine how those employees are perceived by superiors and whether they are considered fit for higher level positions in the organization. Documenting that economic threat has divergent (potentially opposing) effects on the career prospects of employees, in a way that undermines the standing of employees from poorer backgrounds while improving the standing of employees from wealthier backgrounds, would mean that the effect proposed here acts as a mechanism that reproduces childhood inequalities.

To investigate this possibility, I examined the downstream consequences of the proposed interaction effect of economic threat and childhood financial standing on OCBO in the form of promotion potential, a key proxy of career success (Ng et al., 2005). Specifically, I predicted that lower (higher) levels of OCBO arising in response to economic threat among employees from poorer (wealthier) backgrounds would be associated with lower (higher) promotion potential. OCBO is important for organizational functioning, so employees who engage in it are likely to be recognized by higher-ups for their interest and willingness to invest in broader organizational dynamics and organizational success. The key goal of leaders is to secure a high level of contribution to organizational goals on the part of employees (Barnard, 1968, Gouldner, 1959, Selznick, 1948). As such, their assessment of employees' willingness to go above and beyond to support their organization during times of economic threat is likely to influence their assessment of which employees are fit to be promoted to higher level roles. I therefore predict:

### **Hypothesis 3**

*Economic threat undermines (enhances) the promotion potential of employees from poorer (wealthier) backgrounds due to higher (lower) levels of OCBO.*

## **3. Overview of research**

Studies 1a and 1b provided field tests of the theory in two different countries (the U.S. and India), using different operational definitions of economic threat, and documenting implications for promotion potential from a credible source: managers. Managers also provided ratings of employee OCBO to provide a test of the theory using other-report data. I followed the two field studies with an experimental

replication to enhance the internal validity of the conclusions. The study was single-source and was thus not able to test implications for promotability. However, the experimental environment afforded an opportunity to interfere with the proximal psychological mechanism of future focus, and thus to conduct a moderation-of-process test of the mechanism (Spencer et al., 2005). Finally, Study 2 also tested several potential alternative explanations (self-concern, other-orientation, and sense of power), which were suggested in part by the pattern of results observed in the first two studies.

To verify the assumption that managers are able to observe employee OCBO, and thus that they can report on these behaviors in Studies 1a and 1b, as well as that OCBO is likely to matter for promotion potential, I conducted a separate validation study, detailed in Online Supplement A. The validation study found that 1) managers rated OCBO as behaviors that they were generally able to observe, and 2) there was a large correlation between employee self-reported and manager-reported OCBO engaged in by the employee. The validation study also (1) replicated the Joireman et al. (2006) results, indicating that employees understood OCBO as a long-term benefit to the self, and (2) extended the previous results by showing that OCBO was seen as more beneficial to the self than OCBI in the long term. This final validation result suggests that OCBO is particularly relevant from the life history perspective and the focus of this perspective on investments in the future.

All studies were pre-registered and there were no unreported exclusions or additions of cases or variables. The associated Open Science Framework (OSF) webpage ([tinyurl.com/threat-beyond](https://tinyurl.com/threat-beyond); Online Supplement) contains a time-stamped pre-registration of theory and hypotheses. It also contains materials, data, and analysis codes for all the studies.

## 4. Studies 1a and 1b: Field tests

### 4.1. Method

Both field tests involved managers who provided ratings of their subordinates' OCBO and promotion potential. I focused on teams in which subordinates had similar positions, income levels, and responsibilities in the organization. The goal of this sampling strategy was to survey employees who were as similar as possible in terms of their current financial and job situation. This strategy arguably allowed for a conservative test of the notion that the employees would react differently as a function of their childhood conditions in response to economic threat.

Study 1a was conducted in the U.S., which afforded the advantage of having many local economic areas that varied in their economic conditions. This design enabled me to leverage data on economic conditions from official sources as a proxy of economic threat. Study 1b was conducted in India and focused on teams drawn from a diverse range of firms. This design enabled me to use aggregated perceptions of economic threat among team members and leaders as the independent variable. The survey for Study 1b had a longer maximum length than that for Study 1a, which I leveraged to administer longer measures than in Study 1a. The two studies thus provided complementary field tests of the theoretical model.

**Participants and Design. *American sample.*** I recruited managers through ROI Rocket, a firm specialized in assistance with market and academic research, which verifies participants' location and employment status through extensive checks (ROI Rocket, 2022). Because the firm holds data on participant location, I was able to target managers from a wide range of local economic environments in the U.S. to ensure sufficient variation in local economic conditions. Managers were the primary respondents and were paid \$15 per response. I asked them to respond to the survey while at work, using a tablet or laptop. In addition to the self-report component, I requested managers to approach five of their subordinates to ask them to respond to several questions presented on a single page. No information was provided either to the managers or to the subordinates regarding the content of the survey or the study hypotheses to avoid the possibility of self-selection into the survey related to the focal variables. Given the complex design of the survey and the need to keep it as short as possible (as suggested by the data collection firm), I did not measure future focus. Instead, employees responded only to questions asking them about their current and childhood financial standing. The page instructed employees to submit their responses before returning the device to ensure that their responses were not seen by the managers. (The option to move back through the survey was disabled.)

In total, 1,001 managers and 5,005<sup>4</sup> of their subordinates responded to the survey. They came from 46 different U.S. states and 414 different counties. Managers had on average 15.38 years of work experience ( $SD = 8.13$ ) and 9.38 years of tenure in the current firm ( $SD = 6.32$ ); the average age was 43.63 ( $SD = 9.50$ ), and 50.79% were women. The most common jobs performed by their employees included administrative services manager, customer service representative, civil engineer, and software developer.

**Indian sample.** I recruited participants through a firm in India specializing in academic and market research, Maction Consulting. I surveyed three employees and one manager, with each team drawn from a different organization. Participants were approached in major economic centers across India, and the recruitment staff targeted firms from a diverse range of industries and firm sizes. The regional diversity and diversity in terms of industries and firm sizes were meant to ensure sufficient variation between firms and convergence within firms in terms of perceived economic threat relevant to the organization, as viewed by its members. Each participant was surveyed directly, and there were fewer constraints on survey length, which enabled me to use measures that were similar to but longer than those used in the American sample (all detailed in Online Appendix A).

In total, 279<sup>5</sup> subordinates and 93 managers from as many firms responded to the survey. They were paid \$10 per response. Managers had 11.62 years of work experience ( $SD = 6.89$ ) and 4.72 years of tenure in the current firm ( $SD = 2.60$ ); the average age was 43.38 ( $SD = 6.51$ ), and 76.34% were men. Employees had 12.01 years of work experience on average ( $SD = 3.47$ ) and 2.97 years of tenure in the current firm ( $SD = 1.30$ ); the average age was 30.00 ( $SD = 2.43$ ), and 63.80% were men. The gender asymmetry among both managers and subordinates is in line with India's gender gap in the population as well as in the labor force (The World Bank, 2021). The most common jobs performed by employees included financial manager, loan officer, sales manager, and software developer.

Measures. Online Appendix A contains details of all the measures.

**Economic threat.** Participants in both samples were asked to keep in mind the economic context that was most relevant to their individual organization and their employees. In the Indian sample, both employees and managers responded to a six-item measure of perceived economic threat adapted from previous work (Sirola & Pitesa, 2017). Sample items are: "The state of the economy is bad," and "An economic recession is likely" ( $\alpha = 0.87$ ) (see Online Appendix A). In the American sample, managers were asked to indicate the ZIP code of their organization or, alternatively, the economic environment they believed to be most relevant in terms of its influence on the firm and its employees. I then extracted data on objective levels of economic threat from official sources (U.S. Bureau of Labor Statistics, 2021). The proxy of economic threat was local area unemployment, which is a standard proxy of contextual economic threat that has been widely used in organizational research (Bianchi, 2013, Sirola and Pitesa, 2017), as well as in other disciplines, such as economics (Kahn, 2010) and psychology (Bianchi et al., 2018; S. E. Hill et al., 2012). The key advantage of this proxy is that it is a salient feature of the economic context that individuals tend to be aware of, so it can reasonably be expected to impact their psychology (Bianchi et al., 2018).

**Employee childhood and current financial standing.** In the U.S. sample, I administered three-item measures used in the majority of previous studies guided by life history theory (Griskevicius et al., 2011, Griskevicius et al., 2011). The measure of current financial standing served as a control variable to isolate the effects of childhood financial standing. Sample items of childhood financial standing are: "My family didn't worry too much about paying our bills," and "I felt relatively wealthy compared to the other kids in my school" ( $\alpha > 0.88$ ). Sample items of current financial standing are: "I live in a relatively

---

<sup>4</sup> In all three studies, the final sample size surpassed the pre-registered target sample size because of over-sampling by the data collection firm. I retained all responses. No cases were added, and all data collection was completed at one time before any analyses took place. There were several minor technical deviations in the design of Study 1a relative to the pre-registration (e.g., five subordinates per manager instead of the pre-registered four), all of which were introduced before the beginning of the data collection. There were no deviations from the pre-registrations of Studies 1b and 2.

<sup>5</sup> The Study 1a sample is noticeably larger than the Study 1b sample. The reason is that Study 1a's operationalization (unemployment) was relatively distal and required a large number of level-2 (county) units for proper analysis (see the Study 1 Results and Discussion section). By contrast, Study 1b's operationalization of economic threat involved participants' own perception of economic threat, which is arguably a much more direct way of capturing economic threat as it impacts the participants psychologically.



wealthy neighborhood,” and “I feel relatively wealthy compared to others my age” ( $\alpha > .83$ ). In the Indian sample, I added two similar items to each measure, as detailed in Online Appendix A.

The measure of childhood financial standing was appropriate from a conceptual standpoint in the sense that the “items provide an objective measure of developmental stress (e.g., one’s definition of what it means to have gone through hard times is open to interpretation)” (S. E. Hill et al., 2013, p. 893). Research has also found “a strong link between adults’ retrospectively reported and actual SES [socioeconomic status] in childhood” (S. E. Hill et al., 2016, Cohen et al., 2010, Duncan et al., 2010). To further evaluate the validity of the measure, I conducted a separate pre-registered scale validation study in both the U.S. and India (Online Supplement B). This study found evidence of convergent validity of the focal measures relative to a range of established measures of past and current financial standing.

**Future focus measure.** As noted earlier, future focus was only measured in the Indian sample, using a six-item measure of future focus by Shipp, Edwards, and Lambert (2009). Sample items are: “I think about times to come,” and “I think about what my future has in store” ( $\alpha = 0.92$ ).

**Manager-rated OCBO.** In both samples, OCBO was measured the same way as in Allen (2006). This involved a seven-item measure of OCBO developed by Williams and Anderson (1991), supplemented by two items developed by Allen (2006). Sample items are: “Attend functions not required by company management, but which help the company’s overall image,” and “Make suggestions to improve the overall quality of the department.” The measure was internally consistent ( $\alpha > 0.79$ ).

**Manager-rated employee promotion potential.** In line with previous studies (Allen and Rush, 1998, Heilman and Chen, 2005), I asked managers in the American sample to indicate the extent to which they would recommend their subordinates for (1) a promotion and (2) a high-profile project ( $\alpha = 0.87$ ). In the Indian sample, three similar items were again added, as detailed in Online Appendix A ( $\alpha = 0.89$ ).

**Controls.** In both samples, I controlled for employee current financial standing to isolate the effects of childhood financial standing, in line with previous life history research. In addition, to account for potential differences in the types of work that workers from poorer versus wealthier backgrounds were engaged in, managers in both samples reported their industry based on the North American Industry Classification System (NAICS; NIOSH, 2020), which enabled me to control for industry fixed effects. Managers then reported the specific type of work the team was engaged in using the Occupational Information Network (O\*NET) classification developed by the U.S. Department of Labor (National Center for O\*NET Development, 2022c). O\*NET contains “hundreds of standardized and occupation-specific descriptors on almost 1,000 occupations” (National Center for O\*NET Development, 2022a). These data are generated based on surveys of large and representative samples of workers across occupations. Standard measures are used to gauge different aspects of work performed in different occupations (questionnaires can be accessed at National Center for O\*NET Development, 2022b).

I extracted data from O\*NET on key interpersonal and structural factors that characterize the given type of work and that could be relevant to whether employees engage in OCBO. These data can be extracted directly from the O\*NET webpage ([www.onetonline.org](http://www.onetonline.org)) and I used the job classification codes obtained by surveying supervisors to assign values for the relevant variables to each work team. I extracted data on the intensity of social contact among team members, level of interdependence within the team, team member job autonomy, competition among employees, time pressure, and job security—all factors that could conceivably shape the motivation and opportunities for engaging in OCBO (e.g., Cropanzano et al., 2003, Eatough et al., 2011, Randall et al., 1999). Finally, in Study 1b, I recorded data on employee age, gender, and education (based on the classification by United States Census Bureau, 2022) as controls, as these factors could impact how strongly a person’s behavior in adulthood is affected by his or her childhood experiences. For both samples, the results hold with and without controls.

Tables 1a and 1b contain details of the study variables for both samples.

Table 1. a Study 1a: variable summaries and correlations. Table 1b Study 1b (Indian Sample): variable summaries and correlations.

	M	SD	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.
Level 1													
1. OCBO	3.67	0.73	1.00	5.00									
2. Promotion Potential	3.69	1.08	1.00	5.00	0.50								
3. Childhood Financial Standing	3.27	1.16	1.00	5.00	-0.01	0.27							
4. Current Financial Standing	3.63	0.98	1.00	5.00	0.16	0.25	0.53						
5. Contact	4.44	0.39	2.58	5.00	0.08	-0.02	-0.10	-0.05					
6. Interdependence	3.35	0.64	1.54	4.79	0.02	0.04	0.07	0.05	0.18				
7. Autonomy	4.05	0.43	2.79	4.96	-0.01	0.07	0.11	0.09	0.03	0.43			
8. Competition	3.15	0.57	1.26	4.71	-0.07	0.07	0.11	0.06	-0.02	0.10	0.22		
9. Time Pressure	3.85	0.44	1.75	4.92	-0.01	-0.02	-0.01	0.01	0.16	0.21	0.10	0.23	
10. Job Security	4.29	1.24	1.50	6.50	0.01	0.11	0.15	0.12	-0.06	0.40	0.54	0.45	0.08
Level 2													
1. Economic Threat	3.75	1.09	1.90	16.60									

	M	SD	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Level 1																	
1. OCBO	3.59	0.90	1.11	5.00													
2. Future Focus	2.94	1.13	1.00	5.00	0.26												
3. Promotion Potential	3.55	1.00	1.00	5.00	0.64	0.33											
4. Childhood Financial Standing	3.20	1.05	1.00	4.80	0.07	0.05	0.05										
5. Current Financial Standing	3.51	1.10	1.40	5.00	0.12	-0.07	0.14	0.07									
6. Contact	4.42	0.36	3.70	4.96	-0.12	-0.01	-0.10	-0.06	-0.03								
7. Interdependence	3.04	0.51	2.14	4.55	-0.09	-0.05	0.01	0.07	0.10	-0.18							
8. Autonomy	4.21	0.36	3.24	4.82	0.13	-0.06	0.07	0.00	0.02	0.10	0.07						
9. Competition	3.62	0.54	2.41	4.50	0.16	0.03	0.04	-0.01	-0.12	0.10	-0.57	0.18					
10. Time Pressure	4.03	0.33	3.39	5.00	0.01	0.02	-0.02	-0.13	-0.09	0.10	-0.24	0.31	0.46				
11. Job Security	4.77	0.67	2.83	6.00	0.10	0.00	0.06	0.08	-0.02	-0.23	0.05	0.20	0.33	0.03			
12. Age	29.92	2.39	26.00	37.00	0.03	-0.06	0.01	0.04	0.03	0.07	-0.07	0.18	0.01	-0.01	-0.09		
13. Male	0.63	0.48	0.00	1.00	0.06	0.15	0.04	-0.04	-0.06	-0.11	0.14	-0.07	-0.22	-0.13	-0.05	0.06	
14. Education	2.39	0.49	2.00	3.00	-0.03	-0.02	0.00	0.13	0.11	-0.05	0.06	0.13	-0.17	-0.01	-0.07	0.34	0.04
Level 2																	
1. Economic Threat	2.93	0.96	1.67	4.42													

Note.  $N = 5,005$ . Correlations above  $|0.02|$  are significant at  $p < .05$ .

Note.  $N = 267$ . Correlations above  $|0.12|$  are significant at  $p < .05$ .

## 4.2. Results and discussion

Throughout the paper, I report unstandardized coefficients as measures of effect direction and size (Pek & Flora, 2018), along with standard errors and  $p$ -values. In addition, the tables report  $R^2$  and incremental  $R^2$  for all models.

### Hypothesis 1

**Test. American sample.** The data came from a wide range of local economic areas (counties) and thus had a clustered structure with a varying number of respondents per cluster ( $M = 12.09$ ,  $SD = 28.03$ ). McNeish (2014: 651) noted that “sparse clustered data do not seem to present too many issues from a parameter estimate bias perspective when there are a reasonable number of clusters and most clusters have multiple observations.” The American sample was distributed across 414 clusters, above the threshold of 50 (McNeish, 2014). Given the clustered nature of the data and the significant between-cluster variance in the outcome variable ( $ICC = 0.21$ ,  $p < .001$ ), multilevel modeling was used (McNeish, 2014). Because the focal interaction between economic threat and employee childhood financial standing is a cross-level interaction, employee background was group-mean centered (Enders and Tofghi, 2007, Hofmann and Gavin, 1998).

Table 2 presents the results, showing that economic threat interacted with employee childhood environment in predicting OCBO ( $b = 0.05$ ,  $SE = 0.01$ ,  $p < .001$ ). The interaction is displayed in Fig. 2, using the Johnson-Neyman “floodlight” approach to visualize the effect of economic threat across the range of participant childhood financial standing (Carden et al., 2017, Spiller et al., 2013). The pattern of the interaction was such that higher levels of economic threat (higher unemployment rates) were linked to lower levels of OCBO among workers from poorer<sup>6</sup> backgrounds ( $b = -0.14$ ,  $SE = 0.04$ ,  $p < .001$ ), but higher levels of OCBO among workers from wealthier backgrounds ( $b = 0.17$ ,  $SE = 0.04$ ,  $p < .001$ ; see Table 3 for all marginal means). Hypothesis 1 is thus supported.

<sup>6</sup> To provide a conventional reporting of simple slopes of economic threat at illustrative high vs. low levels of participant childhood financial standing in the text, I report simple slopes probed at the lowest (1) versus highest (5) levels of childhood financial standing. This is the appropriate theory testing approach because evidence for the hypothesized crossover interaction is obtained if the effect of economic threat reverses at any level of the moderator variable (childhood financial standing). That is, I had no predictions as to the specific point of employee childhood financial standing at which the effect of economic threat would reverse. The interaction figures additionally depict simple slopes across the entire range of the moderator variable.

Table 2. Studies 1a and 1b: regression analyses results.

	Model 1: OCBO (U.S. Sample)		Model 2: Promotion Potential (U.S. Sample)		Model 3: OCBO (Indian Sample)		Model 4: Future Focus (Indian Sample)		Model 5: OCBO (Indian Sample)		Model 6: Promotion Potential (Indian Sample)	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Constant	3.25***	0.22	-0.51*	0.28	3.86**	1.95	2.64	2.21	3.35*	1.98	0.00	1.56
Current Financial Standing	0.12***	0.01	0.14***	0.01	0.09*	0.05	-0.06	0.06	0.10**	0.05	0.07*	0.04
Contact	0.06	0.03	0.06	0.04	-0.28	0.2	0.29	0.23	-0.34	0.21	-0.01	0.16
Interdependence	0.01	0.02	-0.04	0.03	-0.27	0.17	-0.06	0.19	-0.26	0.17	0.07	0.13
Autonomy	-0.08**	0.03	0.14***	0.04	0.44**	0.21	-0.41*	0.23	0.53**	0.21	-0.01	0.16
Competition	-0.04	0.03	0.09***	0.03	0.21	0.22	0.22	0.24	0.16	0.22	-0.08	0.17
Time Pressure	-0.01	0.03	-0.12***	0.04	-0.25	0.36	0.25	0.4	-0.31	0.37	-0.02	0.28
Job Security	0.00	0.01	0.04**	0.02	-0.04	0.13	-0.09	0.14	-0.03	0.13	0.04	0.10
Age					0.00	0.02	-0.03	0.03	0.01	0.02	0.01	0.02
Male					0.25**	0.11	0.44***	0.14	0.15	0.11	-0.09	0.10
Education					-0.14	0.14	0.03	0.16	-0.15	0.14	0.09	0.11
Economic Threat (A)	0.02	0.02	0.02	0.02	0.07	0.07	0.14*	0.08	0.04	0.07	0.11*	0.06
Childhood Financial Standing (B)	-0.21***	0.04	-0.05	0.05	-0.60***	0.19	-0.81***	0.27	-0.43**	0.19	-0.19	0.19
A × B	0.05***	0.01	0.01	0.01	0.22***	0.06	0.36***	0.09	0.14**	0.06	0.03	0.06
OCBO			0.81***	0.02							0.65***	0.06
Future Focus									0.21***	0.04	0.17***	0.04
N	5,005		5,005		267		267		267		267	
R <sup>2</sup>	0.060		0.080		0.133		0.067		0.133		0.103	
ΔR <sup>2</sup>	0.006		0.224		0.035		0.089		0.080		0.766	

Note. Multilevel regression analyses with cases nested under county (Study 1a) or firm (Study 1b) are reported. All analyses control for industry fixed effects. I calculated R<sup>2</sup> as a squared correlation between observed and predicted values (Zheng & Agresti, 2000). ΔR<sup>2</sup> is relative to a model with only controls included. \*\*\* p < .01, \*\* p < .05, \* p < .1.

Fig. 2. Study 1a: simple slope of economic threat in predicting OCBO.

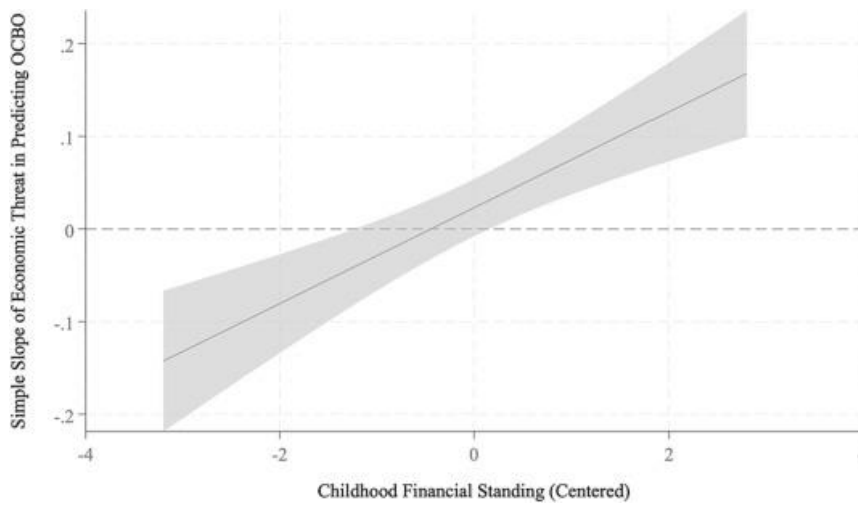


Table 3. Marginal Means of OCBO Across Studies.

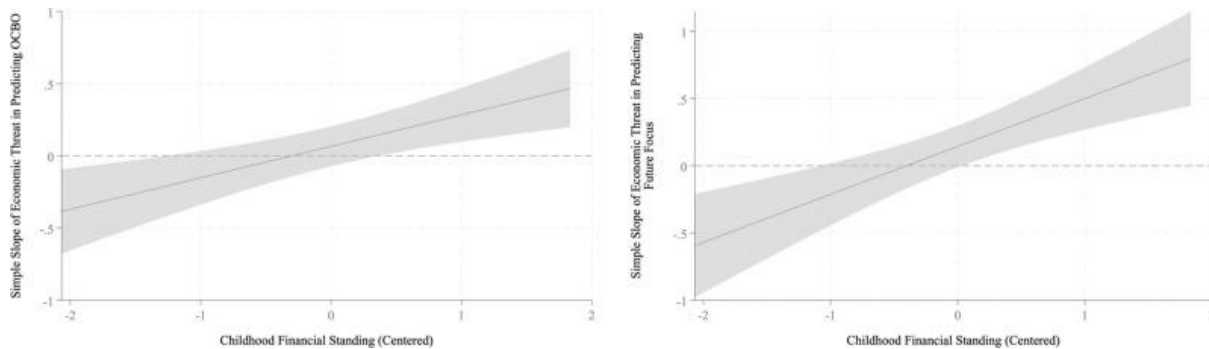
Economic Threat	Childhood Financial Standing	Study 1a		Study 1b		Study 2		M	SE	
		M	SE	M	SE	M	SE			
Low	Low	3.90	0.06	3.87	0.20	Baseline	3.74	0.07	3.71	0.07
Low	High	3.46	0.05	3.21	0.18	Future Focus Induced	3.52	0.08	3.75	0.08
High	Low	3.59	0.06	3.12	0.20		3.49	0.07	3.99	0.07
High	High	3.84	0.06	4.12	0.18		3.99	0.08	4.00	0.08

In addition, although not directly relevant to my hypotheses, I note an interesting pattern of simple effects of employee childhood financial standing. Specifically, when economic threat was at its lowest point, employees from *poorer* backgrounds opted for higher levels of OCBO ( $b = -0.11$ ,  $SE = 0.02$ ,  $p < .001$ ). With increasing levels of threat, however, the effect reversed, and at the highest levels of economic threat, employees from *wealthier* backgrounds opted for markedly higher levels of OCBO ( $b = 0.65$ ,  $SE = 0.14$ ,  $p < .001$ ). The simple effect at low levels of threat may perhaps be understood in light of research suggesting that individuals who grew up in lower income communities have a higher

general other-orientation (Kraus et al., 2010, Piff et al., 2010, Varnum et al., 2015). However, it seems that the higher other-orientation of workers from poorer backgrounds can only manifest itself when economic threat is low.

**Indian sample.** I aggregated the perception of economic threat by employees and their supervisors. There was high convergence in their perception of threat ( $ICC = 0.86$ ), which suggests that the (shared) perception was likely based on some jointly perceived features of their economic environment and the perceived impact on their firm. Data were nested within firms and again exhibited a significant between-cluster variance in the outcome variable ( $ICC = 0.22, p < .001$ ). Therefore, multilevel modeling was used for this sample as well. Table 2 presents the results and shows that the results were comparable to those obtained in the American sample. Perceived economic threat interacted with employee childhood financial standing in predicting OCBO ( $b = 0.22, SE = 0.06, p = .001$ ; see Fig. 3, left), such that higher levels of perceived economic threat were linked to lower levels of OCBO among workers from poorer backgrounds ( $b = -0.39, SE = 0.15, p = .010$ ), but higher levels of OCBO among workers from wealthier backgrounds ( $b = 0.47, SE = 0.14, p = .001$ ). Hypothesis 1 is thus supported in both samples.

Fig. 3. Study 1b: simple slope of economic threat in predicting OCBO (Left) and Future Focus (Right).



Looking at the simple effects of employee childhood financial standing, I note that, as in the American sample, employees from poorer backgrounds exhibited higher levels of OCBO when threat was at its lowest level ( $b = -0.23, SE = 0.10, p = .018$ ), but the effect reversed with increasing levels of threat. At the highest levels of economic threat, employees from wealthier backgrounds exhibited higher levels of OCBO ( $b = 0.37, SE = 0.11, p = .001$ ). These findings indicate that workers from poorer backgrounds are more other-oriented when economic threat is low, but rising economic threat overrides this tendency.

## Hypothesis 2

**Test.** As noted earlier, Hypothesis 2 was tested in the Indian sample only. Table 2 presents the results. Perceived economic threat interacted with employee childhood financial standing in predicting future focus ( $b = 0.36, SE = 0.09, p < .001$ ; see Fig. 3 for the interaction). Higher perceived economic threat predicted lower future focus among workers from poorer backgrounds ( $b = -0.59, SE = 0.20, p = .003$ ), but had the opposite effect among workers from wealthier backgrounds ( $b = 0.81, SE = 0.18, p < .001$ ). Furthermore, future focus was positively associated with OCBO ( $b = 0.21, SE = 0.04, p < .001$ ). I computed bootstrap bias-corrected confidence intervals (5,000 samples) of the indirect effect of economic threat on OCBO via future focus at high versus low levels of participant childhood financial standing. Among employees from poorer backgrounds, there was a significant negative indirect effect of perceived economic threat on OCBO through lower future focus ( $b = -0.14, CI_{95\%}: -0.27, -0.01$ ), while among employees from wealthier backgrounds, the indirect effect was positive ( $b = 0.20, CI_{95\%}: 0.01, 0.32$ ). Hypothesis 2 is supported.

## Hypothesis 3

**Test. American sample.** OCBO positively and strongly predicted manager-rated promotion potential ( $b = 0.82, SE = 0.02, p < .001$ ). Using the same indirect effect testing procedure, I found a significant negative indirect effect of perceived economic threat on promotion potential via OCBO among workers from poorer backgrounds ( $b = -0.13, CI_{95\%}: -0.22, -0.02$ ) and a significant positive effect among workers from wealthier backgrounds ( $b = 0.16, CI_{95\%}: 0.07, 0.23$ ). Hypothesis 3 is supported.

**Indian sample.** In the Indian sample, OCBO also positively and strongly predicted manager-rated promotion potential ( $b = 0.65$ ,  $SE = 0.06$ ,  $p < .001$ ). There was a negative indirect effect of perceived economic threat on promotion potential via future focus and OCBO among workers from poorer backgrounds ( $b = -0.09$ ,  $CI_{95\%}: -0.22, -0.02$ ) and a significant positive effect among workers from wealthier backgrounds ( $b = 0.13$ ,  $CI_{95\%}: 0.03, 0.27$ ). Hypothesis 3 is thus supported in both samples.

## 5. Study 2: Experiment

Study 2 used an experimental approach to test how perceived economic threat impacts OCBO, whether future temporal focus mediates the effect, and whether inducing future focus can attenuate the effect. This approach strengthened the internal validity of the findings, given the random assignment of participants to the economic threat and future focus conditions. In effect, by testing whether inducing future focus attenuates the drop in OCBO among workers from poorer backgrounds, the study provided an experimental moderation-of-process test of the mechanism (Spencer et al., 2005).

I also leveraged this study to explore several potential alternative explanations: self-concern, other-orientation, and sense of power. Studies 1a and 1b documented higher levels of OCBO among employees from poorer backgrounds when threat was at its lowest level. This is in line with research suggesting that individuals who grew up poorer have higher other-orientation (Kraus et al., 2010, Piff et al., 2010, Varnum et al., 2015). I examined the possibility that economic threat impacts OCBO by reducing the otherwise high other-orientation of employees from poorer backgrounds and increasing their self-concern. I therefore measured self-concern and other-orientation as potential alternative mediators to provide a more stringent test of the role of future focus.

I also entertained the possibility that individual differences in sense of power might act as a proximal mechanism explaining the interactive role of childhood financial standing in the effect of economic threat on future focus and OCBO. Specifically, it is possible that those who grew up wealthier (vs. poorer) have a higher long-term sense of power. This possibility is suggested by research linking people's social class to their long-term sense of control over their environment (Kraus et al., 2009), a construct similar to sense of power (commonly defined as control over valued outcomes; Emerson, 1962, Thibaut and Kelley, 1959). Sense of power may potentially buffer individuals from the experience of threat, explaining employees' differential responses as a function of their childhood background. This possibility is also suggested by the research linking sense of power and construal level, which is related to future focus (Magee and Smith, 2013, Smith and Trope, 2006). Consequently, I explored whether differences in chronic sense of power (which may co-vary with childhood financial standing) act as a potential proximal psychological agent, differentially shaping the effects of economic threat on future focus and OCBO among employees from high versus low childhood financial standing.

### 5.1. Method

**Participants and Design.** The sample consisted of 1,711 full-time employees based in the U.S., recruited through Qualtrics Panels ( $M_{age} = 39.40$ ,  $SD_{age} = 13.15$ ; 50.20% female). They were paid \$7.50 per response. I consulted previous studies using a similar manipulation (e.g., Butz and Yogeewaran, 2011, Cohn et al., 2015, Griskevicius et al., 2013) and heuristically opted for a larger target sample size (400 participants per cell) to enhance the precision of estimates and minimize both error types (Button et al., 2013, Simmons, 2013). Participants occupied a diverse array of jobs, the most common ones being customer service representative, construction manager, retail salesperson, and administrative services manager. Participants were randomly assigned to the conditions of a 2 (economic threat: high vs. low)  $\times$  2 (future focus induced vs. baseline) between-subjects experiment.

**Procedure and Materials.** Participants first responded to measures of individual differences, including measures of occupation, age, and education, which were the same as in Study 1b and again served as controls. I also measured race, given its potential association with childhood financial standing (see Online Appendix A). These were followed by measures of childhood and current financial standing and chronic sense of power.

**Childhood and current financial standing.** The same five items for each of the two measures were used as in Study 1b. In addition, following previous life history research (Griskevicius et al., 2013;

e.g., Griskevicius et al., 2011b), I asked participants to report their estimated yearly childhood family income, as well as their current family income. They chose one of 12 options, starting from \$10,000 or less, and ending with more than \$150,000. I found high convergence between income estimates and self-report items (standardized;  $\alpha_{\text{childhood}} = 0.87$ ,  $\alpha_{\text{current}} = 0.86$ ), justifying their aggregation and providing additional evidence of the convergent validity of the items used in Studies 1a and 1b.

**Sense of power.** I asked participants to report how much power they had, using a nine-item measure by Anderson et al. (2012). Sample items are: “In my relationships with others I can get them to listen to what I say,” and “In my relationships with others my wishes do not carry much weight” ( $\alpha = 0.69$ ). After responding to these measures of individual differences, participants were randomly assigned to read about the state of the economy.

**State of the economy manipulation and manipulation check.** The manipulation was similar to the manipulations employed in previous life history research (Griskevicius et al., 2013; S. E. Hill et al., 2012) and in line with how individual reactions to economic threat have been manipulated in previous studies in economics, psychology, and organizational behavior (Cohn et al., 2015, Fisman et al., 2015, Griskevicius et al., 2013; S. E. Hill et al., 2012, Sirola and Pitesa, 2017). Specifically, I randomly assigned participants to read a purportedly real newspaper article that described the prospects of the U.S. economy either favorably or unfavorably. I was able to rely on real facts and analyses to manipulate participants’ perceptions, thereby enhancing the credibility and effectiveness of the manipulation. This approach was considered particularly appropriate at the time, as concerns were being voiced that voters’ perceptions of the economy could be too easily manipulated with “news” that was not real (Qiu, 2024, Rodriguez et al., 2022). Online Appendix B contains the articles.

As a manipulation check, I used a three-item measure of perceived economic threat from previous research (Sirola & Pitesa, 2017), containing three items. Sample items are: “The state of the economy is bad,” and “An economic recession is likely” ( $\alpha = 0.89$ ).

**Future focus induction.** In the future focus induction condition, I administered an induction taken from previous work (e.g., Chiu, 2012, Cojuharenco et al., 2011, Förster et al., 2004, Liberman and Förster, 2009). Participants were asked to briefly imagine and write about their life one or two years later. Participants in the baseline condition were given the opportunity to write about anything that came to mind.

**Future focus measure.** Participants next responded to the same measure of future focus administered in Study 1b ( $\alpha = 0.92$ ).

**Self-concern and other-orientation measures.** I administered measures of self-concern and other-orientation (three items each) by De Dreu and Nauta (2009). Sample items for self-concern are: “At work I am concerned about my own needs and interests,” and “At work my personal goals and aspirations are important to me” ( $\alpha = 0.74$ ). Sample items for other-orientation are: “At work I am concerned about the needs and interests of others such as my colleagues,” and “At work the goals and aspirations of colleagues are important to me” ( $\alpha = 0.85$ ).

**OCBO.** Next, I measured how willing participants would be to engage in OCBO using the same measure as in Studies 1a and 1b ( $\alpha = 0.75$ ) but asking participants about their own willingness to engage in the described behaviors.

**Controls.** The same control variables were included as in Study 1a: industry fixed effects, employee social contact, interdependence, job autonomy, competition, time pressure, job security, age, and education. In addition, I controlled for participant race using the U.S. Census Bureau (2023) classification. The results hold with and without controls.

Table 4 contains details of the study variables.

Table 4. Study 2: variable summaries and correlations.

	M	SD	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Threat Manipulation	0.51	0.50	0.00	1.00														
2. Future Focus Manipulation	0.51	0.50	0.00	1.00	0.01													
2. OCBO	3.78	0.71	1.44	5.00	0.11	0.14												
3. Future focus	4.15	0.83	1.00	5.00	0.05	0.23	0.45											
4. Childhood Financial Standing	0.00	0.78	-1.38	1.67	0.01	-0.04	0.02	0.16										
5. Current Financial Standing	0.00	0.78	-1.51	1.62	0.01	-0.05	0.06	0.18	0.53									
6. Contact	4.50	0.38	2.74	5.00	0.02	0.00	0.05	0.02	-0.01	-0.03								
7. Interdependence	3.26	0.67	1.54	4.79	-0.05	-0.01	0.03	0.01	0.10	0.14	0.17							
8. Autonomy	4.04	0.46	2.45	4.96	0.00	-0.02	0.05	0.00	0.13	0.16	-0.04	0.33						
9. Competition	3.09	0.60	1.26	4.70	0.03	-0.02	0.04	0.02	0.10	0.14	0.13	0.27	0.21					
10. Time Pressure	3.83	0.51	1.75	4.85	0.01	-0.01	0.03	0.02	0.02	0.07	0.05	0.34	0.12	0.32				
11. Job Security	3.92	1.26	1.50	6.50	0.00	-0.02	0.07	0.04	0.19	0.28	0.02	0.43	0.54	0.51	0.25			
12. Age	39.40	13.15	18.00	80.00	-0.01	0.02	0.20	0.03	-0.11	-0.08	0.04	0.07	0.02	0.05	0.11	0.06		
13. Male	0.50	0.50	0.00	1.00	-0.01	-0.03	-0.06	-0.02	0.11	0.15	-0.11	0.12	0.04	0.14	0.07	0.09	0.17	
14. Education	1.77	0.84	1.00	4.00	0.03	-0.04	-0.07	0.00	0.29	0.37	-0.06	0.06	0.19	0.09	0.03	0.26	-0.02	0.08

Note.  $N = 1,711$ . Correlations of  $|0.05|$  or above are significant at  $p < .05$  except for correlation pairs 1-7, 2-5, and 9-12, which are not significant and are rounded up from values of  $-0.047$  or lower.

## 5.2. Results and discussion

I used ordinary least squares (OLS) regression for the analyses.

**Manipulation Checks.** Participants in the high threat condition reported that the economy was in a worse state ( $M = 3.83$ ,  $SD = 1.00$ ) compared to participants in the low threat condition ( $M = 3.21$ ,  $SD = 1.18$ ;  $b = 0.63$ ,  $SE = 0.05$ ,  $p < .001$ ). Furthermore, participants in the future focus condition ( $M = 4.34$ ,  $SD = 0.75$ ) displayed higher levels of future focus compared to participants in the baseline condition ( $M = 3.95$ ,  $SD = 0.86$ ;  $b = 0.39$ ,  $SE = 0.04$ ,  $p < .001$ ). The manipulations thus operated as intended.

### Hypothesis 1

**Test.** Table 5 presents the results. In the baseline condition, high (vs. low) economic threat interacted with employee childhood financial standing in predicting OCBO ( $b = 0.23$ ,  $SE = 0.06$ ,  $p < .001$ ). As displayed in Fig. 4, high (vs. low) exposure to economic threat led participants from poorer backgrounds to exhibit lower levels of OCBO ( $b = -0.25$ ,  $SE = 0.10$ ,  $p = .009$ ), while it led participants from wealthier backgrounds to exhibit higher levels of OCBO ( $b = 0.46$ ,  $SE = 0.11$ ,  $p < .001$ ; see Table 3 for marginal means). The results support Hypothesis 1.

Table 5. Study 2: regression analyses results.

	Model 1:OCBO (Baseline)		Model 2:Future Focus (Baseline)		Model 3:OCBO (Baseline)		Model 4: OCBO		Model 5: Future Focus	
	b	SE	b	SE	b	SE	b	SE	b	SE
Constant	2.75***	0.44	4.21***	0.54	1.20***	0.41	2.83***	0.3	3.87***	0.35
Current Financial Standing	0.12***	0.04	0.24***	0.05	0.03	0.04	0.09***	0.03	0.18***	0.03
Contact	0.10	0.07	0.07	0.09	0.07	0.06	0.06	0.05	0.06	0.06
Interdependence	-0.05	0.05	-0.01	0.06	-0.04	0.04	-0.04	0.03	-0.04	0.04
Autonomy	0.07	0.07	-0.11	0.08	0.11*	0.06	0.09**	0.05	-0.03	0.05
Competition	-0.03	0.05	-0.05	0.06	-0.01	0.05	0.04	0.04	0.01	0.04
Time Pressure	0.01	0.05	-0.05	0.07	0.02	0.05	-0.02	0.04	0.01	0.04
Job Security	0.02	0.03	0.02	0.04	0.01	0.03	0.01	0.02	0.00	0.03
Age	0.01***	0.00	0.01***	0.00	0.01***	0.00	0.01***	0.00	0.00**	0.00
Male	-0.17***	0.05	-0.06	0.06	-0.15***	0.04	-0.15***	0.03	-0.08*	0.04
Education	-0.07**	0.03	-0.07*	0.04	-0.05*	0.03	-0.09***	0.02	-0.07**	0.03
Economic Threat (A)	0.07	0.05	-0.04	0.06	0.09**	0.04	0.07	0.05	-0.05	0.05
Childhood Financial Standing (B)	-0.08	0.05	0.07	0.06	-0.10**	0.04	-0.07	0.05	0.09*	0.05
A × B	0.23***	0.06	0.20***	0.07	0.16***	0.05	0.24***	0.06	0.20***	0.07
Future Focus					0.37***	0.03				
Future Focus Manipulation (C)							0.09*	0.05	0.25***	0.05
A × C							0.19***	0.07	0.27***	0.08
B × C							0.09	0.06	-0.05	0.07
A × B × C							-0.25***	0.08	-0.20**	0.10
N	846		846		846		1,711		1,711	
R <sup>2</sup>	0.154		0.136		0.326		0.140		0.144	
ΔR <sup>2</sup>	0.006		0.224		0.035		0.089		0.080	

Note. OLS regression results are reported. All analyses control for industry and race fixed effects.  $\Delta R^2$  is relative to a model with only controls included. \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

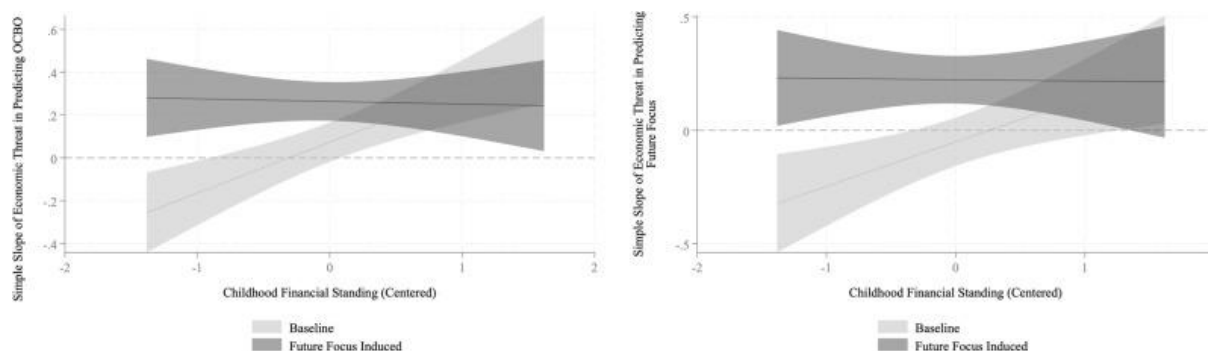


Fig. 4. Study 2: simple slope of economic threat in predicting OCBO (Left) and future focus (Right).

I note that the pattern of simple effects of childhood financial standing differed somewhat from what I found in Studies 1a and 1b. Specifically, participants from wealthier (vs. poorer) backgrounds exhibited similar levels of OCBO when economic threat was low ( $b = -0.08$ ,  $SE = 0.05$ ,  $p = .117$ ); only when economic threat was high did participants from wealthier backgrounds exhibit higher levels of OCBO ( $b = 0.16$ ,  $SE = 0.05$ ,  $p = .001$ ).

## Hypothesis 2

**Test.** Economic threat and childhood financial standing interacted in predicting future focus ( $b = 0.20$ ,  $SE = 0.07$ ,  $p = .006$ ), such that economic threat led participants from poorer backgrounds to become less future-oriented ( $b = -0.32$ ,  $SE = 0.12$ ,  $p = .006$ ) and led participants from wealthier backgrounds to become more future-oriented ( $b = 0.29$ ,  $SE = 0.13$ ,  $p = .026$ ). This interaction is displayed in Fig. 4 (right). Future focus was, in turn, positively associated with OCBO ( $b = 0.37$ ,  $SE = 0.03$ ,  $p < .001$ ). I used the same procedure as in Study 1b to estimate the indirect effect of economic threat on OCBO through future focus. There was a negative indirect effect of economic threat on OCBO via lower future focus among employees from poorer backgrounds ( $b = -0.12$ ,  $CI_{95\%}: -0.22, -0.01$ ), but a positive indirect effect via higher future focus among employees from wealthier backgrounds ( $b = 0.10$ ,  $CI_{95\%}: 0.03, 0.19$ ). The results support Hypothesis 2.

**Future Focus Induction Test.** Future focus induction attenuated the interaction between childhood financial standing and economic threat in predicting OCBO ( $b = -0.25$ ,  $SE = 0.08$ ,  $p = .003$ ). Economic threat led to lower levels of OCBO among those from poorer backgrounds only in the baseline condition (as detailed above); in the future focus induced condition, threat was associated with higher levels of OCBO among participants from both wealthier and poorer backgrounds ( $bs > 0.24$ ,  $SEs < 0.11$ ,  $ps < 0.035$ ). A similar pattern emerged with respect to future focus. Economic threat led to lower levels of future focus among those from poorer backgrounds only in the baseline condition (as detailed above); in the future focus induced condition, threat was associated with higher levels of future focus among participants from both wealthier and poorer backgrounds ( $bs > 0.21$ ,  $SEs < 0.13$ ,  $ps < 0.097$ ).

Therefore, future focus induction can attenuate the drop in OCBO due to lower levels of future focus in response to economic threat among those from poorer backgrounds. Indeed, as in the baseline low threat condition, childhood financial standing did not predict OCBO in the future focus induced condition, regardless of whether the level of threat was high or low ( $ps > 0.769$ ). The results show that the negative effect of economic threat on OCBO among those from poorer backgrounds can be attenuated by targeting the focal mechanism. At the same time, the results provide additional, experimental evidence for the key role of future focus in linking economic threat, childhood financial standing, and OCBO (Spencer et al., 2005).

**Supplementary Analyses.** With the exception of a main effect of childhood financial standing on self-concern ( $b = 0.18$ ,  $SE = 0.04$ ,  $p < .001$ ), there were no effects of economic threat, childhood financial standing, or their interaction in predicting self-concern, other-orientation, or sense of power ( $ps > 0.151$ ). The significant main effect of childhood financial standing on self-orientation cannot explain why those from poorer versus wealthier backgrounds respond to threat differently (as confirmed by the non-



significant interaction between economic threat and childhood financial standing in predicting self-orientation,  $b = 0.03$ ,  $p = .606$ ). Therefore, the results exclude the possibility that these variables act as alternative mechanisms and provide further evidence for the role of future focus. I also note that all the results reported above hold when these variables (self-concern, other-orientation, or sense of power) are included as controls in the estimated models.

## 6. General discussion

Three studies found support for the current theoretical integration of life history theory with the temporal dilemma perspective on OCB. Economic threat (whether proxied by objective economic conditions, measured as an aggregate perception of teams drawn from a diverse range of firms, or experimentally manipulated) was associated with lower levels of OCBO among employees from poorer backgrounds and higher levels of OCBO among employees from wealthier backgrounds. The effect was independent of current financial standing and obtained even among employees working in comparable jobs at the same organizational level (Studies 1a and 1b). The two field studies also found evidence that these differential responses to economic threat have implications for promotion potential and may thus reproduce childhood inequalities later in life. Building on evidence that future focus acts as a proximal psychological mechanism explaining the differential responses to economic threat, Study 2 found that an induction of future focus attenuated the effect of economic threat on future focus and OCBO among workers from poorer backgrounds.

### 6.1. Theoretical contributions

The current research contributes to the literature on employee responses to economic threat (Bianchi, 2020, Sarkar and Osiyevskyy, 2018, Sirola, 2020, Staw et al., 1981). This line of work has focused on understanding the responses to economic threat perception by individual employees across organizational levels, and particularly responses that might matter for broader organizational functioning and thus firms' ability to cope with economic threat. Despite the importance of OCBO from this perspective, to my knowledge, there have been no direct tests of how economic threat impacts OCBO among employees. Introducing life history theory to the literature on economic threat was key to linking economic threat and OCBO theoretically, as well as identifying future focus as a proximal psychological mechanism. This novel perspective, in particular its focus on the mechanism of future focus, can be used to further extend the understanding of the effects of economic threat. For example, Mittal et al. (2015) found that a focus on the here and now among participants from poorer backgrounds enhances their ability to switch between tasks when threat is salient. It is therefore possible that workers from poorer backgrounds possess certain advantages in coping with the high primary task workloads that are typical during times of economic threat (Lazear et al., 2016, Russell and McGinnity, 2014).

This research also adds to the literature on economic threat by uncovering the stratified nature of the effect of threat on people's psychology and how it ultimately shapes their career outcomes. Lower levels of OCBO among employees who grew up poorer in response to economic threat might undermine their career prospects, as documented in Studies 1a and 1b. This effect may thus represent one psychological pathway through which childhood inequalities are reproduced and amplified in organizations (Amis et al., 2020). Indeed, research has noted that even among workers who obtain comparable education and employment, workers from poorer backgrounds have lower long-term objective career success (e.g., Laurison & Friedman, 2016). The differential responses to economic threat proposed here could be one contributing factor, given the importance of OCBO for career success (Allen, 2006). The fact that childhood financial standing impacts behavior primarily under conditions of threat may also help to explain why inequality reproduction is most pronounced during recessionary periods (Meyer and Sullivan, 2013, Mocan, 1999). Therefore, by considering employee childhood conditions, the current investigation shows that the psychological consequences of economic threat can have implications for inequality and socioeconomic mobility.

Another contribution of the current research lies in the attempt to attenuate the influences of early-life conditions on employee responses to threat later in life. By demonstrating that a future focus induction is sufficient to override a drop in future focus and OCBO among workers from poorer backgrounds, the current research points to a simple and low-cost technique that can be implemented by individuals as

they make their time allocation decisions (Cojuharenco et al., 2011, Crum et al., 2013, Shipp et al., 2009, Shipp and Cole, 2015). This insight may also open up avenues for future life history research, which has focused more on identifying challenges and less on proposing ways in which responses to threat conditioned during childhood may be overridden, if so desired (see Ellis et al., 2020, for a related discussion).

The current research also contributes to the literature on individual sense of job insecurity, which has investigated the impact of job insecurity on OCB. This line of work has focused on how a self-reported sense of job insecurity is correlated with OCB (e.g., Feather and Rauter, 2004, Reisel et al., 2010, Wong et al., 2005), but such associations do not speak clearly to the influences of contextual threat. Specifically, an association between workers' personal sense of job insecurity and OCB could arise simply because those workers who are less valuable to the organization (e.g., due to lower levels of exercised OCB) might correctly detect signals that their jobs are less secure. Given this problem, in the current investigation, I opted for designs that would better enable me to isolate the effects of contextual threat, most notably an exogenous proxy of economic threat (unemployment) in Study 1a, an aggregated (rather than individual) perception of economic threat in Study 1b, and an experimental manipulation of contextual threat in Study 2.

It is nevertheless interesting to note that research on job insecurity has found mixed results, with some studies finding a negative relationship between job insecurity and OCB (Cheng and Chan, 2008, Kang et al., 2012, King, 2000, Reisel et al., 2010), some studies finding a positive relationship (e.g., Feather and Rauter, 2004, Wang et al., 2014, Wong et al., 2005), and some studies finding no relationship (König et al., 2010, Loi et al., 2011, Schreurs et al., 2012, Staufenbiel and König, 2010). In cases in which job insecurity arises from contextual threat, the current perspective may potentially help to explain the divergent consequences of job insecurity documented in previous work.

This research also has implications for scholarship on the influences of social class background, which has studied how coming from environments characterized by higher versus lower material, social, and cultural resources exerts long-term influences on workers (Côté, 2011, Pitesa and Pillutla, 2019). As noted earlier, some of this work has suggested that individuals who grew up poorer might exhibit higher other-orientation and thus be more likely to engage in behaviors that benefit others (Kraus et al., 2010, Piff et al., 2010, Varnum et al., 2015). I did find in Studies 1a and 1b (although not in Study 2) that workers from poorer backgrounds exhibited higher levels of OCBO when threat levels were at their lowest. However, this pattern reversed as threat levels increased. This may be relevant because most research documenting an association between coming from a lower social class background and other-benefiting tendencies has been conducted in relatively secure environments, often with university students in a laboratory. It is possible that some other-benefiting tendencies documented among people from lower social classes are modulated by real-world conditions of threat, particularly those tendencies that depend on individuals' future focus. My validation study suggests that future focus is more relevant for organizationally directed as opposed to interpersonally directed other-oriented tendencies. Thus, conceptually considering the level of contextual threat as well as whether and how a given behavior is influenced by people's time perspective might help future work refine the understanding of the link between class background and other-benefiting tendencies.

I also note that I documented similar effects of childhood financial standing in two different cultural contexts: the U.S. and India. This might seem surprising given the notable cultural differences between the East and the West in terms of how social class is associated with other-oriented tendencies. For example, Miyamoto et al. (2018) found that higher social class was associated with more other-oriented tendencies in the East, whereas this trend was weaker or even reversed in the West, with higher social class instead associated with higher self-concerns. Here, it is important to distinguish India from East Asian countries, given that the focal cultural force highlighted by Miyamoto et al. (2018) to explain the association between higher social class and other-orientation in the East is Confucianism. Confucianism has never had much influence in India, where Hinduism and other religious traditions, as well as their numerous regional variations, have dominated instead. Indeed, Miyamoto et al. (2018, p. 437) classified India separately, in the "Southeast/South Asia" group. For this group, the authors found no association between socioeconomic status and self- versus other-orientation, similar to the results they obtained in their U.S. sample. Similarities between the U.S. and India in terms of how social class background is

associated with other-oriented tendencies might thus explain the comparable role of employee background documented across the two contexts in the present research. It is also possible that the process through which the harshness-related early-life stress response system is sensitized is functional regardless of the sociocultural structure and is thus relatively universal and context-independent. As with most other domains of research, there are not enough data on life history processes from non-Western contexts (Henrich et al., 2010, Rad et al., 2018) to make these claims conclusively, making this another productive avenue for future work.

Finally, while the current research focused on the role of childhood financial standing, given its influence on the early-life sensitization of the stress response system and in line with the life history perspective, it is also interesting to consider the role of current financial standing. I conducted exploratory analyses by re-estimating all of the models predicting OCBO or future focus across studies, adding an interaction between current financial standing and economic threat (in addition to the interaction between childhood financial standing and economic threat). I found that (1) in all cases, the interaction between childhood financial standing and threat persisted after the inclusion of the interaction between current financial standing and threat, and (2) there was no interaction between current financial standing and threat in predicting OCBO or future focus (with the exception of a significant interaction in Study 1b, in which threat led to higher future focus among employees with higher current financial standing, but had no effect among employees with lower current financial standing).

While these results constitute strong evidence that the moderating role of childhood financial standing cannot be explained by differences in current financial standing as an active ingredient, it is interesting to consider why current financial standing does not seem to shape responses to threat in the same way as childhood financial standing. The job insecurity literature has suggested that two forces may be at play with the potential to cancel each other out: workers who are more financially vulnerable may react to a threat to their job by being “more motivated to try to secure their jobs because they anticipate greater challenges replacing the job and/or income should loss occur” (Shoss, 2017, p. 1932), but, at the same time, they may have a difficult time realizing such motives because “those who are concerned about being able to find a new job and/or replace lost income have more negative affective reactions” (p. 1931). Another possibility as to why current financial standing does not seem to shape the effects of threat on OCBO is that people with different current financial standing in the sample are in different jobs, with, for example, employees in lower income jobs potentially having fewer opportunities to engage in some types of OCBO (for example, attending company functions).

## **6.2. Limitations and future directions**

The current research represents an initial set of tests of the theory linking life history and temporal dilemma perspectives. This theoretical work, as well as the associated tests, can be extended in several notable ways. Future studies may extend the current tests by focusing on other contexts. For example, it may be possible to capture variation in objective levels of economic threat across industries and professions, an approach sometimes taken in the firm-level literature on responses to economic threat (Chattopadhyay et al., 2001). Studies are also warranted to examine a broader range of operationalizations of childhood environment. In the current research, measures of childhood background were taken from previous research on life history theory for the sake of consistency and validated against similar general measures of childhood financial standing. However, a deeper exploration of particular aspects of resource-scarce environments that drive the effects documented here would generate more specific implications for public policy in terms of thinking about relevant developmental conditions.

Future research may also leverage life history theory to identify other individual responses to economic threat relevant to organizational functioning. For instance, employee adaptivity is facilitated by future focus (Kyndt and Baert, 2013, Maurer, 2002), so lower levels of future focus in response to economic threat might explain why some organizational actors fail to adapt under conditions of adversity—a question that has been central to strategy research on “threat-rigidity” (Sarkar and Osievskeyy, 2018, Staw et al., 1981). Future research may therefore leverage the current perspective to better understand the psychology guiding responses to economic threat, which may ultimately help to identify individual psychological and managerial strategies for managing employee psychology in times of crisis.

### 6.3. Practical implications

One relatively direct practical implication of the current research is that a future focus induction seems useful in overriding responses to threat conditioned during childhood. As such, it may be used by workers when thinking about their priorities in responding to economic threat. Focusing on the here and now is functional in environments characterized by scarcity, and even when workers are not currently facing financial deprivation, they might have valid reasons for prioritizing activities other than OCBO under conditions of economic threat. Yet, to the extent that not taking a longer-term perspective and maintaining one's level of contributions to the organization is an impulse that could be deemed undesirable upon reflection, the future focus exercise used in the current research might be a useful instrument for implementing such intentions.

How employees interpret economic threat is also shaped in important part by various sensemaking and sensegiving processes occurring in organizations that face uncertainty and change. For example, through direct interactions with subordinates and other forms of communication within the firm, leaders exert influence on how employees interpret and respond to threat (Salancik and Pfeffer, 1978, Volkema et al., 1996, Waldman et al., 2001, Weick, 1988). Therefore, under conditions of economic threat, leaders may leverage strategies that research has identified as effective at directing employees' focus on the future in order to promote OCBO among the workforce. For example, research has found that describing organizational goals in the context of economic threat using a large amount of vision imagery and focusing on a small number of values are useful strategies for helping employees to focus on longer term organizational goals (Carton et al., 2014).

## 7. Conclusion

Economic threat has a profound impact on organizations and the psychology of their employees. The current investigation uncovers how economic threat impacts the psychology behind one behavior of particular relevance under crisis conditions: OCBO. Combining life history theory and the temporal dilemma perspective on OCB, I predicted that early-life conditions sensitize people to respond to threat later in life by differentially impacting their temporal focus. Consistent with strategies for responding to threat that are functional in their childhood environments, employees from wealthier backgrounds respond to economic threat by focusing on the future and allocating more time to OCBO, whereas employees from poorer backgrounds respond by being less focused on the future and allocating less time to OCBO. Three studies found support for this perspective, demonstrating that the effect may lead to a reproduction of childhood inequalities later in life and that future focus induction attenuates that effect. The current research demonstrates the utility of the life history perspective in explaining employees' discretionary contributions under conditions of economic threat, and uncovers one way in which economic threat may shape inequality.

CRedit authorship contribution statement: **Nina Sirola**: Conceptualization, Methodology, Data curation, Writing – review & editing.

Declaration of Competing Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability: The associated Open Science Framework (OSF) webpage ([tinyurl.com/threat-beyond](https://tinyurl.com/threat-beyond); Online Supplement) contains materials, data, and analysis codes for all the studies.

## References

Allen, T. D. (2006). Rewarding good citizens: The relationship between citizenship behavior, gender, and organizational rewards. *Journal of Applied Social Psychology*, 36(1), 120–143.  
<https://doi.org/10.1111/j.0021-9029.2006.00006.x>

- Allen, T. D., & Rush, M. C. (1998). The effects of organizational citizenship behavior on performance judgments: A field study and a laboratory experiment. *Journal of Applied Psychology*, 83(2), 247. <https://doi.org/10.1037/0021-9010.83.2.247>
- Amis, J. M., Mair, J., & Munir, K. A. (2020). The organizational reproduction of inequality. *Academy of Management Annals*, 14(1), 195–230. <https://doi.org/10.5465/annals.2017.0033>
- Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, 80(2), 313–344. <https://doi.org/10.1111/j.1467-6494.2011.00734.x>
- Barnard, C. I. (1968). *The functions of the executive* (Vol. 11). Harvard University Press.
- Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development*, 62(4), 647–670. <https://doi.org/10.2307/1131166>
- Belsky, J., Steinberg, L., Houts, R. M., & Halpern-Felsher, B. L. (2010). The development of reproductive strategy in females: Early maternal harshness → earlier menarche → increased sexual risk taking. *Developmental Psychology*, 46(1), 120–128. <https://doi.org/10.1037/a0015549>
- Bergeron, D. M. (2007). The potential paradox of organizational citizenship behavior: Good citizens at what cost? *Academy of Management Review*, 32(4), 1078–1095. <https://doi.org/10.5465/AMR.2007.26585791>
- Bergeron, D. M., Shipp, A. J., Rosen, B., & Furst, S. A. (2011). Organizational citizenship behavior and career outcomes the cost of being a good citizen. *Journal of Management*, 958–984. <https://doi.org/10.1177/0149206311407508>
- Bianchi, E. C. (2013). The bright side of bad times: The affective advantages of entering the workforce in a recession. *Administrative Science Quarterly*, 58(4), 587–623. <https://doi.org/10.1177/0001839213509590>
- Bianchi, E. C. (2020). How the economy shapes the way we think about ourselves and others. *Current Opinion in Psychology*, 32, 120–123. <https://doi.org/10.1016/j.copsy.2019.07.007>
- Bianchi, E. C., Hall, E. V., & Lee, S. (2018). Reexamining the link between economic downturns and racial antipathy: Evidence that prejudice against blacks rises during recessions. *Psychological Science*, 0956797618777214. <https://doi.org/10.1177/0956797618777214>
- Boyce, W. T., & Ellis, B. J. (2005). Biological sensitivity to context: I. An evolutionary–developmental theory of the origins and functions of stress reactivity. *Development and Psychopathology*, 17(2), 271–301. 0.1017/S0954579405050145.
- Bureau of Labor Statistics. (2012). Occupational employment statistics. <http://www.bls.gov/oes/tables.htm>.
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14(5), 365–376. <https://doi.org/10.1038/nrn3475>
- Butz, D. A., & Yogeeswaran, K. (2011). A new threat in the air: Macroeconomic threat increases prejudice against Asian Americans. *Journal of Experimental Social Psychology*, 47(1), 22–27. <https://doi.org/10.1016/j.jesp.2010.07.014>
- Carden, S. W., Holtzman, N. S., & Strube, M. J. (2017). CAHOST: An excel workbook for facilitating the Johnson-Neyman technique for two-way interactions in multiple regression. *Frontiers in Psychology*, 8, 1293. <https://doi.org/10.3389/fpsyg.2017.01293>
- Carton, A. M., Murphy, C., & Clark, J. R. (2014). A (blurry) vision of the future: How leader rhetoric about ultimate goals influences performance. *Academy of Management Journal*, 57(6), 1544–1570. <https://doi.org/10.5465/amj.2012.0101>
- Chattopadhyay, P., Glick, W. H., & Huber, G. P. (2001). Organizational actions in response to threats and opportunities. *Academy of Management Journal*, 44(5), 937–955. <https://doi.org/10.5465/3069439>

- Cheng, G. H., & Chan, D. K. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology*, 57(2), 272–303. <https://doi.org/10.1111/j.1464-0597.2007.00312.x>
- Chiu, F.-C. (2012). Fit between future thinking and future orientation on creative imagination. *Thinking Skills and Creativity*, 7(3), 234–244. <https://doi.org/10.1016/j.tsc.2012.05.002>
- Cohen, S., Janicki-Deverts, D., Chen, E., & Matthews, K. A. (2010). Childhood socioeconomic status and adult health. *Annals of the New York Academy of Sciences*, 1186(1), 37–55.
- Cohn, A., Engelmann, J., Fehr, E., & Maréchal, M. A. (2015). Evidence for countercyclical risk aversion: An experiment with financial professionals. *American Economic Review*, 105(2), 860–885. <https://doi.org/10.1257/aer.20131314>
- Cojuharenco, I., Patient, D., & Bashshur, M. R. (2011). Seeing the “forest” or the “trees” of organizational justice: Effects of temporal perspective on employee concerns about unfair treatment at work. *Organizational Behavior and Human Decision Processes*, 116(1), 17–31. <https://doi.org/10.1016/j.obhdp.2011.05.008>
- Cote, S. (2011). How social class shapes thoughts and actions in organizations. *Research in Organizational Behavior*, 31, 43–71. <https://doi.org/10.1016/j.riob.2011.09.004>
- Cropanzano, R., Rupp, D. E., & Byrne, Z. S. (2003). The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied Psychology*, 88(1), 160–169. 1037/0021-9010.88.1.160.
- Crum, A. J., Salovey, P., & Achor, S. (2013). Rethinking stress: The role of mindsets in determining the stress response. *Journal of Personality and Social Psychology*, 104(4), 716–733. <https://doi.org/10.1037/a0031201>
- De Dreu, C. K. W., & Nauta, A. (2009). Self-interest and other-orientation in organizational behavior: Implications for job performance, prosocial behavior, and personal initiative. *Journal of Applied Psychology*, 94(4), 913–926. <https://doi.org/10.1037/a0014494>
- Del Giudice, M., Ellis, B. J., & Shirtcliff, E. A. (2011). The Adaptive Calibration Model of stress responsivity. *Neuroscience & Biobehavioral Reviews*, 35(7), 1562–1592. <https://doi.org/10.1016/j.neubiorev.2010.11.007>
- Duncan, G. J., Magnuson, K., & Votruba-Drzal, E. (2017). Moving beyond correlations in assessing the consequences of poverty. *Annual Review of Psychology*, 68(1), 413–434. <https://doi.org/10.1146/annurev-psych-010416-044224>
- Duncan, G. J., Ziol-Guest, K. M., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, 81(1), 306–325. <https://doi.org/10.1111/j.1467-8624.2009.01396.x>
- Eatough, E. M., Chang, C.-H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, 96(3), 619. <https://doi.org/10.1037/a0021887>
- Ellis, B. J., Abrams, L. S., Masten, A. S., Sternberg, R. J., Tottenham, N., & Frankenhuis, W. E. (2020). Hidden talents in harsh environments. *Development and Psychopathology*, 1, 19. <https://doi.org/10.1017/S0954579420000887>
- Ellis, B. J., & Del Giudice, M. (2014). Beyond allostatic load: Rethinking the role of stress in regulating human development. *Development and Psychopathology*, 26(1), 1–20. <https://doi.org/10.1017/S0954579413000849>
- Ellis, B. J., & Del Giudice, M. (2019). Developmental adaptation to stress: An evolutionary perspective. *Annual Review of Psychology*, 70(1), 111–139. <https://doi.org/10.1146/annurev-psych-122216-011732>
- Elsby, M., Hobijn, B., & Sahin, A. (2010). The Labor Market in the Great Recession (w15979; p. w15979). National Bureau of Economic Research. 10.3386/w15979. Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, 27(1), 31–41. <https://doi.org/10.2307/2089716>

- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, 12(2), 121–138. <https://doi.org/10.1037/1082-989X.12.2.121>
- Eurofund. (2009). ERM Report 2009: Restructuring in recession. <http://www.eurofound.europa.eu/publications/annual-report/2009/labour-market-business/erm-report-2009-restructuring-in-recession>. Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59 (2), 77–92. <https://doi.org/10.1037/0003-066X.59.2.77>
- Evans, G. W., & Schamberg, M. A. (2009). Childhood poverty, chronic stress, and adult working memory. *Proceedings of the National Academy of Sciences*, 106(16), 6545–6549. <https://doi.org/10.1073/pnas.0811910106>
- Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviours in relation to job status, job insecurity, organizational commitment and identification, job satisfaction and work values. *Journal of Occupational and Organizational Psychology*, 77(1), 81–94. <https://doi.org/10.1348/096317904322915928>
- Fisman, R., Jakiela, P., & Kariv, S. (2015). How did distributional preferences change during the Great Recession? *Journal of Public Economics*, 128, 84–95. <https://doi.org/10.1016/j.jpubeco.2015.06.001>
- Forster, J., Friedman, R. S., & Liberman, N. (2004). Temporal construal effects on abstract and concrete thinking: Consequences for insight and creative cognition. *Journal of Personality and Social Psychology*, 87(2), 177. <https://doi.org/10.1037/0022-3514.87.2.177>
- Frankenhuis, W. E., & Nettle, D. (2020). The strengths of people in poverty. *Current Directions in Psychological Science*, 29(1), 16–21. <https://doi.org/10.1177/0963721419881154>
- Frankenhuis, W. E., Panchanathan, K., & Nettle, D. (2016). Cognition in harsh and unpredictable environments. *Current Opinion in Psychology*, 7, 76–80. <https://doi.org/10.1016/j.copsyc.2015.08.011>
- Gouldner, A. W. (1959). Organizational analysis. In R. K. Merton, L. Broom, & L. S. Cottrell (Eds.), *Sociology Today*. Basic Books.
- Griskevicius, V., Ackerman, J. M., Cantú, S. M., Delton, A. W., Robertson, T. E., Simpson, J. A., ... Tybur, J. M. (2013). When the economy falters, do people spend or save? Responses to resource scarcity depend on childhood environments. *Psychological Science*, 2(24), 197–205. <https://doi.org/10.1177/0956797612451471>
- Griskevicius, V., Delton, A. W., Robertson, T. E., & Tybur, J. M. (2011). Environmental contingency in life history strategies: The influence of mortality and socioeconomic status on reproductive timing. *Journal of Personality and Social Psychology*, 100(2), 241–254. <https://doi.org/10.1037/a0021082>
- Griskevicius, V., Tybur, J. M., Delton, A. W., & Robertson, T. E. (2011). The influence of mortality and socioeconomic status on risk and delayed rewards: A life history theory approach. *Journal of Personality and Social Psychology*, 100(6), 1015–1026. <https://doi.org/10.1037/a0022403>
- Hall, R. E. (2005). Job loss, job finding, and unemployment in the US economy over the past fifty years. *NBER Macroeconomics Annual*, 20, 101–137.
- Heilman, M. E., & Chen, J. J. (2005). Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. *Journal of Applied Psychology*, 90(3), 431. <https://doi.org/10.1037/0021-9010.90.3.431>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world. *Behavioral and Brain Sciences*, 33(2–3), 61–83. <https://doi.org/10.1017/S0140525X0999152X>
- Hill, K., & Kaplan, H. (1999). Life history traits in humans: Theory and empirical studies. *Annual Review of Anthropology*, 28(1), 397–430. <https://doi.org/10.1146/annurev.anthro.28.1.397>
- Hill, S. E., Prokosch, M. L., DelPriore, D. J., Griskevicius, V., & Kramer, A. (2016). Low childhood socioeconomic status promotes eating in the absence of energy need. *Psychological Science*, 27(3), 354–364. <https://doi.org/10.1177/0956797615621901>



- Hill, S. E., Rodeheffer, C. D., DelPriore, D. J., & Butterfield, M. E. (2013). Ecological contingencies in women's calorie regulation psychology: A life history approach. *Journal of Experimental Social Psychology*, 49(5), 888–897. <https://doi.org/10.1016/j.jesp.2013.03.016>
- Hill, S. E., Rodeheffer, C. D., Griskevicius, V., Durante, K., & White, A. E. (2012). Boosting beauty in an economic decline: Mating, spending, and the lipstick effect. *Journal of Personality and Social Psychology*, 103(2), 275–291. <https://doi.org/10.1037/a0028657>
- Hofmann, D. A., & Gavin, M. B. (1998). Centering decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24(5), 623–641. <https://doi.org/10.1177/014920639802400504>
- Joireman, J., Kamdar, D., Daniels, D., & Duell, B. (2006). Good citizens to the end? It depends: Empathy and concern with future consequences moderate the impact of a short-term time horizon on organizational citizenship behaviors. *Journal of Applied Psychology*, 91(6), 1307–1320. <https://doi.org/10.1037/0021-9010.91.6.1307>
- Kahn, L. B. (2010). The long-term labor market consequences of graduating from college in a bad economy. *Labour Economics*, 17(2), 303–316. <https://doi.org/10.1016/j.labeco.2009.09.002>
- Kang, D., Gold, J., & Kim, D. (2012). Responses to job insecurity: The impact on discretionary extra-role and impression management behaviors and the moderating role of employability. *Career Development International*, 17(4), 314–332. <https://doi.org/10.1108/13620431211255815>
- King, J. E. (2000). White-collar reactions to job insecurity and the role of the psychological contract: Implications for human resource management. *Human Resource Management: Published in Cooperation With The School of Business Administration, The University of Michigan and in Alliance With The Society of Human Resources Management*, 39(1), 79–92. [https://doi.org/10.1002/\(SICI\)1099-050X\(200021\)39:1<79::AID-HRM7>3.0.CO;2-A](https://doi.org/10.1002/(SICI)1099-050X(200021)39:1<79::AID-HRM7>3.0.CO;2-A)
- Konig, C. J., Debus, M. E., Häusler, S., Lendenmann, N., & Kleinmann, M. (2010). Examining occupational self-efficacy, work locus of control and communication as moderators of the job insecurity—Job performance relationship. *Economic and Industrial Democracy*, 31(2), 231–247. <https://doi.org/10.1177/0143831X09358629>
- Kraus, M. W., Côté, S., & Keltner, D. (2010). Social class, contextualism, and empathic accuracy. *Psychological Science*, 21(11), 1716–1723. <https://doi.org/10.1177/0956797610387613>
- Kraus, M. W., Piff, P. K., & Keltner, D. (2009). Social class, sense of control, and social explanation. *Journal of Personality and Social Psychology*, 97(6), 992–1004. <https://doi.org/10.1037/a0016357>
- Kyndt, E., & Baert, H. (2013). Antecedents of employees' involvement in work-related learning: A systematic review. *Review of Educational Research*, 83(2), 273–313.
- Laurison, D., & Friedman, S. (2016). The class pay gap in higher professional and managerial occupations. *American Sociological Review*, 81(4), 668–695. <https://doi.org/10.1177/0003122416653602>
- Lazear, E. P., Shaw, K. L., & Stanton, C. (2016). Making do with less: Working harder during recessions. *Journal of Labor Economics*, 34(S1), S333–S360. <https://doi.org/10.1086/682406>
- Lieberman, N., & Forster, J. (2009). Distancing from experienced self: How global-versus-local perception affects estimation of psychological distance. *Journal of Personality and Social Psychology*, 97(2), 203–216. <https://doi.org/10.1037/a0015671>
- Loi, R., Ngo, H.-Y., Zhang, L., & Lau, V. P. (2011). The interaction between leader–member exchange and perceived job security in predicting employee altruism and work performance. *Journal of Occupational and Organizational Psychology*, 84(4), 669–685. <https://doi.org/10.1348/096317910X510468>
- Magee, J. C., & Smith, P. K. (2013). The social distance theory of power. *Personality and Social Psychology Review*, 17(2), 158–186. <https://doi.org/10.1177/1088868312472732>



- March, J. G., & Simon, H. A. (1958). *Organizations*. Wiley.
- Maurer, T. J. (2002). Employee learning and development orientation: Toward an integrative model of involvement in continuous learning. *Human Resource Development Review*, 1(1), 9–44. <https://doi.org/10.1177/1534484302011002>
- McEwen, B. S. (2012). Brain on stress: How the social environment gets under the skin. *Proceedings of the National Academy of Sciences*, 109(Supplement\_2), 17180–17185. 10.1073/pnas.1121254109.
- McEwen, B. S., & Stellar, E. (1993). Stress and the individual: Mechanisms leading to disease. *Archives of Internal Medicine*, 153(18), 2093. <https://doi.org/10.1001/archinte.1993.00410180039004>
- McNeish, D. M. (2014). Modeling sparsely clustered data: Design-based, model-based, and single-level methods. *Psychological Methods*, 19(4), 552. <https://doi.org/10.1037/met0000024>
- Meyer, B. D., & Sullivan, J. X. (2013). Consumption and income inequality and the great recession. *American Economic Review*, 103(3), 178–183. <https://doi.org/10.1257/aer.103.3.178>
- Mittal, C., Griskevicius, V., Simpson, J. A., Sung, S., & Young, E. S. (2015). Cognitive adaptations to stressful environments: When childhood adversity enhances adult executive function. *Journal of Personality and Social Psychology*, 109(4), 604–621. <https://doi.org/10.1037/pspi0000028>
- Miyamoto, Y., Yoo, J., Levine, C. S., Park, J., Boylan, J. M., Sims, T., ... Karasawa, M. (2018). Culture and social hierarchy: Self-and other-oriented correlates of socioeconomic status across cultures. *Journal of Personality and Social Psychology*, 115 (3), 427. <https://doi.org/10.1037/pspi0000133>
- Mocan, H. N. (1999). Structural unemployment, cyclical unemployment, and income inequality. *Review of Economics and Statistics*, 81(1), 122–134. <https://doi.org/10.1162/003465399767923872>
- National Bureau of Economic Research. (2011). US business cycle expansions and contractions. <http://www.nber.org/cycles.html>.
- \*National Center for O\*NET Development. (2022a). About O\*NET. <https://www.onetcenter.org/overview.html>.
- \*National Center for O\*NET Development. (2022b). O\*NET® Questionnaires. <https://www.onetcenter.org/questionnaires.html>.
- \*National Center for O\*NET Development. (2022c). O\*NET OnLine. <https://www.onetonline.org/>.
- Ng, T. W., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58(2), 367–408. <https://doi.org/10.1111/j.1744-6570.2005.00515.x>
- NIOSH. (2020). Collecting and Using Industry and Occupation Data. <https://www.cdc.gov/niosh/topics/coding/code.html>.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books/DC Heath and Com.
- Pek, J., & Flora, D. B. (2018). Reporting effect sizes in original psychological research: A discussion and tutorial. *Psychological Methods*, 23(2), 208. <https://doi.org/10.1037/met0000126>
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771–784. <https://doi.org/10.1037/a0020092>
- Pitesa, M., & Pillutla, M. M. (2019). Socioeconomic mobility and talent utilization of workers from poorer backgrounds: The overlooked importance of within- organization dynamics. *Academy of Management Annals*. <https://doi.org/10.5465/annals.2017.0115>
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513–563. <https://doi.org/10.1177/014920630002600307>
- Qiu, L. (2024). (2022, November 17). In *Announcing, Bid for Presidency*. *The New York Times*: Trump Echoes Old Falsehoods. <https://www.nytimes.com/2022/11/16/us/politics/trump-fact-check.html>.
- Rad, M. S., Martingano, A. J., & Ginges, J. (2018). Toward a psychology of Homo sapiens: Making psychological science more representative of the human population. *PNAS Proceedings of the National*

Academy of Sciences of the United States of America, 115(45), 11401–11405.  
[10.1073/pnas.1721165115](https://doi.org/10.1073/pnas.1721165115).

Randall, M. L., Cropanzano, R., Bormann, C. A., & Birjulin, A. (1999). Organizational politics and organizational support as predictors of work attitudes, job performance, and organizational citizenship behavior. *Journal of Organizational Behavior*, 20(2), 159–174. [https://doi.org/10.1002/\(SICI\)1099-1379\(199903\)20:2<159::AID-JOB881>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1099-1379(199903)20:2<159::AID-JOB881>3.0.CO;2-7)

Reisel, W. D., Probst, T. M., Chia, S.-L., Maloles, C. M., & König, C. J. (2010). The effects of job insecurity on job satisfaction, organizational citizenship behavior, deviant behavior, and negative emotions of employees. *International Studies of Management & Organization*, 40(1), 74–91.  
<https://doi.org/10.2753/IMO0020-8825400105>

Rioux, S. M., & Penner, L. A. (2001). The causes of organizational citizenship behavior: A motivational analysis. *Journal of Applied Psychology*, 86(6), 1306. <https://doi.org/10.1037/0021-9010.86.6.1306>

Rodriguez, G. R. S., Middlemass, K., & Aila. (2022). July 26). Brookings: Misinformation is eroding the public's confidence in democracy. <https://www.brookings.edu/blog/fixgov/2022/07/26/misinformation-is-eroding-the-publics-confidence-in-democracy/>.

ROI Rocket. (2022). 4 Ways To Ensure The Highest Quality Research Panel. <https://www.roirocket.com/blog/4-ways-to-ensure-the-highest-quality-research-panel/>.

Russell, H., & McGinnity, F. (2014). Under pressure: The impact of recession on employees in Ireland: Work pressure in recession. *British Journal of Industrial Relations*, 52(2), 286–307.  
<https://doi.org/10.1111/bjir.12018>

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23(2), 224. <https://doi.org/10.2307/2392563> Sarkar, S., & Osiyevskyy, O. (2018). Organizational change and rigidity during crisis: A review of the paradox. *European Management Journal*, 36(1), 47–58. <https://doi.org/10.1016/j.emj.2017.03.007>

Schreurs, B. H., Hetty van Emmerik, I. J., Guenter, H., & Germeys, F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance. *Human Resource Management*, 51(2), 259–279. <https://doi.org/10.1002/hrm.21465>

Selznick, P. (1948). Foundations of the theory of organization. *American Sociological Review*, 13(1), 25–35. <https://doi.org/10.2307/2086752>

Shipp, A. J., & Cole, M. S. (2015). Time in individual-level organizational studies: What is it, how is it used, and why isn't it exploited more often? *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 237–260. <https://doi.org/10.1146/annurev-orgpsych-032414-111245>

Shipp, A. J., Edwards, J. R., & Lambert, L. S. (2009). Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational Behavior and Human Decision Processes*, 110(1), 1–22. <https://doi.org/10.1016/j.obhdp.2009.05.001>

Shoss, M. K. (2017). Job insecurity: An integrative review and agenda for future research. *Journal of Management*, 43(6), 1911–1939. <https://doi.org/10.1177/0149206317691574> Simmons, J. (2013). Samples Can't Be Too Large. *Data Colada*. <http://datacolada.org/6>.

Sirola, N. (2020). Individuals' responses to economic cycles: Organizational relevance and a multilevel theoretical integration. *Academy of Management Annals*, annals.2018.0124. 10.5465/annals.2018.0124.

Sirola, N., & Pitesa, M. (2017). Economic downturns undermine workplace helping by promoting a zero-sum construal of success. *Academy of Management Journal*, 60(4), 1–21.  
<https://doi.org/10.5465/amj.2015.0804>

Smith, P. K., & Trope, Y. (2006). You focus on the forest when you're in charge of the trees: Power priming and abstract information processing. *Journal of Personality and Social Psychology*, 90(4), 578–596. <https://doi.org/10.1037/0022-3514.90.4.578>

- Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, 89(6), 845–851. <https://doi.org/10.1037/0022-3514.89.6.845>
- Spiller, S. A., Fitzsimons, G. J., Lynch, J. G., & McClelland, G. H. (2013). Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression. *Journal of Marketing Research*, 50(2), 277–288. <https://doi.org/10.1509/jmr.12.0420>
- Staufenbiel, T., & König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology*, 83(1), 101–117. <https://doi.org/10.1348/096317908X401912>
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26 (4), 501. <https://doi.org/10.2307/2392337>
- Strobel, M., Tumasjan, A., Spörrle, M., & Welpe, I. M. (2013). The future starts today, not tomorrow: How future focus promotes organizational citizenship behaviors. *Human Relations*, 66(6), 829–856. <https://doi.org/10.1177/0018726712470709>
- Takeuchi, R., Bolino, M. C., & Lin, C.-C. (2015). Too many motives? The interactive effects of multiple motives on organizational citizenship behavior. *Journal of Applied Psychology*, 100(4), 1239. <https://doi.org/10.1037/apl0000001>
- Taylor, S. E. (2010). Mechanisms linking early life stress to adult health outcomes. *Proceedings of the National Academy of Sciences*, 107(19), 8507–8512. <https://doi.org/10.1073/pnas.1003890107>
- Taylor, S. E., Lerner, J. S., Sage, R. M., Lehman, B. J., & Seeman, T. E. (2004). Early environment, emotions, responses to stress, and health. *Journal of Personality*, 72(6), 1365–1394. <https://doi.org/10.1111/j.1467-6494.2004.00300.x>
- The United States Census Bureau. (2022). Educational Attainment. <https://www.census.gov/newsroom/press-releases/2022/educational-attainment.html>.
- The United States Census Bureau. (2023). Measuring Racial and Ethnic Diversity for the 2020 Census. <https://www.census.gov/newsroom/blogs/random-samplings/2021/08/measuring-racial-ethnic-diversity-2020-census.html>.
- The World Bank. (2021). Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate). <https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>.
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. Wiley.
- U.S. Bureau of Labor Statistics. (2021). Civilian unemployment rate. <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>.
- Varnum, M. E. W., Blais, C., Hampton, R. S., & Brewer, G. A. (2015). Social class affects neural empathic responses. *Culture and Brain*, 3(2), 122–130. <https://doi.org/10.1007/s40167-015-0031-2>
- Volkema, R. J., Farquhar, K., & Bergmann, T. J. (1996). Third-party sensemaking in interpersonal conflicts at work: A theoretical framework. *Human Relations*, 49(11), 1437–1454. <https://doi.org/10.1177/001872679604901104>
- Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal*, 44(1), 134–143. <https://doi.org/10.5465/3069341>
- Wang, H., Lu, C., & Lu, L. (2014). Do people with traditional values suffer more from job insecurity? The moderating effects of traditionality. *European Journal of Work and Organizational Psychology*, 23(1), 107–117. <https://doi.org/10.1080/1359432X.2012.712751>
- Weick, K. E. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies*, 25(4), 305–317. <https://doi.org/10.1111/j.1467-6486.1988.tb00039.x>

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617. <https://doi.org/10.1177/014920639101700305>

Wong, Y.-T., Wong, C.-S., Ngo, H.-Y., & Lui, H.-K. (2005). Different responses to job insecurity of Chinese workers in joint ventures and state-owned enterprises. *Human Relations*, 58(11), 1391–1418. <https://doi.org/10.1177/0018726705060243>

Zheng, B., & Agresti, A. (2000). Summarizing the predictive power of a generalized linear model. *Statistics in Medicine*, 19(13), 1771–1781. [https://doi.org/10.1002/1097-0258\(20000715\)19:13<1771::AID-SIM485>3.0.CO;2-P](https://doi.org/10.1002/1097-0258(20000715)19:13<1771::AID-SIM485>3.0.CO;2-P)