Free to be Isolated?: A Longitudinal Study of Gig Workers' Interdependent Relational Behaviors and Well-Being in the COVID-19 Pandemic

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Abstract

The COVID-19 pandemic led most U.S. employees to experience greater adversity and constraint than ever before. In response, employees experienced an increased need for *interdependence*—i.e., relying on and being connected to others. We theorize that the ability to *fulfill* these newly-heightened interdependent needs was not equally available to all employees: those employed in "gig" work were relatively less able to do so than their counterparts in traditional occupations. Integrating research on the design of gig work with cultural mismatch theory, we propose that gig workers (vs. traditional workers) experienced a cultural mismatch during the pandemic. Specifically, we theorize there was a mismatch between enhanced needs for interdependence during the pandemic and gig workers' limited ability to fulfill these needs as a function of their job design. We theorize that this cultural mismatch, in turn, undermined gig workers' global wellbeing. Utilizing a three-wave longitudinal survey during the first year of the COVID-19 pandemic, the current research provides evidence that employment in gig work (vs. traditional work) predicted lower ability to enact and receive interdependent relational behaviors (e.g., maintain harmony at home), in turn, predicting lower overall well-being.

Keywords: interdependence, cultural mismatch, gig work, well-being, COVID-19

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1. Introduction

The COVID-19 pandemic reflected a time of great upheaval and change for many. During the pandemic, countless people confronted increased adversity, constraint, and uncertainty (Aknin et al., 2022; Hitt et al., 2021; Razmerita et al., 2021; Tull et al., 2020). The pandemic produced an environmental jolt that altered the psychology and priorities of most Americans (Granger et al., 2022). This jolt led people in the U.S. to experience heightened *interdependent* cultural needs. Interdependent cultural needs include belonging, connecting with, and relating to close others (Markus, 2017; Markus & Conner, 2013; Markus & Kitayama, 2010). For example, people increased the value they placed on helping others in need, felt a greater sense of shared fate with neighbors and society, and became more aware of the connections between people (Beltran et al., 2020; del Fresno-Díaz et al., 2023; Guan et al., 2023; Seitz et al., 2020). To meet these heightened cultural needs, research suggests that people are likely to orient to certain relational behaviors, or "tendencies that guide interpersonal behavior" (Kish-Gephart et al., 2023)[1]. In the COVID-19 context, this means that people would have oriented to interdependent relational behaviors.

Here, we argue that interdependent relational behaviors were not equally available to all employees during the pandemic. We propose that a growing class of workers—those employed in gig work—had less access to interdependent relational behaviors than their counterparts in traditional work arrangements. Following prior research, we define *gig work* as labor that is

[1] Prior research has used the term relational *strategies*, rather than *behaviors*. Here, we employ the broader term *behaviors* because strategies can suggest that the behaviors involved may be instrumental or strategic. Given that these behaviors in our context are not always deliberate or intentional, the term behaviors better reflects our theorizing.

contracted and compensated on a short-term basis to individuals or organizations (Cropanzano et al., 2023). These workers tend to be underrepresented and in precarious and vulnerable positions compared to traditional employees (Cameron, 2022; Cameron et al., 2021).

According to cultural mismatch theory (Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012), when there is a misalignment between the relational behaviors people have access to and the cultural needs that are prioritized in a given context, this reflects a cultural mismatch. Experiencing a cultural mismatch is consequential because it produces a host of negative psychological outcomes including lowered wellbeing (Kitayama et al., 2010).

Applied to our empirical context, we theorize that gig workers were confronted with a cultural mismatch during the COVID-19 pandemic due to their job design. This theorizing builds on research that has demonstrated that gig workers' jobs often require autonomy and independence from others (Cropanzano et al., 2023). For example, gig workers are *independent* contractors not limited to the confines of a single organization—instead, they work on separate "gigs" or contracts for many different clients over time, and must drum up their own business (Brammer et al., 2020; Cropanzano et al., 2023; Friedland & Balkan, 2023; Pickard-Whitehead, 2021). Taken together, we theorize that these features likely limit access to the relational behaviors that would enable them to fulfill interdependent needs (Markus, 2017; Markus & Conner, 2013; Markus & Kitayama, 2010). In turn, we expect that this cultural mismatch would undermine gig workers' global wellbeing. Our theoretical model is summarized in Figure 1.

We examine this phenomenon in a mixed-methods investigation in a large-scale three-wave longitudinal study over the first year of the COVID-19 pandemic (i.e., May 2020 – May 2021). We utilize both text analyses and longitudinal quantitative analyses with employees in

diverse work arrangements (i.e., both those employed in the gig economy and those in more traditional employment arrangements).

INSERT FIGURE 1 ABOUT HERE

Our research makes three key contributions to the emerging organizational literature on gig workers and job design. First, our research deepens insights into a growing group of professionals—gig workers—who have been overlooked in the management literature until recently. Prior research on gig workers has provided valuable insight into the experience of gig workers (Ashford et al., 2018; Caza et al., 2022; Granger et al., 2022). Yet, such work has tended to focus solely on gig workers, often lacking comparative analysis with traditional workers. By investigating gig workers *relative* to traditional employees, our research offers insight into the unique challenges faced by gig workers, particularly in the context of the environmental jolt of the COVID-19 pandemic. Investigating this jolt enables us to better understand how broad-scale exogenous cultural shifts in all employee needs might differentially impact workers based on the requirements of their job design. Moreover, prior research has often examined the experiences of gig workers utilizing cross-sectional methods. In contrast, our three-wave longitudinal design enables us to shed light on how being a gig worker early in the pandemic shapes experiences later in the pandemic.

Second, we integrate research on the design of gig work (Cropanzano et al., 2023) with cultural mismatch theory (Stephens, Fryberg, et al., 2012). In so doing, we document the importance of considering how novel work arrangements—in this case, as an independent contractor—might disproportionately create cultural mismatches in the pandemic context relative

to traditional employment arrangements. The design of gig workers' job shapes and affords the behaviors these employees can engage in on a daily basis. Whether these behaviors fulfill heightened interdependent needs, in turn, creates a mismatch. Experiencing a cultural mismatch ultimately impacts their general wellbeing. Examining this cultural mismatch pathway adds a much-needed understanding of how the design of employees' jobs affords or impedes their fulfillment of cultural needs.

Furthermore, by studying gig workers relative to traditional workers, our research contributes to and extends cultural mismatch theory. This theory has been investigated by testing how the cultural norms of an institution can create mismatches with the cultural needs of those with underrepresented social identities (e.g., race, class, gender; Cheryan & Markus, 2020; Covarrubias et al., 2016; Fryberg et al., 2013; Markus & Conner, 2013; Stephens, Fryberg, et al., 2012). We theorize that cultural mismatch theory can offer a useful framework to study gig workers during the pandemic because gig workers are also considered an underrepresented or vulnerable group (Cameron, 2022). Our research provides novel insight into how people's work arrangements can create a cultural mismatch with increased interdependent needs.

2. Theoretical Background and Hypotheses

2.1. Adversity and Constraint During the COVID-19 Pandemic Led People to Prioritize Interdependent Cultural Needs

People embedded in different cultural contexts benefit from fulfilling both independent and interdependent needs (Deci et al., 2017).[2] Independent cultural needs include self-focused

[2] Given that we draw from cultural mismatch theory, which is built upon cultural psychological research utilizing the terms *independence* and *interdependence*, we utilize the same terms for consistency. However, it is important to note that these broad cultural needs are closely related to other constructs in the broader literature on cultural needs including autonomy vs. relatedness (Deci et al., 2017), individualism vs. collectivism (Hofstede, 1980), and agency vs. communion (Diekman et al., 2020). See Markus & Kitayama, 2010; 1988 for more thorough review of the interrelation between these sets of terms.

tendencies such as maintaining distinctiveness, prioritizing autonomy, choice, and control, influencing others, developing and expressing personal preferences, and being separate from others and social contexts (Markus & Kitayama, 2010). In contrast, *interdependent* cultural needs include being similar to others, being part of a group, prioritizing close relationships, maintaining loyalty to others, and adjusting to others and social contexts (Markus & Conner, 2013; Stephens et al., 2007).

However, decades of prior work in social, cultural, and organizational psychology document that the material realities of people's cultural contexts lead them to prioritize one of two sets of dominant cultural needs: independence or interdependence (Markus et al., 2004; Markus & Conner, 2013; Markus & Kitayama, 2010). When people occupy environments that are characterized by high levels of constraint, adversity, and uncertainty, they need to rely on and support each other, and in turn, prioritize fulfilling *interdependent* needs. This pattern is reflected, for example, in different crop-farming areas within China. Historically, farming rice- (vs. wheat-) was more difficult, demanding, and uncertain, requiring people to coordinate with and rely on each other to effectively farm this crop. Over time, contending with these material realities led people to prioritize fulfilling interdependent needs. These differences in cultural needs are still observable today (Talhelm et al., 2014).

While research has found that cultural differences in prioritizing needs tend to be relatively stable, large-scale "jolts" can have transformative effects on deeply ingrained cultural needs (Markus, 2017; Meyer, 1982). The COVID-19 pandemic reflects just such a jolt (Granger et al., 2022). The material conditions of the COVID-19 context—i.e., increases in constraint, adversity, and uncertainty—dramatically impacted people's relational realities. Social distance mandates reduced people's ability to gather and connect in-person (Sikali, 2020) and many

experienced a loss of personal control and adversity directly from the pandemic (Birnbaum et al., 2023). These shifts led many to reflect on what was most important to them and question what their relationships should look like. For example, popular essays and narratives from the onset of the pandemic frequently employed the phrase "We're all in this together" signaling heightened prioritization of interdependent needs (Department of Global Communications, 2020). Many prominent U.S. news outlets also published articles describing how relationships had become even more important to life than they were prior to the pandemic (Brower, 2020; Dubey, 2022). There were even calls for a "national interdependence day" to restore unity and relationality to the U.S. (Coleman, 2021).

Furthermore, there is evidence that the pandemic heightened the connection that employees made between fulfilling interdependent needs and well-being (Cotofan et al., 2021). For example, a large-scale survey of employees prior to and after the onset of the COVID-19 pandemic revealed that employees reported that it was more important for their well-being to receive interdependent relational behaviors at work such as having supportive management. Among other insights, this research reveals that many U.S. employees prioritized interdependent needs—both at work and beyond—more than ever before (Sharpe & Spencer, 2022).

2.2. Interdependent Relational Behaviors Help Fulfill Interdependent Needs

Though there are many ways to fulfill cultural needs, one critical way people can do so is through the types of relational behaviors they engage in and receive from others. While, on the surface, any type of relational behavior might appear to satisfy interdependent cultural needs, we theorize that this is not the case. Indeed, just as there are two broader sets of cultural needs, there are also two types of relational behaviors—independent and interdependent (Kish-Gephart et al.,

2023). To fulfill broader cultural needs, people's relational behaviors need to match. Indeed, interdependent—but not independent relational behaviors—will fulfill interdependent needs.

Interdependent relational behaviors are associated with prioritizing fitting in, taking the perspective of, and adjusting to others in close relationships. Social relationships require loyalty and responsiveness (Markus & Conner, 2013; Stephens et al., 2007). For example, a person would sacrifice their self-interest, help loved ones, and prioritize the well-being of close others. A person who provides direct support to a close other would be enacting an interdependent relational behavior whereas the recipient of that support would be receiving an interdependent relational behavior.

In contrast, *independent relational behaviors* would help people fulfill *independent* cultural needs. Such behaviors include individuals prioritizing and expressing their own thoughts, feelings, and actions in relationships (Carey & Markus, 2016, 2017). Furthermore, social interactions are seen as a way to scaffold individual preferences, goals, beliefs, and abilities (Markus & Kitayama, 2010). A person who primarily relies on independent relational behaviors, for example, would have a network of weak ties, use their relationships to achieve their individual goals, and provide less time and support to relationship partners (Carey & Markus, 2016, 2017). A person who initiates a connection for personal advancement would be enacting an independent relational behavior whereas the person who accepts the connection would be receiving an independent relational behavior.

2.3. A Cultural Mismatch: Gig Work Limits Access to Interdependent Relational Behaviors

Though there is evidence that all employees prioritized interdependent needs during the first year of the COVID-19 pandemic, we theorize that the ability to fulfill these needs was not

equally available to all employees. Specifically, we propose that the design of gig work (vs. traditional work) provides less access to interdependent relational behaviors during the COVID-19 pandemic. This, in turn, reduces these employees' ability to fulfill interdependent needs.

To support this theorizing, we review and integrate existing work that has documented features of gig work (relative to traditional work) that can influence these workers' relationships. Unlike traditional workers, those who engage in gig work typically operate without managers and determine their own schedules (Caza et al., 2022; Cropanzano et al., 2023; Granger et al., 2022). Many are not subject to organizational or managerial control regarding what gigs to take on, with whom to work, and how to design their work once they do take on a gig (Caza et al., 2019; Petriglieri et al., 2019; Ravenelle, 2019; Ertel et al., 2005; Fielden et al., 2003; Ashford et al., 2007; Spreitzer et al., 2017; Caza et al., 2018).

Furthermore, gig workers typically have one-off interactions with customers and lack routine interactions in work settings, which limits their ability to form stable and deep connections with other individuals (Kunda et al., 2002; Petriglieri et al., 2019). On average, gig workers tend to have weaker social networks, and are less likely to receive interdependent behaviors from others than traditional employees (Ashford et al., 2018; Caza et al., 2022; Glavin et al., 2021; Petriglieri et al., 2019). Similarly, due to the variable nature of their schedules, they may also be less able to be responsive to close others in their lives (Caza et al., 2022). Taken together, the design of gig work leads these workers to be less able to enact and receive interdependent relational behaviors, compared to traditional workers. We theorize that a cultural mismatch arises for gig workers due to this misalignment between the relational behaviors they have access to and the cultural needs that are prioritized in the COVID-19 pandemic.

2.4. The Consequences of a Cultural Mismatch During the COVID-19 Pandemic

We extend cultural mismatch theory to suggest that employee wellbeing during the COVID-19 pandemic is contingent on whether they experience a match or a mismatch between the relational behaviors that are afforded by their job and the heightened interdependent needs. Cultural mismatch theory suggests that when people feel as though they do not have the ability to fulfill their cultural needs, they experience a cultural mismatch. Prior cultural mismatch research has indexed a mismatch by investigating whether a person's individual norms diverge from the cultural norms that are prioritized in an institution (Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012). For example, research suggests that in university settings, Latinx students experience a cultural mismatch between their interdependent cultural norms and the cultural norms that are prioritized in U.S. universities. One critical consequence of experiencing a cultural mismatch is low overall wellbeing (Cross et al., 2003; De Leersnyder et al., 2014; Fulmer et al., 2010; Kitayama & Markus, 2000; Markus & Schwartz, 2010; Siedlecki et al., 2014; Zhang et al., 2022).

Here, we extend cultural mismatch theory to the work setting. Specifically, we investigate whether the heightened interdependent needs during the COVID-19 pandemic diverged from the relational behaviors afforded by gig workers' job design, reflecting a cultural mismatch. Furthermore, beyond documenting a cultural mismatch, we also examine the implications of experiencing a cultural mismatch for gig workers' global wellbeing.

Specifically, we will test our theory longitudinally using a three-wave survey design: we index gig worker status at Time 1, interdependent relational behaviors at Time 2, and overall wellbeing at Time 3. We theorize that employment as a gig worker (vs. as a traditional worker) at Time 1 will lead to a cultural mismatch at Time 2. We will infer a mismatch by investigating the amount of access employees have to enact and receive interdependent relational behaviors.

Relatively less access to interdependent relational behaviors would indicate a mismatch because it would reflect a disconnect with heightened interdependent needs. Mismatch at Time 2 will predict overall wellbeing at Time 3. Accordingly, we propose the following hypotheses:

Hypothesis 1 (H1): Employment in gig work (vs. non-gig work; Time 1) will predict a gap in interdependent relational behaviors at Time 2. More specifically:

H1a: Gig workers will *enact* interdependent relational behaviors less often compared to non-gig-workers at Time 2.

H1b: Gig workers will *receive* interdependent relational behaviors less often compared to non-gig-workers at Time 2.

Hypothesis 2 (H2): Interdependent relational behaviors (enacted and received) at Time 2 will mediate the relationship between gig worker status at Time 1 and overall well-being (i.e., global wellbeing and negative affect) at Time 3.

3. Method

3.1. Sample and Data Collection

We specifically focused on how employment in gig work during the COVID-19 pandemic shapes employees' ability to enact and receive interdependent relational strategies and their subsequent well-being over time. Following prior work in cultural mismatch theory on the link between fulfilling dominant cultural norms and well-being, we sought to examine whether gig workers would be less able to enact and receive interdependent relational strategies, relative to those employed in more traditional forms of employment (Martela et al., 2019; Rosso et al., 2010), and whether this, in turn, would reduce gig workers' overall well-being.

We collected data via Prolific Academic, an online survey platform, as part of a larger longitudinal data collection effort on the effects of the COVID-19 pandemic. One article based

on the same dataset but with completely different research questions and substantive variables has been published (Birnbaum et al., 2023). We invited participants to participate in our study at three measurement occasions: May 2020 (Time 1 [T1]), October 2020 (T2) and May 2021 (T3). To be eligible for this survey, participants had to be U.S. citizens who were between the ages of 18-70 and were not currently students. We also recruited a sample that was balanced in terms of gender and education (i.e., those with less than a four-year college degree vs. those with a four-year degree or more). Consistent with our pre-registration, we excluded participants who, at any point in the data collection effort, indicated that they were not U.S. citizens, were students, and/or were inattentive responders. Due to our focus on differential employment experiences in this research, we also excluded $N = 190$ individuals who indicated they were either retired or not in the workforce at T1. At T1, 1,202 persons met all of these criteria. At T2, $N = 833$ (69% retention of T1) and at T3 $N = 622$ (52% retention of T1) individuals participated who had also provided data at T1. Given our use of longitudinal analyses, when looking at those who completed all three waves of the study, we were left with a usable sample of $N = 570$ (47% of the original T1 sample). The high degree of missingness in the complete dataset led us to examine attrition rates and best practices for contending with missing data before proceeding with our analyses.

We discovered that our data was best characterized as missing completely at random conditional on observed covariates (MCAR|X), also called missing at random (MAR; Cheema, 2014; Gomila & Clark, 2020; Nissen et al., 2019), which can unduly bias results. Specifically, utilizing a multiple regression approach, we identified that attrition was predicted by age, personal income, and gig worker status—all of which reflect key variables of interest in our study (see SOM Table S2 for details of these analyses). As such, best practices currently

recommend imputing the missing data to debias results (Nissen et al., 2019). We therefore used multiple imputation with the *mice* package in R following current best practices to impute the missing data (van Buuren, 2011). However, results are largely equivalent with the smaller, non-imputed sample (see SOM pgs. 15-17).

3.2. Attrition and Missing Data

The final imputed sample consisted of 579 women and 623 men. Participants had a mean age of 36.95 years (*SD* = 11.46). Our sample was composed of 20% of people who self-identified gig work as their primary occupation at T1 (see Table 1 for demographic breakdown of gig workers and non-gig workers in our sample). In addition to self-identifying as a gig worker by responding to a binary item that asked participants whether they considered gig work to be their primary form of employment, participants also reported their current job title via an open-ended question. We then had a research assistant code and classify the job titles of gig workers into categories to understand the diverse types of roles in which the gig workers in our sample were employed. This coding ultimately resulted in 17 different categories of employment, as follows: Arts/Creative (13%), Business Owner (2%), Caretaking (5%), Coaching/Advising (8%), Construction (5%), Customer Service (9%), Data/Analyst (5%), Delivery/Driving (4%), E-commerce (3%), Financial Services (3%), Hospitality (2%), Instructor/Teacher/Adjunct (5%), Programmer (5%), Warehouse (2%), Writing/Editing (8%), and Freelancer/Gig worker/Independent Contractor (General) (21%). In terms of education level, those with less than a 4-year college degree comprised 48% of the sample. The sample was 8% Black, 8% Asian, 4% Hispanic/Latinx, 70% White, <1% Native, <1% Arab, <1% unspecified racial identity and 7% multiracial.

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3.3. Qualitative Measures

3.3.1. Pandemic's Effect on Interdependent Relational Behaviors

Participants responded to an open-ended question assessing how the COVID-19 pandemic had affected their social relationships at Time 3: "Please share the top 3 ways the coronavirus pandemic has impacted your social well-being. By social well-being, we mean your relationships with others and your sense of social connection. For example, this may include your relationship with family or friends, romantic relationships, or general feelings of closeness to others" (*M* = 23 words, *SD* = 16 words).

3.4. Quantitative Measures

This study comes from a larger study on the effects of the COVID-19 pandemic over time. A full list of items for each measure in all waves of the survey can be found on OSF: https://osf.io/srtkq/?view_only=c6e97a136f7f46b6a78f9d0ce0d43735.

To assess participants' interdependent relational behaviors in general, we included two metrics: (1) enacted and (2) received interdependent relational behaviors.[3] These two dimensions mapped onto the bidirectional nature of interdependent relationality: both the interdependent behaviors participants were able to engage in themselves, as well as their perception of the interdependent behaviors that they received from close others (Carey & Markus, 2017; Saavedra et al., 1993).

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[3] In addition to the two focal measures of enacted and received interdependent relational behaviors in the main text, we identified three additional related measures: (1) family support, (2) trust in loved ones, and (3) COVID social impact. Social impact and trust in loved ones specifically showed similar patterns to the two focal measures included in the main text, but for concision, we only report the results of these measures in the SOM (pgs. 7-8).

3.4.1. Enacted Interdependent Relational Behaviors

To measure enacted interdependent relational behaviors, participants responded to three items following the prompt: "During the coronavirus pandemic, how often have you been able to…" on a scale from 1 (*never)* to 7 (*very often*). Participants completed this measure at all three timepoints. The items were developed by the authors based on existing literature on interdependent relationality (Carey & Markus, 2017; Stephens et al., 2012). The three items were: "Maintain peace and harmony in your household," "Work together with others to address difficulties," and "Anticipate the needs of family or loved ones". The 3-item measure was reliable at all three timepoints (T1: $M = 3.40$, $SD = 0.75$; $\alpha = .66$; T2: $M = 3.57$, $SD = 0.75$; $\alpha = .69$; T3: $M = 3.61$, $SD = 0.73$; $\alpha = .69$). We confirmed the factor structure and convergent and discriminant validity of this measure in a separate $N = 125$ validation study (see SOM pgs. 2-5 for details of this study).

3.4.2. Received Interdependent Relational Behaviors

To measure received interdependent relational behaviors during the COVID-19 pandemic, participants completed a shortened 9-item version of the Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983), a validated measure assessing four types of close interpersonal support: appraisal, tangible, belonging, and self-esteem. Example items include: "When I feel lonely, there are several people I can talk to," "If I were sick, I could easily find someone to help me with my daily chores," and "There are several people that I trust to help solve my problems." All items were completed on a scale from 1 (*strongly disagree)* to 7 (*strongly agree*). The measure was reliable at each time point (T1: $M = 4.44$, $SD = 0.61$; $\alpha = .88$; T2: $M = 4.45$, $SD = 0.64$; $\alpha = .88$; T3: $M = 4.52$, $SD = 0.62$; $\alpha = .90$). Our validation study further

confirmed that this measure reflects a measure of received interdependent relational behaviors (see SOM pgs. 2-5 for more details).

Next, to assess our downstream consequence of interest—overall well-being—participants responded to two measures, following previous research studying well-being: (1) a global measure of well-being (Brim et al., 1999), and (2) a measure of negative affect over time (PANAS; Watson et al., 1988).

3.4.3. Global Well-being

Participants responded to a single item assessing their overall quality of life: "On a scale of 0 to 10, where 0 means the worst and 10 means the best, how would you rate your life right now?" (0 = *Worst*; 10 = *Best*; T1: $M = 5.91$, $SD = 1.96$; T2: $M = 5.83$, $SD = 2.05$; T3: $M = 6.17$, $SD = 2.17$).

3.4.4. Negative Affect

Participants completed the PANAS-X (Watson et al., 1988) at all three timepoints. The scale consists of two subscales – positive and negative affect – and all items are on a scale from 1 = *Not at all* to 5 = *Very much.* We only analyze the negative affect subscale for the purposes of this paper. The negative affect subscale includes six items ("afraid," "angry," "anxious," "frustrated," "lonely," and "sad" (T1: $M = 2.44$, $SD = 0.95$; $\alpha = .87$; T2: $M = 2.28$, $SD = 0.94$; $\alpha = .89$; T3: $M = 2.11$, $SD = 0.89$; $\alpha = .88$). The positive affect subscale includes four items ("confident," "happy," "lively," and "proud" (T1: $M = 2.67$, $SD = 0.91$; $\alpha = .86$; T2: $M = 2.64$, $SD = 0.92$; $\alpha = .87$; T3: $M = 2.79$, $SD = 0.96$; $\alpha = .88$).

3.4.5. Covariates

We included a variety of control variables that previous research has suggested might influence relationships between gig workers' experiences and well-being during the COVID-19

pandemic (Acker, 2016; Adler & Rehkopf, 2008; Crear-Perry et al., 2021; Gharehgozli & Atal, 2020; Oishi et al., 2011; Shah et al., 2012; Zavala et al., 2020). Specifically, we included age (in years), gender (0 = *men*, 1 = *women*), education level (ranging from 1 = *Some high school or less* to 6 = *MA/PhD, MD, MBA, Law Degree*), personal income (ranging from 1 = *$9,999 or less* to 8 = *greater than $200,000*), political orientation (ranging from 1 = *very liberal* to 7 = *very conservative*), relationship status (i.e., marital status, 0 = *single*, 1 = *married*), number of people living in the household total, and number of dependents. Finally, we included participant race using a binary White (i.e., monoracial White individuals, coded 0) vs. racial/ethnic minority variable (i.e., all non-White, including multiracial, individuals coded 1). We created this binary variable given that previous research suggests that the COVID-19 pandemic differentially affected racial/ethnic minorities (e.g., Fairlie, 2020; Kantamneni, 2020; Tessler et al., 2020; Webb Hopper et al., 2020).

3.5. Analytic Approach

We collected both (1) open-ended responses in the Time 3 survey, and (2) quantitative survey data over three waves. As such, our data analysis took on two phases – one employing text analysis of the open-ended response data at Time 3, and one employing quantitative analyses on our longitudinal survey measures across three waves.

3.5.1. Text Analyses

We analyzed the open-ended responses from Time 3 utilizing two natural language processing text analyses: the Linguistic Inquiry and Word Count (LIWC-22) software (Boyd et al., 2022) and natural language processing (NLP) methods. LIWC is a validated text analytic software that has been used in organizational behavior research (e.g., Sergent & Stajkovic, 2020). It utilizes an algorithmic word counting approach, and also computes several proprietary

summary scores based on a combination of input categories. We sought to explore whether the narratives of gig vs. non-gig workers differed in terms of the themes that emerged in their essays about how the COVID-19 pandemic had affected their social well-being. In particular, given our interests in the overall effect of the pandemic on employees' interdependent relational behaviors and wellbeing, we utilized the *negative emotional tone* dimension within the standard LIWC dictionary. This dimension assesses texts for the presence of negative emotion words (e.g., "sad," "bad," "cried"), and has been validated in prior research (Cohn et al., 2004; Monzani et al., 2021). Due to the low prevalence of emotion words overall, we dichotomized the validated tone dimension so that narratives that included at least 1 negative emotion word were coded as 1, whereas those with no negative emotion words were coded as 0.

We also conducted analyses utilizing NLP techniques. Both LIWC and related dictionary methods and NLP techniques are common and utilized in text analysis, and best practices recommend using both methods in a complementary fashion (Eichstaedt et al., 2021). In particular, the validated World Wellbeing Project NLP dictionary detects individual wellbeing across several dimensions of a validated life satisfaction construct in natural language (Schwartz et al., 2016). Particularly well-suited to our research questions, one dimension of this NLP wellbeing measure specifically focuses on positive and negative tone regarding personal relationships. We applied this NLP algorithm to our participants' open-ended narratives about their social wellbeing.

3.5.2. Cross-Lagged Analyses

With cross-lagged structural equation models (CLPM; Selig & Little, 2012), we examined whether gig worker status was a cause rather than an effect of gaps in interdependent relational behaviors and subsequent well-being over the year. Cross-lagged analyses test whether

gig work *causally* shaped people's interdependent relational behaviors at Time 2, and in turn, their overall affect and wellbeing at Time 3, rather than the reverse causal ordering (Selig & Little, 2012). CLPM models also allow for the inclusion of time-invariant person characteristics (i.e., our standard set of covariates). We used the *lavaan* package in R (Rosseel, 2012).

We tested two mediation models: one with overall life rating as our outcome variable, and another with overall negative affect as our outcome variable (we report the results of a model including both outcome variables simultaneously in the SOM: while the direction and strength of relationships were largely equivalent with the exception of the pathway from T2 received behaviors to T3 negative affect—the fit statistics for this more complicated model were markedly worse; see SOM pgs. 9-10). In both cases, we conducted an overall cross-lagged mediation model testing our full theorized model from gig worker status (T1) to interdependent behavior and relationships (T2; as simultaneous mediators) to well-being/negative affect (T3). These cross-lagged analyses allow for substantially greater confidence in drawing causal conclusions (Mulder & Hamaker, 2021). We again included the standard set of controls as well as T1 well-being/negative affect to capture causal effects of gig worker status most accurately. As robustness checks, we also conducted lagged analyses, which yielded consistent results. However, given that cross-lagged analyses provide stronger tests of causal theorizing, we report the results of the lagged analyses in the supplemental material (see SOM pgs. 11-12).

3.6. Results

3.6.1. Text Analysis Results

We utilized participants' open-ended responses at Time 3 to explore whether the language of gig workers vs. non-gig workers differed in terms of how they described their relational behaviors and wellbeing during the COVID-19 pandemic. First, the LIWC analyses

revealed that the narratives of gig workers regarding how the pandemic had affected their interdependent relational behaviors were significantly more likely to include negative emotion words (27%), relative to non-gig workers (19%), $b = 0.55$, $Z = 2.15$, $p = .031$, 95% CI [0.044, 1.048]. Mirroring the results obtained in the LIWC analysis, NLP analyses indicated that the narratives of gig workers scored significantly higher on the negative relationships dimension of wellbeing ($M = 67.02$, $SD = 70.58$), relative to those of non-gig workers ($M = 49.79$, $SD = 48.53$), $b = 12.96$, $t(609) = 2.24$, $p = .025$, 95% CI [1.596, 24.330].

To highlight the lack of interdependent relational behaviors that gig workers described, we utilized an idiographic approach to identify the narratives of gig workers that contained negative emotion words as coded by LIWC (i.e., negative emotion = 1) and were high on the negative relationships dimension of the NLP analysis (i.e., +1 *SD*). For example, one gig worker–a freelance research assistant–described: “I've been in near-total isolation for more than a year, which felt absolutely awful. I maintained some feeling of connection by spending extra time on social media. I desperately miss my former social activities, which are still not really safe to resume. I'm grieving and tired, with so many in my community not taking precautions seriously. I'm now much more distant from formerly dear friends.” Similarly, another gig worker–an Internet Analyst–described: “Basically everything shut down. I hardly interacted with anyone at all. I live with some toxic people, and the pandemic made it much tougher to leave the house. As a result, I was spending much more time around toxic people which hurt my social well-being. Even when certain social opportunities reopened or re-emerged, I was out-of-practice and out of the habit of socializing in various ways, so due to inertia I mainly just stayed isolated.” Taken together, the tone of these narratives is consistent with the idea that gig workers

felt they were relatively unable to enact and receive interdependent relational behaviors during the COVID-19 pandemic.

In contrast, non-gig workers' narratives about interdependent relational strategies were more positive on average. For example, one non-gig worker, an administrative assistant, had a very positive tone overall (i.e., no negative emotion words, low score on the negative relationships dimension of NLP): "Kept in touch more regularly with friends online. Found interesting Zoom seminars through Eventbrite. Developed new friendships through a local hiking group that I discovered through Facebook." They viewed the pandemic as actually providing them with novel ways to enact and receive interdependent relational behaviors. Similarly, a business owner described: "It has allowed me to strengthen my relationships with the most important people in my life. It has allowed me to excuse myself from social engagements in which I do not wish to participate. It has presented me with opportunities to socialize with people who share interests similar to my own." Taken together, the tone of these narratives, on average, revealed that some aspects of the pandemic led those employees in traditional arrangements to feel as though they were *more* able to enact interdependent relational behaviors during the pandemic than they had been able to previously.

These exploratory text analyses lent initial support to our theorizing regarding the relationship between employment in gig work and access to interdependent relational behaviors during the COVID-19 pandemic, largely consistent with Hypothesis 1. Next, building on these text analytic insights, we sought to examine whether this pattern of lowered interdependent relational behaviors amongst gig workers (vs. non-gig workers) would be replicated in our quantitative longitudinal survey measures, providing specific tests of our full theoretical model (i.e., Hypotheses 1a-b and 2).

3.6.2. Cross-Lagged Mediation Analyses

3.6.3. Longitudinal Measurement Invariance

We first conducted analyses to ensure measurement and structural invariance over time utilizing the *lavaan* package in R (Rosseel, 2012; see Table 2 for results of configural, metric, and scalar models). First, we constructed a configural invariance model, and achieved good fit statistics. Having found evidence for adequate configural invariance, we next examined a metric invariance model whereby all factor loadings were constrained to equality across all three waves. This model yielded virtually identical fit statistics. Having found evidence for adequate metric invariance, we next examined the strictest test of longitudinal invariance, scalar invariance. In addition to the constraints of the metric invariance model, we also constrained item intercepts to equality across waves. The fit statistics for this model were worse than that of the configural and metric models, but nonetheless exceeded typical cutoff standards (i.e., CFI & TLI > 0.90, RMSEA & SRMR < 0.08; Hu & Bentler, 1999; McDonald & Ho, 2002). Therefore, we concluded we achieved sufficient evidence of longitudinal invariance across the three timepoints.

INSERT TABLE 2 ABOUT HERE

3.6.4. Global Well-Being

Our cross-lagged analysis of the mediation model linking gig worker status to global well-being via enacted and received interdependent relational behavior gave a reasonably good fit to the empirical data (CFI = 0.996, TLI = 0.934, RMSEA = 0.055, SRMR = 0.012; Bentler, 1990; Hu & Bentler, 1999; McDonald & Ho, 2002; see Figure 2). First, in support of Hypothesis 1a, there was a significant negative effect of gig worker status at Time 1 on enacted

interdependent relational behavior at Time 2 (γ_{21} = -0.11, *p* = .010, 95% CI [-0.189, -0.026]), indicating that gig workers were less able to access enacted interdependent relational behaviors. The reciprocal pathway from enacted interdependent relational behavior at Time 1 to gig worker status at Time 2 was not statistically significant (γ_{12} = 0.008, *p* = .241). Similarly, in support of Hypothesis 1b, there was a significant negative effect of gig worker status at Time 1 on received interdependent relational behavior at Time 2 (γ_{21} = -0.09, *p* = .008, 95% CI [-0.161, -0.024]), indicating that gig workers were less able to access received interdependent relational behaviors. The reciprocal pathway from received interdependent relational behavior at Time 1 to gig worker status at Time 2 was not statistically significant (γ_{12} = -0.001, *p* = .865).

Next, in support of Hypothesis 2, enacted interdependent relational behavior at Time 2 significantly predicted global well-being at Time 3 (γ_{32} = 0.21, *p* < .001, 95% CI [0.096, 0.322]). The reciprocal pathway from global well-being at Time 2 to enacted interdependent relational behavior at Time 3 was also statistically significant (γ_{32} = 0.05, *p* < 0.001) but appeared to be weaker. In further support of Hypothesis 2, received interdependent relational behavior at Time 2 significantly predicted global well-being at Time 3 (γ_{32} = 0.17, *p* = .007, 95% CI [0.046, 0.297]). The reciprocal pathway from global well-being at Time 2 to received interdependent relational behavior at Time 3 was not statistically significant (γ_{23} = 0.01, *p* = .158). Mediation analysis with 1,000 bootstrap samples indicated that the indirect effect through enacted interdependent relational behavior was significant, *B* = -0.022*, SE* = 0.012, 95% CI [-0.049, -0.001]. The indirect effect through received interdependent relational behavior was also significant, *B* = -0.016*, SE* = 0.010, 95% CI [-0.039, -0.002].

Taken together, these results suggest that being a gig worker in the early stages of the COVID-19 pandemic predicted relatively less access to both enacted and received

interdependent relational behavior five months later. Both forms of interdependent relational behaviors, in turn, were associated with greater global well-being at Time 3, supporting Hypothesis 2. The cross-lagged nature of these measures provides fairly strong evidence of the causal effect of gig worker status at the beginning of the pandemic on subsequent global well-being via enacted and received interdependent relational behaviors.

INSERT FIGURE 2 ABOUT HERE

3.6.5. Negative Affect

Our cross-lagged analysis of the mediation model linking gig worker status to negative affect via enacted and received interdependent relational behavior gave a reasonably good fit to the empirical data (CFI = 0.997, TLI = 0.952, RMSEA = 0.049, SRMR = 0.010; Bentler, 1990; Hu & Bentler, 1999; McDonald & Ho, 2002; see Figure 3). Mirroring the results regarding global wellbeing and in further support of Hypothesis 1a, there was a significant negative effect of gig worker status at Time 1 on enacted interdependent relational behavior at Time 2 (γ_{21} = -0.10, p = .016, 95% CI [-0.183, -0.019]). The reciprocal pathway from enacted interdependent relational behavior at Time 1 to gig worker status at Time 2 was not statistically significant (γ_{12} = 0.006, p = .378). In further support of Hypothesis 1b, there was a significant negative effect of gig worker status at Time 1 on received interdependent relational behavior at Time 2 (γ_{21} = -0.09, p = .007, 95% CI [-0.163, -0.025]). The reciprocal pathway from received interdependent relational behavior at Time 1 to gig worker status at Time 2 was not statistically significant (γ_{12} = 0.002, p = .759).

Next, mirroring the results regarding global wellbeing and in further support of Hypothesis 2, enacted interdependent relational behavior at Time 2 significantly negatively predicted negative affect at Time 3 (γ_{32} = -0.08, p < .001, 95% CI [-0.123, -0.041]). The reciprocal pathway from negative affect at Time 2 to enacted interdependent relational behavior at Time 3 was also statistically significant (γ_{32} = -0.08, p < 0.001, 95% CI [-0.117, -0.051]). While this pattern of results generally supports Hypothesis 2, it also suggests there is some evidence of a reverse pathway of negative affect at Time 2 on enacted interdependent relational behavior at Time 3. In further support of Hypothesis 2, received interdependent relational behavior at Time 2 significantly negatively predicted negative affect at Time 3 (γ_{32} = -0.06, p = .018, 95% CI [-0.102, -0.010]). The reciprocal pathway from negative affect at Time 2 to received interdependent relational behavior at Time 3 was not statistically significant (γ_{23} = -0.01, p = .331). Mediation analysis with 1,000 bootstrap samples indicated that the indirect effect of gig worker status on negative affect through enacted interdependent relational behavior was significant, B = 0.008, SE = 0.005, 95% CI [0.000, 0.018]. The indirect effect through received interdependent relational behavior was also significant, B = 0.005, SE = 0.004, 95% CI [0.000, 0.014].

Taken together, these results suggest that being a gig worker in the early stages of the COVID-19 pandemic was associated with both less enacted and received interdependent relational behavior five months later at Time 2. Both forms of interdependent relational behaviors, in turn, were associated with lower negative affect one year later at Time 3, supporting Hypothesis 2. The cross-lagged nature of these measures provides fairly strong evidence of the causal effect of gig worker status at the beginning of the pandemic on subsequent global well-being via enacted and received interdependent relational behaviors.

INSERT FIGURE 3 ABOUT HERE

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4. General Discussion

As the gig economy continues to grow, the design of gig work increasingly shapes not only how we earn a living but also how we connect with others, especially in times of crisis like the ongoing COVID-19 pandemic. To better understand how this rapidly growing class of worker was affected by the COVID-19 pandemic, in a three-wave longitudinal study of both gig workers and non-gig workers, we documented that gig workers are disproportionately likely to experience a cultural mismatch, compared to their non-gig worker counterparts. Specifically, though all employees experienced heightened interdependent cultural needs during the pandemic, gig workers had less access to the interdependent relational behaviors that would help them fulfill these heightened needs—reflecting a cultural mismatch. This mismatch, in turn, predicts lower overall well-being. Documenting this novel cultural mismatch helps extend both cultural mismatch theory (Stephens, Fryberg et al., 2012) and the growing organizational literature on the gig economy (Cropanzano et al., 2023).

4.1. Implications for Theory

Our work contributes to the small but growing body of management and organizational behavior research on a new class of worker that is on the rise in modern society: gig workers. These workers have even more permeable boundaries between home and work life due to the short-term, flexible, and contractual nature of their work. These boundaries were likely made even more permeable during the COVID-19 pandemic, when many workers were confined to their homes (Kniffin et al., 2021). This means that to understand the impact of gig work on

employees' psychology, it is incredibly important to understand not only feelings and experiences that are strictly limited to work, but also to understand non-work relationships since the spillover effect of the design of gig work on non-work experiences is higher than that of non-gig work employees. Our work complements recent research conducted by Granger et al. (2022), which followed a sample of gig workers prior to and after the onset of the COVID-19 pandemic. Our study is consistent with these prior findings in that we document negative relational experiences that gig workers faced during the pandemic. However, our study extends beyond these prior findings by following a sample that includes both gig workers and non-gig workers, therefore providing us with the opportunity to document *differential* experiences of gig workers (vs. non-gig workers) during the first year of the pandemic. In this way, we identify the unique experiences of gig workers and the separate set of challenges they face compared to those in more traditional work arrangements.

Our work further indicates that two primary sets of cultural needs—those of independence and interdependence—may be in tension in gig work, particularly in contexts like those afforded by COVID-19, that limit social contact. Prior to the pandemic, others who have studied contract workers have suggested that "the nature of the 'on-demand' economy, with its heightened demands for mobility and work devotion as well as the nature of its work and reward system, might push people to put work first, impeding their abilities to form and sustain meaningful nonwork friendships and relationships" (Ashford et al., 2018). Our work suggests that this may be particularly true during times of uncertainty and isolation brought about by large, external shocks like the COVID-19 pandemic.

We also apply and extend cultural and social psychological theories of cultural mismatch to the organizational behavior literature on gig workers. This theory sheds light on how the

broader cultural context in which workers are embedded can powerfully affect their wellbeing, driven by their ability to fulfill vs. not the dominant cultural norms arising from the design of their work. In this way, our work also extends theory on cultural mismatch by documenting a novel source of cultural mismatch: work design. Drawing from cultural mismatch theory, suggests that there is variation in who can fulfill their cultural needs. This prior work has primarily looked at people's social identities including gender, race/ethnicity, and social class. This work finds that those with underrepresented and historically marginalized identities are typically less able to fulfill their cultural needs compared to those with majority group social identities. When times are "stable" and "normal", it is easy to forget or overlook the role of culture and taken-for-granted cultural needs. When large-scale jolts like the COVID-19 pandemic occur, it shines a light on cultural needs and how the differential ability to fulfill these needs impacts employees (Seitz et al., 2020).

Finally, by incorporating management research on different types of relational behaviors (Kish-Gephart et al., 2023), we identify the specific pathways through which work arrangements lead to the experience of cultural mismatch: the structure of people's work differentially affords them the ability to enact and receive interdependent relational behaviors.

4.2. Implications for Managers and Organizations

The results of our longitudinal investigation also suggest promising points for future interventions to bolster the well-being of those employed in gig work: by ensuring they are able to fulfill dominant cultural values. Indeed, one major appeal of gig work is the high level of autonomy and independence it affords (Ashford et al., 2018; Donovan et al., 2016; Kunda et al., 2002; Petriglieri et al., 2018). However, in the context of the COVID-19 pandemic, many who might have flocked to gig work in pursuit of this independence were left even more isolated than

employees in traditional employment arrangements. This suggests fruitful avenues for future interventions targeted at scaffolding the well-being of gig workers. For example, freelancing companies could more systematically incorporate ways for gig workers to engage in interdependent relational behaviors (e.g., providing opportunities to connect with and build bonds with other gig workers). In support of this idea, some qualitative work on gig workers has suggested that creating relational "games" helps gig workers maintain motivation in their day-to-day work lives (Cameron, 2022). Our work complements and extends this work by providing quantitative evidence that, absent intervention, gig workers have relatively less access to interdependent relational behaviors, which helps to explain their lower overall wellbeing. Therefore, identifying ways to bolster access to interdependent relational behaviors amongst gig workers might help these workers capitalize on the benefits of autonomy and independence that gig work provides, while simultaneously minimizing its relational costs.

4.3. Limitations and Future Directions

Though this work documents the outsize impact of COVID-19 on gig workers' fulfillment of interdependent relational behavior through both text analyses and longitudinal quantitative analyses, and connects this to their overall well-being, it is not without its limitations and there are promising directions for future research. First, the conclusions we can draw from our results are limited to the context of the first year of the COVID-19 pandemic. As we theorized, this strong situation may have exacerbated our effects. However, our world appears to have changed in a potentially permanent way as a result of the pandemic, so it may be the case that the struggles gig workers confronted continue through the present day. To determine the durability of the effects that we observed in the first year of the pandemic, replications should be conducted to determine whether these effects hold beyond the most extreme of lockdowns.

Second, while our results show lasting effects across time during the first year of the COVID-19 pandemic, we did not begin data collection until after the onset of the pandemic (i.e., May 2020), so our data do not allow us to disentangle the direction of our effects. Specifically, it is not possible to discern whether the pandemic reduced the interdependent relational strategies of gig workers, or that non-gig workers experienced enhanced interdependent relational strategies, compared to prior to the pandemic. While some work has suggested that gig workers experienced worsened relationships after the onset of the pandemic compared to prior to the onset (Granger et al., 2022), this work did not compare the experiences of gig workers to those of non-gig workers, so we are not able to definitively conclude. This speaks to the importance of collecting data on relationships and well-being from diverse employees consistently over time so that reliable data is available to assess changes pre- and post-large-scale negative events like the COVID-19 pandemic.

Third, our measures pertained to interdependent relational behaviors in general (as opposed to delineating between work and nonwork). This was a reasonable approach, given the highly permeable work-nonwork boundary for all workers during the pandemic (Allen et al., 2021). These global measures seem to indicate that employees' general sense of their ability to enact and receive interdependent relational behaviors were affected. Nevertheless, future research should seek to delineate between interdependent relational behaviors in work relationships and nonwork relationships separately to determine whether there are differential effects.

Fourth, we did not collect a measure of "preference for independence" – because cultural needs shifted to focus on interdependence during the first year of the COVID-19 pandemic, our measures focused primarily on capturing interdependent relational behaviors to document the

cultural mismatch that gig workers confronted. Nevertheless, future research could also collect measures of *independent* relational behaviors (e.g., making interpersonal connections for personal advancement) to examine whether access to behaviors that would fulfill independent cultural needs has additional moderating effects over and above the effects we observed here.

Finally, while our cross-lagged mediation models showed support for our predicted pathways, there was also nonetheless some evidence of reverse pathways (i.e., outcomes to mediators). Indeed, though our work was not experimental we utilized the best longitudinal modeling techniques available to be best able to speak to causality. However, our results suggest that there are recursive effects of wellbeing on interdependent relational behaviors as well as our theorized effects of interdependent relational behaviors on wellbeing. Future work could investigate methods to causally manipulate interdependent relational behaviors to better isolate the unidirectional effect of interdependent relational behaviors on wellbeing (e.g., "nudges" that prompt employees to enact interdependent relational behaviors on a regular basis). Nevertheless, our results do show the importance of interdependent relational behaviors on wellbeing in an externally-valid context (i.e., employees reporting on their real relational behaviors and wellbeing over time).

4.4. Conclusion

During the first year of the COVID-19 pandemic, most employees experienced increased adversity and constraint. Experiencing this changed cultural context led these employees to prioritize fulfilling their needs for interdependence, like connecting with close others. However, our results reveal that access to the behaviors that would fulfill these cultural needs was not equally available to all employees. A growing class of worker—those employed in gig work—were less able to access interdependent relational behaviors, reflecting a cultural mismatch. This

mismatch, in turn, contributed to their lowered overall wellbeing during the COVID-19 pandemic. Though employment in gig work can lead employees to feel relatively “free” relative to the constraints imposed by traditional work arrangements, in the case of the pandemic, this resulted in this vulnerable group of workers instead ending up being free to be isolated.

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Tables and Figures

Table 1

Demographic Characteristics of Gig Workers and Non-Gig Workers at Time 1.

	Gig Workers (N = 242)	Non-Gig Workers (N = 960)
	M (*SD*)	
Participant characteristic		
Age	39.43 (12.70)	38.18 (12.70)
Personal Income***	2.64 (1.70)	3.68 (1.85)
Household Size	1.76 (1.50)	1.80 (1.44)
Number of Dependents*	0.62 (1.09)	0.79 (1.12)
Political Affiliation**	3.47 (1.64)	3.18 (1.62)
Education*	3.89 (1.41)	4.12 (1.36)
	N (%)	
Gender		
Women	53.9%	49.8%
Race		
Racial minorities	29.2%	28.6%
Relationship Status		
Single**	41.6%	32.7%

Notes. Asterisks indicate demographic characteristics that are significantly different between gig workers and non-gig workers. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2

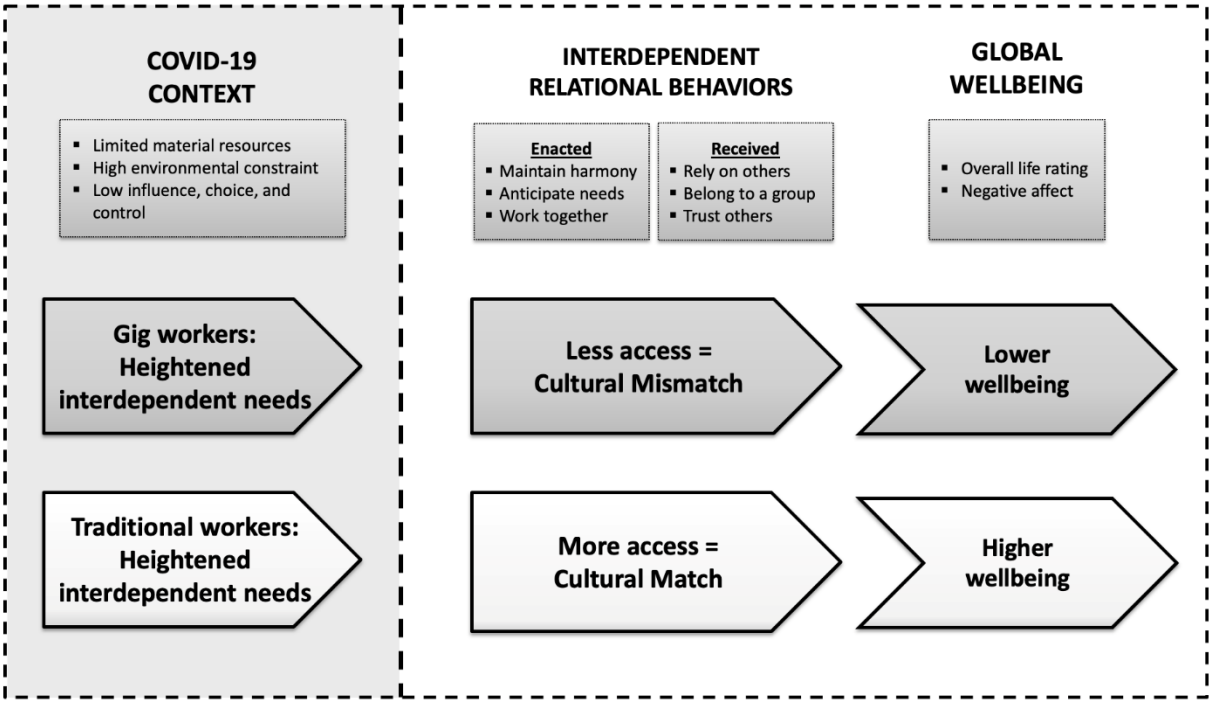
Results of Longitudinal Measurement Invariance Tests.

	Fit Statistics						
Model	X^2	*df*	*p*	CFI	TLI	RMSEA	SRMR
Configural	4404	1557	<.001	0.94	0.94	0.039	0.057
Metric	4521	1597	<.001	0.94	0.94	0.039	0.059
Scalar	4959	1637	<.001	0.93	0.93	0.042	0.062

Notes: CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual. CFI, TLI, and RMSEA are all robust estimates.

Figure 1

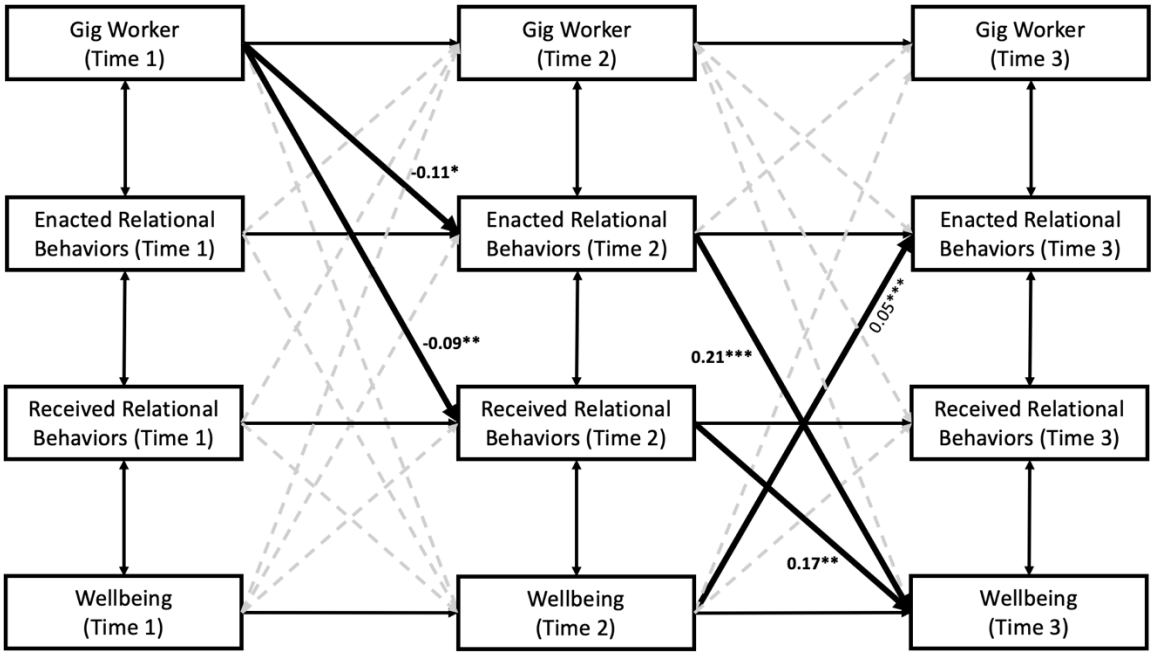
Theoretical model.



Note. Model components outlined in gray represent theorizing based on prior research. Components outlined in white reflect aspects tested in the current research.

Figure 2

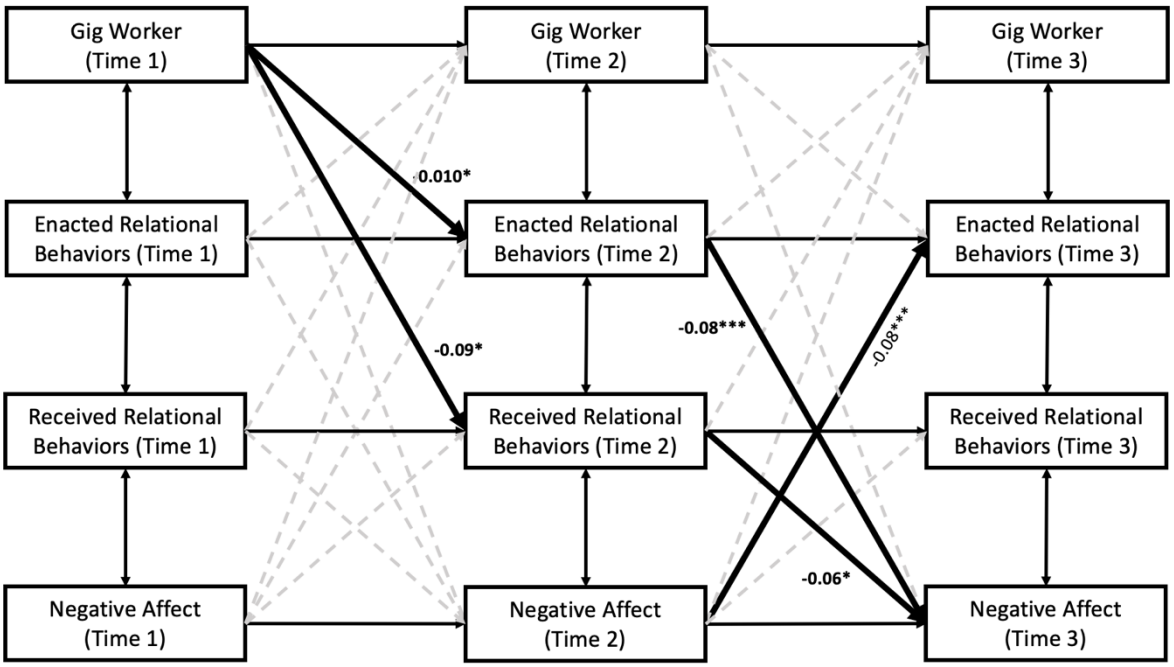
Cross-Lagged Panel Model Linking Gig Worker Status at T1 to Interdependent Relational Behaviors at T2 and Global Wellbeing at T3.



Notes: Significant effects indicated with thick solid black lines. Nonsignificant effects indicated with gray dashed lines. Coefficients indicated only for significant effects for ease of figure readability. See main text for coefficients of nonsignificant effects. * $p < .05$, ** $p < .01$.

Figure 3

Cross-Lagged Panel Model Linking Gig Worker Status at T1 to Interdependent Relational Behaviors at T2 and Negative Affect at T3.



Notes: Significant effects indicated with thick solid black lines. Nonsignificant effects indicated with gray dashed lines. Coefficients indicated only for significant effects for ease of figure readability. See main text for coefficients of nonsignificant effects. * $p < .05$, ** $p < .01$, *** $p < .001$.