

# **Development and Validation of the Work Capital Scale**

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## **Dedication**

I cannot say that my parents have had careers. Rather, they worked. Mostly, their work experiences were tedious and sometimes miserable, painful, and exhausting. However, their work was meaningful. I was able to survive, receive education, and thrive because my parents worked so hard regardless of the stigma of their jobs.

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## Abstract

**Background:** Scholars in vocational psychology have called for greater attention to different forms of capital to better understand the vocational development of marginalized groups, such as immigrants, refugees, and people from lower social class backgrounds. However, previous research has had several conceptual and measurement limitations, such as using less inclusive frameworks; the overuse of categorical, dummy coded, and objective measures; and the exclusion of economically and socially marginalized samples. Given these limitations, researchers, career counselors, and policymakers cannot obtain data to improve work interventions for those lacking work capital. **Purpose:** The proposed scale development study aimed to (a) develop a subjective, continuous, and multidimensional work capital scale and (b) validate the new scale with a representative sample of working adults and job seekers across two studies. **Methods:** In Study 1, I developed and refined items to develop the Work Capital Scale (WCS), conducted exploratory factor analysis on the scale, and assessed its reliability. In Study 2, I compared factor structures and tested the validity of the new scale. **Results:** In Study 1, I finalized a 16-item, four-factor work capital scale. The four factors (i.e., Economic Work Capital, Human Work Capital, Social Work Capital, and Cultural Work Capital) significantly and positively correlated with one another and demonstrated good reliability. In Study 2, the correlational model fit best to the data, and the four subscales correlated with subjective social class, objective socioeconomic indicators, and existing measures of capital. **Conclusion:** The WCS is a valid and reliable scale measuring four

forms of subjective work capital, which advances theory and research and provides a tool for practitioners to use in the community.

*Keywords:* capital, career capital, career assessment, scale

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## Chapter I

### Introduction

Researchers in counseling and vocational psychology have called for greater attention to social class and economic marginalization within the field (Liu, 2013; Liu & Ali, 2005; Smith, 2007). Scholars have particularly raised the need to incorporate different forms of capital into research to better understand and support the vocational development of marginalized groups who have been historically neglected in research, such as immigrants, refugees, and people from lower social class backgrounds (Eggenhofer-Rehart et al., 2018; Flores et al., 2011; Nelson et al., 2006). Capital is defined as any resource or asset that confers value or profit to its owners, which ultimately generates power and privilege within social class structures (Bourdieu, 1986; Desan, 2013; Marx, [1867] 1977). Capital is particularly relevant in the work domain because it provides access to high-status, stable, and lucrative jobs (Arthur et al., 1999; Iellatchitch et al., 2003). Therefore, identifying and classifying different forms of work capital can play a key role in research and clinical interventions seeking to empower marginalized groups to access decent work, such as work with safe working conditions and adequate pay (Duffy et al., 2016).

In response to this call, theorists have proposed the boundaryless career framework (Arthur et al., 1999; DeFillippi & Arthur, 1994) and the career fields framework (Iellatchitch et al., 2003; Mayrhofer et al., 2004) to operationalize several forms of career capital and encouraged further research in vocational psychology. However, several conceptual and measurement issues embedded in these frameworks restrict this line of research and its practical applications. First, although capital is a

multifaceted construct encompassing economic, human, social, and cultural capital (Bourdieu, 1986; Farkas, 2003; Lareau & Weininger, 2003; Liu, 2013), some forms of capital are not well-accounted for in several existing frameworks of work capital (Arthur et al., 1999; Iellatchitch et al., 2003). This exclusion limits the ability of researchers to integrate previous literature and test the multidimensional construct of work capital. Specifically, previous literature has excluded economic capital and focused on elitist cultural practices to measure cultural capital (e.g., listening to certain music). This operational and measurement exclusion has also precluded researchers from considering underserved groups as populations of interest, such as people without a college degree, involuntarily temporary workers, and people with marginalized identities. Lastly, the overuse of categorical, dummy coded, single-item, and objective measures has restricted researchers' ability to capture subjective, continuous, and nuanced psychological experiences. Therefore, the purpose of this study was to a) synthesize multiple theoretical frameworks by creating a comprehensive taxonomy of work capital and b) develop and validate a subjective, continuous, and multidimensional work capital scale based on this taxonomy (Bourdieu, 1986; DeFillippi & Arthur, 1994; Iellatchitch et al., 2003; Liu, 2013).

## Chapter II

### Literature Review

#### Theoretical Frameworks

On the individual level, *capital* is a personal asset or resource, including financial resources, behaviors, relationships, and attitudes, that allows for exchanges and benefits and confers value to the holder (Bourdieu, 1986; Desan, 2013; Liu, Soleck, et al., 2004; Marx, [1867] 1977). From this perspective, capital manifests in different forms, extending beyond economic resources. Bourdieu (1986), a French sociologist, perceived capital as a materialized, incorporated, or embodied labor that enables people to possess and perpetuate power and privilege. Drawing from his view on social class as a multidimensional status with multiple forms of capital, he described several structured forms of capital – economic, social, and cultural – and argued that having these different forms of capital increases the chances of success and achievement by facilitating access to opportunities and resources (Bourdieu, 1986; Lareau & Weininger, 2003). Drawing from these broader perspectives on capital, vocational psychologists developed the concept of *career capital*, which is any personal resource or competency that maximizes a person's achievement and success in occupational development (Flores et al., 2011; Fugate et al., 2004; Hirschi, 2012; Tomlinson, 2017). Specifically, two theories in the management and business fields – boundaryless career framework (BCF; Arthur et al., 1999; DeFillippi & Arthur, 1994) and career fields framework (CFF; Iellatchitch et al., 2003; Mayrhofer et al., 2004) – operationalized several types of career capital based on Bourdieu's forms of capital perspective.

### *Career Capital Theoretical Frameworks*

**Boundaryless Career Framework.** BCF posits three different types of career capital (e.g., knowing-how, knowing-whom, and knowing-why competencies) as central individual mechanisms for workers to be successful in their career. BCF presupposes that employees flexibly develop their boundaryless careers across multiple employers and domains (Arthur et al., 1999; DeFillippi & Arthur, 1994; Eby et al., 2003). Specifically, the framework connects each competency into forms of capital. For example, the knowing-how competency reflects both human capital and cultural capital, also known as job-related knowledge, skills, and abilities (Arthur et al., 1999; DeFillippi & Arthur, 1994); the knowing-whom competency is social capital, referring to networks of people; and the knowing-why competency is psychological capital, such as motivations and vocational identities. From this seminal work, contemporary scholars included more specific competencies, such as knowing-what, knowing-when, knowing-where, and knowing-oneself/contexts and categorized these into “must-have” forms of capital, which provide basic resources (e.g., knowing-what), and “nice to have” forms of capital, which offer additional resources (e.g., knowing-oneself; Lamb & Sutherland, 2010). The framework further proposed that accumulated capital can improve career adaptability, which in turn leads to decent and fulfilling work (Arthur et al., 1999).

**Career Fields Framework.** CFF is another framework that addresses the influence of capital on international working environments (Iellatchitch et al., 2003; Mayrhofer et al., 2004). CFF explicitly applied Bourdieu’s capital framework to a career context, proposing several forms of capital: a) economic capital, defined as general, anonymous, and all-purpose convertible money, b) social capital, referred to as

relationships of mutual recognition and acquaintance based on social connections and group or class membership, and c) cultural capital, indicating cultural signals, such as products, academic titles, and ways of thinking, feeling, evaluating, speaking, and acting (Iellatchitch et al., 2003; Mayrhofer et al., 2004). Structurally, although both BCF and CFF included social and cultural capital, CFF specifically integrated economic capital and distinguished cultural capital from human capital. People in a specific career field have their own unique career capital portfolio that interacts with cultural contexts (Mayrhofer et al., 2004). Particularly, CFF noted social standing as an important contextual factor to accumulate capital (Iellatchitch et al., 2003). Thus, CFF stressed unfair power and resource distributions and social inequity in a process of accumulating and using capital.

**Limitations.** Despite these two important frameworks describing how career capital relates to work experiences, several conceptual and measurement issues remained unresolved. Regarding conceptual issues, BCF did not incorporate economic capital, although capital accumulation generates class-stratified resources that determine power and privilege (Bourdieu, 1986; Smith, 2010; Wright, 1997). As a result, consequent empirical studies have focused on people with middle-class backgrounds, such as those with at least a college or master's degree, business leaders, and researchers with Ph.D. degrees (Brown et al., 2020; Bäker et al., 2021; Direnzo et al., 2015; Eby et al., 2003; Jokinen et al., 2008; Pham et al., 2019). Therefore, career capital research in vocational psychology has overlooked marginalized groups' economic statuses and the relations among economic capital, other forms of career capital, and various outcomes. Although CFF incorporated economic capital, researchers have had difficulty measuring the

construct because CFF did not define career capital in vocational contexts specifically (Brown et al., 2020; Jokinen et al., 2008).

Second, both frameworks did not discuss precarious labor markets, which are composed of insecure, unstable, and untraditional work arrangements (Allan et al., 2021). Instead, the two perspectives emphasize the fit between employees' capital and organizations for career competencies, which limits consideration of alternative forms of work, such as outsourced workers. BCF specifically views jobs as voluntarily changeable, which may not be the case in a volatile labor market (Arthur et al., 1999). A main underlying assumption of these limitations might be a traditional view about workers, perceiving them as those who have a choice regarding employment and therefore view their work as a "career" (Blustein et al., 2008). Lastly, both frameworks chose partial dimensions among all forms of career capital, and studies have often included only one or two types of career capital (e.g., Bäker et al., 2021; Fugate et al., 2004).

In addition, measurement issues have restricted vocational scholars from investigating career capital, despite its relevance to vocational development. Specifically, empirical studies have overly relied on categorical measures with arbitrary cut-offs (e.g., Bäker et al., 2021; Kim et al., 2006), coded the number of certain products or people to operationalize career capital (e.g., the number of networks or the number of books that participants have; Rodrigues et al., 2019; Singh et al., 2009), and used objective variables exclusively (e.g., Ahnquist et al., 2012; Wilson, 2002). These types of measures obscure subjective, psychological experiences, which often better explain social class-related experiences and better predict outcomes (Liu, 2013). Additionally, when measuring

career capital, scholars have used proxy variables, such as career identity for human capital and education for either social or cultural capital (Eby et al., 2003; Singh et al., 2009; Wilson, 2002). These conceptual and measurement problems limit reliability and validity, which further restricts researchers' ability from identifying relations between capital and various outcomes, such as social mobility, access to decent work, and well-being.

This present study addresses these limitations in three ways. First, the current study provides a more comprehensive taxonomy of career capital that incorporates an integrated set of economic, human, social, and cultural capital (Farkas, 2003; Lareau & Weininger, 2003; Liu, Soleck, et al., 2004). Second, I introduce the concept of work capital to reflect current precarious labor markets and encompass a wide range of work experiences. Career counseling and career capital research have focused on privileged groups that can choose employment and are relatively free from financial concerns (Blustein et al., 2008). Therefore, replacing 'career' capital with 'work' capital extends current career capital research to be more inclusive for marginalized groups who have been absent in the literature. This can also help researchers, practitioners, and policymakers understand the continuum of work experiences and support those who have been underserved in work interventions. Third, given methodological issues in the literature, I developed subjective, continuous, and integrated scales measuring work capital.

### ***Social Class-Based Work Capital***

In psychology, *social class* refers to people's status in the social and economic hierarchy and is a primary marker of access to diverse capital and resources (Diemer &



Rasheed Ali, 2009; Duffy et al., 2016; Liu, Ali, et al., 2004). Incorporating social class, counseling psychologists have developed two contemporary frameworks that focus on how social class relates to people's worldviews and access to work. First, the social class worldview model (SCWM) is a psychological framework that details factors that contribute to a person's understanding of their social class (Liu, 2013; Liu, Soleck, et al., 2004). In SCWM, social class generates access to power, privilege, and resources, which influence intra-personal components (e.g., social class-based identities, material possessions, lifestyles, and behaviors) and interpersonal components (e.g., interaction and classism). This process reinforces a person's social class worldview and perceived social class standing, which ultimately influences capital in a feedback loop. SCWM regards capital as attitudes, behaviors, and relationships that people can accrue to maintain their social class worldview (Liu, Soleck, et al., 2004). SCWM specifically places human, social, and cultural capital in a set of capital but excludes economic capital (Liu, Soleck, et al., 2004). Instead, SCWM views economic components as a culture (i.e., economic culture) that provide overarching values, beliefs, and expectations of resources and capital.

In addition, the psychology of working theory (PWT) is a vocational theory that describes capital as a social class-related contextual factor that facilitates work development and access to decent work (Blustein, 2006; Duffy et al., 2016). PWT particularly views economic capital as critical in securing decent work because economic capital provides a wide range of institutional, practical, and emotional support for academic and vocational achievements (Blustein, 2006). However, PWT also proposes social and cultural capital as important forms of work capital for vocational development

(Duffy et al., 2016). For example, parents with membership in higher social classes can connect their children to desired work opportunities or mentors. In addition, intergenerationally transmitted cultural capital, such as habitus - a way of thinking, behaving, and interacting - improves a person-job fit, which allows job applicants to be more appealing in job application processes. Likewise, PWT explains how multiple forms of work capital, derived from social standing, affect work attainment. However, it does not extensively describe specific forms of work capital and instead incorporates capital into the broader construct of economic constraints.

Similarly, some sociologists have suggested that fundamental forms of social class-based capital include economic, human, social, and cultural capital (Farkas, 2003; Lareau & Weininger, 2003). Such scholars have argued that class-stratified capital can determine conditions of existence, access to resources, and value evaluations and therefore can reproduce social inequity (Bourdieu, 1986; Cooper, 2008; Wright, 1997). Although sociologists acknowledge economic capital as being at the root of other forms of capital, they highlight economic capital as an all-purpose financial resource that allows people to easily maximize benefits (Bourdieu, 1986; Wright, 1997). Integrating SCWM, PWT, the forms of capital framework, and other social class-based perspectives, I propose that *work capital* is any social class-based asset or resource, such as experiences, attitudes, behaviors, relationships, knowledge, and skills, that provide exclusive privilege and power in the labor market or the workplace. In addition, these resources fall into four broad categories in a comprehensive taxonomy: economic, human, social, and cultural capital.

## **Domains of Work Capital**

### ***Economic Capital***

Economic capital is the most efficient form of capital, consisting of all-purpose, easily convertible, and general financial resources that facilitate further work-related investment (Bourdieu, 1986; Iellatchitch et al., 2003; Mayrhofer et al., 2004). Although Bourdieu did not fully explain economic capital, contemporary researchers have described how people can invest economic capital to cultivate other forms of capital for their vocational development (Desan, 2013). For example, people with financial support can have unpaid volunteer experiences or internships that improve their social, cultural, and human capital at work (Smith, 2010). People can also invest economic capital to take additional vocational training to enhance human capital (Brown & Wond, 2018) or build cultural capital by purchasing clothing to appear professional (Hooley & Yates, 2015; Smith, 2010). Saved time is another important result of using economic capital. For example, people can have free time from economic necessity, which is helpful to accumulate other forms of capital (Bourdieu, 1986).

Despite the critical role of economic capital in vocational development processes, few vocational psychologists have empirically incorporated economic capital in research. Rather, economists and sociologists have focused on economic capital by measuring household income (e.g., Ahnquist et al., 2012; Wilson, 2002). This may limit the understanding of people's subjective adversities around economic capital when developing other capital or saving their time. For example, a household income of \$60,000 can have a different meaning for economic capital depending on geographical location, wealth, and number of dependents. Accordingly, some scholars have used

subjective and continuous indicators by measuring the inability to afford necessities; however, this does not specifically measure how economic capital is related to occupational development (e.g., Wilson, 2002).

Qualitative research in vocational psychology has illustrated subjective work experiences related to a lack of economic resources (Eggenhofer-Rehart et al., 2018). For example, Eggenhofer-Rehart and colleagues (2018) found that most refugees in their study were unemployed or underemployed with small incomes, inhibiting them from launching their own business or applying for job training to obtain human and cultural capital – indeed, they accepted any job that met their needs, regardless of whether it aligned with their qualifications. Therefore, economic capital appears to be critical for accessing decent work, so developing a subjective measure of economic capital is an important direction for vocational research.

### *Human Capital*

Human capital includes job-related knowledge, skills, abilities, experiences, and other characteristics (i.e., KSAOs) that are important to be competitive, successful, flexible, valuable, and productive in the labor market (Becker, 2009; DeFillippi & Arthur, 1994; Fugate et al., 2004; Hirschi et al., 2017; Schultz, 1961). People can develop human capital through work, education, and training (Becker, 2009; Mincer, 1974). Specifically, people can develop human capital to be flexible across domains of work, suggesting that human capital encompasses both profession-specific and general KSAOs, such as overall work experiences and soft skills (Arthur et al., 1999; DeFillippi & Arthur, 1994). Multiple systematic reviews, longitudinal, and meta-analytic studies have found a myriad of work-related outcomes associated with human capital. For example, review studies

noted that human capital plays an important role in enhancing employability and facilitating work opportunities (Fugate et al., 2004; Williams et al., 2016). A longitudinal study supported this claim, finding that greater human capital increases the ease of obtaining new work (Trevor, 2001). As for work outcomes, studies found both job-specific and general human capital showed significant meta-analytic correlations with performance and the generation of new ideas, despite job-specific human capital showing stronger relations (Canavati et al., 2021; Crook et al., 2011).

However, existing measures of human capital have had conceptual and measurement limitations. Some studies have measured human capital with categorical measures or a single item (Bäker et al., 2021; Kim et al., 2006). Other studies have measured human capital with conceptually different constructs, such as career identity and educational level (Eby et al., 2003; Kim et al., 2006; Singh et al., 2009). However, measuring educational level is a problem because it does not accurately reflect job-specific training and confuses the construct with cultural capital, such as gaining social recognition from higher education. Although one study developed a subjective, continuous, and conceptually consistent scale for human capital, it mainly focused on employees with international work experiences (Jokinen et al., 2008). These issues amplify the methodological and conceptual problems in human capital research. Recently, a study constructed three factors (i.e., occupational expertise, job market knowledge, and soft skills) and developed a subscale of human capital to assess career resources (Hirschi et al., 2017). Although the subscale is psychometrically sound and conceptually clear, it would be impractical to include three constructs of human capital with nine items in a multidimensional capital scale. Therefore, developing a shorter

subscale of human capital informed by existing human capital scales and embedded within a larger work capital scale is warranted.

### ***Social Capital***

Work-related social capital refers to trustworthy networks of people that help workers gain access to information, influence, opportunities, and resources for work (Arthur et al., 1999; DeFillippi & Arthur, 1994; Kwon & Adler, 2014; Smith, 2010). Membership in social class groups facilitates the accumulation of social capital because prestigious groups offer access to people who have power and influence (Bourdieu, 1986). Such memberships include both professional and personal relationships, such as family and friends. Family is a particularly powerful source to obtain social capital throughout people's lives (Bourdieu, 1986; Brown et al., 2020). A meta-analytic study found strong correlations among education, income, and social capital, suggesting that social class plays a critical role in obtaining social capital (Huang et al., 2009). In terms of work-related outcomes, meta-analytic and other studies have found that social capital facilitates job search and job opportunities (Kwon & Adler, 2014), which in turn improves employability, self-directed career management, and work-related well-being (Direnzo et al., 2015; Ng & Feldman, 2014; Rodrigues et al., 2019; Zhang et al., 2010). In a qualitative study, professors in academia from lower and working-class backgrounds shared their struggles in navigating higher education due to the lack of social capital with collective wisdom and knowledge (Nelson et al., 2006).

However, the measurement of social capital has been inconsistent. Studies have mostly relied on categorical and single-item measures, such as coding numbers of people in participants' social networks, identifying whether people have mentors, and rating how

close they feel to their social network or how their social networks have expanded over time (Eby et al., 2003; Rodrigues et al., 2019; Singh et al., 2009). Some studies have used subjective, continuous measures; however, some of these measures focused on specific facets of social capital, such as social skills, the size of social networks, networking behaviors, and belongingness or strong ties with family and colleagues (Eby et al., 2003; Hirschi et al., 2017; Santos et al., 2018; Wolff & Spurk, 2019; Zhang et al., 2010). Other measures were not inclusive of job seekers who do not have work experience or part-time and temporary workers (Jokinen et al., 2008; Santos et al., 2018; Wolff & Spurk, 2019; Zhang et al., 2010). In sum, existing measures of social capital have several issues, which limit this line of research.

### ***Cultural Capital***

Definitions of cultural capital in vocational research consist of cultural, linguistic, and social signals (e.g., linguistic aptitudes, attitudes, interactional styles, goods, formal knowledge, and professional presentation of self) that can provide exclusive rewards and power at work (Bourdieu, 1986; Iellatchitch et al., 2003; Lamont & Lareau, 1988; Mayrhofer et al., 2004; Smith, 2010). Cultural capital presupposes a social consensus that having such cultural signals is socially desirable (Lamont & Lareau, 1988). As a result, cultural capital is a social marker that excludes people who are unfamiliar with certain cultural signals, then deprives them of access to power and provides cues for discrimination (Lamont & Lareau, 1988; Lareau & Weininger, 2003). Cultural capital includes a) embodied, being assimilated into certain cultural practices, such as accents and behaviors; b) objectified, possessing goods with cultural signals, such as luxurious items; and c) institutionalized, having experiences at institutions that transmit respectable

cultural heritage (Bourdieu, 1986). Interestingly, both human capital and cultural capital share educational attainment. However, the key difference is that human capital includes skills and knowledge obtained by receiving education, whereas cultural capital includes socially constructed competence and recognition gained from having a degree, particularly from a prestigious college (Lareau & Weininger, 2003). Drawing from this concept, researchers have refined cultural work capital, defining it as learned linguistic and interaction styles and norms related to self-presentation at work and developed from educational and cultural efforts (Iellatchitch et al., 2003; Smith, 2010).

Although discussions regarding cultural capital are fruitful, many aspects of cultural capital have remained untested due to the complexity of the concept. To address this issue, some qualitative studies in vocational psychology have reflected contextual-specific cultural capital. For example, refugees often struggle to transfer their vocational and academic qualifications to their host country because employers do not acknowledge them – as a result, they have to acquire new cultural capital regarding unknown rules, behavioral norms, and interactional styles at work (Eggenhofer-Rehart et al., 2018). In another study, most women scientists shared that having their fathers in academia served as cultural capital that led them to academia (Duberley & Cohen, 2010). However, they also noted that they feel deficient in cultural capital as women in a male-dominant work environment. On the other hand, professors from working-class backgrounds reported their difficulties adjusting to academia because of not knowing language idioms, cultural practices, professional behaviors, and how to succeed in academia due to the lack of cultural capital (Nelson et al., 2006). Conversely, another qualitative study showed that



Asian employers tend to prefer job seekers with overseas education because of the middle-class social status reflected by their degrees (Waters, 2006).

Despite demonstrating important findings, the literature lacks conceptual and measurement clarity. For example, some research has defined social capital as familiarity with cultural expectations and practices through family relationships, but this aligns more strongly with cultural capital (Garnett et al., 2008; Lewis, 2016; Nelson et al., 2006). Some studies have also used parents' or participants' education level as a proxy for cultural capital, assuming parents' education level would present cultural capital at home (Santos et al., 2018). However, this could generate confounding factors, such as human capital developed from educational training. In addition, little research in psychology has quantitatively measured cultural capital. Some studies have measured elite cultural practices for cultural capital in a categorical or dichotomous manner, such as whether or not participants go to museums or participate in expensive sports (Garnett et al., 2008; Kim et al., 2006; Lareau & Weininger, 2003; Santos et al., 2018). Likewise, although one study measured embodied cultural capital with a continuous scale, it only captured elite cultural practices, such as speaking in a foreign language and knowing certain books and artists, which are not directly related to work-related attitudes or behaviors (Santos et al., 2018). This inhibits a richer understanding of cultural capital and is not culturally inclusive (Lareau & Weininger, 2003). Therefore, a conceptually integrative, continuous, and subjective subscale of cultural capital would allow for quantitative research to examine the role of cultural capital on vocational development.

## **The Present Study**

The purpose of the present study was to develop and validate a multidimensional work capital scale to address the conceptual and measurement limitations of existing measures. To accomplish this goal, I developed the scale across two studies. First, the goal of Study 1 was to develop and refine items by creating a test item pool, incorporating reviews from a panel of experts in vocational psychology and social class-related psychology, conducting exploratory factor analysis (EFA), and evaluating internal consistencies. The aims of Study 2 were to examine a) the factor structure with confirmatory factor analysis (CFA), b) the internal consistencies of the subscales, and c) the scale's convergent and divergent validity.

Specifically, I confirmed the factor structure by testing single-factor, correlational, higher-order, and bifactor CFA models. The single factor model regresses all the items onto one factor (subjective work capital); the higher order model regresses the sub factors onto a higher order subjective work capital factor; the correlational model regresses each indicator load onto its respective factor and allows each factor to correlate with one another; and the bifactor model regresses each indicator on its factor while simultaneously regressing each indicator onto a subjective work capital factor. Therefore, each subfactor has independent variance as well as variance that is reflected by an underlying work capital factor. I predicted that the correlational model would show the best fit to the data because of theoretical perspectives proposing that all forms of capital are independent but intercorrelated (Bourdieu, 1986).

Next, I estimated the internal consistency and validity of each subscale. To establish convergent and divergent validity, I included both objective socioeconomic

status indicators (i.e., adjusted household income, participants' educational levels, and their parents' education levels) and subjective social class indicators (i.e., current subjective social class and childhood subjective social class). I also included existing scales of comparable constructs for each subscale. For economic work capital, I included economic constraints; for human work capital, I included three subscales of human capital (i.e., occupational expertise, job market knowledge, soft skills); for social work capital, I included networking; and for cultural work capital, I included embodied cultural capital. I predicted that the effects sizes of relations between forms of work capital and preexisting scales would be large but not so large as to suggest redundancy (e.g., relations close to .50 but less than .85; (van Mierlo et al., 2008). Based on this information, I proposed the following hypotheses related to the convergent and divergent validity of this scale:

Hypotheses 1a-1d. Adjusted household income will have a large positive correlation with economic work capital (Hypothesis 1a), a small positive correlation with human work capital (Hypothesis 1b), a small positive correlation with social work capital (Hypothesis 1c), and a small positive correlation with cultural work capital (Hypothesis 1d).

Hypothesis 2a-2d. Participants' education level will have a small positive correlation with economic capital (Hypothesis 2a), a small positive correlation with human capital (Hypothesis 2b), a small positive correlation with social capital (Hypothesis 2c), and a small positive correlation with cultural capital (Hypothesis 2d).

Hypothesis 3a-3d. Parents' education level will have a small positive correlation with economic capital (Hypothesis 3a), a small positive correlation with human capital

(Hypothesis 3b), a small positive correlation with social capital (Hypothesis 3c), and a small positive correlation with cultural capital (Hypothesis 3d).

Hypothesis 4a-4d. Current subjective social class will have a large positive correlation with economic capital (Hypothesis 4a), a medium positive correlation with human capital (Hypothesis 4b), a medium positive correlation with social capital (Hypothesis 4c), and a medium positive correlation with cultural capital (Hypothesis 4d).

Hypothesis 5a-5d. Childhood subjective social class will have a small positive correlation with economic capital (Hypothesis 5a), a small positive correlation with human capital (Hypothesis 5b), a small positive correlation with social capital (Hypothesis 5c), and a small positive correlation with cultural capital (Hypothesis 5d).

Hypothesis 6. Economic capital will have a large negative correlation with economic constraints.

Hypothesis 7a-7c. Human capital will have a large positive correlation with occupational expertise (Hypothesis 7a), a large positive correlation with job market knowledge (Hypothesis 7b), and a large positive correlation with soft skills (Hypothesis 7c).

Hypothesis 8. Social capital will have a large positive correlation with networking.

Hypothesis 9. Cultural capital will not have a significant correlation with embodied cultural capital.

## Chapter III

### Study 1

#### Methods

##### *Participants*

Participants in Study 1 were 639 adults with a mean age of 35.19 years ( $SD = 12.34$ ). In total, 62.8% of participants self-identified as women ( $n = 401$ ), 34.7% as men ( $n = 222$ ), and 2.5% as other ( $n = 16$ ), such as non-binary and transgender man.

Regarding race and ethnicity, participants self-identified as White/European American ( $n = 479$ , 75.0%), Asian/Asian American ( $n = 43$ , 6.7%), Black/African American ( $n = 39$ , 6.1%), Hispanic/Latino/a/x ( $n = 34$ , 5.3%), Multiracial ( $n = 23$ , 3.6%), Asian Indian subcontinent ( $n = 10$ , 1.6%), American Indian/Native American/First Nation/Indigenous ( $n = 3$ , 0.5%), Middle Eastern or North African ( $n = 3$ , 0.5%), Pacific Islander ( $n = 1$ , 0.2%), other ( $n = 3$ , 0.5%), and 0.2% ( $n = 1$ ) did not provide racial information.

Regarding employment status, most participants were employed full-time ( $n = 360$ , 56.3%) with remaining participants identifying as employed part-time ( $n = 135$ , 21.1%), unemployed and looking for work ( $n = 94$ , 14.7%), self-employed ( $n = 47$ , 7.4%), and other ( $n = 3$ , 0.6%). Participants' occupations varied, and their top occupations included sales people ( $n = 16$ , 2.5%), teachers/teacher assistants ( $n = 13$ , 2.1%), engineers ( $n = 12$ , 1.9%), administrative assistants ( $n = 9$ , 1.4%), registered nurses ( $n = 7$ , 1.1%), and tutors ( $n = 5$ , 0.8%). Participants' education levels were seventh to ninth grades ( $n = 1$ , 0.2%), high school graduate or equivalent ( $n = 164$ , 25.7%), trade/vocational school ( $n = 32$ , 5.0%), associate degree ( $n = 70$ , 11.0%), four-year college or university degree ( $n = 255$ , 39.9%), master's degree ( $n = 94$ , 14.7%), and professional/Ph.D degree ( $n = 23$ , 3.6%).

Participants reported their childhood social class as lower class ( $n = 59$ , 9.3%), working class ( $n = 196$ , 30.7%), middle class ( $n = 234$ , 36.7%), upper middle class ( $n = 142$ , 22.2%), and upper class ( $n = 8$ , 1.3%). Their current social class included lower class ( $n = 36$ , 5.6%), working class ( $n = 190$ , 29.8%), middle class ( $n = 265$ , 41.5%), upper middle class ( $n = 145$ , 22.7%), and upper class ( $n = 3$ , 0.5%). The median income of the sample was \$35,000 and the median adjusted household income (household income divided by all members of the household) of the sample was \$29,750.

### ***Measures***

**Demographics Information.** Participants shared their demographic information, such as their race/ethnicity, gender, age, employment statuses, adjusted household income, education level, subjective social class, and job title. See Appendix A for the complete demographic questionnaire.

**Work Capital Scale (WCS).** Participants responded to the initial pool of items using a seven-point Likert-like scale ranging from Strongly Disagree (1) to Strongly Agree (7). See Appendix C for the complete pool of items.

### ***Procedure***

In Study 1, I created a large, oversaturated pool of items based on previous theories and literature. After generating the initial item pool, I sent it to experts who have studied the life or working experiences of people from lower social class backgrounds within multicultural and social justice-oriented frameworks for review and feedback. For example, three researchers were those in the counseling psychology field who have regularly published articles on these topics in *Journal of Counseling Psychology*, *The Counseling Psychologist*, *Journal of Vocational Behavior*, and *Journal of Career*

*Assessment.* Another researcher was a sociologist who examined underprivileged populations' capital. After incorporating their feedback, I adjusted the item pool to around four times the number of the final items (DeVellis & Thorpe, 2021), which led to the initial item pool of 83 items.

I then collected a sample of working adults or job seekers to conduct an EFA. By doing so, we aimed to eliminate poor-performing and redundant items. All participants had to a) reside in the United States, b) be 18 years or older, c) be able to read and understand sentences in English, and d) be employed or currently seeking a job. Conducting the EFA requires conservatively ten participants per item (Worthington & Whittaker, 2006). I recruited 650 participants through Prolific Academic based on statistical evidence that having samples of at least 300 cases is adequate (Kahn, 2006; Worthington & Whittaker, 2006). Prolific Academic is a platform where people participate in surveys and receive monetary compensation. Online platforms may leave out some workers who do not have internet access; however, Prolific Academic connects researchers to participants from a wide range of social backgrounds and employment statuses, which is in line with the present study's purpose. Therefore, I encouraged people from lower social class backgrounds, people who did not have higher education degrees, and people currently seeking jobs to participate. In addition, Prolific Academic compensates participants ethically and produces high quality data, such as more honest responses than other online recruitment platforms (Peer et al., 2017). The initial sample included 652 participants. However, we removed 12 participants who did not respond correctly to four attention check items. Additionally, we removed one participant who

was unemployed and not looking for a job (i.e., did not meet the inclusion criteria), which left the final sample size of 639.

### *Analysis Plan*

To determine the final items, I conducted a series of EFAs using robust maximum likelihood (MLR) with geomin rotation (Muthén & Muthén, 2012). I chose the geomin rotation, one of the oblique rotational methods, because the frameworks suggest that each factor of capital would be correlated (Bourdieu, 1986; Muthén & Muthén, 2012). We determined the number of factors in the dataset by considering multiple indices, such as Kaiser's criterion (retaining factors with eigenvalues greater than one), scree plots, parallel analysis, theoretical frameworks, and parsimony. As for parallel analysis, the parallel analysis generates random datasets, so researchers can compare the eigenvalues from the random datasets to the original dataset (O'Connor, 2000). Researchers can determine the number of factors when eigenvalues from the raw dataset are larger than eigenvalues from the random dataset. For this analysis, I generated 1,000 random datasets with 95 percentile values.

I also considered goodness of fit of possible factor models. Specifically, the fit indices guidelines I referred to were comparative fit index ( $CFI \geq .90$ ) and root mean squared error of approximation (RMSEA) and standardized root mean square residual (SRMR)  $\leq .10$  to  $CFI \geq .95$ ,  $RMSEA \leq .06$ , and  $SRMR \leq .08$  and the lower Akaike information criterion (AIC; Preacher et al., 2013; Hu & Bentler, 1999; Weston & Gore, 2006). Although there are no absolute cut-off values, lower AIC values are better (Hooper et al., 2008). Furthermore, experts recommend that researchers retain the fewest number of factors with an RMSEA lower than .05 to obtain the most parsimonious model



(Preacher et al., 2013). To evaluate whether fit changed among different factor models, we used the Satorra-Bentler scaled chi-square difference test, which is necessary with MLR.

When I selected the final items, I referred to the following recommended criteria: a) a factor loading exceeding .50 on the factor, b) no high cross-loadings onto other factors (i.e., less than a .15 difference from an item's highest factor loading), c) no more than five items representing each factor for parsimony, and d) items based on content validity (Brown, 2015; Worthington & Whittaker, 2006). For the content validity, I did not retain items if they captured similar content as items with higher loadings. I also retained items with comparably lower factor loadings if they improved content validity by capturing a distinct element of the construct. Finally, I ran an additional EFA with the finalized 16 items, examined the correlations among the subfactors in EFA, and evaluated internal consistencies for the subscales.

## **Results**

### ***Preliminary Analyses***

Regarding missing data, 637 (99.7%) participants had complete data, one participant (0.2%) was missing data on two items, and one participant (0.2%) was missing data on one item. Therefore, less than 0.03% of all data were missing, so I regarded missing data as negligible and used full information maximum likelihood to handle missing data (Tabachnick et al., 2019).

### ***Primary Analyses***

We first examined factors with eigenvalues over 1.00. The data contained 10 factors with eigen values over 1.00 (1.015). However, Catell's (1966) scree plot showed a

distinct separation between the fourth and fifth factors, which suggests that four factors should be retained. Next, I conducted parallel analysis given issues with using eigenvalues and scree plots to determine the number of factors (O'Connor, 2000), which suggested extracting five factors because the first five factors had raw data eigenvalues (30.599, 11.201, 6.204, 2.644, and 2.036) are greater than the 95<sup>th</sup> percentile of randomly generated eigenvalues (1.858, 1.790, 1.739, 1.698, and 1.660).

Given the mixed results, I compared the model fit of the one, two, three, four, and five factor models. The one-factor model had poor fit to the data,  $\chi^2(3320) = 24,903.633$ ,  $p < .001$ , CFI = 0.46, RMSEA = 0.10, 90% CI [0.10, 0.10], SRMR = .15, and AIC = 175,281.608. The two-factor model also had poor fit to the data,  $\chi^2(3,238) = 15,704.459$ ,  $p < .001$ , CFI = 0.69, RMSEA = 0.08, 90% CI [0.08, 0.08], SRMR = .08, and AIC = 16,4405.078. The three-factor model had mediocre fit to the data,  $\chi^2(3,157) = 9,751.971$ ,  $p < .001$ , CFI = 0.83, RMSEA = 0.06, 90% CI [0.06, 0.06], SRMR = .04, and AIC = 15,7525.430. The four-factor model had borderline fit to the data,  $\chi^2(3,077) = 7,967.883$ ,  $p < .001$ , CFI = 0.88, RMSEA = 0.05, 90% CI [0.05, 0.05], SRMR = .03, and AIC = 15,5499.430. The five-factor model had acceptable fit to the data,  $\chi^2(2,998) = 7,074.068$ ,  $p < .001$ , CFI = 0.90, RMSEA = 0.05, 90% CI [0.05, 0.05], SRMR = .03, and AIC = 15,4514.025. Because both four-factor and five-factor models showed acceptable fit, I conducted the Satorra-Bentler scaled chi-square difference test. The Satorra-Bentler scaled chi-square difference suggested that the five-factor model had significantly lower chi-square compared to the four-factor model,  $\Delta\chi^2(79) = 689.71$ ,  $p < .001$ .

In summary, the model fits suggested both the four-factor and five-factor models might be viable. However, the scree plot, theoretical backgrounds, and RMSEA lower

than .05 for parsimony suggested the four-factor model (Preacher et al., 2013), whereas the parallel analysis and the chi-square difference suggested the five-factor model. Therefore, we examined the EFA results for conceptual consistency. For the five-factor solution, the cultural work capital items appeared to load onto two factors. Specifically, six items loaded onto one factor that explained shared social class backgrounds of cultural work capital. However, all these six items shared significant cross-loadings with other factors. Otherwise, all other items loaded onto their appropriate subscale in the same way for both the four- and five-factor solutions. That is, if the six items with high cross-loadings were removed, then the remaining items loaded onto only one factor, suggesting the four-factor model. Therefore, we proceeded to eliminate the six high cross loading items and retain the four-factor solution.

Next, I selected the final items to improve content validity. For example, for the economic work capital subscale, I chose four items that reflected financial ability to focus on vocational development. For the human work capital, I selected four high loading items that captured both qualifications and training experiences. For the social work capital, I chose four high loading items that explained social connections that could lead to hidden job opportunities and mentoring experiences. Finally, for the cultural work capital, I chose high factor loading items that explained manners and behaviors that fit cultural expectations at work. Therefore, we retained 16 items for the four-factor scale in the EFA.

I ran an additional EFA using these 16 items. The trimmed four-factor model had excellent fit to the data,  $\chi^2(62) = 76.002$ ,  $p = .11$ , CFI = 1.00, RMSEA = 0.02, 90% CI [0.00, 0.03], SRMR = .01, and AIC = 30,448.502. The parallel analysis also suggested a

four-factor model, with four raw data eigenvalues (6.601, 2.799, 1.821, and 1.214) exceeding the 95<sup>th</sup> percentile of randomly generated eigenvalues (1.335, 1.264, 1.213, and 1.170). For the final scale, economic work capital significantly and positively related to human work capital with a medium effect size (.44), social work capital with a medium effect size (.43), and cultural work capital with a medium effect size (.24). Human work capital also significantly and positively related to social work capital with a medium to large effect size (.49) and cultural work capital with a large effect size (.58). Social work capital significantly and positively related to cultural work capital with a small effect size (.21) (see Table 1). All items loaded onto their factors at .72 or higher, and all four subscales had adequate to strong internal consistency reliability: Economic Work Capital ( $\alpha = .92$ ), Human Work Capital ( $\alpha = .91$ ), Social Work Capital ( $\alpha = .91$ ), and Cultural Work Capital ( $\alpha = .87$ ). Table 2 depicts the respective items, factor loadings, and internal consistencies of the four factors. See Appendix D for the final WCS.

**Table 1***Factor Correlations in Exploratory Factor Analysis*

	1	2	3	4
1. Economic Work Capital	-			
2. Human Work Capital	.44*	-		
3. Social Work Capital	.43*	.49*	-	
4. Cultural Work Capital	.24*	.58*	.21*	-

*Note:* \*  $p < .01$ .

**Table 2***Factor Loadings and Internal Consistencies of the Factors*

	F1	F2	F3	F4
<b>Economic Work Capital <math>\alpha = .92</math></b>				
1. If I lost my job, I'd have money to tide me over until I could get a new job.	<b>.86*</b>	-.02	-.03	-.02
6. I can afford to enroll in job training programs.	<b>.84*</b>	.06	-.06	.03
7. I can focus on the job search process because I am financially stable.	<b>.89*</b>	-.05	.02	.07
8. I can afford materials that improve my work productivity (e.g., a laptop, books, and software).	<b>.81*</b>	.05	.07	-.04
<b>Human Work Capital <math>\alpha = .91</math></b>				
4. I have job expertise that helps me be successful.	.04	<b>.85*</b>	.02	0.00
11. I am highly trained in my area of work.	.03	<b>.78*</b>	-.02	.05
13. I have the work experience needed to be successful in my job.	.00	<b>.86*</b>	.01	-.03
18. I have job qualifications that help me excel at work.	-.03	<b>.83*</b>	.05	.04
<b>Social Work Capital <math>\alpha = .91</math></b>				
6. I know influential people who can connect me to job opportunities.	.00	.00	-.02	<b>.90*</b>
12. I have social contacts that can facilitate my job-search processes.	.02	-.04	.07	<b>.89*</b>

13. I am connected to people who coach me about work.	.05	.03	.07	<b>.75*</b>
21. I can access hidden positions through my connections.	-.03	.07	-.11	<b>.80*</b>
<b>Cultural Work Capital <math>\alpha = .87</math></b>				
1. I know how to behave professionally on my first day at work.	-.00	.06	<b>.76*</b>	-.05
10. I have good manners and behaviors that optimize my work opportunities.	.01	-.07	<b>.84*</b>	.04
12. My behavior fits the expectations required at work.	.01	.14	<b>.72*</b>	.00
20. I know how I'm supposed to behave at work social events, including group dinners.	-.01	.02	<b>.75*</b>	.03

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*Note:* \*  $p < .05$ . Bold values indicate the highest loading.

## Chapter III

### Study 2

#### Methods

##### *Participants*

Participants in Study 2 were 438 adults with a mean age of 34.46 years ( $SD = 11.05$ ). Regarding gender, 53.9% of participants self-identified as women ( $n = 236$ ), 43.8% as men ( $n = 192$ ), and 2.3% as other ( $n = 10$ ), such as non-binary and gender fluid. Participants self-identified as White/European American ( $n = 324, 74.0\%$ ), Asian/Asian American ( $n = 37, 8.4\%$ ), Black/African American ( $n = 23, 5.3\%$ ), Hispanic/Latino/a/x ( $n = 23, 5.3\%$ ), Multiracial ( $n = 18, 4.1\%$ ), Middle Eastern or North African ( $n = 2, 0.5\%$ ), and Pacific Islander ( $n = 2, 0.5\%$ ). For their employment status, participants were employed full-time ( $n = 265, 60.5\%$ ), employed part-time ( $n = 83, 19.0\%$ ), unemployed and looking for work ( $n = 54, 12.3\%$ ), self-employed ( $n = 29, 6.6\%$ ), and other ( $n = 7, 1.6\%$ ). Participants had a wide range of jobs, and their top job titles included administrative assistants ( $n = 10, 2.3\%$ ), accountants ( $n = 9, 2.0\%$ ), teachers/teacher assistants ( $n = 8, 1.8\%$ ), managers ( $n = 8, 1.8\%$ ), data entry ( $n = 6, 1.4\%$ ), and delivery driver ( $n = 6, 1.4\%$ ). Regarding participants' highest level of education, participants reported seventh to ninth grades ( $n = 1, 0.2\%$ ), high school graduate or equivalent ( $n = 99, 22.6\%$ ), trade/vocational school ( $n = 21, 4.8\%$ ), associate degree ( $n = 47, 10.7\%$ ), four-year college or university degree ( $n = 196, 44.7\%$ ), master's degree ( $n = 62, 14.2\%$ ), and professional/Ph.D degree ( $n = 12, 2.7\%$ ). Participants' childhood social class were lower class ( $n = 26, 5.9\%$ ), working class ( $n = 128, 29.2\%$ ), middle class ( $n = 183, 41.8\%$ ), upper middle class ( $n = 94, 21.4\%$ ), and upper class ( $n = 7, 1.6\%$ ). Participants



also reported their current social class as lower class ( $n = 25$ , 5.7%), working class ( $n = 120$ , 17.4%), middle class ( $n = 193$ , 44.0%), upper middle class ( $n = 98$ , 22.4%), and upper class ( $n = 2$ , 0.5%). The median income of the sample was \$36,500, and the median adjusted household income (household income divided by all members of the household) of the sample was \$29,750.

### *Measures*

**Participants' and Their Parents' Education Levels.** To assess participants' education levels, I used the International Standard Classification of Education of UNESCO 2011 (ISCED; Unesco Institute for Statistics, 2012) and adapted it based on the United States education systems (Schneider, 2013). To measure the education level of participants' parents, I used the ISCED with a modified formula: (educational level of a parent (or a guardian 1) for the participant + educational level of the other parent (or a guardian 2))/2 (Santos et al., (2018).

**Childhood and Current Subjective Social Class.** To measure childhood and current subjective social class, I used the one-item MacArthur Scale of Subjective Social Status (Adler et al., 2000). This scale presents participants with a picture of a ladder, and participants indicate where they fall on a scale from 1 (worst off) to 10 (best off), relative to other people. Research has found that scale scores consistently relate to health-related variables, even when controlling for objective socioeconomic indicators (Adler et al., 2000). In addition, the scale scores were moderately associated with income and education ( $r = .39$  and  $.37$ ), suggesting that subjective social status is similar but distinct from objective socioeconomic status indicators (Operario et al., 2004). To measure childhood social class, participants retrospectively reported their childhood social class.

**Work Capitals Scale (WCS).** To measure participants' forms of work capital, I used the refined Work Capital Scale (WCS). Participants responded to the refined items determined in Study 1 using a seven-point Likert-like scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (7). The estimated internal consistencies for the four-item subscales were: Economic Work Capital ( $\alpha = .93$ ), Human Work Capital ( $\alpha = .93$ ), Social Work Capital ( $\alpha = .92$ ), and Cultural Work Capital ( $\alpha = .87$ ).

**Economic Constraints.** To assess participants' economic constraints, I used the five-item Economic Constraints Scale (ECS; Duffy et al., 2019). Participants responded to these items on items on a seven-point scale ranging from *strongly disagree* to *strongly agree*. Sample items for the scale include, "Throughout most of my life, I have struggled financially" and "For most of my life, I have not felt financially stable." Duffy and colleagues (2019) found scores to correlate positively with financial deprivation and poverty-wage employment and found scale scores to have a good internal consistency of  $\alpha = .95$ . In the current study, the internal consistency was  $\alpha = .97$ .

**Human Capital.** To measure participants' human capital by using preexisting measures, we used the three-item Occupational Expertise, three-item Job Market Knowledge, and three-item Soft Skills subscales in the Career Resources Questionnaire (CRQ; Hirschi et al., 2017). Participants responded on a five-point Likert-type scale ranging from 1 = *not true at all* to 5 = *completely true*. Sample items include, "I possess profound knowledge in my occupation" in the Occupational Expertise subscale, "I have a good knowledge of the job in the market" in the Job Market Knowledge subscale, and "I have many skills that I could use in a range of different occupations" in the Soft Skills subscale. Hirschi and colleagues (2017) found the scale correlate in the expected

directions with occupational self-efficacy, career satisfaction, job satisfaction, promotions, and salary. The internal consistencies in the scale development study were  $\alpha = .80-.86$  in the Occupational Expertise subscale,  $\alpha = .90-.92$  in the Job Market Knowledge subscale, and  $\alpha = .82-.88$  in the Soft Skills subscale. In the present study, the estimates of the subscales were: Occupational Expertise ( $\alpha = .92$ ), Job Market Knowledge ( $\alpha = .94$ ), and Soft Skills ( $\alpha = .92$ ).

**Networking.** Participants answered the three-item Networking subscale in the CRQ (Hirschi et al., 2017) and responded on a 5-point Likert-type scale ranging from 1 = *not true at all* to 5 = *completely true*. Sample items for the networking include, “I frequently build contacts with other people who are important for my career development” and “I frequently utilize contacts with other people to advance in my career.” In the scale development study, researchers found the scale to correlate in the expected directions with career satisfaction, job satisfaction, promotions, and salary (Hirschi et al., 2017). The internal consistencies in the scale development study were  $\alpha = .84 - .93$ , and the internal consistency in the current study was  $\alpha = .93$ .

**Embodied Cultural Capital.** Participants responded on the five-item Embodied Cultural Capital subscale (ECC) of the Cultural, Social, and Psychological Capital Scale (Santos et al., 2018). Participants responded on a 10-point Likert-type scale ranging from 1 = *never* to 10 = *always*. Sample items include, “How often do you read books except for school or technical books?” and “How often do you visit museums, theaters, dance shows, cultural centers, and concerts?” Given the COVID-10 pandemic, we prompted participants to think of their tendency before the pandemic if appropriate. In the scale development study, the scale scores correlated in expected directions with job

performance, and the internal consistency was  $\alpha = .76$ . For the present study, the estimated internal consistency was  $\alpha = .63$ .

### *Procedure*

In Study 2, I collected a separate sample of working adults or job seekers through Prolific Academic to a) confirm the factor structure, b) assess internal consistency, and c) evaluate the convergent and divergent validity of the new measure. As in Study 1, we used Prolific Academic because it provides quality data, rewards participants ethically, and allowed me to exclude participants who joined the former study. All participants had to a) reside in the United States, b) be 18 years or older, c) be able to read and understand sentences in English, and d) be employed or currently seeking a job. Because the statistical convention for CFA is at least 5:1 to 10:1 ratio of participants to a number of parameters (Worthington & Whittaker, 2006), I recruited an initial sample of 463 participants. Participants consented to participate in the study, then completed the WCS and other measurements. Participants took approximately nine minutes to complete the survey on average.

For data cleaning, I removed five participants who did not provide any data, seven participants who provided only demographic data, and three participants who did not respond correctly to four attention check items. I further removed two participants who were unemployed and not looking for a job (i.e., did not meet the inclusion criteria). As explained below, I also removed eight cases that had outliers for certain variables. The final sample size of 438.

### *Analysis Plan*

To test the statistical assumptions to conduct structural equation modeling, I first explored the data for outliers by evaluating cases that fell outside the distance between the third and first quartile multiplied by 2.2 (Hoaglin & Iglewicz, 1987). Next, I evaluated whether data had any missing data. If I found a significant amount of missing data, I then examined Little's missing completely at random test to demonstrate that data were missing completely at random. Third, I visually inspected scatterplots for nonlinearity and examined all variables' skewness and kurtosis values for univariate normality.

Regarding the primary analyses, I conducted a confirmatory factor analysis (CFA) to identify the best fitting factor structure in Mplus 7.0 with MLR (Muthén & Muthén, 2012). Specifically, I tested single-factor, correlational, higher-order, and bifactor CFA models to evaluate the factor structure. I considered the guidelines for acceptable fit indices: ranging from comparative fit index (CFI)  $\geq .90$  and root mean squared error of approximation (RMSEA)  $\leq .08$  and standardized root mean square residual (SRMR)  $\leq .10$  to CFI  $\geq .95$ , RMSEA  $\leq .06$ , SRMR  $\leq .08$ , and the Akaike information criterion (AIC) (Hu & Bentler, 1999; Weston & Gore, 2006). If the models were nested, we also examined the chi-square difference with a Satorra-Bentler adjustment. Next, in terms of internal consistency, I calculated Cronbach's alpha in SPSS 27. Lastly, I calculated Pearson correlation coefficients to establish convergent and divergent validity for continuous variables. Specifically, for participants' level of education, parents' level of education, and current and childhood subjective social classes, I calculated Spearman correlation coefficients because they were ordinal variables.

## **Results**

### *Preliminary Analyses*

Regarding outliers, 14 cases of cultural capital for the WCS had values outside the Hoaglin and Iglewicz range, and seven cases of these cases were also more than three standard deviations from the mean. Therefore, I removed these seven cases. I also removed one outlier for the soft skills variables because the score fell outside the Hoaglin and Iglewicz range and fell lower than three standard deviation from the mean. Other than these two scales, no other scales had outlier scores.

Only 3.9% of cases had any missing data and these were mostly on demographic variables. Specifically, 12 participants (2.7%) were missing data on income but were unemployed. Additionally, two participants (0.5%) were missing data on parents' education levels, and one participant (0.2%) had missing data for age, household income, and embodied cultural capital respectfully. Therefore, I regarded missing data as neglectable and used full information maximum likelihood to handle missing data (Tabachnick et al., 2019). I also visually inspected scatterplots and found no evidence for nonlinear relations among variables. All variables' had skewness values between -1.5 and 1 and kurtosis values between -1.5 and 1.5, suggesting univariate normality (Weston & Gore, 2006). Lastly, I examined the variance inflation factor for each factor regressed onto other study variables (Menard, 1995). All variance inflation factors for each variable were close to one, so we did not find any evidence for issues with multicollinearity.

### ***Factor Structure***

**Single Factor Model.** This model had poor fit to the data,  $\chi^2 (104) = 2,256.826$ ,  $p < .001$ , CFI = 0.44, AIC = 22,642.641, RMSEA = 0.22, 90% CI [0.21, 0.23], and SRMR = .17. All indicators loaded onto the factors at values of .43 or above.

**Higher Order Model.** This model had excellent fit to the data,  $\chi^2 (100) = 181.893$ ,  $p < .001$ , CFI = 0.98, AIC = 19,900.046, RMSEA = 0.04, 90% CI [0.03, 0.05], and SRMR = .06. All indicators loaded on their factors at values of .75 or above. Economic work capital (.48), human work capital (.95), social work capital (.52), and cultural work capital (.60) also loaded on the higher order factor.

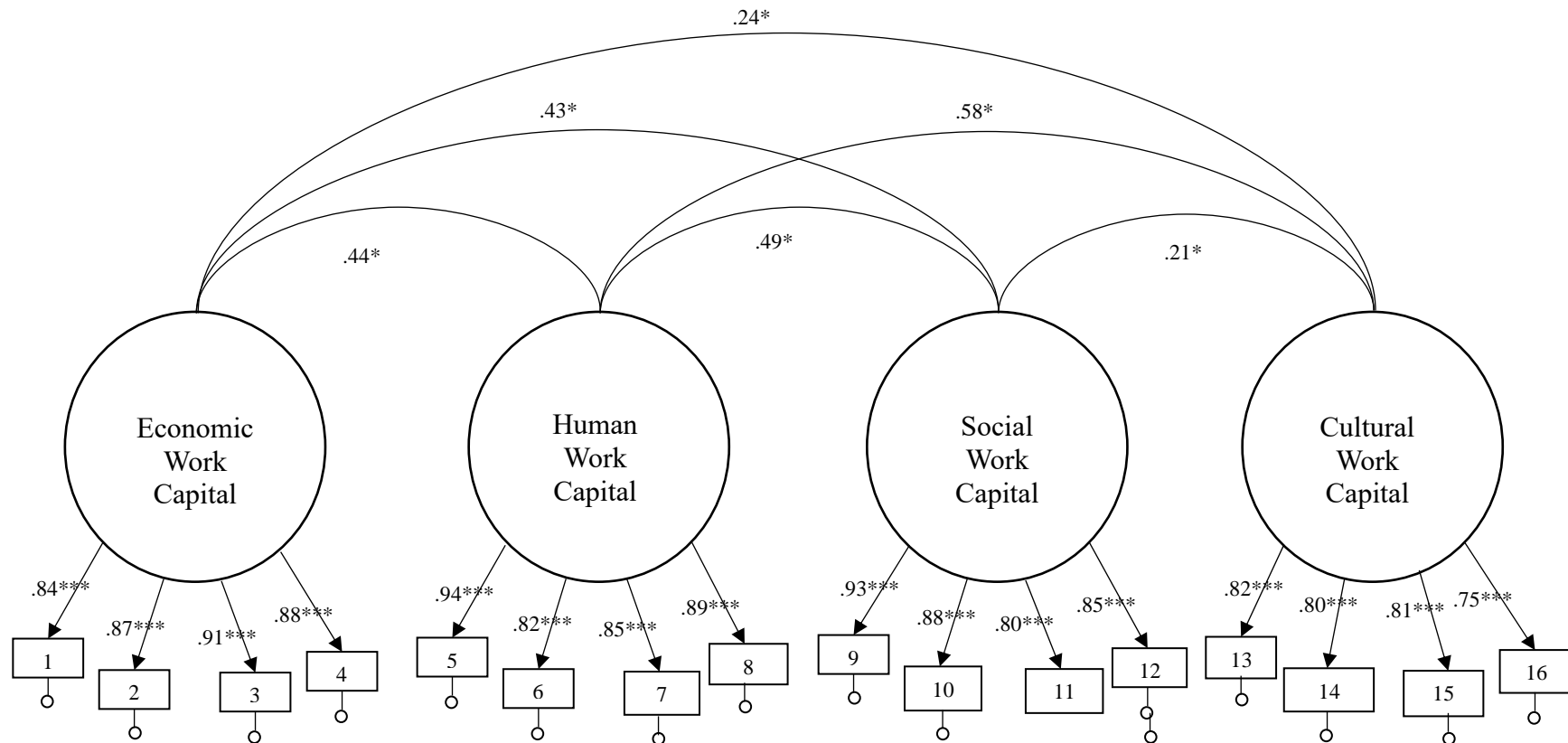
**Correlational Model.** This model also had excellent fit to the data,  $\chi^2 (98) = 156.865$ ,  $p < .001$ , CFI = 0.99, AIC = 19,874.103, RMSEA = 0.04, 90% CI [0.03, 0.05], and SRMR = .03. All indicators loaded on their factors at values of .75 or above.

**Bifactor Model.** This model had good fit to the data,  $\chi^2 (93) = 306.472$ ,  $p < .001$ , CFI = 0.95, AIC = 20,067.561, RMSEA = 0.07, 90% CI [0.06, 0.08], and SRMR = .24. All indicators loaded on their factors at values of .23 or above.

Because both higher order and correlational models had excellent fit, we tested whether a significant change in fit existed. The correlational model had significantly better fit than the higher order model according to the Satorra-Bentler scaled chi-square difference test,  $\Delta\chi^2 (2) = 25.028$ ,  $p < .001$ . Therefore, we retained the correlational model as the best fitting model. Figure 1 displays this final correlational model.

**Figure 1**

*Final Confirmatory Correlational Model of the Work Capital Scale*



*Note.* Estimates are standardized. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



### ***Reliability Evaluation***

The internal consistencies for each subscale were good: Economic Work Capital ( $\alpha = .93$ ), Human Work Capital ( $\alpha = .93$ ), Social Work Capital ( $\alpha = .92$ ), and Cultural Work Capital ( $\alpha = .87$ ).

### ***Validity Evaluation***

**Convergent and Divergent Validity.** Supporting Hypotheses 1a-1d, adjusted household income had a moderate positive correlation with economic work capital (.36,  $p < .001$ ) and small positive correlations with other forms of work capital (human work capital, .26,  $p < .001$ ; social work capital, .27,  $p < .001$ ; cultural work capital, .15,  $p = .002$ ). Supporting Hypotheses 2a-2c, participants' education level was moderately and positively correlated with economic (.30,  $p < .001$ ), human (.23,  $p < .001$ ), and social work capital (.16,  $p < .001$ ). However, contrary to Hypothesis 2d, participants' education level was not associated with cultural work capital (.08,  $p = .080$ ). Consistent with Hypotheses 3a and 3c, parents' education level was positively correlated with economic work capital (.18,  $p < .001$ ) and social work capital (.18,  $p < .001$ ). However, inconsistent with Hypotheses 3b and 3d, parents' education level was not correlated with human (.07,  $p = .168$ ) and cultural work capital (-.03,  $p = .585$ ). Partially supporting Hypotheses 4a, 4b, and 4c, current subjective social class was largely and positively correlated with economic work capital (.53,  $p < .001$ ) and moderately and positively correlated with human work capital (.33,  $p < .001$ ) and social work capital (.32,  $p < .001$ ). However, contrary to Hypothesis 4d, cultural work capital had the small correlation with current subjective social class (.17,  $p < .001$ ). Consistent with Hypotheses 5a and 5c, childhood subjective social class had small positive correlations with economic (.18,  $p < .001$ ) and

social work capital (.14,  $p = .004$ ). However, contrary to Hypothesis 5b and 5d, childhood subjective social class was not correlated with human work capital (.08,  $p = .090$ ) and cultural work capital (.03,  $p = .476$ ). Consistent with Hypothesis 6, economic work capital was largely and negatively correlated with economic constraints (-.70,  $p < .001$ ). Supporting Hypotheses 7a-7c, human work capital was strongly and positively correlated with occupational expertise (.71,  $p < .001$ ), job market knowledge (.40,  $p < .001$ ), and soft skills (.57,  $p < .001$ ). Supporting Hypothesis 8, social work capital was largely and positively correlated with networking (.66,  $p < .001$ ). Lastly, consistent with Hypothesis 9, cultural work capital was not correlated with embodied cultural capital (.05,  $p < .294$ ). Table 3 displays the correlations with each subscale of subjective work capital and other study variables.

**Table 3***Correlations and Descriptive Statistics for the Work Capital Subscales*

	Adjusted Income	Edu	Parent's Edu	Current Social Class	Child Social Class	Econ Constr	Occup Exprt	Jobmrkt Knwlg	Soft Skills	Networ k	Embod Cult Cpt
Econ	.36**	.30**	.18**	.53**	.18**	-.70**	.29**	.27**	.21**	.25**	.24**
Human	.26**	.23**	.07	.33**	.08	-.31**	.71**	.40**	.57**	.44**	.23**
Social	.27**	.16**	.18**	.32**	.14**	-.31**	.43**	.41**	.35**	.66**	.31**
Cultural	.15**	.08	-.03	.17**	.03	-.14**	.36**	.14**	.42**	.19**	.05
<i>M</i>	\$36,136	6.31	5.71	5.14	5.12	17.28	10.54	9.33	12.14	8.95	25.11
<i>SD</i>	\$31,748	1.46	1.62	1.60	1.71	9.47	3.24	3.30	2.51	3.50	8.53

*Note:* Econ = Economic work capital; Human = Human work capital; Social = Social work capital; Cultural = Cultural work capital; Adjusted Income = Adjusted household income; Edu = Participants' education; Parent's Edu = Parents' education; Child Social Class = Childhood social class; Econ Constr = Economic constraints; Occup Exprt = Occupational expertise; Jobmrkt Knwlg = Jobmarket knowledge; Soft Skills = Soft Skills; Network = Networking; Embod Cult Cpt = Embodied cultural capital. \*  $p < .05$ , \*\*  $p < .01$ .

## Chapter IV

### General Discussion

The goals of this study were to a) create a comprehensive taxonomy of subjective work capital by integrating career capital, social class, and vocational theories and b) develop and validate a subjective, continuous, and multidimensional work capital scale based on this taxonomy. In Study 1, I finalized a 16-item scale measuring four forms of work capital, which each provide access to opportunity structures and decent work. As expected based on theory (Bourdieu, 1986), all factors significantly and positively correlated with one another and demonstrated good reliability. In Study 2, I recruited another sample to confirm the factor structure and establish validity of the scale. The correlational model fit best to the data, meaning that all forms of work capital are independent but also interconnected, which is consistent with theory (Bourdieu, 1986). The reliabilities in Study 2 were also good, suggesting that the reliability of the WCS is sound. Moreover, all subscales correlated with subjective social class and partially correlated with objective socioeconomic indicators, indicating that the accumulation of work capital is a class-stratified experience. Additionally, all subscales were correlated to existing measures of work capital, suggesting that the WCS is a valid measure.

Taken together, the results suggest that WCS is a valid and reliable scale that can advance research on how different forms of capital affect vocational development. Specifically, past studies measuring work capital have typically targeted privileged groups, such people who are highly educated, full-time employees, and employees working in global organizations, and have overrelied on categorical, dummy coded, single-item questionnaires, and objective measures of career capital. Despite the

meaningful contribution of this past research, these limitations restrict the study of work capital. In contrast, the WCS provides a tool that inclusively measures the subjective experiences of a broad range of workers in way that is continuous, reliable, and valid. The WCS is also based on a comprehensive taxonomy of work capital that integrated previous literature. Taken together, the WCS provides a tool for researchers, policymakers, and counselors to obtain comprehensive and nuanced data on social class-related forms of work capital.

Relatedly, the development of a multidimensional, subjective work capital scale allowed for the examination of different factor structures, and the correlational model emerged as the best fit to the data. This suggests that all forms of work capital are interconnected and rooted in social class but may also operate independently, corroborating what previous theories have suggested (Bourdieu, 1986; Dunn & McCray, 2020). That is, each subfactor may have different antecedents and outcomes, which has implications for research and intervention. However, perhaps more importantly, the correlational model being the best supports the proposition that forms of work capital may promote one another in a dynamic system that interacts, accumulates, and changes over time (Bourdieu, 1986). For example, having high economic work capital may help people access job training programs to improve their human work capital and create new social connections, which may subsequently lead to increased familiarity and exposure to cultural work capital. Therefore, studying this process represents a key direction for research, such as investigating the relations among forms of work capital and other social class indicators using a longitudinal approach. Regardless, the higher order model also showed the excellent fit to the data, which might mean that the forms of work capital are

united by a general factor. While the current study suggests that scholars should use the subscales independently, using the total score might be acceptable in certain situations (Dunn & McCray, 2020). Future studies can evaluate this claim by testing the factor structure of the WCS with different samples.

As for validity, facets of subjective work capital mostly had small to large correlations with validity variables. For example, forms of capital were associated with both objective socioeconomic indicators (e.g., adjusted household income and education) and subjective social class. This corroborates theoretical perspectives suggesting that social class generates power, privilege, and resources that confer benefits; therefore, economically marginalized groups without this capital have restricted access to work opportunities (Bourdieu, 1986; Desan, 2013; Eggenhofer-Rehart et al., 2018; Flores et al., 2011; Nelson et al., 2006). Furthermore, the relations between forms of capital and subjective social class were stronger than their correlations with objective socioeconomic indicators, indicating that subjective indicators may better reflect social class-related experiences (Liu, Soleck, et al., 2004). However, diverging from theoretical perspectives, cultural work capital was not associated with education level (Bourdieu, 1986). Although some theories emphasize prestigious educational attainment as a key part of cultural capital (Bourdieu, 1986), academic titles are relatively independent from cultural capital (Mayrhofer et al., 2004). For example, a study found that obtaining institutionalized cultural work capital (e.g., attending well-known institutions in the field) did not directly facilitate other forms of cultural work capital (e.g., learning desired linguistic and professional attitudes) (Friesen, 2011). Moreover, the WCS did not directly reflect

experiences of attending prestigious institutions because measuring such experiences may obscure the responses of participants who did not attend college.

Regarding intergenerational work capital accumulation, economic and social work capital were also associated with the level of parents' education and childhood subjective social class, but other forms of work capital were not. Therefore, parents' social class and their capital may facilitate their children's accumulation of economic and social work capital more effectively than other forms of work capital. For economic capital, parents often directly support their children financially, leading to greater economic work capital over time (e.g., financial support from family to get a more lucrative job; Duffy et al., 2016). As for social work capital, parents' education levels and social class provide important social foundations and connections for their children to develop their social work capital over time (Bourdieu, 1986; Brown et al., 2020; Liu, Soleck, et al., 2004). In this sense, intergenerational accumulation of economic and social work capital may depend on parents' social class and level of education, which is determined by and perpetuates broader systems of inequity.

Contrary to my hypothesis, there was no significant relation between parents' education levels and cultural work capital, which is inconsistent with findings that parents' educational attainment facilitates children's access to desired cultural capital (Lamont & Lareau, 1988; Lareau & Weininger, 2003; Reay, 2004). However, this facilitation includes parental involvement in children's education rather than direct vocational guidance, such as sharing cultural knowledge about the desired occupation. For example, some women faculty in science reported that their fathers in academia transmitted some helpful cultural work capital as faculty but could not share cultural

work capital about how to adjust as women scientists (Duberley & Cohen, 2010). In this sense, parents' ability to share cultural knowledge and practices that fit children's desired occupations might be key to the intergenerational transmission of cultural work capital, rather than educational level per se (Duffy et al., 2016).

As expected, subfactors of subjective work capital had small to moderate correlations with preexisting scales measuring work capital, suggesting that the new scale measures similar but different constructs. Despite this general pattern, the relation between economic work capital and economic constraints was fairly large. However, the two constructs clearly have different content. For example, economic work capital specifically reflects current financial adversity in vocational processes, whereas economic constraints capture lifetime financial constraints unrelated to work. Regardless, both variables appeared to tap into shared financial difficulties. Similarly, the strong relation between human work capital and occupational expertise may stem from overlapping items, although human work capital also assesses different types of human capital, such as training experiences and job qualifications.

As expected, cultural work capital was not related to embodied cultural capital, which is likely because cultural capital assesses elite cultural practices, whereas cultural work capital assesses work-specific cultural capital. Specifically, cultural work capital reflects whether the holder of cultural capital would gain social recognition in their specific work context (Lareau & Weininger, 2003). For example, a study found that immigrant engineers in Canada who obtained new cultural capital at work (e.g., learning different interpersonal skills with new jargon and realizing that promoting oneself is the cultural norm) reported receiving more recognition and validation at work (Friesen,



2011). Therefore, researchers can use the cultural work capital subscale of the WCS to assess general cultural work capital, rather than cultural capital that only reflects elite cultural practices.

Findings from the present study offer meaningful suggestions for practice. First, career practitioners can assess clients' forms of work capital. Specifically, exploring the barriers that restrict clients from being employed in a desired position can be overwhelming, so identifying work capital by using the questionnaire would provide more tangible and specific targets for interventions. For example, career practitioners can connect their clients to appropriate resources, case management, and groups for mentorship to improve certain forms of work capital. Second, career practitioners may want to validate clients' experiences of marginalization if the clients' lacking work capital intersects with their lower social class backgrounds and other forms of marginalization, such as racial marginalization. Career practitioners can invite clients to engage in critical reflection to navigate systemic marginalization and subsequent internalized oppression, often manifested as a sense of shame and guilt with an imbalanced work capital portfolio. Career practitioners can also support clients to externalize their distress and increase a sense of control by identifying ways to improve their work capital. Furthermore, if clients report intergenerational economic constraints, career practitioners can assess whether clients struggle with insufficient economic and social work capital that limit them from accessing work opportunities. Finally, career practitioners can conduct focus groups for systemically marginalized communities to recognize lacking work capital, identify their barriers to improving work capital, and develop culturally tailored interventions to address inequity in access to decent work.

## **Limitations and Future Directions**

First, I used an online platform to recruit a representative sample of working adults, but this approach may have excluded some workers who do not have internet access. To address this limitation, researchers can use this scale in partnership with local communities to avoid relying on internet recruitment and to recruit specific groups' lacking work capital. Relatedly, this study found no relation between cultural work capital and education, which might be because participants had somewhat higher education levels than the average in the United States (United States Census Bureau, 2022). Despite my effort to gather inclusive and representative data, participants recruited by Prolific Academic appear to be well-educated (Turner et al., 2020). Therefore, researchers can replicate and extend my findings with a more representative sample of working adults. Furthermore, researchers can use this scale with targeted populations where education is more culturally valued, like people with Confucian cultural backgrounds. The relation between cultural work capital and education in this context might be significant based on a study finding that people who graduated from less prestigious colleges reported a lack of cultural work capital in and outside of their institutions (Garrison et al., 2018). Third, relatedly, approximately 75% of the sample were White. Future researchers should validate the scale with a more racially diverse sample.

Fourth, I developed WCS items to be relevant to a broad range of workers, but this inherently limits its applicability to specific populations. For example, human work capital items measure general work skills, such as soft skills or professional skills, rather than context-specific hard skills. In addition, to capture embodied cultural work capital,

the retained items reflect former cultural knowledge before working and cultural practices regarding social events. I strived to avoid using the term “culture” and included specific and practical terms (e.g., behaviors, expectations, and manners) because culture as an abstract term could be misleading (Hopkins, 2018). However, such items might be insufficient to capture the subtle and contextually nuanced manifestations of cultural work capital. Likewise, the items that described cultural recognition based on social class and unspoken rules to reflect social class-stratified privilege were removed due to their low factor loadings or high cross-loadings onto other factors. To address these issues, researchers can adapt items from the WCS to reflect specific instances of cultural work capital or include a stem to prime participants to consider specific working environments that are relevant to their sample of interest. Finally, I finalized four items for each subscale to prevent participants’ research exhaustion. Although the finalized items demonstrated strong statistical content validity, retaining four items might be insufficient to cover all relevant constructs of interest. Future research should test the scale to examine content validity.

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## Appendix A

### Study 1 Demographics

Thank you for agreeing to participate in this study. Please provide your PROLIFIC ID.

\_\_\_\_\_

What gender do you identify with?  Woman

Man             Non-binary

Self identify \_\_\_\_\_

What is your race/ethnicity?

African/African American/Black

American Indian/Native American/First Nation/Indigenous

Middle Eastern or North African

Asian/Asian American

Asian Indian Subcontinent

Hispanic/Latina/o/x American

Pacific Islander

White/European American

Multiracial

Other: specify \_\_\_\_\_

What is your age? \_\_\_\_\_

What is your employment status?

Employed full-time

Employed part-time

Employed part-time but want full-time

Self-employed

Unemployed and looking for work

Unemployed and not looking for work

On disability

o Retired

o Not specified above: \_\_\_\_\_

What is your job title? \_\_\_\_\_

### **Adjusted Household Income**

- How many people are living in your household? \_\_\_\_\_
- What is your total household income? (That is, the combined income of all members of your household). If it is \$50,000, then please indicate 50K.

\_\_\_\_\_

### **Education level- Participants**

What is your highest degree obtained?

- Kindergarten and below
- 1st-6th grades
- 7th-9th grades
- High school graduate or equivalent (e.g., GED)
- Trade/vocational school diploma
- Associate's degree
- Four-year college or university degree (e.g., BA, BS)
- Master's degree
- Professional degree (e.g., JD, MD) or Doctorate (e.g., Phd, PsyD)

### **Subjective Social Status - Current**

Think of this ladder as showing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the best education, and the most respected jobs.

At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected job or no job.

The higher up you are on this ladder, the closer you are to the people at the top.; the lower you are, the closer you are to the people at the bottom.



Where would you place **yourself currently** on this ladder? 1 = bottom rung to 10 = top rung

### **Subjective Social Status - Childhood**

Think of this ladder as showing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the best education, and the most respected jobs.

At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected job or no job.

The higher up you are on this ladder, the closer you are to the people at the top.; the lower you are, the closer you are to the people at the bottom.



Where would you place **yourself in childhood** on this ladder? 1 = bottom rung to 10 = top rung

## Appendix B

### Study 2 Demographics and Study Variables

What gender do you identify with?

- Woman
- Man
- Non-binary
- Self identify \_\_\_\_\_

What is your race/ethnicity?

- African/African American/Black
- American Indian/Native American/First Nation/Indigenous
- Middle Eastern or North African
- Asian/Asian American
- Asian Indian Subcontinent
- Hispanic/Latina/o/x American
- Pacific Islander
- White/European American
- Multiracial
- Other: specify \_\_\_\_\_

What is your age? \_\_\_\_\_

What is your employment status?

- Employed full-time
- Employed part-time
- Employed part-time but want full-time
- Self-employed
- Unemployed and looking for work
- Unemployed and not looking for work
- On disability

o Retired

o Not specified above: \_\_\_\_\_

What is your job title? \_\_\_\_\_

### **Adjusted Household Income**

- How many people are living in your household? \_\_\_\_\_
- What is your total household income? (That is, the combined income of all members of your household). If it is \$50,000, then please indicate 50K.  
\_\_\_\_\_

### **Education level- Participants**

What is your highest degree obtained?

- Kindergarten and below
- 1st-6th grades
- 7th-9th grades
- High school graduate or equivalent (e.g., GED)
- Trade/vocational school diploma
- Associate degree
- Four-year college or university degree (e.g. BA, BS)
- Master's degree
- Professional degree (e.g., JD, MD) or Doctorate (e.g., Phd, PsyD)

### **Education level– Parents 1**

What is your parent's (e.g., father or a guardian 1) highest degree obtained?

- Kindergarten and below
- 1st-6th grades
- 7th-9th grades
- High school graduate or equivalent (e.g., GED)
- Trade/vocational school diploma
- Associate degree
- Four-year college or university degree (e.g. BA, BS)
- Master's degree
- Professional degree (e.g., JD, MD) or Doctorate (e.g., Phd, PsyD)

### **Education level– Parents 2**

What is your parent's (e.g., mother or a guardian 2) highest degree obtained? **If you have a sole guardian, then please skip this questionnaire.**

- Kindergarten and below
- 1st-6th grades
- 7th-9th grades
- High school graduate or equivalent (e.g., GED)
- Trade/vocational school diploma
- Associate degree
- Four-year college or university degree (e.g. BA, BS)
- Master's degree
- Professional degree (e.g., JD, MD) or Doctorate (e.g., Phd, PsyD)

### Subjective Social Status - Current

Think of this ladder as showing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the best education, and the most respected jobs.

At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected job or no job.

The higher up you are on this ladder, the closer you are to the people at the top.; the lower you are, the closer you are to the people at the bottom.



Where would you place **yourself currently** on this ladder? 1 = bottom rung to 10 = top rung

### Subjective Social Status - Childhood

Think of this ladder as showing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the best education, and the most respected jobs.

At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected job or no job.

The higher up you are on this ladder, the closer you are to the people at the top.; the lower you are, the closer you are to the people at the bottom.



Where would you place **yourself in childhood** on this ladder? 1 = bottom rung to 10 = top rung



## Study 2 Study variables

### Economic Constraints Scale (ECS)

Please answer the following items using the seven-point scale.

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

1. For as long as I can remember, I have had very limited economic or financial resources
2. Throughout most of my life, I have struggled financially
3. For as long as I can remember, I have had difficulties making ends meet
4. I have considered myself poor or very close to poor most of my life
5. For most of my life, I have not felt financially stable.

### Human Capital

Please answer the following items using the five-point scale.

- 1= not true at all
- 2= somewhat not true
- 3= neutral
- 4= somewhat true
- 5= completely true

#### Occupational expertise

1. Others see me as an expert in my occupation (for workers)/others see me as an expert in my desired occupation (for job seekers)
2. I possess profound knowledge in my occupation (for workers)//I possess profound knowledge for my desired occupation (for job seekers)
3. I have a very high level of expertise and skill in my occupation (for workers)//I have a very high level of expertise and skill for my desired occupation (for job seekers)

#### Job market knowledge

1. I have a good knowledge of the job market
2. I have a lot of knowledge about the current labor market
3. I have a good overview of employment trends in the labor market

### Soft skills

1. I have many skills that I could use in a range of different occupations
2. I possess many competencies that are also helpful in various other occupations
3. Besides pure expert knowledge, I possess many skills and competencies that are important in different jobs

### Networking

Please answer the following items using the five-point scale.

- 1= not true at all
- 2= somewhat not true
- 3= neutral
- 4= somewhat true
- 5= completely true

1. I always try to be well connected in my professional field (for workers)/I always try to be well connected in my aspired professional field (for job seekers)
2. I frequently build contacts with other people who are important for my career development
3. I frequently utilize contacts with other people to advance in my career

### Embodied Cultural Capital

Please answer the following items. If you have not engaged in the activities below due to the COVID-10 pandemic, please think of your tendency before the pandemic.

- 1 - Never
- 2 - Rarely
- 3 - Seldom
- 4 – Once in a while
- 5 - Occasionally
- 6 - Sometimes
- 7 - Often
- 8 – Generally
- 9 – Usually
- 10 - Always

How often do you travel abroad?

How often do you use/speak a foreign language?

How often do you visit museums, theaters, dance shows, cultural centers and concerts?

How often do you relate to work teams living in another country?

How often do you read books? Except for school or technical books

How often do you participate or did participate as an active athlete of a local organization, or sports club or sports association?

## Appendix C

### Work Capital Scale Initial Item Pool

The following questions ask you about the resources that help you be successful in the workplace or the job search process. If you are unemployed and looking for work, answer the questions accordingly. If you are currently employed and not looking for work, consider the last time you looked for a job or what it would be like if you decided to switch jobs.

Please select one answer to each of the following statements based on this scale:

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

#### DOMAIN 1: Economic Capital

All-purpose, easily convertible, and general financial resources that facilitate further work-related investment, such as other forms of capital and time.

1. If I lost my job, I'd have money to tide me over until I could get a new job.
2. I have money to meet my basic needs while looking for a job.
3. If needed, I can afford family care services to work or look for a job.
4. If needed, I can hire caretakers for my dependents to focus on work or job search.
5. I can buy materials for job opportunities (e.g., professional clothes, a laptop, books, software).
6. I can afford to enroll in job training programs.
7. I can focus on the job search process because I am financially stable.
8. I can afford materials that improve my work productivity (e.g., a laptop, books, software).
9. I can afford to learn new job skills.
10. Developing job qualifications is affordable.
11. My financial situation helps me get the job I want.
12. I can develop my career because I am financially stable.
13. I can pursue the job that I want without hurting my family financially.
14. I have the financial support to pursue a job that I want.
15. My financial situation gives me time to focus on the job that I want.

16. I have no financial worries when job searching.
17. I can afford transportation to commute to work.
18. If needed, I have money to pay for a career counselor.
19. I can afford anything needed to work or for job interviews (e.g., transportation, childcare, professional clothes, etc).
20. My debt does not limit my ability to focus on my job-search process.
21. I can focus on job-search activities without causing financial burden to my family.

#### DOMAIN 2: Human Capital

Having the work-related knowledge, skills, experiences, and abilities that allow someone to be competitive, successful, flexible, valuable, and productive in the labor market and at work.

1. I have valuable work experiences.
2. I am knowledgeable about my field of work.
3. I am productive at work.
4. I have job expertise that helps me be successful.
5. I have good interpersonal skills for work.
6. I am good at a variety of job skills.
7. I am equipped with important job skills.
8. I have up-to-date knowledge of employment trends.
9. I am a competent worker.
10. My work experience would make me a competitive applicant for a job that I want.
11. I am highly trained in my area of work.
12. I have good social skills to work well with my coworkers.
13. I have the work experience needed to be successful in my job.
14. I can adapt to different work settings.
15. I can handle problems well at work.
16. I am a hard worker.
17. I have strong communication skills at work (e.g., listening, reading, writing, speaking).
18. I have job qualifications that help me excel at work.
19. My education has prepared me for the workplace.
20. I have effective job skills.
21. I do not have health conditions that interfere with my ability to work effectively.

#### DOMAIN 3: Social Capital

Having trustworthy social connections and networks of people that help workers gain access to influence, opportunities, and resources for work.

**For these items, consider people in your life, such as your family, friends, neighbors, community groups, mentors, coworkers, clients, and others.**

1. I have people around me who can connect me to people who work in my desired field.
2. I know people who can help advance my career.
3. I can access good job opportunities through my connections.
4. I have people who give me helpful job advice.
5. People that I know share how to be successful at work.
6. I know influential people who can connect me to job opportunities.
7. I know people who help me understand work-related information (e.g., how to find jobs, job expectations).
8. I can access job opportunities that I want through my family connections.
9. I know important people who teach me about my area of work.
10. I can get access to positions that are unavailable on the official job market through my social contacts.
11. People in my community can give me job opportunities that I want.
12. I have social contacts that can facilitate my job-search processes.
13. I am connected to people who coach me about work.
14. I know people in areas where I want to work.
15. I know job market trends through my social circles.
16. I know people who help me be competent at work.
17. I have people who can help with my family responsibilities while I work or look for a job.
18. I have people who help manage household tasks so I can focus on my job.
19. I know people who can help me when I encounter difficulties at work.
20. People I know will back me up if I make critical mistakes at work.
21. I can access hidden positions through my connections.

**DOMAIN 4: Cultural Capital**

Institutionalized cultural, linguistic, and social signals (e.g., linguistic aptitudes, attitudes, interactional styles, formal knowledge, shared cultural basis with coworkers, and professional presentation of self) that can provide exclusive power in the labor market or at work.

1. I know how to behave professionally on my first day at work.
2. I can meet unspoken expectations to thrive at work.
3. My work-related manners have been well-established throughout my life.
4. I know how to interact professionally with people at work.
5. I know the work-related terms people use in the workplace.
6. I know how to look like a competent worker.

7. My social class background helps me look impressive in a work setting.
8. I know how to dress professionally on my first day at work.
9. I grew up learning how to be professional in work environments.
10. I have good manners and behaviors that optimize my work opportunities.
11. I use my good manners when getting a job.
12. My behavior fits the expectations required at work.
13. My social class background helps me fit into workplace culture.
14. I have hobbies that help me appear well-rounded in job interviews.
15. People at work and I enjoy the same type of sports or physical activities.
16. My hobbies or outside interests help me connect with people at work.
17. At work, I can talk openly about my lifestyle without it negatively affecting my career.
18. My coworkers and I lead similar lives, which helps us get along with each other.
19. The shared interests with people at work get my work done more efficiently.
20. I know how I'm supposed to behave at work social events, including group dinners.

## **Appendix D**

### **Work Capital Scale**

The following questions ask you about the resources that help you be successful in the workplace or the job search process. If you are unemployed and looking for work, answer the questions accordingly. If you are currently employed and not looking for work, consider the last time you looked for a job or what it would be like if you decided to switch jobs.

Please select one answer to each of the following statements based on this scale:

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

#### **Economic Work Capital**

1. If I lost my job, I'd have money to tide me over until I could get a new job.
2. I can afford to enroll in job training programs.
3. I can focus on the job search process because I am financially stable.
4. I can afford materials that improve my work productivity (e.g., a laptop, books, and software).

#### **Human Work Capital**

1. I have job expertise that helps me be successful.
2. I am highly trained in my area of work.
3. I have the work experience needed to be successful in my job.
4. I have job qualifications that help me excel at work.

#### **Social Work Capital**

For these items, consider people in your life, such as your family, friends, neighbors, community groups, mentors, coworkers, clients, and others.

1. I know influential people who can connect me to job opportunities.
2. I have social contacts that can facilitate my job-search processes.
3. I am connected to people who coach me about work.

4. I can access hidden positions through my connections.

**Cultural Work Capital**

1. I know how to behave professionally on my first day at work.
2. I have good manners and behaviors that optimize my work opportunities.
3. My behavior fits the expectations required at work.
4. I know how I'm supposed to behave at work social events, including group dinners.