

Conceptualizing COVID-19-Related Career Concerns Using Bioecological Systems: Implications for Career Practice


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The COVID-19 pandemic has affected many aspects of the global society, including the workforce, with many effects yet to be seen. Career professionals in various settings are positioned to support clients and students through pandemic-related career concerns. Bronfenbrenner's (1979, 2001, 2005) bioecological systems model provides a framework that can aid in conceptualizing clients' and students' presenting issues within the complex nature of their environments. In this theoretical article, we contextualize COVID-19-related career concerns through a bioecological systems lens and integrate four contemporary approaches to career work. Two fictional case studies illustrate how career professionals can integrate these approaches.

Keywords: bioecological systems, COVID-19, career theory, Bronfenbrenner, case studies

The COVID-19 pandemic has affected nearly every sector of the workforce. Layoffs, unemployment, and underemployment are leading many workers to question how to provide for themselves and their families. Closures and disruptions in the global supply chain have led to changes in how jobs are completed. Some job sectors saw unprecedented shifts to telework, whereas in other sectors, the presence of workers on their job site was deemed essential. For those who have contracted COVID-19, health outcomes can range from mild or no symptoms to death, and the mental health concerns of both those who have and those who have not contracted the virus are continuing to grow. At the same time, the United States has faced civil unrest, racial tensions, and a highly contested election season, and although we do not yet know the extent to which these events will impact the workforce, we know that career practitioners are positioned to aid in the response.

Career theory provides a roadmap by which career development professionals can conceptualize clients' and students' concerns and develop a plan of action. Contemporary career theories include attention to relevant cognitive, intrapersonal, interpersonal, and environmental factors that may be pertinent to COVID-19-related concerns. Bronfenbrenner's

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bioecological systems theory (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) is well positioned to augment these career approaches by adding a layered systems-oriented framework through which career development professionals can conceptualize the multilevel issues and various spheres of influence at play with clients and client populations. The purpose of this article is to provide an analysis and conceptualization of the prevalent issues related to COVID-19 within the framework of bioecological systems theory, as well as implications for career professionals working with clients through contemporary career development approaches.

The Intersection of COVID-19 and Racial Injustice

The COVID-19 pandemic has affected the career development of various populations, including young adults, women, minoritized individuals, immigrants, individuals ages 55 and older, and differently abled individuals. The Pew Research Center reported that unemployment in the United States increased more during the pandemic than it did during the Great Recession, jumping from 3.8% in February 2020 to almost 15% in April 2020 (Kochhar, 2020b). Individuals with higher levels of education were more likely to telework than those with a high school diploma and more likely to stay employed than those without a college education (Kochhar, 2020a; Parker et al., 2020). In the early months of the pandemic, unemployment rates surpassed 20% for individuals ages 20–24 and surpassed 30% for individuals ages 16–19 (Aronson & Alba, 2020), with many also experiencing postsecondary transitions.

Immigrant workers lost jobs at higher rates than U.S.-born workers (Kochhar, 2020a). Moreover, 4.8 million adults ages 55 and older lost jobs in the first few months of the pandemic (Kochhar, 2020a). Whereas 11.5 million women lost jobs from February to May 2020, only 9 million men lost jobs; Latinas experienced a larger decline in employment (–21%) than other women and men (Kochhar, 2020a). Not only was unemployment an adjustment, but with approximately 850 million children being schooled at home, women felt more of the burden and responsibility of performing unpaid work in the home compared with men (Kobia et al., 2020). With more couples and families working from home than before, domestic violence increased by 25% in many countries (Cirruzzo, 2021).

The pandemic has disproportionately affected racial minority groups. Black individuals were hospitalized at higher rates than individuals from other racial/ethnic groups, and in some states, Black and Latino populations had higher death rates than other racial/ethnic groups (Lopez et al., 2020). Black individuals were also more likely to know someone who died or was hospitalized from COVID-19, and Latinos showed higher concern about contracting the virus (Lopez et al., 2020). Additionally, many Black and Latino families are not financially positioned to save as much or continue to pay monthly bills in emergency situations; nearly 70% of Black and Latino families reported not having 3 months of wages saved, compared with less than 50% of White families (Lopez et al., 2020). These racial minority groups are also more likely to face job or wage loss because of the pandemic. Racial minorities experienced these physical and financial effects of COVID-19 within the larger context of systemic racism and racial violence.

Simultaneous to the COVID-19 pandemic, the high-profile murders of Black unarmed individuals by law enforcement (e.g., Breonna Taylor, George Floyd), violence against Asian Americans, and the domestic terrorist attack at the U.S. Capitol on January 6, 2021, have called for more focus on violence and antiracism actions across the United States and around the world (Bailey et al., 2021; Le, 2021; Rimer, 2021). Millions of Black, Indigenous, and people of color and allies took to the streets in protest, choosing to gather in large groups in the name of advocacy at a time when such gatherings were a health risk during the pandemic. These issues permeated into workplaces, with corporate statements issued in the wake of specific incidents, workplace trainings for diversity and inclusion, workers choosing between going to work and attending protests, and workers feeling unsafe in work settings. Because of the intersectional nature of COVID-19 and racial injustices, a systems-oriented theoretical model serves to further elaborate on the interconnections between many different layers of events that have transpired.

Bronfenbrenner's Bioecological Theory of Development

Bronfenbrenner's (2001, 2005) bioecological theory of development provides a framework for career practitioners to consider clients within their unique context and the impacts of the intersecting layers of that context (Arthur & McMahon, 2005; Betz, 2002; Cook et al., 2002). The theory holds that individual development is shaped by environmental and biological factors (Bronfenbrenner, 1979, 2001, 2005). The model shares similarities with the systems theory framework of career development (Patton & McMahon, 2018), which also examines individuals within their environment and time; however, we chose Bronfenbrenner's model because of its multilayered approach to examining one's environment. The model is depicted visually as a set of concentric circles, with the individual in the middle, the most proximal spheres of influence closer to the center, and the most distal spheres of influence farther from the center (Neal & Neal, 2013). In the following sections, we will define and describe key factors of the model, as well as the spheres of influence, within the context of the COVID-19 pandemic and career-related issues.

Key Constructs and Research

In later writings, Bronfenbrenner developed the process-person-context-time framework and posited that four factors concurrently influence individuals: (a) proximal process, (b) person characteristics, (c) context, and (d) time (Bronfenbrenner & Morris, 2006; Rosa & Tudge, 2013). *Proximal process* refers to recurring bidirectional interactions between people and aspects of the environment, such as interactions between people (e.g., a boss and an employee) or an interaction between a person and an object or symbol (e.g., a person and a time sheet). *Person characteristics* include a person's dispositions (e.g., curiosity, impulsiveness) and resources (e.g., abilities, disabilities, illnesses). *Context* nests the individual within various systems and groups with which they interact. *Time* integrates personal life events (i.e., shaping events) that occur during one's lifetime (i.e., the chronosystem) as well as historical events that occurred before one's lifetime that have direct or indirect

effects on an individual. Each of these constructs has the potential to influence a person's career development in ways that can be illustrated through Bronfenbrenner's (2005) model of interconnected systems. The process-person-context-time model has been tested in several quantitative studies (Benson & Buehler, 2012; Farrant & Zubrick, 2012) and used as a qualitative theoretical framework (Stipanovic & Woo, 2017). Additionally, Tudge and colleagues (2009, 2016) reviewed dozens of studies that evaluated specific constructs of the model or used Bronfenbrenner's work as the primary theoretical framework within empirical research.

Bronfenbrenner's Interconnected Systems

Bronfenbrenner (2005) proposed a series of "nested, interconnected systems" (p. 54) through which one can make sense of a person's environment. The framework includes proximal and distal influences and time factors all centered around the individual. In the following sections, we highlight each level in the framework and illustrate where COVID-19-related career concerns fit.

Individual level. The individual level builds on Bronfenbrenner's (2005) idea of person characteristics, including demographics, dispositions, and resources. Because the pandemic has not affected everyone equally, demographics (e.g., gender, race/ethnicity, age) are important to consider, particularly relating to their intersectionality and relationship with factors in other levels. Individual dispositions (e.g., risk tolerance/risk aversion, care for others, resilience) and beliefs (e.g., political ideology, beliefs about COVID-19) can serve as protective factors or as risk factors in relation to how individuals interact with their environment amid the pandemic. Finally, resources such as health status, financial standing, work experience, and skills can affect the level of flexibility one has with making decisions about work during the pandemic. For example, individuals from a lower socioeconomic status with underlying health conditions may not see themselves as having the same level of freedom to make decisions as those from a higher socioeconomic status with the same underlying health conditions. Individual factors have the strongest interplay with factors in the microsystem level.

Microsystem. Bronfenbrenner (2005) described the microsystem as the most proximal environment in which individuals interact and the area where proximal processes are most frequently at work. Examples of microsystems include one's immediate family, workplace, and school and are often personal relationships. Individual factors contribute to how people engage within microsystems (e.g., a person exposed to COVID-19 likely would not go to work) and how others in the same microsystem engage with them (e.g., individuals strictly following the Centers for Disease Control and Prevention guidelines may avoid contact with relatives who refuse to wear a mask). Individual differences also help explain how two people in the same microsystem can experience their environment in different ways (e.g., coworkers from different racial/ethnic groups or with differing political views may disagree on observed racial health disparities). In the context of career work, it is important to note that career concerns often play out in microsystems and/or in intersections between them.

Mesosystem. The mesosystem level refers to the "system of microsystems" (Bronfenbrenner, 2005, p. 46) in which an individual's microsystems

begin to intersect and interact. For example, the pandemic may have forced some adults to simultaneously navigate their role within their family system, their workplace, and their child's school during periods when schools and workplaces were operating remotely. Bronfenbrenner (2005) noted that a person's transitions between microsystems would fall within the mesosystem. During the early months of the pandemic, the first author encountered students who previously had been balancing their service industry jobs and their coursework who were questioning their ability to remain enrolled in coursework because work shutdowns cut off their source of income. Others found themselves toggling between their jobs and community service involvement (e.g., volunteering at food pantries, organizing racial justice efforts), as well as balancing the impact of indirect effects.

Exosystem. Bronfenbrenner (2005) described the exosystem as a place where individuals are influenced indirectly by systems of which they are not directly members. For example, a boss without school-age children is not directly affected by policies of a K–12 school, but she may be indirectly affected by school policies when these policies result in her employees needing to take time off or work remotely because their children are learning remotely. Similarly, a daycare teacher likely will not directly interact with parents' employers but may observe an indirect influence of employers if parents are laid off from work, students are withdrawn from daycare, and the number of daycare teachers must be reduced. In conceptualizing client concerns, career practitioners should not overlook indirect impacts, which can contribute to distress in the same way as direct impacts, but often seem to be out of the client's control.

Macrosystem. The most distal system from the individual is the macrosystem, which Bronfenbrenner (2005) described as "the overarching patterns of stability, at the level of the subculture or the culture as a whole, in forms of social organization and associated belief systems and lifestyles" (p. 47). The macrosystem includes political and sociocultural belief systems, policies and laws, and informal societal rules ranging from the national to local levels. During the events of 2020, we saw vast differences from state to state and community to community in their responses to COVID-19 and racial injustice. Additionally, responses and discourses were quite disparate from the federal level down to more local levels, which can lead to a wide array of experiences for individuals within these environments. National-level structures (e.g., federal COVID-19 aid, presidential campaign) provide a common experience across states, whereas state- and local-level structures (e.g., differences in state-level COVID-19 mitigation measures, political leanings of leaders, proximity to high-profile cases of racial violence, state-level policy responses to Black Lives Matter protests) trickle down into different experiences across geographical boundaries.

Chronosystem. The final layer in Bronfenbrenner's (2005) model is the chronosystem, which he described as the events that occur within an individual's life span, as well as events that occurred within their historical context (i.e., prior to an individual's life span). On a large scale, shared chronosystem events might include the day the World Health Organization declared COVID-19 a pandemic, the day of George Floyd's murder, and the U.S. 2020 presidential election timeline, among

others. States and municipalities might have smaller scale shared events (e.g., initiation of a lockdown, the date of a protest or demonstration). Additionally, individuals have their own chronosystem events, such as the death of a loved one, the date of a COVID-19 diagnosis, or losing a job. It is important to consider these important events, because they usually result in substantial shifts at other system levels and can also give context to why two individuals in similar environments can experience their circumstances differently. Bronfenbrenner (2005) also noted that events in an individual's life can be normative (i.e., events that can be anticipated based on the individual's stage of life) and nonnormative (i.e., unexpected illnesses, natural disasters), which can give insight into how the individual or system responds to expected and unexpected events.

Integrating Bronfenbrenner's Theory With Other Career Perspectives

Applying the bioecological lens to career work has gained traction because of the attention paid to examining clients or students within their unique context, rather than looking at career development as a more universal linear process. Moreover, scholars have noted that many career development theories do not accurately represent the experiences of women and individuals of color, and they note that bioecological systems can aid with these populations (Arthur & McMahon, 2005; Betz, 2002; Cook et al., 2002; Stipanovic & Woo, 2017). Contemporary career models tend to take less of a one-size-fits-all approach and can work in tandem with a bioecological lens to aid in supporting clients' and students' career concerns. This section outlines three specific focus areas for career professionals that help operationalize a bioecological approach. This approach synthesizes information from four contemporary career perspectives: social cognitive career theory (SCCT; Lent, 2020; Lent & Brown, 2019), cognitive information processing (CIP; Sampson et al., 2020), chaos theory of careers (CTC; Bright & Pryor, 2019; Pryor & Bright, 2018), and psychology of working theory (PWT; Blustein & Duffy, 2020; Blustein et al., 2019). Table 1 elaborates on how to apply these approaches within an ecological systems framework.

Consider Contextual Factors

Contemporary career approaches attend to contextual factors, and Bronfenbrenner's (2005) interconnected systems framework can enhance how career professionals conceptualize and operationalize such information. SCCT (Lent, 2020; Lent & Brown, 2019) integrates person inputs, such as gender, race, and health status, as influences on one's learning experiences, environmental supports, and environmental barriers that inform one's career decision-making process. Person inputs best equate to Bronfenbrenner's individual level, and other environmental factors relate to other levels of Bronfenbrenner's framework. By elaborating on the individual's bioecological systems, career professionals can gain more insight into the interrelatedness of individual factors, proximal systems/events directly involving the individual (i.e., microsystems and mesosystems), and more distal systems (i.e., exosystems and macrosystems) and events that indirectly impact the individual. In the context

TABLE 1
Applying Concepts of Contemporary Career Approaches to
Bronfenbrenner's (2005) Bioecological Levels

Level and Applicable Career Theory Concepts	
Individual	
Building awareness of individual identity	<ul style="list-style-type: none"> • Person inputs (SCCT), self-knowledge (CIP), and individual identities and demographics (PWT)
Evaluating traits, feelings, and experiences	<ul style="list-style-type: none"> • Flexibility and adaptability traits (CTC) • Feelings related to uncertainty and failure (CTC) • Developing metacognition (CIP) • Feelings related to privilege and oppression (PWT)
Introducing theory-specific processes to individual career work	<ul style="list-style-type: none"> • Facilitating Rapid CPR planning (CTC) • Applying the CASVE cycle (CIP) • Evaluating access issues/barriers and sources of agentic action (PWT) • Assessing readiness factors such as negative thinking (CIP)
Microsystem	
Building understanding of clients in their smallest social contexts	<ul style="list-style-type: none"> • Social and familial identities (PWT) • Complex context of the individual's life (CTC) • Knowledge of the world of work (CIP)
Using theory-specific actions in immediate social contexts	<ul style="list-style-type: none"> • Challenging systems and forming proactive engagement (PWT) • Trial-and-error experiments (CTC) • Monitoring effects of planning processes on microsystems
Recognizing the influence of smallest social contexts	<ul style="list-style-type: none"> • Contextual influences and affordances (SCCT) • Learning experiences (SCCT) • Attractors and fractals (CTC) • Support in responding to failure (CTC) • Access issues/barriers and sources of privilege (PWT)
Mesosystem	
Evaluating differences in individual experiences across microsystems	<ul style="list-style-type: none"> • Differences in privilege and marginalization (PWT, SCCT) • Varying sources of support in responding to failure (CTC)
Recognizing increasing complexity of the world of work	<ul style="list-style-type: none"> • Complex context of labor market and structures (CTC) • Deepened occupational knowledge (CIP)
Exosystem	
Evaluating indirect effects from others' microsystems that the client is not a part of	<ul style="list-style-type: none"> • influences on occupational knowledge (CIP), outcome expectations (SCCT), access issues/barriers (PWT), and unexpected
Macrosystem	
Recognizing influences of international, national, and societal beliefs on individual career development processes	<ul style="list-style-type: none"> • Complex context of labor market, organizational structures, national/international issues, etc. (CTC) • Macrolevel influences that impact metacognition (CIP), occupational knowledge (CIP), and outcome expectations (SCCT) • Access issues/barriers and the structures and systems that perpetuate them (PWT)
Chronosystem	
Recognizing the influence of individual life events, societal events, and historical events	<ul style="list-style-type: none"> • Chance and change events (CTC) • Changes in context of labor market, organizational structures, national/international issues, etc. • Growth and change over time in career development processes like the CASVE cycle (CIP), Rapid CPR (CTC), and the interest/choice/performance model (SCCT)

Note. SCCT = social cognitive career theory; CIP = cognitive information processing; PWT = psychology of working theory; CTC = chaos theory of careers; CASVE = communication, analysis, synthesis, valuing, and execution.

of the COVID-19 pandemic, elaborating on the direct and indirect impacts can be helpful in identifying areas clients may have power to change and areas that are outside of their control, which can be helpful in setting realistic goals.

CTC (Bright & Pryor, 2019; Pryor & Bright, 2018) and PWT (Blustein & Duffy, 2020; Blustein et al., 2019), respectively, focus on the complex nature of one's environment and the socioeconomic and sociopolitical structures that shape one's environment. CTC's notion of complexity in the environment accounts for the different ways that influences, ranging from individual factors (e.g., gender, sexual orientation, race) to macrosystem factors (e.g., political climate, systemic racism, education quality), shape one's career decision-making process. Moreover, interconnections within the systems can make one's environment particularly volatile and sensitive to ripple effects from both large and small influences. The two fictional case studies (discussed later) illustrate how different life circumstances and environmental factors shaped each person prior to and during the pandemic.

Blustein et al. (2019) noted that work and context cannot be separated and that times of large-scale crisis often shed light on how elements of privilege and marginalization affect the workforce at the individual and macro levels. In the context of the COVID-19 pandemic, PWT (Blustein & Duffy, 2020; Blustein et al., 2019) offers ways to gain insight into how these social structures play out in a person's environment, such as understanding the impacts of racism (Flores, 2013), gender-based discrimination (Kantamneni, 2013), and poverty (Ali, 2013), among other forms of marginalization. Building on the contributions of PWT, examining these social structures within the context of Bronfenbrenner's (2005) model allows for a more nuanced look at how they are manifested in proximal and distal, direct and indirect manners.

Incorporate Discussions of Readiness, Adaptability, and Flexibility

Several career approaches underscore the significance of readiness, adaptability, and flexibility in coping with complexities in the workforce. In CTC, Pryor and Bright (2018) stressed that people have a natural desire to structure their lives, including their career paths, but noted that these tendencies can set a person up for failure and frustration because of the unpredictable nature of the world. Instead, CTC encourages clients to be willing to reflect on career plans, be honest about limitations, and be flexible and adaptable in new situations. Likewise, Blustein et al. (2019) noted that plans should leave room for unexpected changes in personal circumstances and in the labor market (e.g., COVID-19-related industry shutdowns and layoffs). Having clients explore their world via Bronfenbrenner's (2005) model may help them anticipate potential curveballs from different proximal and distal influences. For example, parents of young children could anticipate that school or daycare closures would necessitate having a plan for backup childcare or working from home, something that may not be as much of a concern for parents of teenagers. Similarly, a small business owner could consider how sudden changes in COVID-19 response measures at the federal, state, or municipal level would trickle into the workplace and affect employees.

CIP theory (Sampson et al., 2020) emphasizes the importance of self-knowledge and information-processing skills that influence *how* a person makes decisions related to their career. CIP researchers have identified associations between lower levels of career readiness and anxiety and depression (Osborn et al., 2016) and between worry and career indecision (Hayden & Osborn, 2020). Individuals struggling with career indecision prior to COVID (e.g., college students struggling to choose a major) may feel more disconnected from this decision because of changes in their postsecondary environments, and individuals already in a career may reenter states of indecision when faced with a job loss or job change. Therefore, career professionals should assess clients' readiness to make career decisions (e.g., finding a temporary job amid industry shutdown, finding a new career path because of the long-term effects of COVID-19 illness) within the context of multilevel environmental factors that can support or undercut their process. Career practitioners should ask clients about past instances of career indecision to gain insight into whether there is a history of career indecision and how the client worked through it.

Consider Mental Health Concerns

The pandemic will have undeniable mental health impacts, some exacerbated *by* career concerns and some holding influence *on* career-related concerns. Paying attention to where these impacts fall on Bronfenbrenner's (2005) interconnected systems can provide insight on what type of response or intervention may be warranted. Blustein et al. (2019) noted that working has the potential to promote well-being and positive mental health and that work-related concerns (e.g., unemployment, underemployment, lack of dignified employment) can lead to mental health concerns. Work shutdowns, job loss, and diminished hours were common experiences for many individuals amid the pandemic, and stress, anxiety, anger, depression, and other emotions could be expected as responses. Moreover, the pandemic revealed existing inequities in the workforce along gender, socioeconomic, and racial lines, yielding other layers of stressors. Another component of the PWT approach (Blustein & Duffy, 2020; Blustein et al., 2019) is the idea of using interventions that merge mental health care with career work, noting that cognitively oriented career approaches like CIP and SCCT have already been doing integrative work.

Mental health constructs are inherently embedded in CIP theory (Sampson et al., 2020) as a cognitively based approach. CIP's executive processing domain emphasizes that self-talk can have protective or harmful effects (Sampson et al., 1996a, 1996b). Positive career self-talk can foster positive career decision-making, whereas negative career self-talk is associated with anxiety, depression, feelings of inadequacy, hopelessness, and life stress (Bullock-Yowell et al., 2011; Dieringer et al., 2017; Saunders et al., 2000). Career professionals can use the Career Thoughts Inventory (CTI) and the associated workbook (Sampson et al., 1996a, 1996b) to gain insight into the nature of negative career thoughts and self-talk. Bronfenbrenner's (2005) interconnected systems can help expound upon the CTI External Conflict subscale to learn more about which aspects of a person's environment are contributing to negative

career thoughts, which can also inform intervention planning. Because circumstances such as the COVID-19 pandemic can leave individuals feeling out of control in their lives and careers, career practitioners can use CIP interventions to enhance client agency (Hayden & Osborn, 2020). The case studies that follow help illustrate application of Bronfenbrenner's work with other approaches to career work.

Case Studies and Application

Case Study 1: Estelle

Estelle is a 20-year-old Black woman ending her 2nd year as a mechanical engineering student. Her grades are very good, and she has been seeking an internship to start during her next year. She is a full-time student who works to offset tuition costs and living expenses. Estelle lives with her parents, who are on a fixed income (disability benefits), and is raising a young child. Her income is crucial to the family, and finishing her degree on time will mean more stability for them. Recently, however, Estelle lost her job because of the pandemic and is unsure of her plans moving forward. This job loss translates to her needing to find a paid internship or an internship she can do in addition to working. Her parents responded to the news by saying, "Things will be tight around here, but we really can't afford for you not to work. You want to be an engineer, so there has to be something you can get paid for doing. You always figure it out." Although reluctant at first, Estelle reached out to the university's career services center to meet with a career counselor.

She shared her concerns with her career counselor and added that, since losing her job, she feels an increased amount of stress and has thought about taking the fall semester off to regroup and think about a plan for moving forward. Estelle told her counselor, "It's just so much right now. I know they depend on me, and I'm our chance to make things more stable. Maybe I should take off next semester to work?" She is also fearful of contracting COVID-19 while working or riding public transit and possibly passing the virus on to her family. Although she would rather stay in school, she does not see how she can move forward without any income. With many concerns and responsibilities, Estelle is overwhelmed and hopes to get guidance and support.

Table 2 displays Estelle's circumstances through the lens of Bronfenbrenner's (2005) model. By reviewing her bioecological world, a career professional can help normalize some of her distress as conflicts among her roles as a mother, child, and student. Her counselor can help expand her microsystems and mesosystem through a support network of friends, professors, peers, other university supports, and possible community resources to help manage conflicting roles. Estelle's career counselor should also help her identify transferrable skills she possesses to bolster her applications for internship opportunities and to prepare her to find other work in a volatile job market in the event that paid internships are not available. Assessing negative career thoughts could help clarify the magnitude of her distress and its impact on her career decision-making, with the interconnected systems contextualizing that which is creating or exacerbating her distress. A career counselor can help her explore how these thoughts and feelings are affecting her

career decision-making. A referral for mental health counseling may be warranted because of her anxieties about being the sole provider, fears of letting others down, and potential racial and identity stress of being a Black female in the science, technology, engineering, and math field in the era of COVID-19 and racial injustice.

Case Study 2: Ron

Ron is a 52-year-old White married father of two living in southeast Texas. He works as a loan officer at a midsize mortgage company, and his wife Nicole has been on leave from her teaching job while she battles breast cancer. Their daughter Theresa is a high school senior trying to make decisions about college, and their son Wes is repeating sixth grade after failing several core classes. When the pandemic first began, the whole family ended up at home together, with Ron working

TABLE 2
Conceptualizing Estelle’s Case Through
Bronfenbrenner’s (2005) Interconnected Systems

Level and Characteristic	
	Individual
	<ul style="list-style-type: none"> • 20-year-old Black female • Studying mechanical engineering • Fearful of contracting/spreading COVID-19 and stressful about her future
	Microsystem
Family	<ul style="list-style-type: none"> • Mother of a young child • Daughter to parents on a fixed income • Works to help support her family
Work/school	<ul style="list-style-type: none"> • Connections with professors and peers • Lost her job; seeking paid internship site • Considering taking a leave from school
	Mesosystem
	<ul style="list-style-type: none"> • Sandwiched between roles caring for her child and financially supporting her parents • Balancing roles at home, school, and work
	Exosystem
	<ul style="list-style-type: none"> • Doesn’t have control over her parents’ disability benefits, but their circumstances require her to be a financial provider • Doesn’t have control over which internship opportunities are paid and has to make decisions about her education based on actions of internship sites
	Macrosystem
	<ul style="list-style-type: none"> • Ongoing COVID-19 pandemic • Availability of federal/state policies and supports for individuals with disabilities • Availability of federal/state student aid • Lack of substantive COVID-19-related work aid forces many to remain in the workforce and risk exposure • Impacts of systemic racism
	Chronosystem
	<ul style="list-style-type: none"> • Birth of her daughter • Losing her job • Start of COVID-19 pandemic

Note. Refer to Table 1 for a contextualized view of how these circumstances and characteristics relate to different career theories at each system level.

remotely and the kids learning remotely. Everyone being at home alleviated some of the stress of staying safe while Nicole's immune system is compromised. However, the kids struggled, with Theresa missing out on milestones of her senior year and Wes feeling completely checked out of school. Fortunately, Nicole was able to continue her chemotherapy, but this often left her feeling ill, forcing Ron to shoulder many family responsibilities. A few months into the pandemic, Ron's workplace reopened and despite Ron's pleas for continued remote work because of Nicole's health, his boss demanded that he return on-site. Ron now faces a decision whether to return to his workplace and put his wife at risk or to quit the job he has had for 15 years. At the same time, he is tasked with helping his daughter grieve over the loss of her senior year in high school and decide on postsecondary plans, as well as helping his son try to salvage the remainder of his sixth-grade school year so he does not fail his courses again. Nicole recommended that Ron talk to a career counselor.

Table 3 displays Ron's circumstances through the lens of Bronfenbrenner's (2005) interconnected systems. As with Estelle, a career professional could help Ron explore how his interwoven circumstances are leading to role conflict as a father, a husband, and an employee, as well as how the family being at home together is simultaneously working as a safety precaution *and* putting all of these stressors on display at the forefront of Ron's mind. Ron could benefit from brainstorming ways to build support networks in his microsystems and mesosystem. For example, when Nicole is unwell because of her chemotherapy, is there a teacher colleague who would be willing to help support Wes's academic progress? And are there other parents of seniors with ideas on how to safely honor their children's accomplishments? Lightening his emotional load could help Ron focus more on his career-related decisions. If Ron is unwilling to return to the office because of Nicole's health and safety, he may need to explore new work opportunities, which would necessitate examining transferrable skills and preparing to move back into the job search after 15 years. Assessing career readiness and negative thinking may provide insight into what internal processes are creating internal conflict with his decision-making process. Finally, because of the legitimate stress and anxiety of his circumstances, Nicole's illness, and his stage of life, a mental health counseling referral may be warranted for ongoing support.

Implications for Theory Development and Research

As discussed earlier, the events of 2020 and 2021 displayed unprecedented global workforce disruptions and subsequent responses to these challenges, offering an opportunity for career professionals and theorists to learn from what worked, what did not work, and what could be better accounted for in theoretical perspectives. Several theories emphasize the importance of being adaptable to unanticipated changes, but what does adaptability look like when the inciting events affect nearly everyone? The notion of exploring interconnectedness and complexity among client concerns is not a new idea, but how can we operationalize these concerns in circumstances, such as the COVID-19 pandemic, that have clearly illustrated just how interconnected individual lives, the global

TABLE 3
Conceptualizing Ron's Case Through
Bronfenbrenner's (2005) Interconnected Systems

Level and Characteristic	
	Individual
	<ul style="list-style-type: none"> • 52-year-old White male • Relatively good health • Works as a loan officer • Masks his stress well but is burning out
	Microsystem
Family	<ul style="list-style-type: none"> • Happily married • Wife Nicole is undergoing chemotherapy for cancer and is on leave from her teaching job • Daughter Theresa is in 12th grade • Son Wes is in sixth grade
Work	<ul style="list-style-type: none"> • Has been an employee for 15 years • Able to work from home for some time • Workplace is too small for Ron to qualify for FMLA benefits
	Mesosystem
	<ul style="list-style-type: none"> • Ron has been in communication with Wes's teachers about how he's doing • Some of Ron's and Nicole's coworkers have brought food to help out the family • Ron's boss is putting him in a position to choose between work and family
	Exosystem
	<ul style="list-style-type: none"> • Nicole's workplace has been extra accommodating of her health situation • Theresa's school has canceled several senior events, causing stress and grief for her and leading Ron to provide lots of emotional support • Wes's current academic standing creates additional stress for Ron • Both kids' schools provided laptops for students to do remote learning
	Macrosystem
	<ul style="list-style-type: none"> • Inconsistent COVID-19 precautions because of wide range of beliefs and misinformation • Texas has no state-level family and medical leave law
	Chronosystem
	<ul style="list-style-type: none"> • The pandemic led to the whole family working/studying from home • Nicole's cancer diagnosis • COVID-19 protocol changes led Ron's boss to demand he return to work

Note. Refer to Table 1 for a contextualized view of how these circumstances and characteristics relate to different career theories at each system level. FMLA = Family and Medical Leave Act of 1993.

economy, public health, technology, and many other areas are? These questions, among others, give reason for considering how to adapt approaches in response to large-scale events that simultaneously affect nearly every facet of life for billions of people. Some approaches integrate systems thinking and encourage attention to clients' individual and environmental factors, but Bronfenbrenner's (2005) six-level framework allows for a more specific and nuanced look at impacts that are proximal and distal, as well as direct and indirect. Although circumstances like a global pandemic will not be the norm in career development work, theories have room to adapt and help prepare professionals for future possibilities. Research can bolster these adaptations by exploring how components and interventions associated with different theories serve different populations and industries.

The complexities of the COVID-19 pandemic have further illustrated connections among career, mental health, and family life. Contextualizing

clients through a bioecological lens can equip career professionals to help clients make more sense of present circumstances. Integrating Bronfenbrenner's (2005) framework into current practices can also aid career practitioners across settings (e.g., university career centers, K–12 schools, community agencies) in (a) anticipating the challenges that their clients are facing as a result of the pandemic, (b) identifying and developing appropriate responsive services designed to support clients through these challenges, and (c) recognizing opportunities for advocacy efforts to ensure that adequate supports are in place. Integrating the bioecological approach with constructs and interventions from contemporary career approaches can bolster career professionals' ability to provide direct services that feature discussions of complex client environments, incorporate discussions of career readiness for decision-making, and integrate mental health concerns. Professional development and engagement with research equip career professionals with knowledge of how to respond to client concerns related to the COVID-19 pandemic, instances of racial violence or injustice, or other future events.

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