Changes in business students' value orientations after the COVID-19 outbreak: An exploration

Sophia Town | James Weber | Noémi Nagy

1Gabelli School of Business, Fordham University, New York City, New York, USA
2Palumbo-Donahue School of Business Management, Duquesne University, Pittsburgh, Pennsylvania, USA
3College of Education, University of South Florida, Tampa, Florida, USA
4Department of Business and Management, Kalaidos University of Applied Sciences, Zürich, Switzerland

Abstract
The values people hold tend to be relatively enduring. An important exception appears to be values adaptation in response to major, life-altering situations. Major events can act as triggers for people to adapt their values based on the new context. In particular, collective traumas—such as the COVID-19 pandemic—may incite immediate values change. The aim of the current paper is to compare business school students' value orientations before and after the COVID-19 global pandemic outbreak. We investigated responses from two comparable samples of business students: one surveyed before and one surveyed after the outbreak of the COVID-19 pandemic. The subjects' individual value orientations were aggregated and analyzed by comparing the distribution of the first group's pre-COVID-19 outbreak responses with the second group's post-COVID-19 outbreak responses regarding the importance given to values in the Rokeach Values Survey. We further explored specific demographic differences in personal versus social orientations and competence versus moral orientations for our samples. Results confirm differences in business school students' pre-COVID-19 outbreak versus post-COVID-19 outbreak...
value orientations, with the post-COVID-19 outbreak sample reporting greater attention to social values, as predicted, and competence values, not as predicted. Implications of our findings are discussed.

**KEYWORDS**
collective trauma, COVID-19, value change, values

1 | INTRODUCTION

Values reflect what people find important in life. They are abstract goals and guiding principles that influence how people show up in the world, including their perception, preferences, beliefs, attitudes, and behavior (Kluckhohn, 1951; Roccas & Sagiv, 2010; Rokeach, 1973; Schwartz, 1992). As such, values have been described as “central aspects of the self” that are relatively stable and quite resistant to both outside influences and inner resolution (Bardi & Goodwin, 2011; Konty & Dunham, 1997). That said, values influence people’s moral reasoning and decision-making (Gehman et al., 2013; Selznick, 1957; Weber, 1993)—two things which are necessary for leaders to navigate the myriad challenges business and society face today, including social and political unrest, climate change, and economic health challenges to name a few (Tsalis et al., 2020). Given the impact of leaders’ decision-making on organizational outcomes (Diskiene & Gostautas, 2012), it is important to study the value orientations of business school students, many of whom will take leadership roles in organizations in the future. Prior research demonstrates that, in general, business school students in the United States hold a personal-competence value orientation, reflecting a deep-rooted prioritization of personal (over social) qualities and competence (over moral) characteristics (Weber et al., 2019; Weber & Urick, 2017). Assuming that business school students evolve into organizational leaders, the tendency for these individuals to hold a personal-competence values orientation, and the general stability of values over time, has implications for the future. For example, although there is increasing public demand for organizations to address the triple bottom line, that is, people, planet, profit (Elkington, 2018), there may be little shift in this regard unless organizational leaders value the social and the moral. Given the stability of values, most research in the management and psychology fields has explored the stability of values with less focus on how those values can shift or change.

However, values can change under certain circumstances (Rokeach, 1973; Rokeach & Ball-Rokeach, 1989). Some literature suggests that values can only change negligibly (Feather, 1975; Lubinski et al., 1996). Other work demonstrates that significant life experiences can reorient and restructure the importance of certain values in more profound ways (Kohn & Schooler, 1982; Sheldon, 2005). In this camp, some authors have explored value shifts in response to traumatic events (Gavreliuc & Gavreliuc, 2016) such as cancer diagnosis (Greszta & Siemińska, 2011) and terrorist attacks (Murphy et al., 2004; Verkasalo et al., 2006), but this work has been minimal compared with work that explores values stability (Bardi & Goodwin, 2011). The COVID-19 pandemic serves as an unprecedented collective trauma (Stanley et al., 2021) and thus presents a rare opportunity to examine a potentially major shift in business students’ value orientations.
The purpose of this paper is to explore if and how business students’ value orientations are different before and after a major, life-altering event. To do this, we compared aggregated responses from two comparable samples of business students regarding the importance given to the values in the Rokeach Values Survey (Rokeach, 1973). Responses for the first group were collected before the onset of the COVID-19 global pandemic (Weber et al., 2019), and responses for the second group were collected 6 months into the pandemic outbreak when COVID-19 influenced many aspects of the participants’ lives. We compared the distribution for the first group’s pre-outbreak responses with the second group’s post-outbreak responses. This pre-outbreak versus post-outbreak assessment provides us with critical information about our investigated population’s values orientations prior to and following collective trauma.

2 | PERSONAL VALUES

Personal values influence all areas of people’s lives (Kluckhohn, 1951; Schwartz, 1992). Defined as explicit or implicit conceptions (Kluckhohn, 1951: 395), mental representations (Maio, 2010), cognitive structures (Schwartz & Bilsky, 1987), and abstract desirable goals (Roccas & Sagiv, 2010), values reflect what people believe to be noble, important, and worthy (Rokeach, 1973). They are shaped by a number of social conditions including family, politics, faith, and religious traditions, education, as well as personality and trait characteristics (Meglino & Ravlin, 1998; Rokeach, 1973; Schwartz, 1992). According to early and influential values researcher, Rokeach (1973), a person’s value system can be summed up as their “enduring organization of beliefs concerning preferable modes of conduct or end states of existence along a continuum of relative importance” (Rokeach, 1973, p. 5). To measure people’s values, Rokeach (1973) identified 18 terminal (personal or social end states of existence) and 18 instrumental (competence or moral modes of conduct) values to which people ascribe. The more importance given to a particular value orientation, and thus the higher on the hierarchy, the more likely it is to organize their behavior (Rokeach, 1973; Schwartz, 1992).

Scholars have long argued that values are central to understanding people’s attitudes, moral reasoning, and decision-making (Selznick, 1957). This is because values influence people’s attention and focus (De Dreu & Boles, 1998), as well as what they worry about (Schwartz, Sagiv, et al., 2000) and how they make sense of information (Sattler & Kerr, 1991; Van Lange & Liebrand, 1989). Moreover, values provide social justification for decisions, choices, and behaviors (Rokeach, 1973). As such, numerous scholars have explored the impact of value on various behaviors, including conflict and negotiation styles (Bond et al., 2004; Brett & Okumura, 1998), political voting (Caprara et al., 2006), purchasing (Grunert & Juhl, 1995), environmentalism (De Groot & Steg, 2008; Nordlund & Garvill, 2002; Poortinga et al., 2004; Stern, 2000), sexual behavior (Goodwin et al., 2002), and more. In short, people are likely to think, behave, and make decisions in ways that are in line with their values and refrain from thinking, behaving, and making decisions in ways that are not in line with their values (Roccas & Sagiv, 2010; Rokeach, 1973; Sagiv & Schwartz, 1995).

2.1 | Values stability and change

In general, values do not change very much (Maio & Olson, 1998). Unlike behaviors, goals, or attitudes, values transcend context (Bardi & Goodwin, 2011; Janoff-Bulman, 1989; Roccas &
Sagiv, 2010) and have therefore been described as a dominating force in one’s life (Allport, 1961; Schwartz & Bilsky, 1987). However, certain life experiences can reorient and restructure the importance of certain values (Rokeach & Ball-Rokeach, 1989). One such experience is adaptation, which occurs when big life transitions, for example, becoming a parent (Ferriman et al., 2009), experiencing a change in job conditions (Kohn & Schooler, 1982), or witnessing a major political shift (Danis et al., 2011), require a person to confront their default values (Bardi & Goodwin, 2011). When something major like this happens, people demote those values that do not align with the new context and elevate values that are encouraged by the new context (Bardi & Goodwin, 2011). Initial values change is often temporary (Verkasalo et al., 2006). As Bardi and Goodwin (2011) put it, “as life goes on and people do not constantly think about their values, the original values are likely to continue to operate” (275–276). To achieve long-term change, a person must experience a situation that causes them to reinterpret future situations through their new value set (Greszta & Siemińska, 2011). One way this can happen is through traumatic life events.

2.2 | Value change with trauma

Rokeach (1973, 1979) identified four ways that values may change rapidly. These include (1) significant socialization, (2) self-confrontation, (3) significant emotional events, or (4) cultural upheaval. In particular, significant emotional events and cultural upheaval may be involved in traumatic experiences. Indeed, research in psychology demonstrates that traumatic events change people (Gavreliuc & Gavreliuc, 2016; Greszta & Siemińska, 2011; Tedeschi & Calhoun, 1996). For individuals, trauma can include loss and bereavement (Calhoun & Tedeschi, 1990; Schwartzberg & Janoff-Bulman, 1991), physical or sexual violence (Burt & Katz, 1987; Veronen & Kilpatrick, 1983), and life-threatening medical diagnoses (Affleck et al., 1987; Schwartzberg, 1994). Because people expect life to be generally predictable (Thornton, 2002), unexpected traumatic events can “shatter assumptions individuals hold about themselves, the future, and the world” (Greszta & Siemińska, 2011: 56). To cope, people often seek meaning in the event or aftermath (Janoff-Bulman, 1992; Tedeschi & Calhoun, 1996). Through this meaning-making, people are better able to endure painful memories and, for some, the experience leads to “a new philosophy of life that alters basic assumptions people hold about life and what meaning it may have” (Tedeschi & Calhoun, 1996: 458). In instances such as these, the changes can involve core dimensions of the self, such as spirituality (Andrykowski & Hunt, 1993; Schwartzberg & Janoff-Bulman, 1991), self-perception (Andreasen & Norris, 1972), and worldview (Taylor et al., 1984).

One of the most significant traumatic events that ignites values change is a cancer diagnosis. Following diagnosis, patients report a deluge of distressing emotions such as shock, anger, and fear (Greszta & Siemińska, 2011), followed by a greater appreciation for the sanctity of life (Fromm et al., 1996; Salmon et al., 1996), connection to spirituality (Andrykowski & Hunt, 1993), and an improvement in their closest relationships (Collins et al., 1990; Lichtman et al., 1987). As traumatic events change people’s primary needs, changes within their values system will reflect those changes in need (Greszta & Siemińska, 2011). Indeed, using the Rokeach Values Survey, Greszta and Siemińska (2011) found that cancer patients’ values shifted; participants reported an increase in prioritization for family security, salvation, self-respect and wisdom and a decrease in prioritization for a comfortable life, an exciting life, a
sense of accomplishment, and pleasure. In short, the states of disequilibrium following trauma have the capacity to fracture and completely reorganize people’s values (Cordova et al., 2007; Gavreliuc & Gavreliuc, 2016).

2.2.1 | Collective trauma and values change

This is also true at the collective level (Sztompka, 2000). Typically, social value change happens over decades (De Vos, 1997; Hofstede, 2001) due to stabilized class structures and cultural conditions (Kohn et al., 1990). Even when political and social climates change, the values of a particular society tend to stay the same (Schwartz, Bardi, et al., 2000). However, collective traumas are one of the few conditions that instigate rapid social values change. Collective traumas are “a group level cataclysmic, tragic experience” that are both experienced and reproduced socially (Stanley et al., 2021, p. 1). These experiences can instigate societal values change by impacting the health and vitality of a community or what Sztompka (2000) refers to as the body social:

In medical parlance [trauma] refers precisely to the impact of a sudden event, leaving long-term, destructive effects on the body, incapacitating it in some important respect. Extended to psychiatric discourse, it means a similar long-term destructive impact on the personality, resulting in some form of mental or emotional incapacity. It may be worthwhile to give the term yet another connotation: to apply it to the social domain, to look for destructive effects on the body social. (Sztompka, 2000, 451–452).

Similar to the way a cancer diagnosis reflects physical trauma to the individual, collective traumas can reflect a “shock to the cultural tissue of a society” (Sztompka, 2000: 449). For example, in their study of Finnish students’ values before and after the horrific 2001 terrorist attacks on the US World Trade Center, Verkasalo et al. (2006) found that students reported higher group level security values immediately following the attacks. Additionally, natural disasters (Hirschberger, 2018), radical economic reform (Sztompka, 2000), and genocide are collective traumas that can impact social values (Downing, 2007; Kahana, 1992; Paliewicz & Hasian, 2016). Just as traumatic life events can reorient individual values (Janoff-Bulman, 1989), collective traumas can reorient values for groups of people.

2.2.2 | COVID-19 as a traumatic event

To qualify as a collective trauma, social change must involve the following four elements: (1) Temporality: it is sudden and rapid; (2) Substance: it is radical, deep, and holistic; (3) Origin: it is imposed from outside the victims; and (4) Mental frame: it is unexpected, unpredicted, and shocking (Sztompka, 2000). Given these criteria, the current global COVID-19 pandemic is arguably one of the most significant collective traumas of the 21st century (Espinel et al., 2020; Liang et al., 2020; Rossi et al., 2020; Salari et al., 2020). While there have been other traumatic events in recent years—including one of the most divisive and polarizing political eras in United States history (Abramowitz & McCoy, 2019), as well as major upheavals in racial and social injustice (Buchanan et al., 2020)—COVID-19 has been one of the most disruptive at scale. Not only has the pandemic impacted people’s mental health globally (Furlong & Finnie, 2020), it has become enmeshed in other major collective traumas, including the ongoing political polarization
Over the past 20 months, the COVID-19 pandemic has resulted in “enormous social, cultural, and economic tragedies” and reflects a major collective trauma both locally and globally (Stanley et al., 2021). As of September 2021, the pandemic has resulted in approximately 4.5 million deaths worldwide, with approximately 629,000 deaths in the United States (World Health Organization, 2021). For both the sick and the healthy, every aspect of life was disrupted, including work, recreation, socialization, and planning for the future (Stanley et al., 2021).

In many ways, the COVID-19 global pandemic mirrors on a collective scale, what a cancer diagnosis reflects on an individual or family scale—and, possibly, similar values change. Similar to the shock, uncertainty, fear, guilt, loneliness, and helplessness experienced in the wake of a cancer diagnosis (Greszta & Siemińska, 2011), the COVID-19 pandemic has disrupted all aspects of life and sent communities through equivalent emotional turmoil (Stanley et al., 2021). When people receive a cancer diagnosis, they face threats to both their physical and psychological well-being. They are anxious about their families, their future, and their mortality (Greszta & Siemińska, 2011); likewise, COVID-19 has left millions of people fearing for their lives and the lives of their loved ones (Center for Disease Control, 2020b). Cancer patients routinely experience or anticipate undesired changes to their employment, family structure, social relationships, and caretaking (Greszta & Siemińska, 2011); the COVID-19 pandemic created similar insecurities, with shocking unemployment rates (U.S. Bureau of Labor Statistics, 2020), restricted social gatherings (Marcus, 2020), and travel bans (U.S. Department of State, 2020). Indeed, life, in the era of COVID-19, has been completely disrupted.

For both individual cancer diagnoses and the collective experience of COVID-19, these dislocations in routine, behavior, and life-worlds can alter people in dramatic ways (Sztompka, 2000). What is more, when faced with unexpected social disruptions, “the magnitude of value socialization (the degree to which values shift to reflect the new situation) mirrors the magnitude of change to the life of the person” (Bardi et al., 2014: 144). Although the individual experience of cancer diagnosis does not mirror the collective experience of COVID-19 holistically, the main point here is that, based on the impact of trauma on values change, the collective trauma of COVID-19 may impact societal values in a way similar to the impact of a cancer diagnosis on individual values. As Rokeach (1973, 1979) points out, values can change rapidly under conditions of significant socialization, self-confrontation, significant emotional events, or cultural upheaval. The COVID-19 pandemic reflects not one but all of these pathways to values change. While the future of COVID-19 is uncertain, we can expect people to “struggle with the aftermath of trauma” and, as a possible consequence, “derive meaning, feel wiser, and face uncertain futures with more confidence” (Tedeschi & Calhoun, 1996: 469).

In this paper, we explore the possible values change of business school students specifically. Prior to the pandemic, business school students tended to value personal (over social) qualities and competence (over moral) ones. Based on the above literature on values change in response to traumatic events, we consider whether business school students’ values after the pandemic outbreak will reflect the social and moral leaning observed in extant posttrauma values research (Greszta & Siemińska, 2011).

### HYPOTHESES

Despite the general stability of personal values (Janoff-Bulman, 1989; Maio & Olson, 1998), we suggest that the trauma of the COVID-19 global pandemic might contribute to changing the
importance given by individuals to certain values found in the Rokeach Value Survey (RVS). In light of the research evidence and arguments presented earlier, specifically the prior work demonstrating people’s values can change in response to individual and collective trauma, we expect differences in the value orientations manifested in our samples before and after the COVID-19 outbreak (Gavreliuc & Gavreliuc, 2016; Tedeschi & Calhoun, 1996; Verkasalo et al., 2006). Specifically, we hypothesize that:

**Hypothesis 1.** As a collective group, subjects in our sample will manifest a different distribution of their value orientations when comparing the value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak.

Despite the paucity of research in the business and society or business ethics fields regarding value change under the conditions of traumatic crises, we draw upon work published in psychology to explore and predict what value differences we may discover assessing personal value orientations for our samples before and after the collective trauma of the COVID-19 pandemic outbreak. Verkasalo et al. (2006) provide one of the most relevant studies of students' value change after a collectively traumatic event: the terrorists' attacks on the New York City World Trade Center in 2001.

Despite that these researchers used the Schwartz Value Survey—which is similar to but not an exact match to the RVS we used in our research—for their exploration of Finnish students' values after the September 11, 2001 terrorist attack in the United States, Verkasalo et al. (2006) found significant upticks in the importance attributed to values that demonstrated a concern for the security value type. Within the Schwartz Value Survey, the security value type reflects specific values that match those found in the RVS, such as family security, inner harmony, national security, and cleanliness. Although two of these values are associated with the Rokeach personal value orientation (family security and inner harmony), national security is a member of the Rokeach social value orientation, according to the value clusters reported by Weber (1990). Indeed, other scholars have reported that the experience of a traumatic event may weaken a focus on the self and strengthen attention to one's community. For example, Greszta and Siemińska (2011) used the RVS and discovered a decrease in values associated with the personal values orientation category—such as a comfortable life, an exciting life, a sense of accomplishment, and pleasure—and an increase in focus toward others, when their subjects encountered the notification of a cancer diagnosis.

Our second hypothesis is directed at terminal value orientations, which denote values describing desirable “end states of existence” and include two overarching kinds of values: social- or society-centered versus personal- or self-centered orientations (Rokeach, 1973; Weber, 1990). Examples for social value orientations include prioritizing national security, equality or a world at peace, while examples for personal value orientations include prioritizing inner harmony, pleasure, or self-respect.

Therefore, if a difference is found in the terminal values of our two investigated samples, we will expect that:

**Hypothesis 2.** Subjects in our sample will exhibit a greater tendency toward a Social Value Orientation, as opposed to a Personal Value Orientation, when comparing the terminal value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak.
Other results found by Verkasalo et al. (2006) are relevant for our prediction of value change among our research participants regarding the competence and moral personal value orientations. In their study of Finnish students after the September 11, 2001 terrorist attack in the United States, Verkasalo et al. (2006) found their subjects attributed greater attention toward the Schwartz value types of security and benevolence. Within these, Schwartz value types are values included in the RVS, such as cleanliness, forgiving, helpful, and honest. Each of these values is associated with the moral value orientation identified by Weber (1990).

Hence, our third hypothesis is directed at instrumental value orientations, which denote certain “modes of conduct” in everyday life and include two overarching kinds of values: moral versus competence value orientations (Rokeach, 1973; Weber, 1990). Examples of moral value orientations include being helpful, honest, polite, and forgiving, while examples for competence value orientations include being ambitious, independent, logical and responsible.

Therefore, based on prior research, when investigating value-importance attributed to instrumental values in the RVS, we hypothesize that

**Hypothesis 3.** Subjects in our sample will exhibit a greater tendency toward a Moral Value Orientation, as opposed to a Competence Value Orientation, when comparing the instrumental value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak.

If changes in the individual value orientations of our subjects are found, we will further explore which values embedded in the RVS and which population demographics appear to account for the differences in value orientations before the COVID-19 outbreak compared with after the COVID-19 outbreak.

## 4 | METHODS

### 4.1 | Sample

We employed a repeated cross-sectional approach that investigates differences across comparable samples (Steel, 2008). A repeated cross-sectional design is a valid technique given that we are exploring value changes from an aggregate perspective at the population level (Debowska et al., 2020). To do this, we searched for a previously published sample of individuals who completed the RVS before the COVID-19 pandemic arose and located the work by Weber et al. (2019). These authors secured the values data from their subjects in spring 2016. We reached out to these authors to survey their student population in the fall of 2020, and we were able to acquire data from five of the seven universities represented in the Weber et al. (2019) dataset. We sought to mirror as closely as possible the subject profile from the 2019 publication with a current post-COVID outbreak sampling of subjects. The demographic comparison of the two samples is shown in Table 1.

The two datasets consisted of undergraduate business students from five US universities, private and public, located across the United States. Subjects were drawn voluntarily from a larger population of business students at the respective universities in 2016 and 2020. All subjects were individuals born between 1980 and 2000. Some subjects participated in this project
due to their enrollment in a course, while others were part of a larger research participative pool of student subjects. Further information about the participating schools is summarized next and shown in Table 2. Surveys that were missing information regarding how the subject rated a value in the RVS were removed from our data analysis.

University A is a private, faith-based institution in the Eastern region of the United States with a university enrollment of almost 10,000 students and a 15:1 student-to-faculty ratio. The business school has an enrollment of 1200 undergraduate students. The sample from University A in 2016 provided 423 useable responses for our analysis. In 2020, 153 students at University A completed the RVS, discussed later, with 137 useable surveys provided.

The other private university, University B, is located in the Northwestern region of the United States with a 21:1 student-to-faculty ratio and a total undergraduate enrollment of 21,980 students. The business school has an undergraduate enrollment of 694 students. A total of 296 subjects completed the RVS in 2016 with 286 responses useable for our analysis, and an additional 154 students completed the RVS in 2020 yielding 136 useable surveys for our study.

University C is a public university located in the Southern region of the United States with a 23:1 student-to-faculty ratio and a total undergraduate enrollment of 14,444. The business school has an undergraduate enrollment of 1865 students. A total of 201 subjects completed the RVS in 2016 and were used in our analysis. A total of 153 subjects completed the RVS in 2020 from University C, and there were 126 useable surveys provided for our study.

Next, University D, a public institution, is located in the Midwest region of the United States. This university is the largest in our sample, with an 18:1 student-to-faculty ratio and a total undergraduate enrollment of 33,368 students. The business school has an undergraduate enrollment of 3102 students. In total, 492 subjects completed the RVS in 2016 with 476 useable responses for our analysis. A total of 180 students from University D completed the RVS in 2020, producing 165 useable surveys.

Finally, University E is a public institution located in the Southeastern region of the United States. The university has a 16:1 student-to-faculty ratio and a total undergraduate enrollment of 3356, making it the smallest school in our sample. The business school has a resident undergraduate enrollment of 571 students. Useable RVS accounted for 351 subjects in 2016 and an additional 53 students completed the RVS in 2020 with 42 of those surveys useable for our analysis.

In total, the Weber et al. (2019) study included 1467 undergraduate business students in their sample from the five designated universities. In 2020, we were able to collect 606 RVS surveys completed by the similar student population from these five universities.

| Sample group            | Average age in years | Gender (male versus female) | Average year | Average work experience in months | Grade point average (4.0 max) |
|-------------------------|----------------------|-----------------------------|--------------|-----------------------------------|------------------------------|
| All—pre-COVID-19        | 20.19                | 53%/47%                     | 2.49         | 3.30                              | 2.79                         |
| All—post-COVID-19       | 20.22                | 51%/49%                     | 2.39         | 3.26                              | 2.83                         |
| School                          | Type                    | Location (all in the USA) | Total enrolled | Business school/% of univ | N surveyed—2016/2020 | Personal-competence | Personal-moral | Social-competence | Social-moral |
|--------------------------------|-------------------------|---------------------------|----------------|---------------------------|----------------------|---------------------|------------------|-------------------|-------------|
| University A—pre-COVID-19      | Private/faith-based     | East                      | 10,000         | 1200/12.0%                | 153/137              | 186/44%             | 114/27%          | 64/15%            | 59/14%      |
| University A—post-COVID-19     |                         |                           |                |                           |                      |                     |                  |                   |             |
| University B—pre-COVID-19      | Private/faith-based     | North west                | 21,980         | 694/3.15%                 | 286/136              | 103/36%             | 77/27%           | 54/19%            | 52/18%      |
| University B—post-COVID-19     |                         |                           |                |                           |                      |                     |                  |                   |             |
| University C—pre-COVID-19      | Public                  | South                     | 14,444         | 1865/12.9%                | 201/126              | 80/40%              | 40/20%           | 41/20%            | 40/20%      |
| University C—post-COVID-19     |                         |                           |                |                           |                      |                     |                  |                   |             |
| University D—pre-COVID-19      | Public                  | Midwest                   | 33,368         | 3102/9.3%                 | 476/165              | 238/50%             | 119/25%          | 58/12%            | 61/12%      |
| University D—post-COVID-19     |                         |                           |                |                           |                      |                     |                  |                   |             |
| University E—pre-COVID-19      | Public                  | South east                | 3356           | 571/17.0%                 | 351/42               | 179/51%             | 88/25%           | 45/13%            | 39/11%      |
| University E—post-COVID-19     |                         |                           |                |                           |                      |                     |                  |                   |             |
| All—pre-COVID-19               |                         |                           |                |                           |                      |                     |                  |                   |             |
| All—post-COVID-19              |                         |                           |                |                           |                      |                     |                  |                   |             |
4.2 Materials

There are two predominant value surveys appearing regularly in the academic literature, one developed by Milton Rokeach (1973) and the other by Shalom Schwartz (2009). Weber et al. (2019) utilized the RVS due to “the instrument’s strong theoretical foundation focusing on personal values underlying the survey (Rokeach & Ball-Rokeach, 1989), its widely accepted validity in values research (Vauclair et al., 2011), and its capability in assessing business students’ values (McCarthy, 1997),” as described in Weber et al. (2019). We replicated the use of this instrument for comparative purposes for our investigation.

The RVS assesses the importance assigned by individual subjects to 18 terminal (personal or social end states of existence) and 18 instrumental (competence or moral modes of conduct) values. In the first data collection (2016), participants completed the RVS questionnaire and a series of demographic questions, either online or in-class. In 2020, all participants completed the RVS online due to COVID-19 social gathering restrictions. None of the subjects at any institution were provided monetary incentives for completing the survey.

Items from the RVS are listed in Appendix A. The faculty supervising the data collection in person or the online survey questionnaire asked the respondents to consider each set of values separately. Each set of values is listed in alphabetical order and asked respondents to rate each value in terms of their perceived importance.

In order to assess demographic characteristics, there was information requested in a separate section of the survey. These items asked the respondent to provide their age, major, grade point average (GPA), and previous work experience in months. Additional items asked the respondent to indicate their gender and class standing (i.e., the participant’s year in the undergraduate program—Freshman, Sophomore, Junior, or Senior).

In both data collection phases, two modifications to the original RVS were employed. The first modification instructed respondents to rate, rather than rank, each value on a 7-point Likert scale. Previous research (Miethe, 1985) found that asking subjects to rate (rather than rank) values on a Likert scale enabled subjects to consider fewer items at once and made the resulting importance ascribed to each value more plausible and reliable. The rating system allows individuals to appraise different values as being equally important to them and permits for the possibility that a given value item will be negatively valued.

The second modification of the original RVS was to use quantitative-based membership, or weights, for each of the 36 values. This approach is based on prior works (see Weber’s initial classification reported in 1990, shown in Appendix A). The weights are assigned to the values within each of the four individual value orientations theoretically proposed by M. Rokeach (1973). These are a personal or a social value orientation for the terminal values and a competence or a moral value orientation for the instrumental values. See Weber (1990) for a more detailed explanation of how the values were weighted within each value group.

4.3 Measures

The subjects’ individual value orientations were initially analyzed by comparing the distribution for pre-COVID-19 outbreak responses with post-COVID-19 outbreak responses to the importance given the RVS values using a Chi-square goodness of fit test statistic. The goodness of fit test assesses whether an observed frequency distribution of a nominal variable matches another frequency distribution. The Chi-square test was applied to the entire sample, for all five
universities, regarding the pre-COVID-19 outbreak versus post-COVID-19 outbreak data and then to each university to determine if differences were discovered, as hypothesized.

Next, we utilized a $Z$-test of propositions for the two samples to assess Hypotheses 2 and 3 to determine if the differences in the value orientations were due to differences in the terminal value orientations—personal or social—or the instrumental value orientations—competence or moral. This test calculates the value of a “$Z$” (and associated “p-value”) for two group proportions to determine if there are statistically significant differences across the two groups within the population. A $Z$-test was also used to explore any differences in the participants’ value orientations due to their demographic characteristics.

5 | RESULTS

The mean and range of our participants’ value orientation scores by universities are shown in Table 3. As explained above, we conducted the Chi-square test and Z-test for proportions on the two samples of data—one collected in 2016 (pre-COVID-19 outbreak) and the other sample collected in fall 2020 (post-COVID-19 outbreak)—to assess any differences in subjects’ value orientations. Figure 1 displays the general research model of this study, along with the uncovered differences.

To test Hypothesis 1—As a collective group, subjects in our sample will manifest a different distribution of their value orientations when comparing the value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak—the Chi-square test reveals significant differences in the two samples’ individual value orientations for the combined (all five universities) samples: $X^2$ (df = 1, N = 1737; 599), $X^2 = 46.6047$, $p < 0.00001$. As shown in Table 4, we discovered strong statistical differences when comparing the pre-COVID-19 versus post-COVID-19 outbreak samples. The strong difference was predicted based on prior personal values research (Gavreliuc & Gavreliuc, 2016; Tedeschi & Calhoun, 1996). Despite the general research consensus that values do not change dramatically or quickly, the presence of the COVID-19 global pandemic appears to be a likely influence on our student subjects and their value orientations. In just a few years, the two comparable samples demonstrated a significantly different value profile.

Given the initial differences discovered when looking at the entire, combined sample, we evaluated the five university locations of our subjects independently to see if there may be any geographic differences or differences based on whether the institution was private versus public.

| Table 3 | Mean and range of participants’ value orientation scores by universities |
|---------|---------------------------------------------------------------------|
| School | Personal value orientation mean/range | Social value orientation mean/range | Competence value orientation mean/range | Moral value orientation mean/range |
| University A—post-COVID-19 | 5.966/4.00–7.00 | 5.649/3.28–7.00 | 6.001/3.69–7.00 | 5.687/3.53–7.00 |
| University B—post-COVID-19 | 6.001/2.81–7.00 | 5.969/1.00–7.00 | 5.990/3.00–7.00 | 5.791/3.33–7.00 |
| University C—post-COVID-19 | 6.205/2.00–7.00 | 6.013/1.33–7.00 | 6.222/4.31–7.00 | 6.038/2.80–7.00 |
| University D—post-COVID-19 | 5.978/3.81–7.00 | 5.701/2.67–7.00 | 6.041/3.33–7.00 | 5.632/3.77–7.00 |
| University E—post-COVID-19 | 6.083/3.96–7.00 | 5.816/2.28–7.00 | 6.118/4.75–7.00 | 6.014/4.53–7.00 |
When looking at the five university samples independently, statistically significant differences were discovered, ranging from marginal to strong, for each university sample comparing pre-COVID-19 outbreak versus post-COVID-19 outbreak value orientation distributions. Specifically, subjects from University A showed no significant difference when looking at pre-COVID-19 outbreak versus post-COVID-19 outbreak value orientations for the subjects: $X^2$ (df = 1, $N = 423$; 130), $X^2 = 6.0783$, $p = 0.108$. However, subjects from University B: $X^2$ (df = 1, $N = 286$; 136), $X^2 = 19.139$, $p = 0.000256$; University C: $X^2$ (df = 1, $N = 201$; 126), $X^2 = 130.657$, $p < 0.00001$; and University D: $X^2$ (df = 1, $N = 476$; 165), $X^2 = 22.483$, $p = 0.000052$ demonstrated a strongly significant difference in their value orientations between the two times. Finally, University E showed no significant differences in the value orientation comparison from pre-COVID-19 outbreak responses to post-COVID-19 outbreak responses: $X^2$ (df = 1, $N = 351$; 42), $X^2 = 7.612$, $p = 0.0547$. These three universities—B, C, and D—where significant change was identified represent different regions in the United States, with variant university and business school enrollments. Therefore, it seems that given that the participation by subjects from three of the five different universities is from different regions and types of institutions across the United States, we can conclude that the differences in personal value orientations between pre-COVID-19 outbreak responses and post-COVID-19 outbreak responses are primarily due to the subjects' perceived importance of the values embedded in the RVS. Implications of these results are discussed in the next section of this paper.

![Overall research model of the present study. Upper half indicates hypothesized changes in value orientations; lower half indicates confirmed changes in the present samples](wileyonlinelibrary.com)
TABLE 4  Chi-square goodness of fit test for pre-COVID-19 and post-COVID-19 data

| School             | Personal-competence | Personal-moral | Social-competence | Social-moral | N   | $X^2$ | $p$   |
|--------------------|---------------------|----------------|-------------------|--------------|-----|------|------|
| University A—pre-COVID-19 | 186/44%             | 114/27%        | 64/15%            | 59/14%       | 423 |      |      |
| University A—post-COVID-19 | 66/51%              | 26/20%         | 26/20%            | 12/9%        | 130 | 6.078| 0.108|
| University B—pre-COVID-19 | 103/36%             | 77/27%         | 54/19%            | 52/18%       | 286 |      |      |
| University B—post-COVID-19 | 47/35%              | 15/11%         | 45/33%            | 29/21%       | 136 | 19.139| 0.000256***|
| University C—pre-COVID-19 | 80/40%              | 40/20%         | 41/20%            | 40/20%       | 201 |      |      |
| University C—post-COVID-19 | 57/45%              | 23/18%         | 24/19%            | 22/18%       | 126 | 130.657| <0.00001***|
| University D—pre-COVID-19 | 238/50%             | 119/25%        | 58/12%            | 61/12%       | 476 |      |      |
| University D—post-COVID-19 | 86/52%              | 17/10%         | 38/23%            | 24/15%       | 165 | 22.483| 0.000052***|
| University E—pre-COVID-19 | 179/51%             | 88/25%         | 45/13%            | 39/11%       | 351 |      |      |
| University E—post-COVID-19 | 18/43%              | 6/15%          | 9/21%             | 9/21%        | 42  | 7.612 | 0.0547*|
| All—pre-COVID-19   | 782/45%             | 452/26%        | 260/15%           | 243/14%      | 1737|      |      |
| All—post-COVID-19 | 274/46%             | 87/14%         | 142/24%           | 96/16%       | 599 | 46.6047| <0.00001***|

Note: The terminal values from the Rokeach Value Survey are represented in the personal and social value orientations, whereas the Instrumental Values are represented in the competence and moral value orientations.

***$p = 0.01$.

**$p = 0.05$.

* $p = 0.10$. 
Since differences in the subjects' collective personal value orientations were found, we further explored if these differences were due to differences in the terminal or instrumental values embedded in the RVS or both. To test Hypothesis 2—Subjects in our sample will exhibit a greater tendency toward a Social Value Orientation, as opposed to a Personal Value Orientation, when comparing the terminal value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak—we conducted a series of Z-tests of proportions for two samples as shown in Table 5. These statistical assessments revealed strong significant differences in the two samples’ individual personal and social value orientations for the combined samples: $Z = -4.8862$, $p < 0.00001$. A negative Z score indicates a trend toward an increase in the social value orientation and away from the personal value orientation.

When looking at the five university samples independently, strong statistically significant differences were discovered for three of the five universities’ samples comparing the personal value orientation to the social value orientation when comparing the pre-COVID-19 outbreak versus post-COVID-19 outbreak orientation distributions. Subjects at University B (a private university located in the Pacific Northwest region of the United States): $Z = -3.3677$, $p = 0.00038$; University D (a large public university located in the Upper Midwest region of the United States): $Z = -3.0924$, $p = 0.001$; and, University E (a public university located in the Southeast region of the United States): $Z = -2.6441$, $p = 0.00415$; all demonstrated strong significant increases in their social value orientation, with a corresponding decrease in their personal value orientations.

Given the variations in these institutions’ private versus public affiliation, geographic region, and size of enrollment in the university and business schools, we cannot conclude that these factors played a role in the differences we observed in the subjects’ collective value orientations. Yet, the results reflect earlier research reporting that, when facing a crisis or tragedy, individuals turn to a greater reliance on social relationships, such as family or community, eschewing an emphasis on the self (Greszta & Siemińska, 2011).

Similarly, two other universities with unrelated demographic characteristics showed no significant differences in the terminal value ratings of importance leading to a nonsignificant difference in the personal versus social value orientation for these subjects. University A (a private university located in the Eastern region of the United States): $Z = -0.0335$, $p = 0.48803$ and University C (a public university located in the Southern region of the United States): $Z = 0.6845$, $p = 0.24825$ both demonstrated a nonsignificant difference in the personal versus social value orientations of their subjects.

Turning to the instrumental value ratings of importance and the corresponding competence versus moral value orientations for the subjects in our sample, we tested Hypothesis #3—Subjects in our sample will exhibit a greater tendency toward a Moral Value Orientation, as opposed to a Competence Value Orientation, when comparing the instrumental value-importance ratings from subjects acquired pre-COVID-19 outbreak to the value-importance ratings from subjects acquired post-COVID-19 outbreak—using a Z-test of proportions for two samples, shown in Table 5.

Our results revealed significant differences in the combined sample’s individual competence and moral value orientations: $Z = 4.1223$, $p < 0.00001$. A positive Z score indicates a trend toward an increase in the competence value orientation and away from the moral value orientation. Therefore, contrary to what we hypothesized based on prior research, a strong statistical difference was discovered but not in the direction predicted.
| School                  | N   | Personal | Social | Z-test      | Competence | Moral | Z-test      |
|------------------------|-----|----------|--------|-------------|------------|-------|-------------|
| University A—pre-COVID-19 | 423 | 300/71%  | 123/29%| −0.0335     | 250/59%    | 173/41%| 2.3951      |
|                        |     |          |        | p = 0.48803 |            |       | p = 0.0082  |
| University B—pre-COVID-19 | 286 | 180/63%  | 106/37%| −3.3677     | 157/55%    | 129/45%| 2.4892      |
|                        |     |          |        | p = 0.00038 |            |       | p = 0.00639 |
| University C—pre-COVID-19 | 201 | 120/60%  | 81/40% | 0.6845      | 81/64%     | 45/36%| 0.7401      |
|                        |     |          |        | p = 0.24825 |            |       | p = 0.22965 |
| University D—pre-COVID-19 | 476 | 357/75%  | 119/25%| −3.0924     | 296/62%    | 180/38%| 3.0198      |
|                        |     |          |        | p = 0.001   |            |       | p = 0.00126 |
| University E—pre-COVID-19 | 351 | 267/76%  | 84/24% | 0.0597      | 224/64%    | 127/36%| 0.47608     |
|                        |     |          |        | p = 0.47608 |            |       | p = 0.47608 |
| All—pre-COVID-19       | 1737| 1234/71% | 503/29%| −2.6441     | 1042/60%   | 695/40%| 4.1223      |
|                        |     |          |        | p = 0.00415 |            |       | p = 0.00001 |
| All—post-COVID-19      | 599 | 361/60%  | 238/40%| −4.8862     | 416/69%    | 183/31%| 4.1223      |
|                        |     |          |        | p < 0.00001 |            |       | p < 0.00001 |

Abbreviations: ND, not in the direction predicted; NS, not significant.

***p = 0.01.
**p = 0.05.
*p = 0.10.
When looking at the five university samples independently, strong statistically significant differences were discovered in three of the five universities' samples, comparing the competence value orientation to the moral value orientation pre-COVID-19 outbreak versus post-COVID-19 outbreak. Yet, we did not find any of the universities' subjects demonstrating a change in the importance attributed to the instrumental values in the direction we predicted, that is, an increase in a moral value orientation and a corresponding decrease in a competence value orientation.

Significant differences in the instrumental-associated value orientations were found at University A: $Z = 2.3951, p = 0.0082$; University B: $Z = 2.4892, p = 0.00639$; and University D: $Z = 3.0198, p = 0.00126$, but none in the direction predicted. No significant differences were found when comparing the pre-COVID-19 outbreak versus post-COVID-19 outbreak data for our samples at University C: $Z = 0.7401, p = 0.22965$ and University E: $Z = 0.0597, p = 0.47608$, and the nonsignificant differences were not in the direction we predicted.

While there is a minimal amount of prior research that supports our prediction of a change toward a moral value orientation post-COVID-19 outbreak—for example, cancer survivors' shift toward salvation and away from pleasure (Greszta & Siemińska, 2011)—we expected that subjects would focus more on moral and ethical behavior during the global pandemic crisis. Our contrary findings will be discussed in more detail in the next section of this paper.

Finally, we took a deeper dive into our results of the individual values embedded in the RVS and differences in the subjects' rating of importance of these values. This additional investigation targeted any specific values that differed in the ratings of importance by the subjects pre-COVID-19 outbreak and post-COVID-19 outbreak, and any university demographic characteristic may have contributed to the overall differences in the individual value orientations.

Contributing to the shift toward greater social value orientations compared with personal value orientations, we found three values that influenced this difference: A “World of Beauty” (0.66 change on a 7-point scale), “Equality” (0.62 change on a 7-point scale), and “A World at Peace” (0.60 change on a 7-point scale). These three terminal values represent the greatest difference of any of the 18 terminal values from pre-COVID-19 outbreak to post-COVID-19 outbreak assessment. Each of these values is associated with a social value orientation.

In contrast, differences in the instrumental values were less evident. Contributing to the move from moral value orientations toward competence value orientations, we found differences in the following value ratings: “Imaginative” (0.33 change on a 7-point scale) and “Broadminded” (0.32 change on a 7-point scale). These two values represent the second and third greatest difference in value-importance from the pre-COVID-19 outbreak versus post-COVID-19 outbreak era. Therefore, there seems to be a subtler, yet broader, difference across many instrumental values to account for the differences toward a competence value orientation. These results will be discussed further in the next section of this paper.

Finally, we explored any demographic indicators to account for the differences in value orientations for our sample. Basically, our emerging research question can be framed as follows: Are the changes toward a social value orientation and maintenance of a competence value orientation influenced by any of the demographic characteristics we captured from our post-COVID-19 outbreak sample of participants?

We are unable to conduct a direct pre-COVID-19 versus post-COVID-19 outbreak comparison of value preferences across our two samples for each demographic variable due to the unavailability of pre-COVID-19 outbreak value preferences attributed to demographic characteristics (not reported in Weber et al., 2019). However, when looking at the post-COVID-19
outbreak data, shown in Table 6, we did discover that for every demographic variable, there were differences when considering a personal versus social value orientation.

Older, male, Junior or Senior students with more work experience all preferred a social value orientation. Students in our sample with a lower GPA preferred a personal value orientation. We observe from this analysis that the preference toward a social value orientation in a post-COVID-19 outbreak environment was primarily driven by significantly different results (age: \( t = -4.969, p < 0.00001 \); gender: \( t = -2.71, p = 0.0069 \); year: \( t = -3.18, p = .0016 \); and, grade point average: \( t = 0.20, p = 0.0293 \)). The demographics of older, Junior or Senior, and male explain, in part perhaps, our discovery of a value preference change from pre-COVID-19 to post-COVID-19 outbreak toward a social value orientation. The remaining demographic variable, work experience, was not significant (\( t = -1.61, p = 0.1089 \)) when assessed for change in the personal versus social value orientations.

In terms of demographic explanations for the shift to competence (vs. moral) value orientations post-COVID-19 outbreak, the results are less clear. As depicted in Table 7, only the gender demographic revealed a significant difference, with males preferring a moral versus competence value orientation (gender: \( t = 0.33, p = 0.0115 \)). None of the other demographic variables demonstrated a significant difference across the two subgroups (age: \( t = -0.80, p = 0.4236 \); year: \( t = -1.09; p = 0.2758 \); work experience: \( t = -1.64, p = 0.1019 \); and GPA: \( t = -0.09, p = 0.3704 \)). However, we observed that for each of the five demographic variables, several subgroups showed a preference toward a moral value orientation—older, males, Juniors/Seniors, more work experience, and higher GPA—despite four of these comparisons found not to be statistically significant.

When simply observing the mean value preference scores (from the Likert scale of 1 to 7 in terms of importance), participants who were older, male, Junior/Senior, with more work experience, and higher GPAs all reported higher mean scores for moral orientation. However, none of the comparisons of the means were found to be statistically significant. Thus, the apparent greater attention by males for a moral value orientation post-COVID-19 outbreak environment is puzzling because we did not find statistical support for our Hypothesis 3, where we predicted

| Demographic       | Group       | N   | Mean | Std dev | t-value | \( S^2 \) | t    | p      |
|-------------------|-------------|-----|------|---------|---------|---------|------|--------|
| Age               | 18−20       | 255 | 0.04 | 91.04   |         |         |      |        |
|                   | 22−23+      | 172 | 0.36 | 91.01   | 0.43    | -4.969  | <0.00001*** |
| Gender            | Female      | 291 | 0.09 | 99.68   |         |         |      |        |
|                   | Male        | 320 | 0.23 | 141.14  | 0.40    | -2.71   | 0.0069*** |
| Year              | Fr/So       | 364 | 0.08 | 137.7   |         |         |      |        |
|                   | Jr/Sr       | 251 | 0.25 | 124.61  | 0.43    | -3.18   | 0.0016*** |
| Work exp. (years) | 0−2.5       | 348 | 0.12 | 135.15  |         |         |      |        |
|                   | 3−5+        | 273 | 0.21 | 132.11  | 0.43    | -1.61   | 0.1089 |
| GPA               | <3.0        | 211 | 0.24 | 102.41  |         |         |      |        |
|                   | >3.0        | 412 | 0.12 | 164.44  | 0.43    | 2.20    | 0.0283**  |

***p = 0.01.
**p = 0.05.
*p = 0.10.
that our participants, as a whole, would demonstrate a value orientation change from competence to moral in the post-COVID-19 outbreak environment. These results will be discussed in more detail in the next section.

6 | DISCUSSION

While values are relatively stable personal dispositions, and any change in values is typically a slow (i.e., decades-long) process, values can shift more quickly under certain formative circumstances such as individual and collective traumas. We argued that the global COVID-19 pandemic reflects a major collective trauma (Stanley et al., 2021), and we explored whether business school students' value orientations differed after the COVID-19 pandemic outbreak compared with before the COVID-19 era. In line with Rokeach’s (1968) theory of value change, the current COVID-19 pandemic has brought on significant cultural upheaval, along with emotional events and increased self-confrontation. Although there have been other traumatic experiences in recent years—such as extreme political polarization and massive mobilization around racial and social injustice—the impact and disruption of COVID-19 not only produced the most widespread disruption to daily life, the pandemic became enmeshed in those other social traumas. Given the pervasiveness of collective trauma experienced from the COVID-19 pandemic, we expected to see a shift in business students' value orientations. Indeed, we detected significant value differences in our investigated samples within just a few years. Values exist in a systemic relationship such that a change in one value will likely prompt a change in another value (Bardi & Goodwin, 2011). In other words, values are likely to change in tandem. This has been pointed out by Rokeach (1973) and subsequently confirmed by a multitude of empirical research (Bardi et al., 2009; Maio et al., 2009). Our results confirmed this dynamic as well. Regarding the types of changes, our results point to larger changes in terminal, compared with instrumental values.
6.1 Terminal values: Increase in social orientation

In terms of terminal values, our findings demonstrate an increase in our investigated population’s social value orientation and a decrease in their personal value orientation. This reflects the tendency for people to prioritize the social good after a collective trauma. Researchers have seen similar increases in social concern following terrorism threats (Veréb et al., 2018). For example, Gavreliuc and Gavreliuc (2016) found that following trauma, “the profile of a traumatic identity is born, which finds its refuge in the nucleus of the family” (Gavreliuc & Gavreliuc, 2016, p. 108). And following the 2001 terrorist attacks on the World Trade Center, Verkasalo et al. (2006) found that students’ group level security and benevolence values increased, while their stimulation values decreased. Indeed, our findings mirror recent work that demonstrates that trauma tends to cause a greater focus on others and family (e.g., Greszta & Siemińska, 2011).

Because values do not tend to change quickly or often (Bardi & Goodwin, 2011; Maio & Olson, 1998), this shift toward a social orientation may remain long after the COVID-19 pandemic outbreak and result in implications for business and society over time. Past research shows that people’s values influence their moral reasoning and decision-making (Gehman et al., 2013; Selznick, 1957; Weber, 1993), and leaders’ decision-making impacts organizational outcomes (Daskine & Gostautas, 2012). Considering that business students are educated to hold leadership positions in the future, this group’s shift toward a more social orientation may manifest in socially conscious decisions within the teams, departments, organizations and society in which they one day lead.

6.2 Instrumental values: Increase in competency orientation

In terms of instrumental values, although we hypothesized that moral values would increase and competence values would decrease when comparing pre-COVID-19 values with post-COVID-19 outbreak values, we found an opposite effect in our investigated samples. Specifically, our participants surveyed post-COVID-19 outbreak deemed being imaginative and broadminded—two aspects of a competence orientation—as more important than those surveyed pre-COVID-19 outbreak. This surprised us due to the prior research that suggests collective trauma would encourage a shift toward moral and ethical behavior, such as cancer survivors’ prioritization of salvation over pleasure (Greszta & Siemińska, 2011). A potential explanation for this result could be that during a collective trauma, such as the current global pandemic, people must rely on their competencies to navigate the current situation, think outside of the box, and cope with unanticipated, difficult circumstances. This level of engagement may require increased competency and therefore elevate the prioritization of a competence orientation.

In line with this, another explanation could be that when facing an unprecedented social crisis, moral values might appear too abstract and thus less immediate than competence values. We can interpret our results as our participants focusing on competence values as a self-preservation approach during the pandemic, similar to what Weber and Gerde (2011) found when investigating the ethical work climates for military personnel. They discovered that active-duty soldiers tended to focus on self-preservation and instrumental ethical work climate, whereas reservists were found to focus on a concern for the organization and others in their units’ ethical work climates. In the current study, a focus on preservation may be even more
salient given that our investigated samples are rather young (in their late teens and early twenties) and have most likely not experienced any comparable threatening and invasive, far-reaching collective traumas. In short, our finding that participants’ competency orientation increased instead of moral orientation suggests that, following collective trauma, people aim to be more capable of navigating the complexities they face.

Considering the increase in competency orientation, we ask, how does this counter-intuitive result make sense as a manifestation of shifting values during a crisis? While the rise of competence values and the corresponding descent of moral values might seem troublesome at first, participants’ terminal values reflect an increase in social concern. In fact, participants’ social (terminal) value orientations increased significantly and to a higher extent than the comparative decrease in moral (instrumental) value orientations. This significant difference in value orientations in the pre-COVID-19 outbreak versus post-COVID-19 outbreak samples is most notable at: University B, with a 17% increase in social orientations and a 13% decrease in moral orientations; University D, with a 14% increase in social orientations and a 12% decrease in moral orientations; and University E, with an 18% increase in social orientations and no change in moral orientations. Overall, there is a significant increase in social value orientations by 11% compared with a decline in moral value orientations by 10%. We interpret participants’ increased competency and social orientation to reflect a concern for competent action for the betterment of society, as opposed to simply focusing on personal outcomes. This analysis aligns with current research into the positive consequences of profound trauma (Gavreliuc & Gavreliuc, 2016; Greszta & Siemiński, 2011; Tedeschi & Calhoun, 1996). Furthermore, another interpretation of our results could be that in a trauma-induced context, there might be less of a dichotomy between competency and moral values, as evidenced by our results that the decrease and increase do not balance each other out, but rather, we have a certain extent of values inflation in the instrumental values domain. Future research could explore this question and shed light on whether and to what extent single value domains change in a rather dichotomous or more independent manner.

6.3 Exploring collective trauma in situ

Most collective trauma literature is retrospective and looks at textual or cultural artifacts (e.g., Downing, 2007; Paliewicz & Hasian, 2016), rather than people’s experiences in situ or immediately following catastrophic events (e.g., Garcia & Rimé, 2019). This may be, in part, because of the challenge in documenting group experience of trauma (Stanley et al., 2021). While retrospective analysis provides a broader picture (Hirschberger, 2018), it lacks the ability to capture potential change as it is unfolding and the ability to compare people’s experiences, empirically, before and after the traumatic event. By capturing and comparing business students’ value orientations before and after the outbreak of the COVID-19 global pandemic, the current study offers a unique empirical exploration of potential value change in response to collective trauma.

6.4 Collective trauma and wisdom

While early research focused mostly on the deleterious outcomes of trauma, scholars have more recently explored potential benefits. Despite the anxiety, sadness, and discomfort of trauma,
people also report positive outcomes, including an increased sense of purpose, spirituality, and personal resources, as well as closer relationships and a positive shift in priorities (Carver & Antoni, 2004; Fromm et al., 1996; Greszta & Siemińska, 2011). In much of this work, the possible benefits of trauma are conceptualized as outcomes, although they may also indicate processes of coping and resilience—for example, a person may engage in positive reinterpretation, positive reframing, interpretive control, or reconstrual of events (Tedeschi & Calhoun, 1996). In their work on posttraumatic growth, Tedeschi and Calhoun (1996) identified three categories of productive responses—including changes in self-perception (Andreasen & Norris, 1972; Joseph et al., 1993), interpersonal relationships (Collins et al., 1990; Malinak et al., 1979), and general philosophy of life (Joseph et al., 1993; Taylor et al., 1984)—which, taken together, reflect wisdom. Some scholars have found that the more traumatic the experience, the greater the opportunity for growth (McMillen et al., 1997). If this is the case, then the current COVID-19 pandemic may offer a rare collective values shift, and possibly collective growth. While most trauma tends to impact individual people (such is the case with health diagnoses or domestic violence) or specific groups of people (such is the case with natural disasters, political revolution, or war), the impact of the COVID-19 pandemic is one of a global scale.

7 | LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

As with any study, the current investigation is not without limitations. In what follows, we note certain shortcomings of our study design that may have influenced our results and could limit the conclusions of the current research. Also, we encourage future research to consider those limiting factors when building on our work to outbalance these limitations and meaningfully add to this growing body of research. First, due to the lack of access to longitudinal data, we cannot say with certainty that our uncovered differences are a direct result of the impact of the COVID-19 pandemic on our investigated participants. Although we attempted to ensure maximum comparability of the pre-COVID-19 and post-COVID-19 outbreak samples by carefully matching our participants on key demographic indicators, we acknowledge that comparing two data sets from different samples is a major limitation of this study. While such a repeated cross-sectional design is a valid technique given that we are looking at value changes from a macro-/aggregate perspective and describe our findings on the population level (Debowska et al., 2020; Steel, 2008), we deem it important to clarify that we are exploring differences, as opposed to changes, in business school students’ value orientations. In line with this, it is important to state that we are unable to derive any individual-level conclusions about value changes and our results are only directed at population level differences in our investigated values. Future research on this topic should therefore utilize longitudinal, repeated measures data to be able to investigate individual-level value orientation changes.

Second, while the rationale for the current study centers around business students and their potential role as future leaders, the generalizability of our findings is, strictly speaking, limited to this specific young adult population. We were careful to address this limitation by widening our scope and including students from multiple institutions across a wide variety of geographical distributions throughout the United States. Also, we have a remarkable balance of the gender distribution in our data, having surveyed an almost 50/50 ratio of female and male participants, which increases the generalizability to the wider population. Furthermore, regarding trauma and traumatic events, college students have been shown by previous research to be
highly comparable with the larger public (Tedeschi & Calhoun, 1996; Vrana & Lauterbach, 1994). That said, we cannot draw conclusions about the generalizability of our findings for the larger population.

Third, while our findings reflect values shift, it is too soon to determine if this shift in values will remain over time. Previous work has found mixed long-term effects of values change (Vertzberger, 1997). In their study of students’ values after the 2001 terrorist attacks, Verkasalo et al. (2006) found that students’ increased value for collective security returned to pre-attack levels after a short period of time. When reflecting on why students’ values returned to pre-trauma states rather quickly, the authors suggest that personal life distractions, coupled with a perceived lessening of personal threat, can encourage a “bounce-back” toward earlier value orientation and value levels. Some scholars argue that long-term value change is related to long-term trauma (Janoff-Bulman, 1989). In a review of intergenerational value transmission, Boehnke (2001) found that security values are likely to be influenced by the current social state, that is, the “zeitgeist effect.” Thus, even when a collective trauma shifts values, individuals’ values may return to the pretrauma societal status quo. Hence, depending on how long the COVID-19 pandemic impacts society in significant ways, we may find the “bounce-back” effect—or a sustained value change. Given that value shifts can take decades (De Vos, 1997; Hofstede, 2001), future work should retest the values of a similar sample in 1 year, 5 years, and 10 years.

Finally, we recognize that while the COVID-19 pandemic reflects a collective trauma, there were a number of other traumatic events that might have also contributed to the difference in business students’ value orientations between the two times. For example, between data collection pre-COVID-19 and post-COVID-19 outbreak, there was also one of the most divisive political climates in the US history (Abramowitz & McCoy, 2019), as well as massive mobilization around racial and social injustice following the murder of George Floyd (Buchanan et al., 2020). Both of these circumstances alone could serve as collective traumas that either instigated or amplified the values change identified in our study.

8 | CONCLUSION

The current research provides additional evidence that life-altering situations and collective trauma can and do change people’s values. When something major happens, people adapt their values based on what is possible in their new environment and what provides the best survival mechanism given the altered circumstances. Furthermore, collective traumas may incite immediate values change. Just as traumatic life events can shift people’s values rather quickly, collective traumas can quickly reorient values for groups of people. We found evidence for this in our current paper. Our participants showed increased levels of concern for competence values, along with a significant increase in the importance of social considerations. Hence, we conclude that the current COVID-19 pandemic may offer a rare collective value shift—and possibly collective growth. In line with previous research, we suggest that the positive benefits experienced after a traumatic life event may reflect wisdom and represent a positive value shift toward higher social concern.

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ORCID
Sophia Town https://orcid.org/0000-0001-6451-0710
James Weber https://orcid.org/0000-0003-1688-3015

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**APPENDIX A**

Weights assigned to each value in the Rokeach Value Survey, based on Weber (1990).

**Terminal values (end states of existence)**

**Personal value orientation:**

- A Comfortable Life (a prosperous life) = 5 = personal
- An Exciting Life (a stimulating, active life) = 4 = personal
- A Sense of Accomplishment (lasting contribution) = 4 = personal
- Family Security (taking care of loved ones) = 1 = personal
- Freedom (independence, free choice) = 1 = personal
- Happiness (contentedness) = 4 = personal
- Inner Harmony (freedom from inner conflicts) = 5 = personal
- Mature Love (sexual and spiritual intimacy) = 4 = personal
- Pleasure (an enjoyable, leisurely life) = 5 = personal
- Salvation (saved, eternal life) = 3 = personal
- Self-respect (self-esteem) = 5 = personal
- Social Recognition (respect, admiration) = 3 = personal
- True Friendship (close companionship) = 5 = personal
- Wisdom (a mature understanding of life) = 4 = personal

**Social value orientation:**

- A World at Peace (free of war and conflict) = 5 = social
- A World of Beauty (beauty of nature and the arts) = 3 = social
- Equality (equal opportunity for all) = 5 = social
- National Security (protection from attack) = 5 = social
Instrumental values (modes of conduct)

Competence value orientation:

- Ambitious (hard-working, aspiring) = 5 = competence
- Broadminded (open-minded) = 2 = competence
- Capable (competent, effective) = 5 = competence
- Imaginative (daring, creative) = 5 = competence
- Independence (self-reliant, self-sufficient) = 5 = competence
- Intellectual (intelligent, reflective) = 5 = competence
- Logical (consistent, rational) = 5 = competence
- Responsible (dependable, reliable) = 4 = competence

Moral value orientation:

- Cheerful (light-hearted, joyful) = 4 = moral
- Clean (neat, tidy) = 3 = moral
- Courageous (standing up for your beliefs) = 2 = moral
- Forgiving (willing to pardon others) = 5 = moral
- Helpful (working for the welfare of others) = 5 = moral
- Honest (sincere, truthful) = 2 = moral
- Loving (affectionate, tender) = 5 = moral
- Obedient (dutiful, respectful) = 1 = moral
- Polite (courteous, well-mannered) = 3 = moral

Neither value orientation: Self-controlled (restrained, self-disciplined).