

## EMPIRICAL ARTICLE

# I was, I Am, I will Be: Identity and time perspective before and during COVID-19

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**Abstract**

The ways in which youth reach a stable identity, a core developmental task of emerging adulthood, are intertwined with their perceptions of the past, present, and future. Additionally, these dynamics are embedded in and are strongly influenced by the socio-historical context and concurrent events, such as COVID-19. This study examines how different groups of emerging adults (university students and workers) engage in identity processes in educational/vocational and interpersonal domains and frame their perspective of time before ( $N = 299$ ,  $M_{\text{age}} = 21.90$ ; 51.4% females) and during the pandemic ( $N = 497$ ;  $M_{\text{age}} = 23.11$ ; 68.2% females). Significant differences in identity processes and time perspective emerged between the two cohorts. Moreover, significant associations between identity and time perspective were found to be similar across different identity domains and cohorts.

**KEYWORDS**

COVID-19 pandemic, identity, time perspective

**INTRODUCTION**

Identity development is a fundamental task of emerging adulthood (Arnett, 2000). Young people can explore different possibilities in their main life domains, such as those related to their choices in the educational/vocational realm and in the interpersonal one (McLean et al., 2016). By doing so, they can either consolidate their adolescent identity or question it in order to find meaningful adult commitments (Branje & Morris, 2021; Meeus, 2018). Notably, the achievement of a stable identity is theorized to be intertwined with youth orientations about time (Erikson, 1968). Specifically, the ways in which emerging adults think about their past, perceive their present, and plan for their future in a coherent and organized manner may go hand in hand with how effectively they engage in identity-related processes.

Above all, emerging adults' navigation through this developmental period, coping with the main task of developing their identity, and structuring their time perspective, is affected by socio-contextual factors (Arnett et al., 2011). In this vein, accounting for specific events such as the COVID-19

pandemic with its tremendous worldwide impact (Branje & Morris, 2021; Breakwell & Jaspal, 2021), can contribute to the theoretical understanding of identity-in-context (Branje, 2022; Crocetti et al., 2022). In line with this, this study aims to examine how emerging adults (i.e., both university students and workers) engage in identity processes and frame their time perspective before and during the COVID-19 pandemic.

**Identity formation in emerging adulthood**

In emerging adulthood, young people have the possibility to explore a wide array of alternatives in multiple life domains, such as education, work, and interpersonal relationships, before enacting adult commitments (Arnett, 2000; Schwartz et al., 2013). In facing this task, on the one hand, they can build upon prior identity pathways enacted in the adolescent years, like consolidating their educational and vocational choices in the school-to-university or school-to-work transitions (Branje et al., 2014; Christiaens et al., 2021). On the

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other hand, they can question their prior choices such as engaging in new and more meaningful interpersonal relationships or trying to enlarge their job prospects (Arnett, 2004).

Conceptually, this dynamic interplay through which individuals can iteratively form and change their identity across different developmental periods can be captured by dual cycle identity models (for reviews, see Branje et al., 2021; Meeus, 2011). In the three-factor identity model (Crocetti et al., 2008), the first cycle (i.e., identity formation cycle) is based on the interplay between the identity processes of *commitment* (i.e., firm choices that individuals have made concerning various identity domains and the self-confidence they derive from these choices) and *reconsideration of commitment* (i.e., the possibility of discarding or revising one's existing commitments when they are perceived as no longer satisfactory). Thus, this cycle is focused on individuals' attempts to weigh their commitments in light of alternatives that are potentially more appealing. Instead, the second cycle (i.e., the identity consolidation cycle) is based on the interplay between commitment and *in-depth exploration* (i.e., the extent to which individuals think actively about their existing commitments and search for additional information about them). In this cycle, the thorough consideration of current commitments enables individuals to validate their choices, by verifying whether these choices are a good fit with their goals and potentials. In contrast, when this process becomes a source of uncertainty, individuals can go back to the identity formation cycle (Crocetti, 2018).

Extensive research has documented that each identity process matters for individuals' adaptation (Crocetti, 2018). Commitment has been associated with higher satisfaction with life and overall indices of adjustment (Karaš et al., 2015; Rokvic et al., 2021; Sugimura et al., 2015), while reconsideration of commitment has been found to undermine individuals' well-being (Hatano et al., 2016; Kaniušonytė et al., 2019), at least until new meaningful commitments are found. Conversely, in-depth exploration has been conceptualized as a sort of double-edged sword, linked to both positive (e.g., openness to experience and well-being; Crocetti et al., 2008; Karaš et al., 2015) and negative outcomes (e.g., symptoms of distress and anxiety; Crocetti et al., 2015) that arise when individuals might start to doubt their current commitments. However, less is known about the specific ways in which identity processes in different domains are related to youth's time perspective, particularly how they conceive their past, present, and future.

### Perspectives on past, present, and future in emerging adulthood

Time perspective is defined by Lewin (1951) as "the totality of the individual's views of his psychological future and psychological past existing at a given time" (p.75). Building upon this conceptualization, Zimbardo and Boyd (1999) proposed a model of time perspective encompassing five dimensions: two referred to individuals' perceptions of their

past, two related to views of the present, and one to future orientation. Specifically, *past negative* represents a generally negative and aversive view of the past, whereas *past positive* refers to a warm, sentimental attitude toward the past. *Present hedonistic* depicts a hedonistic, risk-taking attitude toward life, while *present fatalistic* represents a helpless and hopeless outlook toward life. Finally, *future* reflects behavioral attitudes dominated by striving for future goals and rewards.

Individual perspectives on past, present, and future constitute a cognitive-motivational framework that influences and orients youth's social and interpersonal experiences in everyday life as well as their adjustment (Sircova et al., 2014). For instance, negative views of the past and a fatalistic orientation to the present have been linked to mental health (e.g., higher anxiety and depression; van Beek et al., 2011; Zimbardo & Boyd, 1999) and relationship problems (Holman & Zimbardo, 2009; Laghi et al., 2008). Conversely, positive views of the past and future have been associated with higher self-esteem (Zimbardo & Boyd, 1999), academic achievement (Adelabu, 2008), and healthy lifestyle (Daugherty & Brase, 2010). Finally, a present hedonistic perspective has been paradoxically related to both risky behavior (e.g., sensation seeking, substance use; Fieulaine & Martinez, 2011; Zimbardo & Boyd, 1999), and greater psychological functioning (e.g., exploration and satisfaction with life; Boniwell et al., 2010; Kashdan et al., 2004). Overall, prior findings have highlighted that individual's perceptions of the past, present, and future are intertwined with how they interact with others and function in their everyday life experiences. In light of this and building upon Erikson's (1968) theory, some studies have also examined how time perspective is linked to identity processes.

### Identity and time: Theoretical background and empirical evidence

The theoretical interplay between identity and time perspective has been laid out in Erikson's theory (1968). According to this theory, the psychological representation of time is inevitably intertwined with individuals' identity from the beginning of one's life. Young children develop a basic sense of trust through interactions with the caregiver. The core of this trust is a feeling of continuity and sameness of the self, the other, and the world, all of which constitute preparation for forming a coherent sense of identity in adolescence and emerging adulthood. Time perspective provides individuals the grounds for identity formation and identity embraces a coherent sense of self whereby one's past, present, and future are optimally connected.

So far, empirical research on the associations between identity and time perspective is relatively scarce, although the few available studies have provided some support for Erikson's theory. For instance, youth who made a commitment after a period of active exploration (i.e., those in the achievement status) displayed a positive view of the past

and higher levels of future orientation, whereas those who were missing a commitment and were not actively searching for one (i.e., those in the diffusion status) reported a more negative past and fatalistic view of the present and lower orientation to the future (Laghi et al., 2013). These findings, related to overall identity, were largely confirmed in a longitudinal study (Luyckx et al., 2010) with college students highlighting reciprocal associations between identity styles and time perspective (with a specific focus on the present and future orientations). Specifically, in this study, it was found that an information-oriented identity style, characterized by the active search and processing of identity-relevant information, was related to a stronger future orientation. Alternatively, a diffuse-avoidant identity style, typified by tendency to procrastinate the identity formation task, was related to a fatalistic view of the present. In addition, identity commitment was positively related over time to a reduced hedonistic view of the present and to a stronger future orientation.

Overall, these studies (Laghi et al., 2013; Luyckx et al., 2010) provide convergent evidence on the links between global identity and time perspective. However, research tackling specific identity domains (e.g., vocational, interpersonal) has pointed to a more nuanced pattern of associations. For instance, in a study on vocational identity, Taber and Blankemeyer (2015) found that identity achievement was not related to future orientation, but was related to more hedonistic and less fatalistic views of the present. Overall, this evidence suggests the importance of addressing identity domain-specific effects (Laughland-Booÿ et al., 2017; Vosylis et al., 2018). Hence, in this study, we examined the interplay of identity and time perspective in both students and workers within the two main identity domains they manage in this life phase—the educational/vocational and interpersonal ones—accounting also for the role of macro-contextual factors.

### Macro-contextual influences: The role of the COVID-19 pandemic

Seminal developmental theories (ecological systems theory, Bronfenbrenner & Morris, 2007; life span theory, Baltes et al., 1980; developmental contextualism, Lerner, 1992) share the main assumption that individuals' development is embedded in multiple social contexts and is affected by varying socio-historical conditions. In this regard, it is of utmost importance to understand how the unprecedented circumstances created by the COVID-19 pandemic can affect emerging adults' experiences (Mancini & Imperato, 2022). During the first wave of the pandemic, Italy was one of the earliest European countries to be hit by the virus and reported the highest number of cases by mid-February 2020 (ECDC, 2020). Consequently, the government adopted several restrictive measures (e.g., lockdown, limitations to social activities and interactions) to prevent the spread of the virus (Alessandri et al., 2021). As of the

early months of 2021, some of these measures (e.g., mandatory mask, smart working) were still in place in highly infectious municipalities.

These preventive measures have threatened the very fabric of work, school, and social life, which all play a powerful role in the development of identity (Breakwell & Jaspal, 2021). Additionally, COVID-19 disruptions in curricular and work life have been previously linked to difficulties in adjustment (Clabaugh et al., 2021) and might influence the interplay of personal and interpersonal identity processes (Dovidio et al., 2020). Thus, in this study, we sought to compare two cohorts of emerging adults, navigating through this life period before (in 2017) and during (in early 2021) the pandemic in order to understand how the changing historical context might modulate identity processes and their interplay with time perspective.

## THE PRESENT STUDY

While extensive research has highlighted the interplay between identity processes and adjustment in emerging adulthood, less attention has been paid to the role of identity in influencing youth's perspective on time. Identity processes in developmentally relevant domains, such as the educational/vocational and the interpersonal domains, might differently shape how youth think of themselves in the past, present, and future. The interplay of these psychological processes might also be influenced by historical changes, such as the COVID-19 pandemic.

In light of the literature reviewed above, the current study primarily adopted an exploratory approach with two purposes. The first aim was to investigate differences (if any) in identity processes and time perspective between emerging adults from two different cohorts (before and during the COVID-19 pandemic). The second aim was to examine the interplay of identity processes and time perspective in emerging adults in these two cohorts. Building upon prior research, in addressing both aims we took a domain-specific approach to identity by considering educational/vocational and interpersonal identity processes in two main groups of emerging adults: university students and workers.

## METHOD

### Participants

The sample included participants from two different cohorts. The first cohort (emerging adults from 2017) included 299 Italian emerging adults between the ages of 19 and 29, divided evenly between those who studied (50.5%) and those who worked (49.5%). The second cohort (emerging adults from 2021) included 497 Italian emerging adults between the ages of 19 and 29, of which the majority were students (65.6%), and the remaining were workers (34.4%) at the time of study enrollment (Table 1). The

**TABLE 1** Demographic characteristics by cohort and study group.

	Cohort differences		Study group differences			
	2017 cohort (N = 299)	2021 cohort (N = 497)	Students 2017 (N = 151)	Workers 2017 (N = 148)	Students 2021 (N = 326)	Workers 2021 (N = 171)
Gender (% males)	<b>48.60 (+)</b>	<b>31.80 (-)</b>	46.70	<b>50.70 (+)</b>	<b>26.10 (-)</b>	42.70
Mean age (SD)	21.90 <sub>a</sub> (2.36)	23.11 <sub>b</sub> (2.99)	21.09 <sub>a</sub> (1.73)	22.73 <sub>c</sub> (2.62)	21.71 <sub>b</sub> (2.24)	25.78 <sub>d</sub> (2.36)
Status (% students)	50.50	65.60				

Note. Observed values indicated in bold were significantly different across cohorts or study groups. (+) indicates that the observed value is higher than the expected value; (-) indicates that the observed value is lower than the expected value. Subscript letters indicate significant differences in age across the two cohorts or the four study groups.

two cohorts significantly differed in terms of both the gender ( $\chi^2(1) = 22.25, p < .001, \phi = 0.17$ ) and status (i.e., student vs. worker) distributions ( $\chi^2(1) = 17.71, p < .001, \phi = -.15$ ), with slightly more males and fewer students in the 2017 cohort. Additionally, participants in the 2017 cohort were moderately younger than those in the 2021 cohort ( $F = 35.10, p < .001, \eta^2 = .04$ ). Gender ( $\chi^2(3) = 35.89, p < .001, \phi = .21$ ) and age ( $F = 152.34, p < .001, \eta^2 = .37$ ) differences were also found across the four study groups (i.e., students in 2017, workers in 2017, students in 2021, workers in 2021). Specifically, males were underrepresented in the student cohort of 2021. Regarding age, students were generally younger than workers. Furthermore, participants in the 2017 cohort were younger than those in the 2021 cohort. Across the two cohorts, most participants lived in the North (82.4%), some in the South (10.7%), and a few in the Central parts of Italy (6.2%). The remaining lived abroad (0.7%). All participants had Italian nationality.

The questionnaire completion rate was exceedingly high in both the 2017 (91.6%) and 2021 (87.3%) cohorts. The Little's Missing Completely at Random (MCAR) test yielded a normed  $\chi^2$  ( $\chi^2/df$ ) of 0.719, indicating that data were likely missing completely at random (Bollen, 1989). Missing data were, therefore, handled differently for the two sets of analyses. The analysis of variance performed with IBM SPSS Version 23.0 for Windows implied the use of list-wise deletion of participants with missing data resulting in samples that are slightly smaller ( $710 < N < 759$ ) than the total one ( $N = 796$ ). Conversely, the total sample was included in the analyses performed in *Mplus* (Muthén & Muthén, 1998–2017), and missing data were handled with the Full Information Maximum Likelihood (FIML) procedure (Kelloway, 2015).

## Procedure

The current study was approved by the Ethics Committee of the Alma Mater Studiorum University of Bologna (Italy) (protocol n. 134741 of 3/11/2017 and protocol n. 27283 of 05/02/2021). Participants in both cohorts were recruited following two main strategies. First, research assistants contacted potential participants in different contexts (e.g., university courses, workplace settings) and by advertising

the research online. Second, a snowball technique was utilized so that each recruited participant was asked to involve one or more peers by sharing information about the research. For both cohorts, before initiating the data collection, all participants provided their active consent. Participation was voluntary, and no compensation was provided. Participants filled in a questionnaire either via paper-and-pencil (in 2017) or online (in 2021).

## Measures

In both cohorts, participants completed a questionnaire, including socio-demographic questions (e.g., age, gender) and measures of identity and time perspective.

### Identity processes in the educational/vocational domain

Commitment, in-depth exploration, and reconsideration of commitment in the educational/vocational domain were measured with the Utrecht-Management of Identity Commitments Scale (U-MICS, Crocetti et al., 2008; Italian validation by Crocetti et al., 2010). Participants received different versions of the items depending on their status (i.e., students or workers). The instrument consists of 13 items scored on a 5-point Likert-style rating scale, ranging from 1 (*completely false*) to 5 (*completely true*). Sample items include: "My education/job gives me certainty in life" (commitment; 5 items), "I think a lot about my education/job" (in-depth exploration; 5 items), and "I often think it would be better to try to find a different education/job" (reconsideration of commitment; 3 items). Cronbach's alphas were .85, .62, and .83 for commitment, in-depth exploration, and reconsideration of commitment, respectively.

### Identity processes in the interpersonal domain

Commitment, in-depth exploration, and reconsideration of commitment in the interpersonal domain were measured also with the Utrecht-Management of Identity Commitments Scale (U-MICS, Crocetti et al., 2008; Italian



validation by Crocetti et al., 2010). In this case, participants were asked to think about the most important person in their lives when answering questions about identity processes in the interpersonal domain. Sample items include: “The relationship with this person gives me certainty in life” (commitment; 5 items), “I think a lot about my relationship with this person” (in-depth exploration; 5 items), and “I often think it would be better to try to find a different person as a reference point” (reconsideration of commitment; 3 items). The response scale was the same as described above. Cronbach's alphas were .87, .70, and .88 for commitment, in-depth exploration, and reconsideration of commitment, respectively.

## Time perspective

Past negative, past positive, present fatalistic, present hedonistic, and future were assessed using Zimbardo's Time Perspective Inventory (Zimbardo & Boyd, 1999; for the Italian validation, see Sircova et al., 2014). This instrument consists of 56 items scored on a 5-point Likert-type rating scale from 1 (*completely false*) to 5 (*completely true*). Sample items include: “I often think of what I should have done differently in my life” (past negative; 11 items), “It gives me pleasure to think about my past” (past positive; 8 items), “Fate determines much in my life” (present fatalistic; 9 items), “I feel that it's more important to enjoy what you're doing than to get work done on time” (present hedonistic; 15 items), and “When I want to achieve something, I set goals and consider specific means for reaching those goals” (future; 13 items). Cronbach's alphas were .84, .70, .73, .77, and .77 for past negative, past positive, present fatalistic, present hedonistic, and future, respectively.

## Strategy of analyses

Descriptive statistics and analyses pertaining to the current study's first aim were conducted in IBM SPSS Version 23.0 for Windows. Conversely, descriptive statistics and analyses regarding the second aim of this study analyses were conducted in *Mplus* 8.6 (Muthén & Muthén, 1998–2017), using Maximum Likelihood Robust (MLR) estimator (Satorra & Bentler, 2010). As a preliminary step, we tested whether the main measures (i.e., identity processes in educational, vocational, and interpersonal domains, and time perspective) showed invariance across the four study groups. To this end, we performed consequential multigroup confirmatory factor analyses (CFA; van de Schoot et al., 2012) for each study variable. To compare means across groups, full or partial scalar invariance is needed, whereas to conduct regression analyses, full or partial metric invariance is sufficient (Donahue, 2006). The detailed procedure for testing multigroup invariance is reported in the Appendix S1.

To address the first aim of the current study (i.e., investigating differences in identity processes and time perspective across participants), four sets of multivariate analyses of variance (MANOVAs) were conducted. First, cohort differences in educational (i.e., students in 2017 and students in 2021) and vocational (i.e., workers in 2017 and workers in 2021) identity processes were examined separately, since they tap into different areas (i.e., study and work) depending on the status of participants. Next, differences across the four groups of participants (i.e., students in 2017, workers in 2017, students in 2021, and workers in 2021) were tested for levels of interpersonal identity processes and time perspective.

Regarding the second aim (i.e., examining the interplay between identity processes and time perspective), two path models (separately for educational/vocational and interpersonal identity domains) with observed variables were tested on the entire sample. In each model, we included age and gender as control variables given the four groups significantly differed in them. Next, multigroup analyses were conducted and the Wald test was used to identify possible significant differences in paths and effects across the four groups. The Wald-based statistic tests the hypothesis that two regression paths or the same regression path across two groups are significantly different compared to the null hypothesis of path equivalence (Bollen, 1989).

## RESULTS

### Preliminary analyses

Descriptive statistics (means and standard deviations) for all study variables are reported in Table 2. Bivariate correlations are available in Table S1 of the Supplemental Materials. Results of the measurement invariance are reported in Table S2 of the Supplemental Materials. Full scalar invariance could be established for interpersonal identity processes and time perspective across the four study groups (i.e., students in 2017, workers in 2017, students in 2021, and workers in 2021 cohorts). Regarding educational/vocational identity processes, only partial metric invariance could be established across the four study groups. However, full scalar and partial scalar invariances across cohorts were established for educational (i.e., students in 2017 and students in 2021) and vocational (i.e., workers in 2017 and workers in 2021) identity processes, respectively. Therefore, we could proceed with the analyses.

### Between-group differences

The first aim of this study was to examine whether emerging adults from the four study groups differed in educational/vocational and interpersonal identity processes and time perspective. Results are displayed in Table 2.

**TABLE 2** Multivariate ANOVAs of identity processes in the educational/vocational and interpersonal domains and time perspective.

	Total sample	Cohorts				F-value ( $\eta^2$ )
		Student 2017	Workers 2017	Students 2021	Workers 2021	
Personal domain						
Educational domain ( $N_{\text{students}} = 454$ )						
Commitment	3.48 (0.65)	3.42 (0.66)		3.51 (0.65)		1.78 (0.00)
In-depth exploration	3.76 (0.52)	3.77 (0.49)		3.76 (0.54)		0.06 (0.00)
Reconsideration	2.63 (0.92)	2.43 (0.78)		2.55 (0.84)		2.00 (0.00)
Vocational domain ( $N_{\text{workers}} = 305$ )						
Commitment	3.41 (0.80)		3.24 (0.83)		3.56 (0.73)	13.32*** (0.04)
In-depth exploration	3.72 (0.67)		3.61 (0.74)		3.81 (0.53)	7.08** (0.02)
Reconsideration	2.87 (1.07)		3.02 (1.10)		2.73 (1.03)	5.48* (0.02)
Interpersonal domain ( $N = 751$ )						
Commitment	4.11 (0.65)	4.00 (0.64) <sub>a</sub>	4.07 (0.60) <sub>a,b</sub>	4.14 (0.68) <sub>a,b</sub>	4.21 (0.61) <sub>b</sub>	3.08* (0.01)
In-depth exploration	3.56 (0.66)	3.49 (0.67)	3.55 (0.66)	3.61 (0.65)	3.54 (0.69)	1.22 (<0.01)
Reconsideration	1.93 (0.88)	1.89 (0.86)	1.83 (0.79)	2.02 (0.94)	1.90 (0.87)	1.70 (<0.01)
Time perspective ( $N = 710$ )						
Past negative	3.08 (0.61)	3.11 (0.62)	3.11 (0.62)	3.08 (0.62)	3.01 (0.57)	0.932 (<0.01)
Past positive	3.53 (0.53)	3.50 (0.59)	3.50 (0.47)	3.55 (0.54)	3.54 (0.50)	0.493 (<0.01)
Present fatalistic	2.60 (0.52)	2.62 (0.53) <sub>b</sub>	2.82 (0.51) <sub>c</sub>	2.54 (0.52) <sub>a,b</sub>	2.47 (0.47) <sub>a</sub>	13.60*** (0.06)
Present hedonistic	3.43 (0.43)	3.47 (0.39) <sub>a,b</sub>	3.51 (0.44) <sub>b</sub>	3.40 (0.44) <sub>a,b</sub>	3.36 (0.43) <sub>a</sub>	3.93** (0.02)
Future	3.43 (0.47)	3.34 (0.47) <sub>a</sub>	3.34 (0.45) <sub>a</sub>	3.49 (0.50) <sub>b</sub>	3.49 (0.43) <sub>b</sub>	5.89** (0.02)

Note: Standard deviations are in parentheses. Subscript letters indicate the results of Tukey's post-hoc analysis, with different letters on each row indicative of significantly different values across groups.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

## Educational and vocational identity processes

Differences in educational and vocational identity processes were examined separately for students and workers across the two cohorts, respectively. Regarding educational identity processes, students in the 2017 cohort did not significantly differ from students in the 2021 cohort in their levels of commitment, in-depth exploration, and reconsideration of commitment. Conversely, workers in the two cohorts displayed significant differences in all identity processes in the vocational domain. Specifically, workers in the 2017 cohort reported significantly lower levels of commitment ( $d = -0.42$  [95% CI] =  $-0.65, -0.20$ ) and in-depth exploration ( $d = -0.30$  [ $-0.53, -0.08$ ]), and significantly higher levels of reconsideration of commitment ( $d = 0.27$  [ $0.05, 0.50$ ]) compared to workers in 2021.

## Interpersonal identity processes

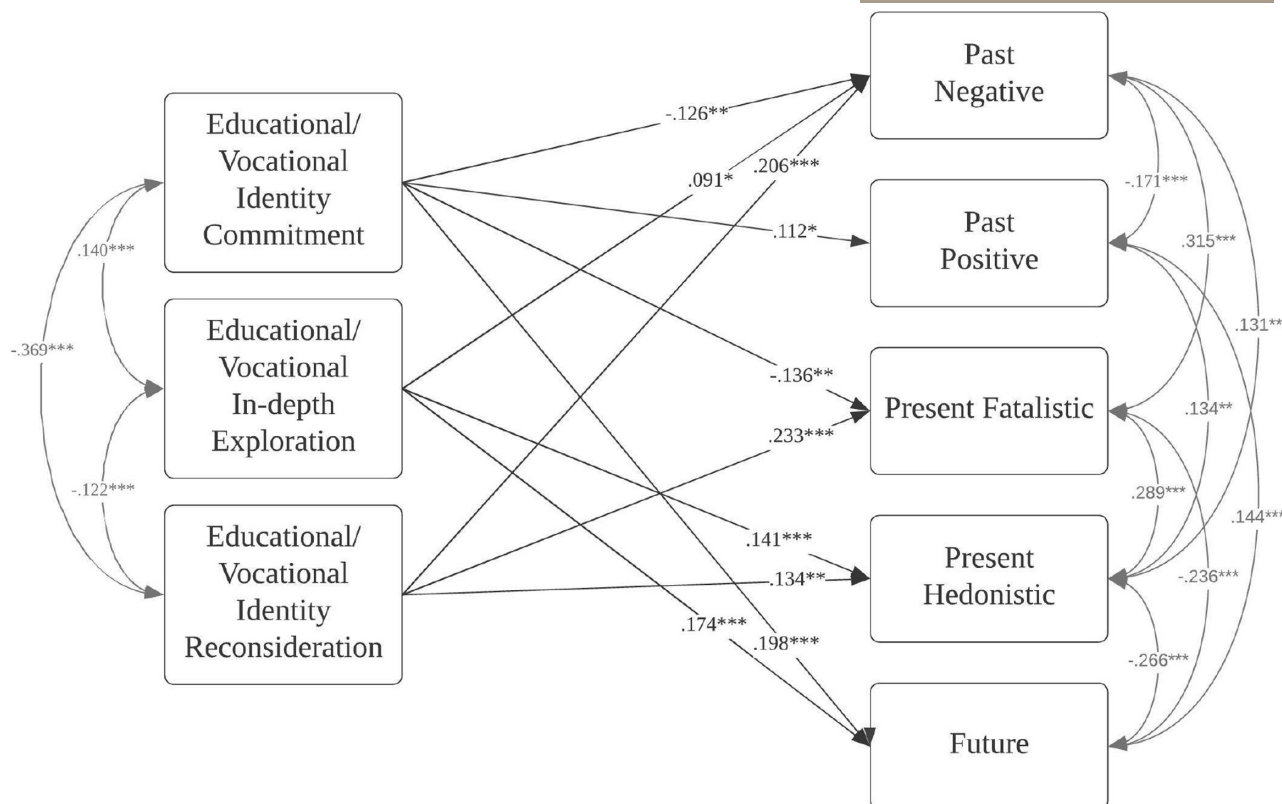
Regarding identity processes in the interpersonal domain, only one significant difference emerged. Specifically, workers in the 2021 cohort displayed significantly higher levels of commitment ( $d = 0.34$  [ $0.11, 0.57$ ]) compared to students in the 2017 cohort. No differences emerged for in-depth exploration and reconsideration of commitment processes.

## Time perspective

Significant differences across groups emerged in the dimensions of time perspective related to present and future. Regarding present fatalistic, workers in the 2017 cohort reported significantly higher levels compared to the other participants ( $0.38$  [ $0.15, 0.62$ ]  $< d < 0.71$  [ $0.48, 0.95$ ]), whereas students in the 2017 cohort scored higher ( $d = 0.30$  [ $0.07, 0.53$ ]) than workers from the 2021 cohort. Additionally, workers in the 2017 cohort reported significantly higher present hedonistic orientation ( $d = 0.34$  [ $0.11, 0.58$ ]) compared to workers in the 2021 cohort. Regarding future orientation, significant differences were observed between the 2017 and 2021 cohorts, with the former scoring lower on the orientation toward the future ( $d = -0.26$  [ $-0.41, -0.11$ ]) compared to the latter.

## Identity processes and time perspective

The second aim of the present study was to test whether the extent to which participants commit to, explore in-depth, and reconsider their identity commitment in relevant domains might be associated with their conceptions of time and whether these associations might differ between groups. Results of the model on the entire sample of participants with educational/vocational and interpersonal



**FIGURE 1** Structural Equation Model: Educational/vocational identity processes and time perspective ( $N = 796$ ). *Note.* Only significant regression paths and correlations are displayed. Gender and age are controlled for in the model. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

identity are displayed in Figures 1 and 2, respectively. In both models, gender and age were included as covariates. Results (Table 3) indicated that females reported higher levels of past negative, past positive, present fatalistic, and future orientation. In addition, younger participants displayed higher negative perception of the past (however, this link reached statistical significance only in the educational/vocational identity model) and more hedonistic views of the present.<sup>1</sup>

### Educational/vocational identity processes and time perspective

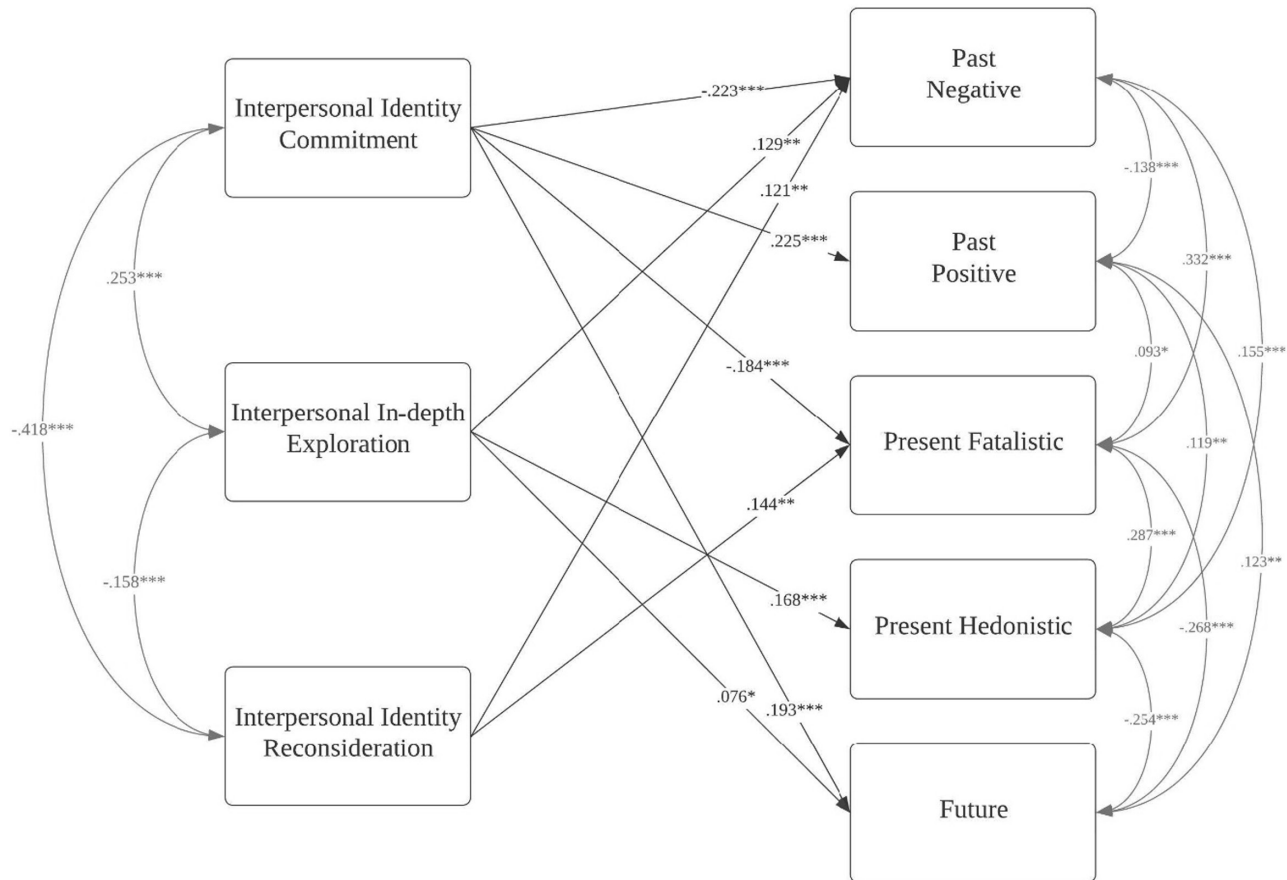
In the educational/vocational identity domain, higher levels of identity commitment were negatively associated with past negative and present fatalistic and positively associated with past positive and future orientation. Regarding in-depth exploration, associations were more ambivalent in that exploration was linked positively both to past negative and to future. Reconsideration of commitment was associated with higher levels of past negative, present fatalistic, and present hedonistic.

<sup>1</sup>As ancillary analyses, we additionally tested the two models on the entire sample without including gender and age as covariates. Similarly, we conducted multigroup analyses on these unadjusted models. Results are reported in Document S3 of the Supplemental Materials. Overall, they largely replicate the results from the adjusted models reported in the Results section.

Multigroup analyses revealed that workers in the 2021 cohort significantly differed from students in the 2017 (Wald = 3.933,  $p = .047$ ), workers in the 2017 (Wald = 8.523,  $p = .004$ ), and students in the 2021 cohort (Wald = 19.703,  $p < .001$ ) on the association between identity commitment and present fatalistic. Additionally, students in the 2017 cohort significantly differed from students in the 2021 cohort on the same association (Wald = 3.988,  $p = .046$ ). Specifically, for workers in the 2021 cohort, vocational identity commitment was positively associated with present fatalistic ( $\beta = 0.248$ ,  $p = .012$ ), whereas higher levels of identity commitment were significantly associated with lower present fatalistic among students in the 2021 cohort ( $\beta = -0.264$ ,  $p < .001$ ). Conversely, identity commitment was not significantly linked to fatalistic views of the present among workers in the 2017 cohort ( $\beta = -0.168$ ,  $p = .103$ ) and among students in the 2017 cohort ( $\beta = -0.040$ ,  $p = .661$ ).

### Interpersonal identity processes and time perspective

In the interpersonal identity domain, results for commitment largely replicate what was found for the educational/vocational domain. Specifically, higher levels of commitment were associated with lower levels of past negative and present fatalistic, and with higher levels of past positive and future orientation. Both in-depth exploration and reconsideration



**FIGURE 2** Structural Equation Model: Interpersonal identity processes and time perspective ( $N = 796$ ). *Note.* Only significant regression paths and correlations are displayed. Gender and age are controlled for in the model. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**TABLE 3** Standardized coefficients of the regression between covariates and time perspective.

	Educational/vocational identity model		Interpersonal identity model	
	Gender	Age	Gender	Age
	$\beta$	$\beta$	$\beta$	$\beta$
Past negative	0.093**	-0.087*	0.085*	-0.062
Past positive	0.098*	-0.009	0.080*	-0.013
Present fatalistic	0.122**	-0.032	0.109**	-0.011
Present hedonistic	0.069	-0.152***	0.037	-0.134***
Future	0.092*	0.048	0.087*	0.047

*Note:*  $N = 796$ . Gender was coded as 0 for males and 1 for females.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

of identity commitment were associated with higher levels of past negative. Additionally, while in-depth exploration was linked to higher present hedonistic and future orientation, reconsideration of commitment was associated with higher present fatalistic.

Multigroup analyses indicated a significant difference between workers in the 2021 cohort on the one side, and workers in 2017 (Wald = 6.391,  $p = .012$ ) and students in 2021

(Wald = 7.048,  $p = .008$ ) cohorts on the other in the association between interpersonal identity commitment and present fatalistic. Specifically, identity commitment in the interpersonal domain was not significantly associated with present fatalistic among workers in the 2021 cohort ( $\beta = 0.031$ ,  $p = .717$ ), while higher levels of commitment were linked to lower present fatalistic among workers in 2017 ( $\beta = -0.269$ ,  $p < .001$ ) and students in 2021 ( $\beta = -0.241$ ,  $p < .001$ ) cohorts. Students in the 2017 cohort did not significantly differ from participants in the other groups, with interpersonal identity commitment being negatively but not significantly associated with present fatalistic scores ( $\beta = -0.061$ ,  $p = .516$ ).

## DISCUSSION

The process of achieving a stable identity is intertwined with youth's perspectives about time. Nevertheless, prior research has not examined whether these links differ regarding the identity domain considered and how macro-contextual factors might modulate these associations. Adopting a domain-specific approach, the current study aimed to fill this gap by considering two cohorts of emerging adults (i.e., before and during COVID-19). First, it explored differences in identity processes in educational/vocational and interpersonal domains and time perspective



among participants. Second, it tested whether the associations between identity processes in relevant domains and time perspective would significantly differ across the two cohorts of emerging adults. Findings from this study provide novel insight into the interplay between identity and time perspective and highlight the role of macro-context in shaping emerging adults' views and approaches to the key developmental tasks of this life phase.

## Perceptions of self and time during the pandemic

The first purpose of this study was to examine differences in identity processes and time perspective in two cohorts of emerging adults navigating through this period of life before or during the pandemic while accounting for differences in their occupational status (comparing university students and workers). Several results regarding differences in identity processes are noteworthy. First, we found that the differences in identity processes concerned mainly the vocational domain, while only a (small) difference in interpersonal identity commitment was found among the four groups of participants. Specifically, workers in 2021 displayed a significantly more stable vocational identity (characterized by higher commitment and in-depth exploration and lower reconsideration) than their counterparts in 2017. Interestingly, a similar pattern did not emerge among students in the two cohorts. This might be a consequence of how the pandemic affected the lives of workers and students differently. While university courses almost immediately switched to an online format, the pandemic has raised concerns about the short- and long-term occupational conditions of many workers. Therefore, increasing the commitment to one's vocational identity might have been an adaptive strategy to deal with pandemic-induced uncertainty. Specifically, the uncertainty-identity theory (Hogg, 2007) posits that individuals are motivated to strengthen their identification with relevant social groups and increase their commitments in personally relevant domains to reduce and take control over feelings of uncertainty. Similar perceptions of uncertainty might have been particularly salient during the COVID-19 pandemic and especially among workers, possibly influencing the extent to which youth engage in identity-related processes. In a similar vein, workers in 2021 also reported higher levels of commitment in the interpersonal domain than students in 2017. Since interpersonal identity is a relevant domain for emerging adults (McLean et al., 2016), strengthening this commitment might have supported youth, especially workers, in adjusting to the conditions imposed by COVID-19. To this end, it has been suggested that during threatening times, such as those of the pandemic, personal and social identities become increasingly salient and guide the ways in which individuals approach their social world and adjust to it (Jetten et al., 2020). The novel evidence collected in this study seems in line with these remarks and underscores that identity may be a core asset for facing critical times, such as the pandemic.

Moving into time perspective, significant cohort differences emerged only in the views of the present and of the future. Specifically, students and workers from the 2021 cohort tended to report a less fatalistic view of their present, especially compared to workers in 2017. Likely, young people's investment in their identity provided them with a sense of agency (Serafini & Adams, 2002) that allowed them to feel in control of their present and perceive it in a less fatalistic way even amidst a pandemic. In addition, workers in 2021 reported a less hedonistic view of their present compared to workers in 2017. This result might be interpreted in light of the social restrictions experienced during the pandemic and the concerns for personal safety, which could lead young people to value a hedonistic approach to a lesser extent compared to the pre-pandemic life (Bojanowska et al., 2021). Finally, emerging adults in 2021 (both students and workers) reported a higher future orientation than their peers in 2017. This finding is in line with prior research showing high future orientation among adults dealing with the uncertainty of the pandemic (Lenzo et al., 2022), which in turn appears to foster resilience and protect against negative adjustment (Lalot et al., 2021; Skinner et al., 2022).

## Identity and time perspective: A meaningful interplay

The second aim of this study was to tackle the interplay between identity and time perspective. Results were largely similar across the two identity domains examined. Nonetheless, some nuanced differences were also detected as further discussed below. Furthermore, with only two exceptions, the results were replicated across the four groups under consideration (students and workers before and during the pandemic).

In the current study, in line with Erikson (1950, 1968) theory, assuming meaningful identity commitments appeared to be a milestone for structuring a coherent time perspective. Specifically, identity commitment in both educational/vocational and interpersonal domains was found to be negatively related to past negative and present fatalistic views, and to be positively related to past positive and future orientations. This result is in accordance with and adds to prior research highlighting the longitudinal associations between global identity commitment and lower negative views of the past and more future orientation (Luyckx et al., 2010).

Notably, the association between commitment and present fatalistic appeared to be more nuanced across the two identity domains when accounting for the moderating role of participants' status and cohort. More specifically, commitment in the educational/vocational domain was negatively related to present fatalistic in students during the pandemic and positively associated with present fatalistic in workers during the pandemic. No effect was found among participants in the 2017 cohort. Conversely, commitment in the interpersonal domain was linked to lower present fatalistic in both workers before and students during the pandemic, whereas no significant association was found for students before and workers during the pandemic. It appears that, especially for students

during the pandemic, consolidating identity commitment in both domains supported youth's sense of personal control and contributed to reducing fatalistic perceptions of their present life. Conversely, it could be argued that workers during the pandemic faced additional external (and often unpredictable) constraints (e.g., job market insecurity, fear of unemployment, lockdown measures on work activities) that might have hampered the protective role of identity commitment.

Moving on to the other identity processes, in-depth exploration in both educational/vocational and interpersonal identity domains was positively related to a negative view of the past, to a hedonistic view of the present, but also to a positive future orientation. Overall, these findings confirm that in-depth exploration may be seen as a “double-edged sword” (Crocetti, 2018). On the one hand, active reflection on current commitments supports emerging adults in the process of developing a future orientation. On the other hand, this can also lead to a tendency to mull over current choices and become more uncertain about them and more negative about the past. Furthermore, youth who explore in-depth and search for meaningful information usually display higher levels of openness to experience (Hatano et al., 2016) and lower need for closure (Soenens et al., 2005). Our findings align with prior research, highlighting that identity exploration relates to more hedonistic views of the present.

Finally, reconsideration of commitment in both educational/vocational and interpersonal identity domains was positively related to a negative view of the past and to a fatalistic view of the present. Additionally, reconsideration of commitment in the educational/vocational domain was also linked to a hedonistic view of the present. Taken together, these results confirm the crisis-like character of reconsideration of commitment (Beyers & Luyckx, 2016) which has been related to a host of problematic behaviors and indicators of maladjustment (Becht et al., 2016).

All in all, the current study highlights how the development of a stable identity is intertwined with emerging adults' conceptions of past, present, and future, even in challenging times such as the pandemic. Specifically, when youth are trapped in questioning their identity, they are more focused on their past and present and less likely to plan for the future. In contrast, such a future orientation appears to be nurtured within the identity consolidation cycle, based on the interplay of commitment and in-depth exploration (Meeus, 2018). These findings highlight the need for interventions supporting adolescents and emerging adults in their quest for identity commitment and the development of a temporally coherent sense of self, which might in turn help them navigate unexpected challenges and events.

### Limitations and suggestions for future research

The evidence presented in this study should be considered in light of several limitations. The comparison of the two cohorts of emerging adults before and during the pandemic, without following them longitudinally, does not allow for

a deeper understanding of the link between identity and time perspective. Specifically, the cohort design does not fully disentangle cohort effects from developmental processes. Furthermore, participants in the four study groups differed on a significant number of demographic characteristics, which prevented the direct comparison (e.g., for educational/vocational identity processes) and overall limited the generalizability of current results. It should also be noted that we have examined how identity processes are associated with specific perceptions of past, present, and future. However, due to the design of the current study, the reversed link (i.e., how time perspective is linked to identity processes) could also be examined. Thus, future research could overcome these limitations by using a longitudinal approach to examine the dynamic interplay between identity and conceptions of time as rooted in and influenced by specific socio-historical contexts and events (e.g., pandemic, war, economic crisis) that can shape the development of youth.

### CONCLUSIONS

This study examined differences in identity processes, time perspective, and their associations among university students and workers from two different cohorts (i.e., before and during the COVID-19 pandemic), to disentangle common and domain-specific associations between identity and individuals' perspectives about past, present, and future. Differences between cohorts mostly concerned the vocational identity domain, with workers in 2021 displaying a more stable identity than their peers in 2017. Additionally, participants during the pandemic displayed less fatalistic views of their present and more orientation toward the future compared to the other cohort, whereas no significant difference emerged in their perceptions of the past. Regarding the interplay between identity and time perspective, results were similar across the two identity domains and highlighted the positive effect of commitment, the negative effect of reconsideration, and the nuanced associations of in-depth exploration with time perspective. Notably, only one difference was found between cohorts. Overall, these findings extend our understanding of the interplay between identity and time perspective, recognizing the role of macro-contextual events in shaping these processes.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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