

**Relation of Temporal Experience to Vocational Identity Formation:
Pathways, Experiences, and Outcomes**

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Abstract

Temporal Experience and Vocational Identity Formation

The present study examines how individual differences in temporal experience are related to the formation of vocational identity. Temporal experience is conceptualized as perspective (i.e., orientation to past, present and future), extension (i.e., how far remembering, experiencing, and anticipation extend), and integration (i.e., the relatedness among events from the past, present, and future). We investigated how individual differences in temporal experience are systematically related to two distinct pathways for forming a vocational identity, namely, norm adherence and norm nonadherence. Norm adherence is associated with “society minded” pathways to identity formation or identity foreclosure, while norm nonadherence is associated with “self-authoring” pathways to identity formation or identity achievement. Participants are 1,657 adolescents (ages 13-19) and 2,171 young adults (ages 20-29). We found that self-authoring was characterized by a strong orientation to the present, a pronounced lack of orientation to the past, and low temporal integration. In contrast, society mindedness was characterized by a very strong orientation to the future, a moderate present orientation, and moderate temporal integration. Findings are discussed with a view toward integrating life-course and life-span conceptualizations.

Relation of Temporal Experience to Vocational Identity Formation: Pathways, Experiences, and Outcomes

A hallmark of human thought and action is the use of time. Subjective time refers to the personal experience of time in contrast to objective time marked by clocks, chronology, and calendars. From a subjective perspective, time is a "complex set of personally experienced cognitive constructs used by individuals and cultures to account for the order, duration, and organization of events" (Gorman & Wessman, 1977, p. vii). Individuals use socially constructed time to orient themselves in the midst of ongoing events and to coordinate interaction with others (McGrath, 1988). Comprehensive review articles such as those written by Nurmi (1991) and earlier by Wallace and Rabin (1960) discuss empirical findings from dozens of investigations concerning the relation of subjective time to social class, achievement motivation, academic and occupational performance, mental health, psychiatric disorders, delay of gratification, goal selection, planning, and vocational development. From this literature, we can conclude that individuals vary widely in how they conceptualize and use time as well as how they plan their futures. Furthermore, temporal experience may be regarded as a persisting personality trait or characteristic, yet one that is subject to change.

The present study examined how temporal experience relates to the process and outcome of vocational identity formation in adolescents and young adults. Temporal experience clearly relates to how adolescents define themselves. Consideration of possible selves is fostered by a future orientation which makes one concerned about tomorrow. In addition, adolescents are better able to form adult plans and make tangible occupational choices if they connect their past experiences and present situations to possible futures. Erikson (1968) called this sense of connection or integration among time zones "time perspective" versus "time confusion."

A Model of Temporal Experience

To address the complexity of "time perspective," this study conceptualized temporal experience with a multidimensional model that includes the psychological order, duration, and organization of time. The model emerged from an extensive literature review and factor-analytic investigations (Ringle & Savickas, 1983) and was further developed in a program of research on career consciousness (Savickas, 19). The model uses three dimensions to organize the numerous variables that investigators have operationally defined in empirical studies of the psychology of temporal experience. The model was originally constructed to comprehend the welter of variables investigated by research on temporal experience. This research literature is difficult to follow because investigators often failed to link their research to prior investigations. This *de novo* approach to studying temporal experience resulted in researchers "reinventing the wheel" and using different names for similar operational definitions of time variables. The three-dimension model of temporal experience has been particularly useful in clarifying the underlying structure of temporal experience variables and mapping their nomological network.

The three dimensions in our model of temporal experience are *perspective*, *extension*, and *integration*. Perspective refers to how individuals orient themselves to the three time zones of

past, present, and future. The preferred time zone indicates the individual's "time orientation," that is, the time zone that has primary relevance for contemporary decision making. Individuals with a past orientation tend to follow family and community traditions. A past orientation can preempt active exploration of alternatives when faced with the need to choose. Individuals with a present orientation tend to drift with the tide, pursuing "targets of opportunity" and managing crises. Living in the moment prevents the past or future from shaping current action. A future orientation structures a proactive preparation for anticipated events, one that may cause individuals to choose goals and then sacrifice today to achieve tomorrow. Planning requires a future orientation because it means forming in advance organized action (cf, Friedman & Scholnick, 1997).

The second dimension in our model of temporal experience deals with temporal extension, that is, how far into the past one remembers and how far into the future one anticipates. Retrospective (past) extension refers to how far back one remembers whereas prospective extension refers to how far into the future one imagines and anticipates events. Individuals can extend far in each direction, with different psychological benefits. A long past extension offers a better context for self-knowledge. A future that extends far over the horizon helps individuals to better anticipate events and have a greater awareness of developmental tasks and choices that they will someday encounter. Prospective (future) extension also offers the possibility of making the future feel real and provides a detailed context within which to make personal choices and plans. "A long, realistic, and active future time perspective is important in planning and realizing behavioral projects, since almost all important achievements require coordinated and long term means-end structures" (Nuttin, 1985, p. 22).

The third dimension of temporal experience addresses the connection among time zones. Temporal integration denotes relatedness among events occurring in the past, present, and future. Temporal integration facilitates connecting present situations with prior behavior and relating future goals to present efforts. In prior research, integration has been operationally defined by cognitive variables such as continuity versus spontaneity as well as by and affective variables such as hope and optimism. In the present study we used only cognitive variables, namely, continuity and spontaneity. A sense of continuity, what Erikson (1968) called "time perspective," helps individuals to comprehend how their past experiences and present choices shape their future career. The opposite of continuity is spontaneity, what Erikson (1968) called "time confusion." A more spontaneous temporal experience conditions present behavior that can often be disconnected from past experiences or future considerations. We have argued elsewhere (Wolf & Savickas, 1985) that temporal integration is a prerequisite for internal causal attributions concerning the future because temporal integration fosters a sense of agency that enhances striving and accomplishment. The three dimensions in this model of temporal experience are hypothesized to influence behavior, as well as develop, in the order in which they were described above: perspective, extension, and integration.

Normative Orientation toward Identity Formation

In this study, we were interested in how individual differences in temporal experience relate to vocational identity formation. We examined how temporal experience relates to normative orientation toward vocational identity formation, that is, norm adherence versus norm-questioning. Adherence to societal norms provides one pathway for mastering the tasks of forming a vocational identity whereas norm questioning offers an alternative pathway to composing an occupational life. Norm adherence organizes vocational identity development along accepted social pathways whereas norm questioning pushes identity development away from established pathways and toward individual reflection about flexible, non-normative solutions. Various personality psychologists have referred to norm adherence as norm-following, norm-favoring, and norm-accepting. They have referred to norm questioning as norm rejecting, norm doubting, and norm non-adherence). Developmental psychologists also have studied constructs quite similar to normative orientation, including Josselson (1996) who refers to the alternative orientations as Guardians versus Pathmakers and Kegan (1994) who refers to the two normative orientations for identity formation as society-minded versus self-authoring pathways.

The conception of developing a vocational identity by being society-minded and adhering to social norms permeates the models and measures of vocational psychology. In these vocational development models, norm adherence is the pathway for forming and implementing a vocational identity. In fact, the process of career maturation is operationally defined by readiness to respond appropriately to social expectations regarding the student and worker roles. A norm questioning orientation to forming a vocational identity is typically attributed to a developmental delay of to psychopathology. The resulting career immaturity, in turn, causes indecisiveness or unrealistic educational and vocational choices. The current vocational development models do not include a norm questioning orientation as a pathway to identity formation.

The study of norm adherence in vocational identity formation is particularly important now because norm adherence, also called conformity, is emerging as a critical super-factor in personality research. For example, Hogan (1983) has suggested that conformity and sociability are the two dimensions that underlie personality circumplexes. Similarly, after reviewing 50 separate factor-analytic studies of his California Psychological Inventory, Gough (1990) concluded that normative and interpersonal orientation were the two themes that underlie the 18 separate scales. Furthermore, by studying norm orientation in relation to temporal experience and vocational identity, we hope to link the perspectives of personality, developmental, motivational, and vocational psychology. Such linkages will provide the empirical foundation needed to construct, in due course, a comprehensive theory of careers that incorporates interdisciplinary insights from across the behavioral sciences (Savickas, in press).

Hypotheses

In the present study, we hypothesized that individual differences in temporal experience systematically covary with psychosocial development formation pathways and experiences during adolescence and young adulthood. Specifically, we expected future orientation, longer extension, and greater integration to relate to norm adherence as well as to positive psychosocial

experiences; whereas, we expected present orientation, shorter extension, and spontaneity to relate to norm questioning as well as to negative psychosocial experiences.

H1: Variation in temporal experience relates to normative orientation in the processes of vocational identity development.

H1a: Future orientation, long temporal extension, and continuity in adolescents relates to norm-adherence and more positive developmental experiences.

H2b: Present orientation, short temporal extension, and spontaneity in adolescents relates norm-questioning and negative developmental experiences.

Whereas the first hypothesis addressed the relation between temporal experience and developmental processes, the second hypothesis addressed the relation between temporal experience and an important developmental outcome, namely, vocational identity achievement. We anticipated that variations in time perspective, extension, and integration relate systematically to degree of vocational identity achievement.

H2: Vocational identity development relates to temporal experienced.

Our developmental-contextualism perspective required that we investigate these hypotheses relative life stage and contextual situation. Accordingly, we tested the hypotheses with two age groups living in two different cultures.

Hypotheses and Life Stage

We examined age-related trends in the relation of temporal experience to vocational identity processes (H1) and outcomes (H2) by examining the two major hypotheses separately for adolescents aged 13 to 19 and young adults aged 20 to 29. Most writers conclude that an adult conceptual understanding of time does emerge until late adolescence, around 15 or 16 (Fraisie, 1963; Wallace & Rabin, 1960; Friedman, 1982). This awareness spurs imagination about possible selves in the future and them planning for the future. Accordingly, we wanted to examine means scores to determine whether the adolescents experienced time differently than young adults and whether young adults are norm-questioning and self-authoring (in that they have had more time to mature). We also planned to examine means scored for differences in psychosocial experiences and vocational identity achievement. However, this second pair of comparisons is less interesting because we anticipated that the older group would, primarily as a function of just chronological age, have more developmental experiences and greater vocational identity achievement. Finding any differences in these variables will require separate analyses to test the two hypotheses independently for the younger and older adolescents.

Hypotheses and Cultural Context

We also tested the two hypotheses in two different cultural groups: East Germans and West Germans. Because temporal experience is personally constructed (Friedman, 1990), its origins and development are shaped by the particular cultural and social context in which the individual is embedded. Individual variations in temporal experience develop in a context of parents, peers, and society, each of which tries to influence how adolescents orient themselves to time by setting normative standards and by modeling time use and planning (Nurmi, 1991). For

example, cultural norms prescribe appropriate pathways for solving the developmental task of occupational commitment and vocational identity formation. More collectivist cultures emphasize following traditional paths whereas individualistic cultures encourage spontaneity in authoring one's own identity. Accordingly, different patterns of time perspective, extension, and integration relate systematically to vocational development, especially attitudes toward career choice and achievement of vocational identity (Savickas, 19xx). Research on identity and on temporal experience can be criticized for ignoring social and historical circumstances and the influence of those conditions on particular cohorts. The present research sought to integrate individual temporal experience with social and cultural processes through the concept of norm adherence. Furthermore, the present study attempted to directly control for changing relations between adolescents and young adults and their social environments by testing the two hypotheses in two socio-cultural situations posed by West and East Germany. Being more collectivist in cultural orientation, we expected East German youth to be higher in past and present orientation as well as more norm-accepting (society-minded). In contrast, we expected that West German youth raised in an individualist culture would be more future-oriented, norm questioning (self-authoring). In addition to differences in temporal experience and normative orientation, we also expected that West German participants would report more positive experiences that foster psychosocial development because modern, democratic cultures such as West Germany emphasize individuation of the self and encourage psychosocial experiences that foster identity formation (McAdams, Diamond, de St. Aubin, & Mansfield, 1997). We expected no differences in vocational identity achievement, just differences in the pathways of development. Finding any differences between East and West German youth in these variables will require separate analyses to test the two hypotheses independently for groups. Thus, it is possible that the two hypotheses will be tested separately for four groups: East German adolescents, East German young adults, West German adolescents, West German young adults. Finding no mean differences in the variables would mean that these four groups could be combined and the two hypotheses tested for the group as a whole.

In sum, we examined two hypotheses that examine the relation of temporal experience to developmental processes (H1) and outcomes (H2). To account for developmental-contextualism, the hypotheses were examined relative to development stage (adolescents versus young adult) and cultural context (collectivists versus individualists).

Methods

Participants

3,823 participants
 1,657 ages 13-19
 2,171 aged 20-29
 West 2,540
 East 1,282

Measures

Temporal experience. Subjective time was operationally defined by scales constructed to assess perspective, extension, and integration. Time perspective was operationally defined with three separate scales, one for each time zone. Past orientation was measured by a 4-item scale. A sample item is "I enjoy thinking about my past." Present orientation was measured by 4-item scale. A sample item is "I only think about what I'll do next week when next week is here." Future orientation was also measured with a 4-item scale, including "When one does not precisely plan one's life, one doesn't get anywhere." Length of future extension was measured by a single item with eleven options: 1 week, 1 month, 1, 2, 3, 4, and 5 years, and 10, 20, 30, and 40 years. Temporal integration was measured with two scales, one for each pole: continuity versus spontaneity. Continuity was measured with 4 items, including "I do not believe that one can learn much from one's own experience" (reversed scored). The opposite of continuity is spontaneity, measured by 4 items including "I prefer to do spontaneously what I feel like doing at the time." With the exception of the future extension item, all temporal experience scales used the following response options to describe their opinion of how well the item characterized them: "not at all," "not so well," "well," and "very well."

Vocational identity achievement. Vocational identity status was measured by a single item. In the context of reporting about their life plans, participants selected one option from: "I know what I want and have plans already." (4 points/achieved-pathmaker); "I know what I want and I follow established paths." (3 points/foreclosed-guardian); "I don't know what I want, but I want to find out." (2 points/moratorium-searcher); and "I don't know what I want, what happens, happens." (1 point/diffusion-drifter).

Psychosocial experiences. Experiences related to the developmental tasks of identity ("identity experiences scale") and intimacy ("intimacy experiences scale") were measured by separate scales. Identity fostering experiences were measured by 10 items to which participants answered either "experienced" (1) or "not experienced" (0), including for example "to make a vacation trip on my own" and "to make enough money to support self." Intimacy fostering experiences were measured by 6 items, including for example "have a steady girl friend/boy friend" and "first live with a partner." Negative experiences that can be considered traumatic tasks ("adaptations scale"), rather than developmental tasks, were measured by 15 items, each representing a bad event. Respondents indicated whether or not the events had occurred in their lives. For each bad event that occurred, participants reported "How strongly did it affect (change) your life?" on a scale which ranged from (1) not at all, (2) a little, (3) average (medium), (4) strongly, and (5) very strongly. Higher scores mean more bad events and greater life disruption. Sample items include: "separation of parents," "father or mother loss of job," "lost a close friend," and "failed grade in school."

Normative orientation. Pathways to vocational identity formation were measured by two separate scales. The society-minded, norm adherence scale consisted of 7 items including "I want to live in peace and not even consider the possibility of rebelling against things," and "Adapting and deferring are things that one has to be able to do." Participants respond on a 4-point scale

from (1) "not at all" to (4) "very well." High scores indicate that meaning is provided by society and that one embeds oneself in system of relationships and takes meaning and authority from that system. The self-authoring, norm non-adherence scale consisted of 7 items including "I try very hard to not let societal demands get the best of me," and "I want to do what I want to do and others should do the same." Higher scores mean norm rejection with authority derived internally. Higher score suggest the individual can take the society as an object and think for self about the rules of society.

Results

Descriptive statistics

Mean and standard deviations for total sample, for participants from East and West Germany, and for adolescents aged 13-19 and young adults aged 20-29 appear in Table 1 along with alpha coefficients for each scale. Inspection of the t-tests for mean differences for East Germans versus West Germans revealed statistically significant differences on 7 of 11 variables. However, these small yet significant differences did not seem practically meaningful because the statistical significance can be attributed to the large N. Effect sizes were quite small. For example, the West German (18.34) participants scored higher on self-authoring than did the East German participants (17.91); the difference in means of .41 was significant statistically. Nevertheless, the effect size of .14 suggests that this difference was not substantively meaningful or practically important. The same lack of meaningful differences emerged when comparing adolescents (aged 13-19) to young adults (aged 20-29). Although all of the 11 differences in scores were statistically significant, only two differences seemed to be meaningful. Both of these differences seem related to age. The young adults had substantially more identity achievement experiences (effect size = 1.5), more intimacy experiences (effect size = 1.37), and more bad things had occurred in their lives (effect size = .63). However, we interpret this to mean that the group who was ten years older had more time to accumulate these experiences, thus we attributed these statistically significant differences to age. Given, the lack of practical significance in the differences between East and West and younger and older participants, we did not test the hypotheses separately among these groups. Data from all participants was combined into a single set of analyses to examine the hypotheses about the relation of temporal experience to psychosocial experiences, pathways, and outcomes.

Examining the correlations for the total group revealed that the variables associated generally as expected. For example, more identity and intimacy experiences correlated positively with more progress in vocational identity formation, as did adapting to more traumatic tasks. Also, the temporal experience variables each correlated, in the expected direction with vocational identity. Again as expected, a present orientation correlated with positively with spontaneity and negatively with continuity.

Insert Table 1 About Here

Inferential analyses

To examine the relationship between the set of time variables and the set of psychosocial variables, we conducted a canonical correlation analysis. The aim was to find a linear combination, called canonical variate, for the predictor and the criterion variables (one for each) which results in a maximal correlation. More than one set of linear combinations are possible, and each is orthogonal to the others and each has a separate canonical correlation of descending size. The number of pairs of canonical variates corresponds to the number of variables in the smaller set, five in the present study. The linear combination is a new entity or "super-variable", composed of the variables. The new entity is interpreted by examining the standardized coefficients, which have a mean of 0 and a standard deviation of one. The canonical loadings are the correlations of individuals' scores on the variables to the new variate. A high correlation means that the variable and the variate are alike. Because the variables in this study are not highly correlated, the standardized coefficients and the canonical loadings should be, and are, very similar. Thus we interpret below only the canonical loadings.

Of the five canonical pairs of variates in this analysis, four had canonical correlations that attained statistical significance ($p < .001$). However, similar to the mean differences, we attribute small yet significant canonical correlation coefficients to the large N. The first two correlations seemed substantive and meaningful in that they were .50 and .36. The third and fourth canonical

correlations (.12 and .08) each accounted for only about one percent of shared variance.

Therefore, we concentrated on interpreting the first two canonical correlations. The standardized coefficients and canonical loadings for the first three pairs of canonical variates appear in Table 1.

Insert Table 2 About Here

The first pair of canonical variates consisted of a time component, predictor set, that was characterized by a strong orientation to the present with a low temporal integration, as indicated by high spontaneity and low continuity. There was also a pronounced lack of orientation to the past. The corresponding criterion variate composed of psychosocial variables was characterized almost exclusively by self-authoring (.95).

The second pair of canonical variates consisted of a predictor set that was characterized by a very strong orientation to the future. There also was a moderate present orientation but unlike the first pair of variates, the present orientation had a low spontaneity. Thus, it appears to be a present awareness linked to clear future rather than high spontaneity. The corresponding criterion variate composed of psychosocial variables was characterized almost exclusively by society-mindedness (.92).

The third pair of variates, which correlated only .12, seemed to show temporal confusion in the predictor set and identity diffusion (drifting) in the criterion set.

To test the second hypothesis, we computed a multiple regression analysis, with vocational identity status as the criterion and the six time variables as the predictors. We used a stepwise procedure to enter the predictor variables in order of our theoretical model for predicting identity achievement, that is, a temporal experience characterized first by a future orientation, then a long extension, and finally a sense of integration. The multiple R was .42 ($p < .001$). Future orientation, which had the largest zero-order correlation with identity (.32) was entered as the first step. Extension which had the second largest zero-order correlation (.24) was entered as the second step and increased the R to .37. The two integration scales were entered next. Continuity was added next and increased the R to .40. Spontaneity was entered next and increased the R to .42. The addition of past orientation and present orientation for steps five and six did not further increase the R. Separate multiple regression for different subgroups produced the following multiple Rs: adolescents = .38; young adults = .43; West German participants = .44; and East German participants = .40.

analyses, one for each of the four identity status separately. 17.65 of the participants who were at level 1, 32.8% of participants at level 2, 33.1% of participants at level 3, 15.5% of participants produced.

Discussion

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