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Chronological and Subjective Age in Emerging Adulthood:
The Crossover Effect

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This study explored the relationship between chronological age and subjective age in emerging adulthood. Predictors of variability in subjective age were also examined. A sample of 190 university students (140 females, 50 males) ages 17 to 29 completed questionnaires assessing their subjective age, psychosocial maturity, number of role transitions, financial dependence, economic pressure, and alcohol use. There was a negative linear relationship between subjective age and chronological age, with older individuals feeling younger than their chronological age. The crossover from an older to a younger subjective age occurred at about 25.5 years. Psychosocial maturity was the only significant predictor of subjective age, with higher maturity related to feeling older. The crossover from an older to a younger subjective age is discussed as a transition-linked turning point in which emerging adults redefine who they are in the context of changing reference groups and the newness of their recently acquired autonomy.

Keywords: *subjective age; psychosocial maturity; emerging adulthood*

Arnett (2000) proposed that in industrialized nations there is a distinct period in the life span when people are neither adolescents nor adults and that this period of emerging adulthood may begin around age 18 and extend through the 20s. Furthermore, Arnett argued that emerging adulthood is

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characterized by a diversity of life situations with respect to education, work, and romance; experimentation with different behaviors and identities; and subjective perceptions of oneself as not having reached adulthood. Shanahan (2000) also pointed to increasing variability of the life course in recent decades in Western societies. He argued that the traditional, objective markers of entrance into adulthood (e.g., completion of schooling, marriage, parenthood) no longer follow a standard sequence, as historical and economic changes have presented many individuals with the opportunity to actively construct their own biographies. In essence, emerging adulthood is a period of transition in which the active search for an identity is intensified and prolonged (Arnett, 2004). One way to enhance understanding of this transition is to include subjective measures of adult status in studies of emerging adults (Shanahan, 2000).

One potentially important subjective marker that is interesting to consider in emerging adults is called *subjective age*. Subjective or self-perceived age is generally defined as how old one feels (Settersten & Mayer, 1997). Researchers have speculated that subjective age may be a motivational facet of identity, associated with a desire to be younger or older (Galambos, Kolaric, Sears, & Maggs, 1999). Subjective age also appears to be influenced by important social and autobiographical reference points (Montepare & Clements, 2001; Zebrowitz & Montepare, 2000) such as behaviors associated with legal status or social markers of chronological age (e.g., 50th birthday). Thus, changes across the life span in both subjective age and its referents are to be expected.

Depending on the research questions, investigators measure subjective age as a single one item (Markides & Boldt, 1983) or multi-item global construct (Galambos et al., 1999; Montepare & Lachman, 1989) or as a multidimensional measure consisting of one or more items to assess subcomponents of subjective age such as psychological and physical age (Montepare, 1996). Often, subjective age is assessed relative to one's chronological age, as when individuals rate how old they feel on a scale from "a lot younger than my age" to "a lot older than my age" (Galambos, Barker, & Tilton-Weaver, 2003b; Montepare, 1996).

Despite different measurement strategies across studies, consistent age-related differences in subjective age have been found. In a cross-sectional study of individuals ages 14 to 83, adolescence (i.e., the high school or teen years) was identified as the only period of the life span during which the majority of individuals had subjective ages that were older than their chronological ages. Conversely, beginning at about age 30 and extending to old age, many individuals report feeling younger than their chronological ages. On average, individuals in their 20s feel about the same age as their chronologi-

cal age (Montepare & Lachman, 1989). Other studies have found that adolescents (ages 9 to 17) typically feel older than their chronological age (Galambos et al., 1999), individuals in their 20s feel about the same age or slightly older than their chronological age (Barnes-Farrell & Piotrowski, 1989; Montepare, 1996; Montepare & Clements, 2001), and after age 29 and in older or elderly adults, larger proportions of individuals have younger rather than same-age or older subjective ages (Barnes-Farrell & Piotrowski, 1989; Baum & Boxley, 1983; Heckhausen, 1997; Hubley & Hultsch, 1994; Markides & Boldt, 1983; Montepare, 1996). This pattern of results suggests that between adolescence and adulthood, there is a transition from feeling older than one's chronological age to feeling younger (Montepare & Lachman, 1989). That this transition or crossover process is located during emerging adulthood highlights the importance of examining subjective age from the late teens through the 20s. One purpose of this study is to examine chronological age differences in subjective age.

Two questions arise from seeking to understand the crossover from an older to a younger subjective age in emerging adulthood. First, at what age does the crossover occur? Studies including emerging adults in their samples tend to group together participants in their 20s (or in their early and later 20s) rather than examining chronological age as a continuous variable (Barnes-Farrell & Piotrowski, 1989; Montepare, 1996). This practice obscures age differences in subjective age within this important decade of transition and may miss theoretically and empirically interesting findings that could emerge from a closer consideration of variability in subjective age associated with chronological age. Indeed, although Montepare and Lachman (1989) indicated that the transition from an older to a younger subjective age may occur in the 20s, computations based on equations presented in a footnote are required to learn that the crossover took place in their sample at about age 23 for men and age 24 for women. We take the perspective that by locating the turning point, more can be learned about the nature of emerging adulthood and the changes in self-perceptions of one's age that accompany this long transition. Moreover, it is important to identify the turning point because it may be a useful measure by which to compare the experience of the transition to adulthood from sample to sample. That is, self-perceptions of adult status may differ across samples, depending on individual difference variables such as ethnicity and family socioeconomic status (Arnett & Galambos, 2003). In one study, African Americans and Latinos were more likely than Whites and Asian Americans to feel like adults, which was attributed to the lower family socioeconomic status and greater frequency of parenthood among the African American and Latino participants (Arnett, 2003). The turning point from an older to a younger subjective age might be sensitive to such differences.

A second question that arises is "As chronological age increases during the period of emerging adulthood, does subjective age decrease in a linear or nonlinear fashion?" To our knowledge, cross-sectional studies (Barnes-Farrell & Piotrowski, 1989; Heckhausen, 1997; Montepare & Lachman, 1989) have assumed that a linear function describes the relationship between chronological and subjective age. Yet this relationship could be curvilinear. For example, subjective age might increase in the late teens or early 20s as individuals gain independence by obtaining jobs, moving out of the family home, or enrolling in postsecondary schooling. These events could be followed by a decline in subjective age as young people begin to compare themselves to the adults they will become and identify less with the adolescents they left behind. In the present study, we identify the age at which the crossover from an older to a younger subjective age occurs in a sample of Canadian university students, and explore whether the relationship between subjective age and chronological age is a linear or curvilinear function.

Although there is a significant relationship between chronological and subjective age across the life span, within any given chronological age period there are substantial interindividual differences in subjective age (Barnes-Farrell & Piotrowski, 1989; Montepare, 1996; Montepare & Lachman, 1989). Thus, it is important to ask, "What variables predict interindividual differences in subjective age in emerging adults?" Studies of adolescents have found that an older subjective age is linked with a more advanced pubertal status, higher levels of problem behaviors such as drinking alcohol, and more involvement with the other sex (Galambos et al., 1999). The implication of this research is that variations in important physical and social changes that occur during the adolescent transition are associated with interindividual differences in the subjective age of adolescents. In older adults, an older subjective age has been associated with poor psychological and physical health, as well as with pessimism, life dissatisfaction, and lower levels of extraversion, characteristics that likely reflect important stage-of-life issues for these adults (Baum & Boxley, 1983; Hubley & Hultsch, 1996; Markides & Boldt, 1983; Montepare & Lachman, 1989). What are the potential determinants of subjective age in emerging adulthood, when many of the issues of adolescence have been resolved and the issues associated with aging are not yet of concern?

Interindividual differences in the subjective ages of emerging adults are likely tied to the circumstances of their life transitions (Montepare, 1991). Thus, we should expect major role transitions, or objective markers traditionally associated with entrance into adulthood (e.g., leaving home, obtaining a job, marrying, having children) to be related to an older subjective age. Arnett (1994; Arnett & Galambos, 2003), however, has shown that emerging

adults do not generally consider such role transitions to be salient markers of the transition to adulthood. Rather, intangible and individualistic characteristics such as taking responsibility for one's actions, making decisions on one's own, and becoming financially independent are more often viewed in White majority cultures to be associated with the attainment of adult status. Moreover, accepting responsibility, making independent decisions, and obtaining financial independence are seen to be more important criteria for achieving adult status than are role transitions in samples of university student Mormons (Nelson, 2003); high school and university student Israelis (Mayseless & Scharf, 2003); Whites, African Americans, Latinos, and Asian Americans (Arnett, 2003); and emerging adults in Argentina (Facio & Micocci, 2003). Other salient psychological markers of adulthood that appear in some samples include the ability to control one's emotions, consideration for others, and the establishment of an equal relationship with parents (Arnett, 2003; Facio & Micocci, 2003; Mayseless & Scharf, 2003; Nelson, 2003; Tilton-Weaver, Vitunski, & Galambos, 2001).

The psychological markers of adulthood identified by Arnett and others fit under the rubric of a concept called *psychosocial maturity. Psychosocial maturity* is a term that has been used to describe individuals' general level of adaptive functioning and socioemotional competence (Galambos & Costigan, 2003). According to Greenberger and colleagues (Greenberger, Josselson, Knerr, & Knerr, 1975; Greenberger & Sorenson, 1974), psychosocial maturity encompasses attainments in several domains of development. These attainments include the ability to function independently, the ability to communicate and interact well with others, and the capacity for social responsibility. In the current study, psychosocial maturity was measured as a global multidimensional construct composed of indicators of autonomy, identity, and intimacy, all of which are viewed as requirements for a successful transition to adulthood (Erikson, 1963; Rosenthal, Gurney, & Moore, 1981). Merging the literatures on the perceived criteria for reaching adulthood and on interindividual differences in subjective age, we hypothesized that net of the effects of chronological age, an individual's psychosocial maturity is likely to be related to an older subjective age in emerging adulthood. Moreover, we expected role transitions to be less important than psychosocial maturity as predictors of subjective age in emerging adults.

Although we can identify likely predictors of an older subjective age in people in their 20s, it makes sense that there might also be circumstances present in emerging adults' lives that serve as barriers to the achievement of an older subjective age. Just as people share criteria for what it means to be an adult, they also have implicit theories of immaturity, or criteria for what it

means not to be grown up (Galambos, Barker, & Tilton-Weaver, 2003a). For individuals in emerging adulthood, we speculated that dependence on parents for financial support is one possible barrier to an older subjective age. After all, financial independence is an established sign of maturity (Arnett, 1994). Economic pressure, which refers to the difficulty associated with stressful financial conditions (Conger, Rueter, & Conger, 2000), might also be a barrier to an older subjective age. There is ample evidence that economic pressure is demoralizing and leads to emotional distress (Conger et al., 2000). We hypothesized that higher economic pressure in emerging adults would be associated with feeling younger because it might be a sign that financial independence has not been achieved. Although financial dependence on parents and economic pressure could both be indicative of a lack of financial independence, they may be relatively orthogonal constructs. For example, a university student who is financially dependent on wealthy parents who can provide for all of the student's needs is unlikely to feel economic pressure, whereas a student who is aware that his or her financial dependence is a hardship for parents might well experience economic pressure. Thus, these two constructs are measured separately.

Another possible barrier to feeling more mature might be the individual's level of alcohol use. Whereas drinking alcohol seems to confer an older subjective age on adolescents because it symbolizes a forbidden activity that adults are allowed to pursue openly (Galambos et al., 1999), it is normative for emerging adults to relinquish high levels of alcohol use as they move into the roles associated with adulthood (i.e., marriage, parenthood; Bachman, Wadsworth, O'Malley, Johnston, & Schulenberg, 1997; Bachman et al., 2002). Moreover, gaining impulse control, including control of one's use of alcohol, is one marker of the end of adolescence (Arnett & Taber, 1994). Thus, it is reasonable to suggest that at some point in emerging adulthood, the individual who is still overindulging in alcohol after others give it up might feel relatively young.

In this cross-sectional study spanning the period of emerging adulthood in a sample of university students, we asked the following research questions:

1. At what chronological age in emerging adulthood does the crossover to a younger subjective age occur, and is the relationship between chronological age and subjective age a linear or nonlinear function?
2. After accounting for the relationship between chronological and subjective age, to what extent do two possible markers of movement toward adulthood, psychosocial maturity and role transitions, explain variation in the subjective ages of emerging adults?

3. To what extent are possible barriers to the achievement of adulthood—that is, financial dependence on parents, economic pressure, and alcohol use—associated with a younger subjective age in emerging adulthood?

METHOD

Participants

Participants were 190 university students (140 females and 50 males) enrolled in introductory psychology or other undergraduate psychology courses in 1993. Their mean age was 21.87 years (*SD* = 3.02; range: 17.00 to 28.81). The students attended a university with very little diversity in the student body (i.e., an undergraduate student survey taken in 1998 indicated that only 9.6% of students were visible minorities or First Nations). Thus, most participants were White. Given this homogeneity, ethnicity was not considered in this study. Most participants (88%) were unmarried, but 4% were married, 2% were separated or divorced, and 6% were unmarried, living together. Six participants had one child. Also, 14% of participants' mothers had less than a high school education, 26% had completed high school, and 60% had obtained at least some postsecondary (vocational, college, university) education. Percentages for fathers' education were 17% (less than high school), 26% (high school), and 58% (at least some postsecondary). Participating students were offered the opportunity to sign up for the study in their classes and then attended group testing sessions of approximately 20 to 30 students at a time. Other participants participated in larger group testing sessions during class time. Participants from the introductory psychology classes received one extra credit point whereas participants from other psychology courses simply volunteered their time.

Measures

In line with our research questions, subjective age was assessed as the criterion measure. Two possible markers of adulthood (psychosocial maturity, number of role transitions) and three possible barriers to the achievement of adulthood (financial dependence on parents, economic pressure, and alcohol use) were also measured.

Subjective age. The mean of five items (Montepare, Rierdan, Koff, & Stubbs, 1989) measured how old participants perceived themselves to be

relative to their chronological age. Items were rated on a scale ranging from 1 (*a lot younger than my age*) to 4 (*the age I am*) to 7 (*a lot older than my age*). Items were "Compared to most people my age, most of the time I feel ____"; "Compared to most people my age, most of the time I look ____"; "My interests and activities are most like people who are ____"; "My same-sex friends act toward me as if I am ____"; and "Opposite-sex peers act toward me as if I am ____". Higher scores indicate an older subjective age ($M = 4.27$, $SD = .76$, $\alpha = .72$).

Psychosocial maturity. The mean of 35 items from the Erikson psychosocial inventory scale (Rosenthal et al., 1981) formed the measure of psychosocial maturity. Items from the autonomy ("I am able to take things as they come," "I like to make my own choices"), identity ("The important things in life are clear to me," "I like myself and am proud of what I stand for"), and intimacy ("I'm ready to get involved with a special person," "I care deeply for others") subscales were rated on a scale ranging from 1 (*hardly ever true*) to 5 (*almost always true*). Each subscale consists of 12 items; 1 item was omitted from the autonomy scale because of a negative item-total correlation. The subscale items were combined because they were highly intercorrelated (rs = .71 to .83) and the 35-item scale demonstrated high internal consistency (Cronbach's $\alpha = .90$). Higher scores indicate a higher level of psychosocial maturity ($M = 3.89$, $SD = .49$).

Role transitions. A series of questions determined whether participants had left their parents' home, were currently working at a paying job, were or had been married, or had at least one child. An index of the number of role transitions was generated by summing the number indicated by the participant ($M = 1.28$, $SD = .75$). The number of role transitions ranged from 0 (12% of the sample) to 3 (5.8%). The majority of participants had experienced one (53.7%) or two (28.4%) role transitions. The most common transition was having left home (68% of the sample).

Financial dependence. Two items were constructed to capture financial dependence on parents: "I depend on my family for financial support" and "My parent(s) help me with my school and living expenses." Participants responded to the first item on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). They responded to the second item on a scale ranging from 1 (*not at all*) to 4 (*a great deal*). The two items were correlated at .84. The mean was calculated, with a higher score representing more financial dependence on parents ($M = 2.38$, $SD = .91$).

Economic pressure. Pearlin and Schooler's (1978) four-item standard of living brinkmanship scale measured economic pressure. Participants rated three items on a 4-point scale ranging from 1 (*very often*) to 4 (*never*): "Do you have enough money for the leisure activities you should have?" "Do you have enough money for the kind of clothing you should have?" "Do you have enough money for the kind of food you should have?" The fourth item ("How much difficulty do you have in meeting the monthly payments on your bills?") was rated on a scale from 1 (*no difficulty at all*) to 4 (*a great deal*). Cronbach's (was .82. The mean of the items was generated, with higher scores indicating more economic pressure ($M = 2.06$, $SD = .66$).

Alcohol use. Four items assessed level of alcohol use (based on Donovan, Costa, & Jessor, 1985; Health and Welfare Canada, 1988; Maggs, 1997). Participants indicated how often in the past 12 months they had consumed beer, wine, or liquor; had 5 or more drinks of beer, wine, or liquor on a single occasion; and got drunk or high on alcohol (not just light-headed). Responses for these three items ranged from 0 (*not at all*) to 7 (*every day*). They also indicated how many drinks they consumed per average occasion, with responses ranging from 0 (*none, I didn't drink*) to 7 (*more than 12*). The mean was calculated, with higher scores indicating more alcohol use ($\alpha = .91$, $M = 1.87$, $SD = 1.31$).

Results

Correlations among the variables in the study are presented in Table 1. Subjective age was inversely associated with chronological age, reflecting the trend toward an increasingly younger subjective age as chronological age increases. Subjective age was also associated with psychosocial maturity, such that higher psychosocial maturity was related to an older subjective age. Chronological age was significantly correlated with several variables, showing that older individuals were more psychosocially mature, had experienced a higher number of role transitions, were less likely to be financially dependent on parents, and were more likely to feel economic pressure. A higher number of role transitions was related to less financial dependence on parents and more economic pressure. Another significant correlation showed that less financial dependence on parents was associated with more economic pressure. Alcohol use was not related to any variable.

A hierarchical linear regression was conducted to examine the first question concerning the age of the crossover from an older to a younger subjective age as well as the shape of the relationship between chronological age and

TABLE 1: Intercorrelation Among Variables in the Study

Variable	*1*	*2*	*3*	*4*	*5*	*6*
1. Subjective age						
2. Chronological age	–.29*					
3. Psychosocial maturity	.16*	.20*				
4. Role transitions	–.09	.50*	.09			
5. Financial dependence	–.03	–.31*	–.05	–.46*		
6. Economic pressure	–.05	.40*	.01	.32*	–.36*	
7. Alcohol use	–.01	.04	–.03	.06	–.10	.08

$n = 190$. *$p < .05$.

subjective age. Chronological age was centered at zero (by subtracting mean chronological age from the participant's chronological age score). Centering eases interpretations of curvilinear and interactive relationships and reduces nonessential multicollinearity among predictors (Cohen, Cohen, West, & Aiken, 2003). This centered score was squared to allow testing of a curvilinear (quadratic) function. The centered term for chronological age was entered in Block 1 of the regression, and chronological age squared was entered in Block 2. The partialed regression coefficients in Block 2 are interpreted for linear and quadratic trends (Cohen et al., 2003). The results of these tests are shown in Table 2. The linear, negative relationship between subjective and chronological age was significant, indicating that on average, chronologically younger individuals felt older than did chronologically older individuals; this negative relationship is also depicted in Figure 1. The curvilinear (quadratic) relationship between chronological and subjective age was nearly significant ($p = .06$). Worth noting for possible consideration in future research, this trend suggested that subjective age could rise to its highest levels in the early 20s with an accelerated decrease in the later 20s. At what age did the crossover occur? Figure 1 shows that in this sample, the crossover from an older to a younger subjective age occurred at 25.5 years of age.

In Figure 1, all data points are plotted to reveal the interindividual variability in subjective age in emerging adulthood. What explains this variability in subjective age? To answer this question, centered predictors were entered into the hierarchical regression, after the linear and quadratic terms for chronological age. Possible markers of adulthood (number of role transitions and psychosocial maturity) were entered in Block 3, and possible barriers to adulthood (financial dependence, economic pressure, and alcohol use) were entered in Block 4 (see Table 2). R^2 change for Block 3 was significant. The

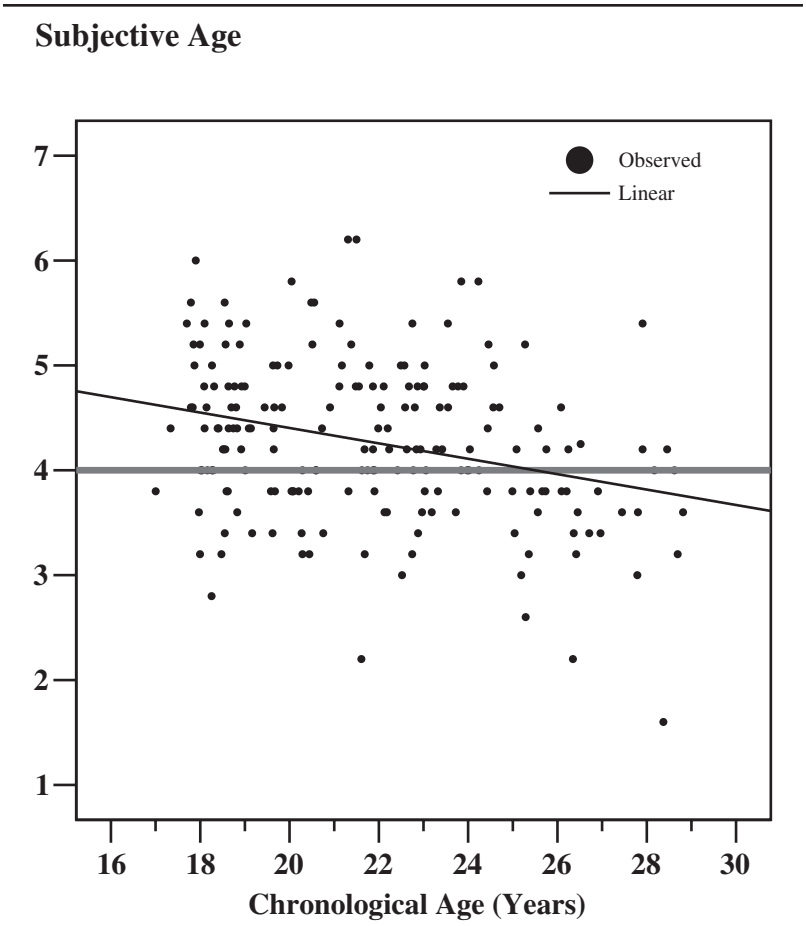

Figure 1.
The crossover effect: Subjective age is older than chronological age until 25.5 years. Chronological age scores are presented on the *X* axis in their original (noncentered) metric. The shaded horizontal line indicates the point at which subjective age equals chronological age. All cases (n = 190) are plotted.

number of role transitions was not a significant predictor of subjective age. Psychosocial maturity, however, was significant. Specifically, the more that emerging adults reported themselves as having established autonomy, an identity, and intimacy, the older they felt. R^2 change for Block 4 (barriers to adulthood) was not significant.

TABLE 2: Results of Hierarchical Regression Predicting Subjective Age

Block and Predictor	B	SE B	β	R^2 *change*	F *change*
Block 1: Chronological age				.09	17.39**
Linear effect	–.07	.02	–.29**		
Block 2: Chronological age				.02	3.54+
Quadratic effect	–.01	.01	–.14+		
Block 3: Markers of adulthood				.05	5.46*
Number of role transitions	.10	.08	.10		
Psychosocial maturity	.34	.11	.22*		
Block 4: Barriers to adulthood				.02	1.15
Financial dependence	–.11	.07	–.13		
Economic pressure	.05	.09	.04		
Alcohol use	–.02	.04	–.03		

NOTE: $n = 190$. Total $R^2 = .17$, $F(7, 182) = 5.23$, $p < .001$.
$+p < .10$. $*p < .01$. $**p < .001$.

Follow-up Analyses

In their cross-sectional sample spanning ages 14 to 83, Montepare and Lachman (1989) found a gender difference in the regression of subjective age on chronological age. That is, as chronological age increased, females felt subjectively young compared to males. Given that the present study considered a much shorter and chronologically younger segment of the life span, we did not expect to see such a gender difference. Nevertheless, it was informative to explore whether a gender difference existed in the relationship between chronological and subjective age in emerging adults. To this end, a hierarchical regression was run in which gender and chronological age were entered in the first block, the Gender × Chronological Age interaction was entered in the second block, chronological age squared was entered in the third block, and the Chronological Age Squared × Gender interaction was entered in the fourth block. The only R^2 change to reach significance was for the first block, $F(2, 187) = 9.81$, $p < .001$, R^2 change = .10. Within this block, the only significant predictor was chronological age ($B = –.08$, $SE\,B = .02$, $\beta = .30$, $p < .001$). Gender was not a significant predictor of subjective age alone or in interaction with the chronological age variables.

To assess whether gender moderated the relationship between the other predictors and subjective age, another hierarchical regression was conducted. Predictors were entered in blocks as follows: gender and chronological age (Block 1); chronological age squared (Block 2); role transitions and psychosocial maturity (Block 3); the interactions of gender with role transi-

tions and psychosocial maturity (Block 4); financial dependence, economic pressure, and alcohol use (Block 5); and the interactions of gender with financial dependence, economic pressure, and alcohol use (Block 6). The only significant R^2 changes were for Block 1, F (2, 187) = 9.81, $p < .001$, R^2 change = .10, and Block 3, F (2, 184) = 5.78, $p < .01$, R^2 change = .05. Within Block 1, the only significant predictor of subjective age was chronological age ($B = –.08$, $SE\ B = .02$, $\beta = –.30$, $p < .001$). For Block 3, the only significant predictor was psychosocial maturity ($B = .34$, $SE\ B = .11$, $\beta = .22$, $p < .01$). Thus, the results were virtually identical to those presented in Table 2, and gender did not moderate the relation between the predictors and subjective age.

DISCUSSION

Similar to other studies (Montepare & Clements, 2001), the average emerging adult in this sample felt slightly older than his or her chronological age. Nevertheless, there was a turning point from an older to a younger subjective age at about 25.5 years, 1 or 2 years later than for individuals in the Montepare and Lachman (1989) study. This crossover may qualify as a transition-linked turning point, that is, an internal reorganization or redefinition of who one is, brought about by demands of the transition and associated changes in the social context (Graber & Brooks-Gunn, 1996). We speculate that this crossover process signifies a change in the reference group to which individuals compare themselves as they make the transition to adulthood and rework their subjective ages. Specifically, whereas the comparison group for people in the early 20s may be individuals in late adolescence, the reference group for individuals in their later 20s is likely to be individuals in early to middle adulthood. This puts emerging adults in their early 20s as top dogs in their comparison group, although their counterparts in their later 20s are the bottom dogs. Feelings of relative youthfulness may reflect the bottom dog phenomenon. This situation might even be exaggerated in a sample of university students in which people in their later 20s are outnumbered by chronologically younger individuals who are at the same life stage.

The autonomy, independence and identity experimentation that takes place in one's years at university may present a degree of newness and uncertainty that may make more experienced students feel younger. Students in their later 20s, in a sense, graduate from familiar territory, leaving them feel like the new adult on the block. Despite gains in their maturity compared to adolescents or those in their early 20s, the goals that seemed at one point to be normative for those who are older may seem different once those goals are

reached. That is, what once seemed old (e.g., reaching a particular age or level of maturity) may no longer seem so old when that age or level of maturity is achieved.

Montepare and Clements (1995) found that an older subjective age in a university student sample is associated with a stronger denial of youth, that is, the desire to relinquish one's youth and to achieve an older age group status that is associated with greater independence, freedom, and responsibility. The idea that some emerging adults want to abandon their youth is consistent with our findings that emerging adults who reported higher levels of psychosocial maturity had older subjective ages. Some young people value mature behavior and welcome it as a sign of adulthood as they cast off their former status as youth.

The significant negative linear relationship between chronological and subjective age suggests that the crossover process could be a relatively continuous and gradual one. The possibility of a quadratic trend, however, is intriguing. The shape of the relationship between chronological and subjective age is important to consider because a better understanding of the crossover process can be obtained by learning more about how subjective age varies along the chronological age dimension. The shape of the function relating chronological and subjective age provides clues to interesting psychological and social phenomena that could be studied in further research. For example, if subjective age is shown to remain relatively high or even increase slightly in the early 20s, with a more rapid decline thereafter, then it would be important to identify features of each portion of the transition to adulthood that explain this pattern. For instance, is the denial of youth phenomenon stronger earlier in emerging adulthood? What are the psychological and social correlates of this pattern? Understanding the sources of interindividual differences in subjective age at various chronological ages in emerging adulthood holds many possibilities for future research.

With respect to explaining interindividual differences in subjective age, the results supported the hypothesis that psychosocial maturity would be more important as a marker of adulthood than the number of role transitions. These results are consistent with Arnett's (1994) research showing that individualistic characteristics such as attaining independence and engaging in responsible behavior are seen by emerging adults as more indicative of reaching adulthood than are role transitions such as getting married. Feeling older may require engagement in mature behaviors and experiencing psychological maturity, regardless of whether a given role is occupied. One caveat is in order. Because of the nature of the sample in this study (university students), there may have been less variability in the number of role transitions than would be found among young people not attending university.

Specifically, a sample of nonstudent emerging adults might be characterized by larger numbers who have moved out into the labor force, sought a place in the military, or established a family. In a nonstudent sample, it is possible that role transitions might explain more variation in subjective age than found in the current study.

We were unable to provide evidence for barriers to achieving an older subjective age. Although we had hypothesized that economic pressure and financial dependence on parents would be inversely associated with subjective age, these relationships did not materialize. Perhaps the psychological manifestations of economic hardship are accepted by emerging adults more as a rite of passage that accompanies the transition to adulthood rather than as a comment on how old they should feel. Although we hypothesized that overindulgence in alcohol would be related to a younger subjective age, there was no such relationship. Perhaps alcohol use is so normative on campuses that it is not relevant to one's self-perceptions of age. After all, a considerable amount of variance in alcohol use among university students is explained simply by beliefs about the fun associated with drinking (Maggs, 1997). Moreover, alcohol use has both negative (lowered self-esteem) and positive consequences (heightened perceived peer acceptance) in emerging adults, demonstrating the complexity that characterizes the relationship between alcohol use and self-perceptions (Maggs, 1997).

As mentioned earlier, the composition of the sample is a serious limitation of this study, as university students do not represent all emerging adults. Furthermore, the sample included many more females than males, making the exploratory analyses of gender differences less powerful than they could be. The fact that the sample was not ethnically or culturally diverse also significantly limits generalizability. We know that ethnicity and culture may be associated with different conceptions of the transition to adulthood (Arnett & Galambos, 2003). For example, recent research shows that although individualistic criteria for adulthood are similarly endorsed across many cultural and ethnic groups, there are some unique differences (Arnett & Galambos, 2003). Two thirds of young Israelis view military service as an important criterion for adulthood (Mayseless & Scharf, 2003). In Argentina, young people view family capacities (e.g., caring for children) as a very important marker of adulthood (Facio & Micocci, 2003). Among young Mormons, rites of passage specific to their religion (e.g., mission service) are important criteria for movement into adulthood (Nelson, 2003). These differences draw attention to the importance of considering cultural background in the investigation of subjective age. Cultural differences in what it means to be an adult could well affect the turning point from an older to a younger subjective age

and perhaps even whether the turning point exists at all. Consider what subjective age would look like in a Third World nation with high mortality rates and short lifespans.

Examination of the transition to adulthood also ought to include other underrepresented populations. For instance, what is the transition to adulthood like for emerging adults with motor disabilities such as cerebral palsy and spina bifida? Do the physical challenges of such conditions and reliance on other individuals for assistance impact the timing and acquisition of feeling like an adult? It is important to extend the study of subjective age and emerging adulthood to people with disabilities.

It would be very informative to observe developmental trajectories in subjective age across the period of emerging adulthood. Although we refer to a crossover effect, this process has not been documented longitudinally. The ideal study would examine between-person predictors (e.g., cultural group) of trajectories of intraindividual change in subjective age over multiple times of measurement. Moreover, intraindividual change in life circumstances and relationships could also be documented and related to trajectories of change in subjective age. In this way, we would have a better idea of whether the crossover is a transition-linked turning point, that is, a transition that can be clearly connected to movement into and out of specific roles, relationships, and life experiences. As a developmental phenomenon, subjective age holds great promise for understanding how individuals construct and comprehend their own maturation.

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