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Continuity and Change from Adolescence to Emerging Adulthood: Adolescence-limited vs. Life-course-persistent Profound Ego Development Arrests

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Abstract

Participants ($n = 36$) with consistent Pre-conformist ego development levels during multiple adolescent assessments were studied to determine whether and how their ego levels had changed at age 25. Those ($n = 12$) whose ego levels remained at the Pre-conformist level were assigned to a *life-course-persistent profound ego development arrest* trajectory group; those ($n = 24$) whose ego levels reached the Conformist or Post-conformist level at age 25 were assigned to an *adolescence-limited profound ego development arrest* trajectory group. Analysis of predictors and age 25 correlates of group membership revealed that selected age 14 family interaction behaviors differentiated the two groups. At age 25, members of the adolescence-limited group showed superior performance on several measures of interpersonal and intrapersonal functioning.

Keywords

Ego development; Family contexts; Trajectories; Adolescence; Emerging adulthood; Identity; Hostility; Close family and relationships; Attachment

Introduction

Since its inception in 1978, a central conceptual framework and key repeated measure in our longitudinal study has been ego development, as theoretically and empirically defined by Loevinger (1976) and Loevinger and Wessler (1970). In this new contribution to adolescent-

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adult studies, drawn from our long-term longitudinal project (Hauser et al. 2006), we describe a subtype of adolescent arrested ego development—adolescence-limited—which we have identified. We examine both hypothesized family antecedents *and* concurrent adulthood close relationship dimensions of this trajectory and a second subtype—life course persistent ego development arrest.

Loevinger (1976) defines the ego as a “master trait;” as it develops, individuals grow to hold increasingly complex orientations to the self and the interpersonal world. Candee (1974, p. 621) views these orientations as falling along a continuum in which each stage marks “a more differentiated perception of one’s self, of the social world, and the relations of one’s thoughts and feelings to those of others.” Loevinger’s model characterizes those at low ego levels as egocentric, demanding, and likely to use manipulative behaviors in order to achieve their goals. In contrast, her perspective conceptualizes individuals at high levels of ego development as possessing superior coping skills, having greater tolerance for ambiguity, appreciating and exhibiting cognitive complexity, recognizing interpersonal interdependence, and valuing the search for personal identity. McAdams (1998) describes progression in ego development as the process by which the Jamesian “I” progressively constructs the “me,” while Kegan et al. (1998) regard the process of attaining higher levels of ego development as a series of progressive differentiations between subject and object.

Noam et al. (2006, p. 752) recently summarized Loevinger’s stage sequence:

...ego develops along a sequence of developmental stages, from the Impulsive state, where the world is perceived in its dichotomy of black and white (good and bad) and the person is enveloped in his or her own egocentrism; to Self-Protective, where the world is perceived as hostile and threatening; to Conformist, where ideas and behaviors are governed by external rules; to Self-Aware, where the self, at last, becomes the focus of its own awareness; to Conscientious, where one’s conscience becomes its own judge; to Individualistic, where the value of an individual is fully appreciated; to Autonomous, where the life and the self are perceived in their complexity and interrelatedness.

Ego development is defined both in terms of stages, as described above, and also by means of the superordinate levels of *Pre-conformist* (Impulsive and Self-Protective stages), *Conformist* (Conformist and Self-Aware stages), and *Post-conformist* (Conscientious stage and above).

Much of the still growing literature on empirical research (cf. reviews by Hauser 1976, 1993; Noam et al. 2006; Westenberg et al. 2004) investigating Loevinger’s construct is based on assessments of ego development stages on a single occasion, examining how they both correlate with and predict concurrent and subsequent functioning. Some recent studies in this tradition have substantiated positive, hypothesized relations between ego development and emotion differentiation (Kang and Shaver 2004), complexity of romantic relationship perceptions (Bakken and Huber 2005), adolescent academic locus of control and learning orientations (Bursik and Martin 2006), and the endorsement of developmentally-appropriate identity statuses during emerging adulthood (Billings and Bursik 2008).

Some investigators (e.g., Bursik 1991; Lanning et al. 2007; Loevinger et al. 1985; Westenberg and Gjerde 1999; White 1985) use longitudinal datasets to track *changes in ego development* over time. Hauser and his research team (e.g., Hauser et al. 1991, 2006) offer one approach here, based on repeated measures of ego development over many years, where they apply theoretically-derived definitions (Erikson 1968; Loevinger 1976) to define an array of *ego development trajectories* individuals can theoretically follow over time. Each such trajectory reflects the grouping together of individuals for whom successive measurements of ego development have been similar in timing and extent (Westenberg and Gjerde 1999). While certain trajectories (*Accelerated*, *Consistent Conformist*, and *Profound Arrest*) indicate ego level stability, others (*Progression*, *Moratorium*, and *Regression*) reflect change over time. Individuals following the Accelerated trajectory are those with Post-conformist levels of ego development at all times of measurement; Consistent Conformist and Profound Arrest trajectories reflect Conformist and Pre-conformist ego levels at all measurements, respectively. The Progression trajectory represents those individuals whose ego levels increase over the measurement period; those whose ego development patterns are marked by fluctuations between higher and lower levels comprise the Moratorium trajectory. The Regression trajectory reflects decline in ego level across the measurement period.

Building upon this approach, Hennighausen et al. (2004) classified the members of a sample of adolescents into specific trajectories, based on up to four annual ego development assessments obtained during the teen years. The teens' trajectory status related to several conceptually relevant relationship functioning indices at age 25. For example, when compared with members of other trajectory groups, participants in the *profound arrest* trajectory were rated by peers during early adulthood as being significantly more hostile. These profound arrest participants gave subjective accounts of close relationships characterized by lower levels of interpersonal understanding. In contrast, participants who progressed to, or maintained, higher levels of ego development during adolescence were rated, at age 25, by peers as being less hostile and more flexible. Moreover, those same adults who as adolescents followed progressive and accelerated ego development paths described in their interviews about close relationships (Schultz 1993, Manual for scoring young adult close peer relationship interviews with the developmental relationship scales, "Unpublished manuscript") high levels of prosocial behaviors, including engaging in more complex interpersonal sharing of experience, and using conflict resolution strategies that were more collaborative in nature. Overall, Hennighausen et al. provide evidence that the following of a profound arrest trajectory during the teen years may be associated with suboptimal relationship outcomes during the mid-twenties.

Basic Concepts, Research Questions, and Hypotheses

In light of these intriguing findings, we chose to more intensively focus on the *subsequent* ego development—in terms of differentiation within this group as well as predictive and functional aspects—of the teenage profound arrest group. Among the compelling questions we now asked were: Do all members of this group remain in profound arrest—i.e., at the Pre-conformist level of ego development—through age 25? Or, are some individuals able to achieve ego level gains in their early adult years? In framing these new questions, we drew upon contributions by Moffitt (1993) and Moffitt et al. (2002), who first introduced two key

concepts: *adolescence-limited* and *life-course-persistent* pathways of antisocial behavior. Just as Moffitt et al. identified adolescents who do, and do not, continue their involvement in antisocial behaviors in later life, we sought to identify adolescents who do, and do not, emerge from profound ego development arrest by age 25. Just as Moffitt et al. delineated predictive factors hypothesized to influence later patterns of antisocial behavior, we sought, on an exploratory basis, to identify adolescent-era dimensions which may have contributed to teens' later outcomes with respect to adolescence-limited and life-course-persistent ego development arrest groups.

Hypothesized Predictive Dimensions—Between the teen and early adult years, individuals continue to develop with respect to their close relationships and individual functioning. Relationship development includes processes of individuating from families of origin in ways that, ideally at least, promote psychological autonomy in the context of warm, ongoing family bonds. Hauser et al. (1984) concluded, from their direct observation family analyses, that adolescent ego development is likely enhanced by family interaction behaviors (e.g., acceptance, focusing, problems solving, curiosity) that theoretically enable development, and obstructed by those family interaction behaviors (e.g., devaluing, withholding, indifference) that theoretically constrain development. Allen et al. (1994) illustrated that adolescent ego development is associated with family interaction behaviors promoting autonomy in a context of relatedness, above and beyond the effects of constraining and enabling family behaviors. Consequently, we would expect that variations in family interaction patterns during adolescence may influence further differentiation of profound ego development teens into those following an adolescence-limited pathway of arrested ego development, and those teens those who in early adulthood follow what may become a life-course-persistent one, as manifest by no change in ego development by age 25. In this exploratory report, then, we examine family interaction behaviors as possible predictors of adolescence-limited vs. life-course-persistent ego development arrest trajectory membership.

Hypothesized Outcomes—Beyond our theoretically-driven search for predictive factors, our adoption of this adolescence-limited versus life-course-persistent taxonomy for defining ego development trajectories can lead us to other conceptually relevant ways in which the two trajectory groups may function differentially at age 25. A first realm of functioning represents an extension of the Hennighausen et al. (2004) close relationship findings. If, as concluded by these investigators, profoundly arrested teens are characterized by more problematic adult relationships—on both objective and subjective measures—at age 25 than teens who followed other ego development paths in their teen years, then what will see when we look at outcomes *within* the profound ego development arrest group? More specifically, will those adolescents who emerge from arrest by age 25 show enhanced relationship functioning, relative to those who do not?

Considering close relationships can lead to better understandings of whether the adolescence-limited and life-course-persistent profound arrest groups differ in the quality of their interpersonal adaptation. A second significant outcome realm involves an aspect of *intrapersonal* functioning—specifically, continued identity development—which may be

especially pertinent in young adult years. We began by considering Arnett's (2000) conceptualization of *emerging adulthood*, referring to the period from the late teens through the twenties. Arnett argues that especially within cultures encouraging exploration of roles and values, individuals within this age cohort are free from the dependency that marks childhood and adolescence, yet they often have not fully assumed responsibilities characteristic of adulthood. Our expectation, with respect to ego development pathways, is that those young adults who shifted from adolescent persistently low (pre-conformist) to higher ego levels will be inclined to take maximum advantage of this developmental era by "trying on" an array of roles and values, before making firm commitments to any of them.

In the tradition of Erikson (1968), Marcia (1966, 1980) developed a taxonomy for characterizing individuals in terms of *identity development*, which he defined as the degree to which they have experienced a personal identity crisis, and made a commitment to specific adult roles and values. In Marcia's paradigm, individuals reach *Identity Achievement* through having experienced a crisis and making a commitment. Individuals in a state of *Identity Moratorium* are those in the midst of a crisis and who may be actively "trying on" a number of roles and ideals in an experimental manner, but who have not yet committed to these choices. Individuals expressing *Identity Foreclosure* have made commitments to roles and values, but seem not to have experienced an exploratory period of crisis before doing so; the act of having committed in the absence of crisis may suggest that foreclosed individuals have unquestioningly accepted the roles and values advocated by parents or other authority figures. *Identity Diffusion* characterizes adults who are neither currently experiencing a crisis, nor working to resolve questions of personal goals and values. In Marcia's parlance, we expected that at age 25, members of the adolescence-limited profound arrest trajectory group would be more likely than life-course-persistent group members to be described by close peers as having experienced an exploratory period of identity crisis—that is, to show relatively higher concordance with the achievement or moratorium identity patterns.

Summing up, prior findings about: (a) influences of family interactions on adolescent development, (b) relations between ego development and interpersonal functioning in close peer relations, and (c) theoretical speculations about ego development and identity development patterns, led to two major sets of exploratory hypotheses about predictors and outcomes associated with these two ego development arrest trajectories:

1. Adolescent-era family interaction variables meaningfully differentiate life-course-persistent and adolescence-limited profound ego development arrest groups, thereby suggesting possible family predictors of growth in ego development between adolescent years and emerging adulthood.
2. In emerging adulthood, members of the life-course-persistent and adolescence-limited ego development arrest groups will differ on specific measures of psychosocial functioning.
 - a. *Interpersonally*, following Hennighausen et al. (2004), adults in the adolescence-limited ego development arrest group will, on objective and subjective indices, exhibit more adaptive relationship functioning at

age 25 than those in the life-course persistent ego development trajectory group.

- b. *Intrapersonally*, and following Billings and Bursik (2008), adolescence-limited participants will more likely show evidence of having been engaged in periods of exploration into roles and values, as a part of their search for and commitment to a sense of personal identity.

Method

Participants

The present report draws upon data collected during the course of a longitudinal project that began in 1978 (Hauser et al. 1991, 2006, 1984). The project's full sample (M age = 14.43, SD = .87) was deliberately constructed with the goal of capturing a broad range of psychosocial functioning. One cohort included 76 adolescents drawn from a pool of 250 volunteers from the freshman class of a public high school. With the expectation that psychiatric hospitalization may serve as a potential marker of lower levels of ego development, the second cohort consisted of 70 adolescents with impairments of sufficient severity to warrant admission to a private specialized child and adolescent psychiatric facility.

These adolescents had diagnoses based initially on the second edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-II*; American Psychiatric Association 1968); these diagnoses were subsequently updated using criteria specified in the revised third edition of the *DSM (DSM-III-R*; American Psychiatric Association 1987). These latter diagnoses ranged from conduct or oppositional defiant disorder (50%) to depressive disorders (30%), anxiety disorders (6%), and other disorders (e.g., anorexia and avoidant and histrionic personality disorders) (14%). Psychotic, cognitively impaired, and medically impaired patients were excluded from the psychiatric ("clinical") sample. The two adolescent samples did not significantly differ along the lines of age, gender, birth order, or family structure (i.e., one- vs. two-parent families). They differed only in terms of socioeconomic status, which was somewhat higher (i.e., more upper middle class, compared with more lower middle class) for the high school sample. Overall, the 146 participants were from predominantly White and upper middle class families (M Hollingshead 1975, Four-factor index of social status, "Unpublished manuscript", socioeconomic status = 2.07, SD = 1.26).

During adolescence, participants were seen annually for up to four annual assessments. As they reached early adulthood (M age = 25.7 years, SD = .95), they were invited to participate once again; by that time, one participant was deceased, and three declined to take part. No significant differences on demographic or psychiatric measures were evident to differentiate those who did, and did not, participate at age 25.

For the purposes of the present study, a complete array of adolescent and young adult measures was available for 133 participants, or 93.7% of those seen at age 25. The young adult protocols of the other nine participants were incomplete (e.g., due to Q-sorts not

completed by nominated peers) and their data were excluded. Analyses reveal that these nine participants did not differ demographically or psychiatrically from the 133 participants for whom complete data were available. Because the present study was designed to more intensively examine predictive and outcome aspects of a specific ego development trajectory—profound ego development arrest—our final sample included only those 36 young adult participants who expressed this pathway as adolescents. The ego development arrest sample included 7 former high school students and 29 former psychiatric patients; in terms of gender, the sample included 22 male and 14 female young adults.

Adolescent Procedures

During the first year in the longitudinal project, adolescents were assessed on three occasions; they then completed up to three annual follow-up assessments in subsequent years. These baseline and follow-up assessments encompassed paper-and-pencil measures, individual semi-structured interviews and family interaction tasks (e.g., revealed differences discussions). Assessments occurred for the non-patients and their families in rooms at their high school and/or in private offices and meeting rooms of the research project. Patients and their families were seen in private offices at the psychiatric hospital or (after being discharged from the hospital) in private offices and meeting rooms of the research project.

During the first session of the year one assessments, adolescents completed a range of measures (summarized in Hauser et al. 1991) including the ego development measure (WUSCT; Loevinger and Wessler 1970) described below. Within a month of the ego development assessment, each adolescent engaged in a semi-structured clinical interview (with one of the project-trained psychiatrists, psychologists, social worker, or advanced psychology graduate student interviewers), many results of which are described elsewhere (e.g., Hauser et al. 1991, 2006; Hauser 1999) but not included in the present report.

Adolescent Assessments

Ego Development—The Washington University Sentence Completion Test (WUSCT; Loevinger and Wessler 1970) was administered to each adolescent during the baseline and annual follow-up assessments. The WUSCT is a semi-projective instrument consisting of 36 sentence stems (e.g., “Raising a family ____;” “Being with other people ____”) that participants are instructed to complete. Test scoring is based on the notion that each individual will display a core level of ego functioning. Each of the 36 items is scored for ego stage; item results are summed to obtain an item sum score (ISS) (Hauser 1976; Loevinger and Wessler 1970). An overall stage score, the Total Protocol Rating (TPR), is derived from the distribution of scores across items using the ogive rules presented in the scoring manual (Loevinger et al. 1970). The TPR stages, assessed by the WUSCT, include Impulsive, Self-Protective, Conformist, Self-Aware, Conscientious, Individualistic, Autonomous, and Integrated stages (Loevinger 1976; Loevinger and Wessler 1970). The TPR for each participant can then be summarized into one of three theoretically coherent *ego development levels*: (a) Preconformist (Impulsive, Self-Protective), (b) Conformist (Conformist, Self-Aware), or (c) Post-Conformist (Conscientious, Individualistic, Autonomous, and Integrated). The reliability and construct validity of the measure have been well established (Hauser 1976, 1993; Loevinger and Wessler 1970; Redmore and Waldman 1975; see

Westenberg et al. 2004, for a recent review.) These procedures yielded ISS, stage (TPR), and ego level ratings for each point at which the SCT was administered.

Family Procedures and Assessments

About two months after these adolescent-centered assessments, all teens and their parents participated in a revealed-differences procedure (Strodtbeck 1958). All direct observation family interaction data described in the present report are drawn from the recorded and transcribed family revealed differences discussions that occurred in the first year of the study.

In the revealed differences procedure, family members were first interviewed separately to discuss Kohlberg (Colby and Kohlberg 1987) moral dilemmas. After these individual sessions, the family members gathered as a group to individually defend their different responses to specific moral dilemmas and, if possible, reach joint family resolutions to their differences about these dilemmas. Based on the results of the individual moral dilemma interviews (given immediately before the family meeting), the two research assistants who conducted the three interviews sequenced the ensuing group discussions so that each family member held a minority opinion for one of three 10-minute discussion segments. Although he or she gave instructions to the family regarding the specific differences to be discussed and reviewed the dilemma for them, neither research assistant remained in the room during the ensuing discussions. The family group discussions usually lasted 40 to 45 minutes, and were audio taped and then transcribed. These rich and usually lively discussions were subsequently coded via the following two empirical family scoring systems.

Constraining and Enabling Coding System (CECS)—Based on family discussion transcripts (with use of audiotapes for any ambiguous speeches), all adolescent and parent speeches were then coded according to a three-level scheme—identifying speaker, speech category (Table 1) and target of speech (Hauser et al. 1984). The Constraining and Enabling Coding System categories encompass cognitive and affective components, which guide (through empirically defined constructs) and organize the actual scores (for intensities ranging from 1–2 for up to two cognitive and two affective codes) assigned to each speech. More detail about this coding system is available (e.g., Hauser et al. 1984, 1991).

Scores for each discussion participant were generated through trained coders applying this system to all transcripts, leading to total number of speeches in each category, and also as proportions, by dividing the number of speeches in a given category by the total number of speeches for the speaker. It is these proportional scores that are used in the analyses that follow. In addition, speeches were coded not only by speaker but also by target—so that, for example, the adolescent’s “Distracting” speeches to mother, and to father, could be tracked separately. Inter-rater (intraclass, ICC) reliabilities of speech coding by categories were acceptable, as were reliabilities for the classification of speeches by speaker and target (Hauser et al. 1984).

Autonomy and Relatedness Coding System (A–R)—Allen et al. (1991, The autonomy and relatedness coding system: A scoring manual, “Unpublished manuscript”) developed this system to measure the extent to which family members’ speeches encourage

or inhibit autonomy and relatedness of other family members. In contrast to the CECS approach, this system provides ratings on the basis of the totality of a participant's verbal behavior during the interaction, rather than through separate, speech-by-speech coding. In comparing these two approaches to family interaction coding, the authors note that with the A–R method:

a single, brief, but unusually hostile remark might very substantially increase a score for a hostility scale, whereas a digression in which the family discusses plans following the interview might not influence any scales. This is in contrast to existing micro-analytic coding systems which typically code every speech and assign equal weight to every speech in a given category. (Allen et al. 1994, p. 182).

The A–R system provides codes for 10 individual speech dimensions, defined and classified into the three major categories of *exhibiting autonomous-relatedness*, *inhibiting autonomy*, and *inhibiting relatedness*. Behaviors revealing autonomous-relatedness include voicing and discussing the reasons underlying disagreements, expressing confidence in one's own position, and attending to, validating, and expressing interest in others' opposing views. Behaviors inhibiting autonomy include pressuring another party to agree with one's own position, recanting a position (without having been persuaded) in order to end the discussion, and “blurring,” or failing to distinguish between the basis of a disagreement, and the person with whom one disagrees. Behaviors inhibiting relatedness include direct expressions of hostility and the rude interruption or ignoring of another. It is noteworthy that evidence of discriminant validity was found in the first published paper on the A–R coding (Allen et al. 1994), where the authors reported that family autonomy and relatedness behaviors *added* to predicting teen-era ego development, above and beyond the predictions provided by the CECS (Hauser et al. 1984).

Young Adult Procedures

As the full sample approached age 25, all former adolescent participants were invited to take part in a second wave of data collection. Those choosing to participate were met by research assistants in private offices either at the research project site, or at locations close to the participants' homes. Interviewers and research assistants during this phase were blinded with respect to the original adolescent pool (i.e., high school or psychiatric hospital) from which each participant had been selected.

The young adult assessment procedures encompassed an array of paper-and-pencil measures (e.g., WUSCT; Loevinger and Wessler 1970), perceived competence (Messer and Harter 1986, Adult self-perception manual, “Unpublished manual”; Messer and Harter 1989, The self-perception profile for adults, “Unpublished manual”), psychiatric symptom dimensions (SCL-90; Derogatis 1983), and a close relationships inventory and individual semi-structured interviews (e.g., Adult Attachment Interview (AAI; Hesse 1999), Close Peer Relationship Interview (CPRI; Schultz 1993, Manual for scoring young adult close peer relationship interviews with the developmental relationship scales, “Unpublished manuscript”). In the CPRI, participants were queried about relationships with the two friends and/or romantic partners to whom they felt closest. After the interview the young adults were asked to give permission for the research team to contact these peers, who in

turn were invited to describe the participant using a version of the California Adult Q-sort (CAQ; Block 1978) used by Kobak and Sceery (1988).

Young Adult Assessments

Ego Development and Adolescent–Young Adult Ego Development Trajectories

—As in the adolescent phase, participants were asked to complete the WUSCT, which was scored according to the procedures described above. Once this scoring procedure was complete, the adolescent and young adult ego levels of all participants in the sample were then reviewed. By tracing the patterns of ego level over as many as four adolescent years and at age 25, operational definitions extending the theoretical definitions of adolescent ego development trajectories (given in Hauser et al. 1991) were applied to each young adult, resulting in his or her assignment to a specific adolescent-young adult ego development trajectory (e.g., sustained consistent conformist, continuing moratorium, progression). Two trajectories—adolescent-limited ego development arrest, and life-course-persistent ego development arrest—generated by these new theoretical and empirical taxonomies are central to the new analyses presented and discussed in this paper.

Close Peer Relationship Interview and Linked Scales—To provide us with more systematic and fine-grained information about the extent to which their early-adult close friendships and/or romantic relationships were characterized by psychological intimacy and autonomy, the participants engaged in the Close Peer Relationship Interview (CPRI; Schultz 1993, Manual for scoring young adult close peer relationship interviews with the developmental relationship scales, “Unpublished manuscript”). If a given participant was not currently in a romantic relationship, then this semi-structured interview focused on two close friendships. Participants involved in a romantic relationship were asked about that relationship, as well as a close friendship. Interview data were then rated using the Developmental Relationship Scales (Schultz 1993, Manual for scoring young adult close peer relationship interviews with the developmental relationship scales, “Unpublished manuscript”; Schultz and Selman 1998), based on the interpersonal theory developed by Selman (1980) and Selman and Schultz (1990). These scales then generated markers of self-reported autonomy and relatedness interactions and explicit self-reflections concerning each participant’s two closest peer/romantic relationships.

The CPRI data were rated separately by two trained coders, leading to Developmental Relationship Scale scores for each participant. The coders then met in order to reach consensus on their coding. Scores on the following scales included in this report ranged from the lowest level of 0, to the highest level of 4:

Shared Experience—Shared Experience is an intimacy-oriented scale reflecting instances and patterns of harmonious emotional and physical connection. It is based on participants’ descriptions of actual interactions with the close peer, such as those involving self-disclosure, shared activities, and time otherwise spent together. Lower scores reflect engagement in relatively mundane or practical activities, coupled with limited emotional exchange; higher-level scores reflect the meaningful sharing of interests, activities, and values, and open expression of personal and relational issues. A special focus of this scale

involves the extent and quality of the participant's disclosures to the peer, and the participant's responses to the peer's own disclosures.

Interpersonal Negotiation—Interpersonal Negotiation, an autonomy-oriented scale, focuses on instances and patterns of conflict resolution that the individual reports when describing actual interactions with the peer. Interpersonal negotiation strategies are defined as the ways in which individuals in situations of social conflict deal with the self and the other person to gain control over inner and interpersonal disequilibrium. Low-level scores indicate use of impulsive, egocentric strategies to get one's way or to avoid harm. High-level scores indicate conflict resolution through more cooperative and collaborative strategies, such as candid sharing and negotiation.

Interpersonal Understanding—Interpersonal Understanding reflects the participant's representation of the core psychological and social qualities of persons and relationships. It reflects the presence (or absence) of a reflective social cognitive competency that serves as a necessary but insufficient condition for mature levels of interpersonal interaction. Key aspects this scale are perspective taking and the ability to understand how different perspectives may color a relationship. Low-level scores represent limited or concrete perspective taking, while higher scores index greater awareness of different points of view.

Meaning of Interdependence—Meaning of Interdependence is the subscale that measures the quality of the participant's reflections about interdependence in the relationship, and the extent to which issues of intimacy and autonomy are integrated. Low-level scores reflect representations of intimacy and autonomy as polar constructs; high-level scores indicate the participant's understanding that intimacy and autonomy need not be mutually exclusive.

Overall Relationship Maturity—Overall Relationship Maturity is a summary scale—derived from the preceding four scales by taking their average—indicating the developmental level (in terms of Selman's (Selman 1980; Selman and Schultz 1990) interpersonal relationship developmental perspective) of the interviewee's attitudes and perceptions regarding close interpersonal relationships.

California Adult Q-Sort—Once two close peers were identified as outlined in the procedural description above, the nominated peers were invited to rate the participants using a version of the California Adult Q-sort (CAQ; Block 1978; Kobak and Sceery 1988) and the instructions given by Kobak and Sceery (1988). For each participant, the two peer ratings were averaged so as to create a single composite sort. For 12 participants in the sample, only one peer provided ratings, and these single peer ratings are also included in the present analyses. Peer response rate was found not to differ by participant gender or psychiatric history. The following scales were derived from the resulting CAQ descriptions.

Identity Status—CAQ results were scored for ego-identity status using the Q Ego Identity Status (Q-EIS) prototypes developed by Mallory (1989). To formulate these prototypes, Mallory asked 10 experts in the field of ego-identity research to perform four separate sorts of the 100 CAQ items (using the standard 9-point forced distribution) in order to describe

hypothetical persons with each of the Achieved, Foreclosed, Moratorium, and Diffused identity statuses. The 10 expert sorts were then averaged for each of the four identity statuses in order to form the Q-EIS prototypes. (See Table 2 for the 5 CAQ items that experts rated as being most salient and least salient for each of the four ego identity statuses.) Inter-judge reliability for the Q-sort prototypes was high and ranged from .92 for Identity Diffusion to .97 for Identity Achievement. The content validity of the Q-EIS prototypes was provided by virtue of their construction by experts in ego-identity research. Mallory evaluated construct validity by reviewing correlations between scales. Scales that differ along both identity commitment and crisis dimensions would be expected to show the strongest negative relation; this was borne out by Mallory's analysis (e.g., Pearson $r = -.83$ between Achieved and Diffused identity statuses). Scales differing on either the commitment or crisis dimension showed less divergence (e.g., Pearson $r = .24$ between Achieved and Moratorium identity statuses.) Cramer (2000) provided further evidence of Q-EIS construct validity by relating Mallory's prototypes to an external criterion measure of identity status.

For the study we report here, results of the scoring procedure were used to create four continuous identity status scores, as well as one overall categorical score, for each participant. The continuous scores represent the extent to which the participant's pattern of CAQ responses correlated with Mallory's (1989) four ego identity prototypes. For a given identity status, a score approaching 1.0 represents strong concordance between the Q-EIS prototype for that status and the peers' description of the participant; and a score approaching -1.0 indicates a strong divergence between the prototype and the CAQ self-description. The overall categorical score identifies the identity status with which the participant recorded the strongest positive correlation. Because of the difficulties Mallory cited in relation to using purely categorical descriptors of the multidimensional identity status construct, the continuous measures of identity status were used in our analyses.

Hostility—A hostility mega-item score was created using the Q-sort scoring procedures described by Kobak and Sceery (1988). This mega-item represents the sum of the ratings associated with eight CAQ items relating to hostility, such as “has hostility toward others,” “expresses hostile feelings directly,” and “is subtly negativistic.” Kobak and Sceery reported that in their sample, the eight hostility items had good internal consistency ($\alpha = .76$); internal consistency in the present sample was comparable ($\alpha = .78$). In the present sample, peer ratings were moderately correlated (Spearman-Brown r for composite ratings was .53).

Results

Demographic and Clinical Differences between the Ego Development Arrest Trajectories

Consistent with the aims of our paper—intensively examining young adult outcomes (including possible shifts in their trajectories) of those adolescents who were arrested in their ego development as teens—we have focused on those participants ($n = 36$) whose ego levels remained constantly at the Pre-conformist level of ego development during adolescence. Of these participants, 12 continued to function at Pre-conformist levels at age 25, and were therefore assigned to the life-course-persistent profound ego development arrest trajectory

group. Of the remaining 24 participants, 22 achieved the Conformist level at age 25, while two were at the Post-conformist level; all 24 were assigned to the adolescence-limited profound ego development arrest trajectory group.

Demographic, diagnostic, and treatment information regarding these two trajectory groups is summarized in Table 3. Members of the adolescence-limited group were evenly divided by gender; in contrast, 10 of the 12 life-course-persistent group members were male. Seven of the 36 participants classified as ego development arrests during their teen years were non-patient high school students; of these, six (or 86%) progressed to at least the Conformist level by this later young adult time. The majority of the former ego development arrest psychiatric patients—18 of 29 (62%)—also progressed to the Conformist level by the time they were young adults.

Among the adolescence-limited group members who were former psychiatric patients, conduct disorder was the most prevalent *DSM-III* diagnosis, having been assigned to 33% of these teens. A likely related diagnosis—oppositional-defiant disorder—was the most prevalent adolescent diagnosis (45%) for the formerly-hospitalized members of the life-course-persistent group.

Adolescent Predictors of Membership in the New Ego Development Arrest Trajectories: Adolescent-era Family Interactions

Using the two ego development trajectory definitions specified above, Year 1 Family Interactions were compared between the two trajectory groups on both the CECS and the A–R family dimensions. Scales revealing group differences at or below $p = .05$ and trends (at or below $p = .10$) are presented in Table 4 for the CECS dimensions, and in Table 5 for the A–R measures.

Constraining and Enabling Coding System (CECS) Findings—Group comparisons of family interaction behaviors scored with the CECS reveal many expected significant and trend differences. Compared to teens following the adolescent-limited ego arrest trajectory (changing their ego levels in young adulthood), those who sustained their arrests into young adulthood (potential life-course persistent ego development arrests) revealed more constraining speeches to their mothers. These same teens expressed more overall cognitive-constraining speeches toward all family members, as well as ones targeted directly toward their mothers. In addition, the life-course persistent ego arrest young adults engaged in more distracting behaviors than the adolescence-limited young adults. In terms of affective constraining (e.g., devaluing, gratifying, indifference), mothers of life-course-persistent teens expressed higher rates of such speech overall, as well as higher rates of affective constraining speeches directed toward their adolescent sons or daughters. The fathers of life-course-persistent teens engaged in higher rates of gratifying speeches—speeches where undue agreement, acceptance, or praise are offered—often with the apparent intent of ending (rather than resolving) the discussion.

Beyond these results, other findings within the CECS domain run counter to our initial expectations. Suggesting the importance of clearly differentiating between the two parents, fathers of teens in the life-course-persistent group expressed lower levels of cognitive

constraining behaviors; they also revealed lower levels of constraining speeches toward their wives. In contrast to their higher levels of constraining interactions toward their mothers, adolescents in the life-course-persistent group engaged their mothers with significantly higher rates of cognitive enabling speeches, in comparison with the adolescence-limited teens.

Autonomy and Relatedness (A–R) Coding System Findings—In terms of specific family interactions expressing autonomous-relatedness dimensions, mothers of life-course-persistent teens engaged in higher rates of speeches indicating intense positive relatedness than did the mothers of adolescence-limited teens. So too, mothers and teens in the life-course-persistent group both expressed greater levels of interest in the others' views, asking questions to their teens and husbands.

In the domain of behaviors inhibiting autonomy, “blurring”—or the failure to distinguish between a person and their position—occurred more frequently for three separate speech pairs in the families of the life-course-persistent ego development arrest young adults: adolescents' speeches to mothers; mothers' speeches to adolescents; and mothers' speeches to fathers. Overall, *mothers of life-course-persistent teens engaged in higher rates of autonomy-inhibiting speeches than did mothers of adolescence-limited teens*. Along all of these dimensions, teen membership in the *life-course-persistent ego development arrest group was associated with higher levels* of autonomy-inhibiting behaviors.

Measures of relatedness-inhibiting behaviors also showed several group differences; in all cases, young adults with life-course-persistent ego arrest trajectories expressed higher relatedness-inhibiting scores as teens. Specific indices here included hostile and distracting adolescent-mother speeches, and overall more intense relatedness-inhibiting scores for these teens toward their mothers, and toward their both parents. The summary family-level score for inhibiting relatedness was similarly higher for the life-course-persistent group (cf. Table 5).

Outcomes Associated with Specific Ego Development Arrests—Young Adulthood Relationship Functioning

Dimensions of Young Adult Close Peer Relationships—Table 6 summarizes results comparing specific interview-based (Schultz 1993, Manual for scoring young adult close peer relationship interviews with the developmental relationship scales, “Unpublished manuscript”; Schultz and Selman 1998), relationship functioning scores between the two young adult ego development arrest groups, as well as those gleaned from the peer CAQ (Block 1978).

It is apparent that for all these young adult close relationship dimensions, members of the life-course-persistent ego development arrest trajectory group reveal less favorable levels of functioning at age 25 than the adolescence-limited ego development arrest young adults.

Young Adulthood Ego Identity Status—Table 7 presents the results of *t*-tests comparing ego identity status scores between the two trajectory groups.

As anticipated, at age 25, participants in the adolescence-limited group were described by peers as being significantly more representative of the identity achievement and identity moratorium statuses, than were those in the life-course-persistent group. In other words, peer ratings suggested that the adolescence-limited members appeared relatively more likely to have experienced a developmentally-appropriate period of exploration by the age of 25. In contrast, no differences were expected for identity diffusion or identity foreclosure dimensions, and none were found.

Discussion

A full two-thirds of adolescents following pathways of profound ego development arrest advanced to higher levels of ego development when seen again as young adults (age 25). Our analyses of observed adolescent and parental interactions from early adolescent years–11 years earlier–revealed possible family relationship influences that may have contributed to these unexpected progressions. In addition, at age 25, young men and women from the adolescence-limited ego development arrest trajectory group were functioning at consistently higher levels on several interpersonal and intrapersonal dimensions.

While Hauser et al. (1984), and then Allen et al. (1994), previously delineated independent contributions of diverse yet conceptually relevant family interaction behaviors (e.g., problem solving, active understanding, validating, expressing interest in others' points of views) to ego development during adolescence, the present findings argue that such family influences may persist through (at least) the young adult years. For example, life-course-persistent trajectory young adults as adolescents expressed more intense cognitive constraining in their families, especially toward their mothers. And they also were more distracting as their families worked on resolving differences in their thinking about moral dilemmas. Mothers of these teens also expressed higher levels of affectively constraining (e.g., devaluing) during the interaction overall, and particularly toward their son or daughter. Fathers of the life course persistent ego development arrest teens also were affectively constraining, especially along the lines of excessive gratification toward other family members. Other problematic interactions in the adolescence of the life course persistent arrest group included mothers inhibiting teens' and fathers' autonomy by overpersonalizing (or blurring the boundaries) when disagreeing or in any conflicts. Overall, these mothers expressed more autonomy-inhibiting behaviors within the family discussions. There were also many signs of relatedness-inhibiting among various speaker pairs through interactions like distracting and hostile responding.

At the same time, certain specific differences in family interactions were inconsistent with the preceding patterns. For instance, fathers of life-course-persistent teens revealed fewer cognitive constraining behaviors, as well as constraining behaviors of directed toward their wives. And these teens interacted with their mothers with higher rates of cognitive-enabling speeches. As has been observed elsewhere (e.g., Grotevant 1998; Hauser et al. 1991; Noam et al. 2006), relations between individuals and their contexts are bidirectional and multiply-determined. Thus, although there are many reasons to conclude that there were higher levels and more kinds of dysfunctional interactions in the teen families of those young adults who were already showing evidence of following pathways of life course persistent ego

development trajectories, we do not have solid empirical data to infer the extent to which these difficulties were driven by the adolescent or his parents. Examining specific micro-sequences within families (e.g., Hauser et al. 1987, 1991) and changes in family sequences and interactions over time could shed some light on the continuing controversies over compelling specific scientific—and ultimately applied—questions centering on underlying causes shaping family interactions. For instance, do life-course-persistent fathers' excessively gratifying efforts toward their sons and daughters primarily *contribute to* their ongoing developmental arrests? Or do these behaviors instead represent efforts *to adapt to*, accommodate, or change their teens' problematic family behaviors?

Observations of current interpersonal and intrapersonal functioning of the young adults in the two ego development arrest groups are clearer with respect to the nature of specific differences. Just as Hennighausen et al. (2004) demonstrated that profoundly ego development arrested teens experienced less optimal social relationships at age 25 than members of other trajectory groups, our findings illustrate that within the original ego arrest group, differential patterns of functioning emerge—with the life course persistent young adults being more extensively impaired—once these trajectories are extended into the mid 20s. Yet again, intriguing and complex questions about directionality of effect arise: Do those young adults following the adolescence-limited ego development trajectory experience fulfilling relationships because of the evolving capabilities and structures which mark their ego development gains? Or, have their abilities to engage in meaningful social relationships contributed to those gains? Or is the best answer here that effects in both directions are most likely?

Unresolved and significant questions arise along the lines of intrapersonal functioning—identity development. In Arnett's (2000) scheme, exploration of alternative roles, values, and choices is a key task for emerging adulthood. Do higher levels of ego development provide an emerging adult with the psychological resources and motivation to embark upon that exploration? Or, is it the exploration that leads to subsequent psychological growth?

A particular set of research questions highlighted by the above questions involves the period of time between the last teen-era ego development measurement—a mean age of 17—and the assessments performed at age 25. What triumphs and tragedies may have occurred over the intervening years? What relational bonds were forged—or broken—during the period?

Within our sample, additional data are available that may clarify these questions. At age 25, participants completed the Adult Attachment Interview (AAI; Main and Goldwyn 1998, Attachment scoring and classification systems. Manual in drafts, version 6.1, "Unpublished Manual"), the contents of which may reveal information about formative developments since the teen years. Adolescent-era clinical interviews, currently the focus of study in our lab's ongoing work on resilience—may in turn reveal cues and clues about determinants of subsequent progression and development.

We have not taken up the likely impacts of family and relationship contextual variables. Do subtle (and not statistically significant) variations in family-of-origin structure possibly contribute to later ego development growth, either for all participants or for sub-groups—the

former patients; the females? A particularly rich area for future inquiry is the ego development levels and pathways of the adolescents' parents, about whom we have such data on hand for up to four years.

Finally, already anticipated extensions of this new intensive examination of an adolescent-young adult trajectory will lead us to more deeply examine other trajectories of interest—moratorium, progression, regression—along the lines of adolescent family influences, and how they change as our original adolescents become adults. In what ways do trajectory changes continue, or stabilize, during the subsequent years of adult life, during times that new significant relationships (spouses, children, close peers) both enter and leave their lives?

We are mindful of limitations and noteworthy future implications of these new findings and interpretations. In terms of limitations, they include both limited sample sizes, as well as narrow demographic range in terms of ethnicity and socioeconomic status. For example, a growing body of literature (e.g., Conger et al. 1999; Wadsworth et al. 2005) describes processes linking family economic hardship to adverse child adjustment outcomes, and explores the extent to which such processes may generalize across key ethnic groups (e.g., Conger et al. 2002; Mistry et al. 2002). In parallel, other researchers (e.g., García Coll et al. 1996) highlight the importance of examining developmental outcomes with regard to the cultural, ethnic, economic, and social contexts with which children and families identify. Among the salient questions raised in these new contributions are whether the same family interaction processes as we describe above will also be significant antecedents of specific adolescent-adult ego development trajectories in women and men from other ethnic and racial settings, as well as whether different patterns of ego development trajectories may be found in these other settings. In short, further research will be required to determine whether and how the present findings may apply to diverse populations.

With respect to salient future implications, we encourage other researchers to attempt replication on samples of greater size and diversity. Moreover, we hope that additional investigation of our own sample will elucidate important mechanisms promoting change and obstructing change in this important area of psychosocial development. Rather than providing definitive conclusions to the questions of what promotes ego development gains during emerging adulthood, and what additional psychosocial sequelae may be associated with such gains, we see the present exploratory report as highlighting *potentially fruitful new avenues for further research on trajectories* of psychosocial development from adolescence through adulthood, which we have sketched throughout this paper, especially in the discussion and interpretation of our new findings.

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Biographies

Rebecca L. Billings became the Data Coordinator of the Paths Over Time and Across Generations project at Judge Baker Children's Center in 2001, and is a doctoral candidate in

clinical psychology at Suffolk University. Prior to assuming her project responsibilities, she received her Master of Science in Management, with concentrations in applied economics and finance, from the Alfred P. Sloan School of Management at MIT, and for more than a decade held a variety of managerial roles in corporate finance and information technology. Her major research interests include predictors and correlates of ego development trajectories, and the psychometric properties of Loevinger's Sentence Completion Test.

Stuart T. Hauser is Senior Scientist and Co-Director of the Clinical Research Training Program in Biological and Social/Developmental Psychiatry at Judge Baker Children's Center. He also is Professor of Psychiatry, Harvard Medical School as well as Professor II, Norwegian Institute of Public Health. He has studied aspects of adolescent development since 1964. While first focusing on aspects of adolescent identity formation, his research broadened to adolescent ego development, and then to the reciprocal impacts between adolescent arrests and progressions in adolescent ego development with surrounding family contexts. As the original adolescent longitudinal cohort matured, this research program extended to address issues relating to life span development (following the participants through their adulthood), intergenerational effects (now including the children [and spouses] of the original adolescent cohort), attachment, and close relationships. Stuart Hauser first met Dan Offer in the early 1970 s, while he was a Clinical Associate at NIMH. In 1977, he joined the Editorial Board of the *Journal of Youth and Adolescence*, founded by Dan, and worked with him in that position for the next 14 years. In 1986, he was the Annual Speaker at the Annual Conference of the Clinical Research Training Program in Adolescence (directed by Dr. Offer) at the Institute for Psychosomatic and Psychiatric Research Training at Michael Reese Hospital and Medical Center, Chicago. Over the years, Dr. Hauser met with Dr. Offer on many occasions at national meetings to discuss their shared interests in adolescent development and empirical approaches to normative and dysfunctional pathways. Their most recent meeting was through the Festschrift organized by the Institute for Juvenile Research, the publisher of Offer's *Journal of Youth and Adolescence* (Springer) and the Child Psychiatry Department of the UIC College of Medicine, Chicago.

Joseph P. Allen is currently Professor of Psychology and Director of Clinical Training at the University of Virginia. He received his Ph.D. in Psychology from Yale University. For over 20 years, he has been a close collaborator with Dr. Hauser, as a Co-Principal Investigator on all the adult phases of the NIMH-funded adolescent-adult development longitudinal project described and further analyzed in this paper. He has interests that follow in the tradition of Dan Offer's research on the psychological development of normal and disturbed adolescents. This includes research on the social development of adolescents and its implications for long-term developmental outcomes in adulthood.

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Table 1

Constraining and Enabling Coding System (CECS) categories

Category
<i>Constraining</i>
Cognitive
Distracting
Withholding
Judgmental
Affective
Indifference
Gratifying
Devaluing
<i>Enabling</i>
Cognitive
Explaining
Focusing
Problem solving
Curiosity
Affective
Acceptance
Empathy

Note: Adapted from Hauser et al. 1984

Table 2

Five Block (1978) California adult Q-sort items rated most and least salient for each identity status

Most salient	Least salient
<i>Identity achievement</i>	
26. Productive	22. Lacks personal meaning
35. Warm; compassionate	30. Withdraws when frustrated
70. Ethically consistent	42. Reluctant to commit self
75. Clear, consistent personality	45. Brittle ego defenses
96. Values own independence	55. Self-defeating
<i>Identity foreclosure</i>	
7. Conservative values	16. Introspective
41. Moralistic	22. Lacks personal meaning
63. Conventional	39. Thinks unconventionally
74. Satisfied with self	50. Unpredictable; changeable
93. Sex-appropriate behavior	62. Rebellious; nonconforming
<i>Identity moratorium</i>	
16. Introspective	1. Submissive
62. Rebellious; nonconforming	33. Calm; relaxed
68. Basically anxious	74. Satisfied with self
90. Philosophically concerned	86. Represses conflicts
96. Values own independence	97. Emotionally bland
<i>Identity diffusion</i>	
22. Lacks personal meaning	2. Dependable; responsible
42. Reluctant to commit self	26. Productive
45. Brittle ego defenses	35. Warm; compassionate
48. Avoids close relationships	71. High aspirations
50. Unpredictable; changeable	75. Clear, consistent personality

Note: Adapted from Mallory (1989)

Table 3

Demographic and clinical differences between the life-course persistent and adolescence-limited ego development arrest groups

	Life-course-persistent	Adolescence-limited
<i>N</i>	12	24
Males	10 (83.3%)	12 (50.0%)
Age at initial assessment	<i>M</i> = 14.2 <i>SD</i> = 1.0	<i>M</i> = 14.3 <i>SD</i> = 1.1
High school participants	1 (8.3%)	6 (25.0%)
Formerly-hospitalized participants	11 (91.7%)	18 (75.0%)
Family composition during adolescence		
One-parent family	58.3%	45.8%
Two-parent family	33.3%	45.8%
Other	8.4%	8.4%
<i>Among formerly-hospitalized participants</i>		
Most frequent diagnoses		
Conduct disorder	0	6 (33.3%)
Oppositional-defiant disorder	5 (45.4%)	4 (22.2%)
Major depressive disorder	2 (18.2%)	2 (11.1%)
Length of hospital stay (days)	<i>M</i> = 127.3 <i>SD</i> = 187.9 Range = 41–646	<i>M</i> = 265 <i>SD</i> = 265.3 Range = 37–921

Table 4

Mean baseline (year 1) adolescent-era CECS family interaction scores for the two ego development arrest trajectory groups

Measure	Life-course-persistent (<i>n</i> = 12)	Adolescence-limited (<i>n</i> = 24)	<i>t</i>	<i>p</i>	<i>d</i>
<i>CECS</i>					
Constraining					
Adolescent–Mother	0.46	0.32	1.80	.08	0.66
Father–Mother	0.21	0.36	−2.02	.06	1.18
Cognitive constraining					
Adolescent	0.40	0.27	1.75	.09	0.64
Adolescent–Mother	0.38	0.26	1.83	.08	0.68
Adolescent distracting	0.35	0.22	1.96	.06	0.71
Father	0.14	0.23	−1.94	.07	1.07
Father–Mother	0.16	0.33	−2.81	.01	1.73
Affective constraining					
Mother	0.06	0.02	2.05	.05	0.77
Mother–Adolescent	0.07	0.02	1.87	.07	0.69
Father gratifying	0.01	0.00	2.14	.05	1.01
Mother indifference	0.04	0.01	2.12	.04	0.78
Enabling					
Cognitive enabling					
Adolescent–Mother	0.89	0.73	2.07	.05	0.77

Note: CECS = Constraining and enabling coding system

Mean baseline (year 1) adolescent-era A–R family interaction scores for the two ego development arrest trajectory groups

Table 5

Measure	Life-course-persistent (<i>n</i> = 12)	Adolescence-limited (<i>n</i> = 24)	<i>t</i>	<i>p</i>	<i>d</i>
<i>A–R</i>					
Exhibiting autonomous-relatedness					
Mo–Adol positive relatedness	2.76	2.44	1.82	.08	0.79
Adol–Fa agreement	0.63	1.90	1.78	.10	1.03
Fa–Mo agreement	1.21	2.28	–2.11	.05	1.13
Adol–Mo queries	1.80	1.09	1.77	.09	0.68
Mo–Adol queries	3.20	2.60	2.45	.02	0.94
Mo–Fa queries	2.88	1.69	2.01	.06	1.24
Inhibiting autonomy					
Mo–Adol inhibiting autonomy	1.45	1.10	1.89	.07	0.73
Adol–Mo blurring	2.58	1.48	2.30	.03	0.88
Mo–Adol blurring	2.82	2.14	1.87	.07	0.72
Mo–Fa blurring	3.13	1.91	1.89	.08	1.07
Inhibiting relatedness					
Adol–Mo hostility	1.87	0.78	2.48	.02	0.94
Adol–Mo distracting	2.33	1.47	1.82	.08	0.69
Adol–Mo inhibiting relatedness	2.10	1.13	2.44	.02	0.92
Adol–Par inhibiting relatedness	2.06	1.20	2.10	.04	0.80
Family inhibiting relatedness	1.44	0.81	2.09	.05	0.79

Note: A–R = Autonomy and relatedness coding system;

Mo = Mother;

Adol = Adolescent;

Fa = Father;

Par = Parents

Table 6
Mean young adulthood relationship functioning scores for the two ego development arrest trajectory groups

Measure	Life-Course-persistent (<i>n</i> = 12)	Adolescence-limited (<i>n</i> = 24)	<i>t</i>	<i>p</i>	<i>d</i>
Developmental relationship scales					
Interpersonal negotiation	0.97	1.20	-1.81	.08	0.64
Interpersonal understanding	1.81	2.30	-2.73	.01	0.96
Meaning of interdependence	0.08	1.40	-2.51	.02	0.89
Shared experience	1.51	1.94	-2.48	.02	0.88
Overall relationship maturity	1.65	1.97	-2.54	.02	0.90
CAQ Peer Q-sort					
Hostility	41.45	30.85	3.09	<.01	1.19

Table 7
Mean young adulthood ego identity scores for the two ego development arrest trajectory groups

Measure	Life-course-persistent (<i>n</i> = 12)	Adolescence-limited (<i>n</i> = 24)	<i>t</i>	<i>p</i>	<i>d</i>
CAQ Peer Q-sort					
Identity achievement	−0.17	0.24	−3.32	<.01	1.28
Identity moratorium	−0.09	0.15	−2.94	<.01	1.14
Identity diffusion	−0.03	−0.19	1.17	.25	0.45
Identity foreclosure	−0.16	0.00	−1.51	.14	0.60