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Early- and Late-Adolescent Predictors of Psychological Health in Adulthood: Results from the Intergenerational Studies

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Abstract The longevity of longitudinal samples now allows study of such awaited projects as the prediction of psychological health from adolescence to early, middle, and later adulthood. In this report, we used California Q-sort (CQS) data collected from 106 members of the Intergenerational Studies at ages 14, 18, 30, 40, and 60. A Psychological Health Index (PHI) and measures of six aspects of personality (*self-confidence, assertiveness, cognitive commitment, outgoingness, dependability, and warmth*) were created from CQS items. Statistical analysis proceeds by univariate and multivariate steps to calculate the separate and combined ability of PHI and personality components in early and late adolescence to predict PHI and personality components at adult ages. Men show more overtime consistency than women in PHI from early adolescence through later adulthood. For both genders, PHI at age 40 draws the best prediction from early-adolescent PHI, still more so for men when late-adolescent effects are partialled out. Of the strong early-adolescent personality components predictive of age 40 PHI for men, *dependability* shows a unique *reversal* effect, such that the most psychologically healthy men at age 40 are those who show dependability in early adolescence and undependability in late adolescence. Aspects of social engagement, embodied by *outgoingness* at age 40, as one element of psychological health, appear most strongly related to this reversal effect of dependability in adolescence.

Keywords Psychological health · Intergenerational studies · Lifespan development · Dependability

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Introduction

Perhaps no concept occupies more of the common ground between human development and clinical psychology than psychological health, and no method better reveals stability and change in psychological health than longitudinal assessment of the same individuals across their life span. So much has longitudinal method freed us from a priori expectations of stability and continuity that change per se barely arouses our surprise, although the locus and meaning of such change often greet us with unanticipated and intriguing questions for further analysis. This we would expect of psychological health, given clinical observations of developmental twists and turns that mitigate and even reverse deficiency and disadvantage along the life span, as various theoretical positions have proposed about the distinct and disparate effects of age- and stage-specific processes. Alternatively, stability of psychological health deserves equal notice when it survives the flux of the formative years of youth and adolescence. In short, the study of psychological health represents a confluence of empirical, clinical, and theoretical issues. It is in such a crucible that we present our statistical findings of its stability and change from the teens to the sixties.

Stretching longitudinal study across the life span invites conceptual revisions of old assumptions pertaining to the development of psychological health from youth to adulthood and even across adulthood (e.g., Clausen 1991; Clausen and Jones 1998). Opportunity for study of stability and change increases as the outcome years expand from early adulthood to late middle age—from the thirties to the sixties in our study. It is the longevity of a longitudinal study, so to speak, that finally allows a more definitive inquiry into whether a dimension-like psychological health over youth and adulthood occupies a selfsame plateau, an evenly sloping incline, or an uneven landscape. Our prospective study offers a statistical mapping of this foundational terrain at the interface of developmental and clinical psychology.

If, where and when it is revealed, change in psychological health may be conditioned by evolving life tasks in early and later adulthood that call upon differential uses of the past (Peskin 1998; Peskin and Livson 1981), given the evolving constellation of strengths, interests, and challenges that present across the life span, individuals have a wealth of past selves upon which to draw to enhance current psychological health, As an example, a woman in her 30s, in the midst of active child rearing, may be most healthy if she recalls and "uses" her most conscientious self as a late adolescent. When she reaches her 40s, freed from some of her most intensive parental efforts, she may be most healthy if she recalls and uses her most playful and creative self as an early adolescent. We explore such "uses of the past" here, with access to the expansive spectrum of the life course carefully captured by the Intergenerational Studies.

We begin with a précis of terms to orient the reader to the statistical methods and organization of findings on the longitudinal course of psychological health in our present study. Stability and change are broad terms for an assortment of statistical outcomes (Jones and Peskin 2013). Under stability, we count, of course, the consistency of significant correlations between early and later ages. Relative continuity is also indicated when decline occurs evenly, like in the steady and expectable drop-off of correlations as age advances. But correlations that actually rise with the passage of time draw special attention to the long and incremental reach of developmental processes, precluded in short-term study, that link and integrate the manifestly different worlds of youth and adulthood.

Changes with age that are irregular, nonlinear, or unexpected present a swath of possible outcomes and, correspondingly, methodological challenges to describe their shape parsimoniously. The most familiar and generic of such uneven changes is the so-called sleeper effect (Kagan and Moss 1962) in which significant years "jump over" or override seemingly inert or weak years, so that an early age predicts a distant age, whereas an intervening age does not. Such inactivity favors interpretations, like psychoanalytic, that expect long-term effects to lie dormant during apparently inert time periods. But apropos of methodological precision, as we have critiqued elsewhere (Peskin 1972), such apparent inertness gleaned from univariate analysis may conceal complex and offsetting effects recovered in multivariate analysis, as when a seeming sleeper or weak variable turns into an opposite predictor when the masks of overtime consistency or presumed random error are statistically accounted for. Such a second look helps avoid the bypassing of age-specific processes.

A case in point is our own reanalysis of longitudinal correlations that initially suggested the failure of the mid-adolescent years to predict adult status, whereas multivariate analysis indicated that such prediction was indeed active (Livson and Peskin 1967; Peskin 1972). Alternatively, controlling for apparent consistency may change a predictor year into an inert one, while enhancing the power of an adjacent predictor. Thus, on further study, stability and irregularity may give way to the other. This kind of analysis may be likened to a clinical observer who discerns a different but concealed process beneath a manifest one, or who determines that a process has occurred in a briefer time span than first observed. Such multivariate analysis is drawn upon in our study when univariate analysis points to the likelihood of concealed effects. Together, first- and second-order analysis of stability *and* change apprehend the complexity of human development.

As an overview, our study proceeds in four steps anchored in a broad-gauged measure of psychological health whose overtime consistency is assessed from ages 14 to 60. Univariate and multivariate analyses are then drawn upon to estimate the separate and combined power of prior psychological health to predict subsequent psychological health from early and late adolescence to early, middle, and later adulthood. Further, personality components of psychological health are identified that best account for these predictions:

1. Zero-order intercorrelations of an inclusive Psychological Health Index (PHI) at five ages from adolescence to midlife—14, 18, 30, 40, and 60—for the men and women of the Intergenerational Studies (IGS).
2. Multiple prediction of adult PHI (ages 30, 40, and 60) from PHI at early and late adolescence (ages 14 and 18) jointly. Such multiple correlation analysis yields both the separate and mutual effects of early and late adolescence which are otherwise masked by their joint intercorrelation. This statistical design is used as well in Step 3 and Step 4, below.
3. A second round of analysis to specify adolescent personality components accounting for the prediction of psychological health at each adult age in Step 2.
4. A similar round of analysis to specify personality components at each adult age accounting for the predictive personality components in early and late adolescence in Step 3.

Method

Participants

Participants are 106 (51 men and 55 women) members of the Berkeley Guidance and Oakland Growth Studies, rare long-term longitudinal studies of men and women, begun in 1929, when participants were either infants or children (see Eichorn 1981 for more details). We incorporate here data from five time points: age 14, age 18, the 30s, the 40s, and the 60s. More specifically, Berkeley Guidance Study data were collected in 1942, 1946, 1958, 1970, and 1996, when participants were aged 14, 18, 30, 42, and 68. Oakland Growth Study data were collected in 1935, 1939, 1959, 1970, and 1983, when participants were aged 14, 18, 38, 49, and 62. We included only those participants with complete data at all time points considered. Reflecting the demographic composition of Berkeley and Oakland, California, during the late 1920s and early 1930s, when both studies were begun, the vast majority of participants are Caucasian. Consistent, long-term participants of any longitudinal study, like these studies, tend to be slightly more privileged and more conscientious than those who refused to continue participating, those who are otherwise lost to the study, or those who are dead (e.g., Martin et al. 2007).

Instruments

Study members were extensively interviewed by clinicians, at several different ages in childhood, adolescence, and adulthood, and transcripts were created of responses. Other supporting materials were also often collected. Raters then read the packet of material, separately for each age (no rater provided scores for the same individual at different ages), and then provided scores from 1 (*least characteristic*) to 9 (*more characteristic*) on a set of 100 California Q-sort items said to give an overall portrait of personality (Block 2008). Example items are “Seeks reassurance from others,” “Has a rapid personal tempo; behaves and acts quickly,” and “Arouses nurturant feelings in others.” Raters provided scores such that the total set of scores were ipsatively arranged, with a prescribed number of 1 s, 2 s, etc., through 9 s allowed (falling into a roughly normal distribution). Ipsative scoring allows raters to focus on each individual’s unique characteristics, without regard for what is normative for other individuals of the same age, and reduces response bias. Multiple raters scored each set of material; when the correlation between two raters across the original 100 items was .45 or higher, the scores were averaged. If the correlation was less than that, additional raters (up to four) provided additional Q-sorts until the composite reliability was acceptable (Spearman-Brown reliability of at least .65). When examined across multiple time points, Haan, Millsap, and Hartka (1986) determined that 27 of the 100 CQS items could be dropped, for maximum cross-time reliability, and these remaining 73 items are our focus here. The data we use here are from participants who provide complete data for all of our ages of focus—they were rated at ages 14, 18, and in their 30s, 40s, and 60s.

Personality

Using the maximally reliable 73 CQS items, Haan et al. (1986) performed an exploratory cross-time principal component analysis, with the loading patterns forced to be equivalent across a total of seven time points. Six principal components emerged from these analyses: *self-confidence* (e.g., satisfied with self, not feeling victimized), *assertiveness* (e.g., values independence, not submissive), *cognitive commitment* (e.g., values intellect, not uncomfortable with uncertainty), *outgoingness* (e.g., cheerful, not aloof), *dependability* (e.g., productive, not rebellious), and *warmth* (e.g., sympathetic, not negativistic). These components have been found to be reliable, valid measures of key aspects of personality (e.g., Jones and Meredith 1996) are available at each point of data, and CQS data are available, with the exception of the 60s for the Berkeley Guidance Study members.

Psychological Health

The Psychological Health Index (PHI) was created by Livson and Peskin (1967) as another method to take advantage of the rich CQS data available for these samples. Four experienced clinical psychologists independently created a 100-item profile of the “ideally psychologically healthy individual.” The average interrater reliability between psychologists was .82, and therefore, a reliable composite index of “ideal psychological health” was created. Using the subset of 73 CQS items, each individual’s CQS profile of scores is correlated with the idealized profile; correlations fall between -1.00 (completely psychologically unhealthy) and $+1.00$ (completely psychologically healthy). The correlation is further transformed via the Fisher r-to-z formula (Hays 1981) to take into account the skewed nature of the distribution of correlation coefficients.

“Psychological health” is clearly a broad concept; researchers have attempted to capture its essence with a variety of methodological techniques and tools, ranging from the biological (cortisol levels in saliva; e.g., Sjörs, Ljung, and Jonsdottir 2014) to the sociological (Holmes and Rahe Life Events Scale; e.g., Riese et al. 2014). Measures of psychological health show much variety within the discipline of psychology. Longitudinal studies similar to the Intergenerational Studies, or even the IGS itself, have used, in addition or instead of the PHI, straightforward self-report measures of subjective well-being (Diener’s Subjective Well-being Scale; e.g., Whisman et al. 2014), less face valid but equally robust self-report measures (the California Psychological Inventory’s v3 scale; e.g., Helson and Wink 1987; Jones and Peskin 2010), or more projective measures, including measures of ego strength (Loevinger's sentence completion test; e.g., Helson and Wink 1987), or responses to the Thematic Apperception Test (e.g., Cramer and Jones 2008). Clearly, each has strengths and weaknesses. It is very unlikely that any single measure can capture the entire essence of psychological health. We use the PHI here because it has been shown to be a powerful, empirically valid index of psychologically health (Jones and Meredith 2000; Livson and Peskin 1967), and because it is the only measure of psychological health in the IGS that is available from early adolescence all the way through later adulthood. Example items are given in Table 1.

Results

Step 1: First-Order Correlations of PHI from Adolescence to Midlife (Table 2)

The zero-order correlations of PHI from adolescence to midlife do not support consistent or steadily diminishing predictability, but rather nonlinearity of prediction. Notwithstanding the significant interrelationships among the three adult ages for both genders, there is little uniformity of adolescent predictors, suggesting age-specific processes for the adolescent/adult linkages. Orderly decline with age is evident only for men from age 18 to age 60 (.44, .30, .13).

Overall, psychological health shows a stronger early-adolescent/adult nexus for men than for women: PHI at age 14 significantly predicts all three adult ages (.42, .50, .31) for men, but only age 40 for women (.35). Within adolescence too—between ages 14 and 18—psychological health is more stable for men than women (.69 vs. .36, $p < .05$). Indeed, overall, age 14 exceeds age 18 as a significant predictor of adult psychological health, an

Table 2 PHI by gender and age: means, standard deviations, and autocorrelations

	14	18	30s	40s	60s
Age					
14		.36**	.22	.35**	.19
18	.69**		.20	.39**	.26^{+}
30s	.42**	.44**		.52**	.54**
40s	.50**	.30*	.39**		.50**
60s	.31*	.13	.38**	.45**	
Men M	.04	.11	.27	.37	.62
Men SD	.45	.42	.46	.42	.38
Women M	.19	.11	.29	.52	.64
Women SD	.36	.36	.37	.41	.43

Men $N = 51$ and women $N = 55$. Men's autocorrelations below the diagonal, women's autocorrelations above the diagonal

$^{+}$ $p < .10$; * $p < .05$; ** $p < .01$

indication of the yet longer reach of early adolescence than late adolescence for men. Moreover, age 30 for men is robustly predicted from both ages 14 and 18 (.42, .44) but from neither for women.

Both genders show a similar increase in prediction from early adolescence to age 40: for men .50, for women .35. The power of age 40 to link with adolescence is shown again from age 18 for the women (.39). For women only, this linkage at age 40 may properly be called a sleeper effect since it "jumps over" the insignificant correlations (.22, .20) at age 30.

Step 2: Multiple Prediction of Adult PHI from Age 14 and Age 18 PHI (Table 3)

The common variance shared by adjacent age periods, while of interest in itself, masks or obscures the specific predictive power of PHI at each adolescent period for adult

Table 1 Example California Q-sort items comprising the PHI

Psychological Health Index
Is a genuinely dependable and responsible person
Has warmth; is compassionate
Behaves in a giving way toward others
Is productive; gets things done
Is socially perceptive of a wide range of interpersonal cues
Has a brittle ego system; has a small reserve of integration; would be disorganized and maladaptive when under stress or trauma
Feels cheated and victimized by life
Is emotionally bland; has flattened affect
Gives up and withdraws where possible in the face of frustration and adversity
Is negativistic; tends to undermine and obstruct or sabotage

Italicized items are negatively weighted items

PHI. The beta weights of the multiple correlations make transparent the separate contributions to ages 14 and 18, reducing or enhancing them as a function of their intercorrelation. For men, beta weights of .55 and −.08 at ages 14 and 18 with age 40, respectively, supplant the first-order correlations of .50 and .30 (Table 1). By this estimation, only early adolescence PHI survives as a predictor of age 40 PHI for men, eliminating entirely the predictive power of late adolescence. This finding is the most notable change in moving from zero-order to multiple correlations. For women, the common variance between age 14 and 18 is insufficient to affect any similar outcome. Although numerically altered, the three significant multiple correlations of Table 2 maintain the statistical contribution of adolescent PHI in Table 1 to predict PHI at age 30 and age 40 for men, and at age 40 for women. It is these three significant predictions that are further examined in Steps 3 and 4.

Step 3: Adolescent Personality Components Predicting Adult PHI (Tables 4, 5)

Table 4 for men and Table 5 for women present the early- and late-adolescent beta weights and multiple correlations for each of the six Q-sort personality components predicting PHI at ages 30, 40, and 60. These results specify the adolescent personality components underlying the PHI findings of Table 2. Tables 4 and 5 mirror the findings of Table 2 in yield of significant predictors.

For men, *self-confidence* (adjusted $R^2(aR^2) = .16$) and *cognitive commitment* ($aR^2 = .11$) account for the PHI prediction at age 30 from both early and late adolescence. These same components contribute significantly again at age 40 (.11, .10), but are overshadowed by *dependability* (.36). Clearly, it is *dependability*, together with *warmth* (.10), that thrusts PHI prediction at age 40 upward, as Table 2 shows. All four predictors of age 40 PHI are situated in early adolescence. A finding not anticipated in Table 2, where no such effect was indicated, is a single late-adolescent predictor: *Dependability* at age 18 predicts *lower* PHI at age 40. Between early and late adolescence, this personality component thus undergoes a *reversal*, such that dependability in early adolescence ($\beta = .80$) and *un*dependability in late adolescence ($\beta = -.34$) forecast age 40 PHI.

For women, Table 5 shows that the personality components of *self-confidence* and *cognitive commitment* (as for men at age 30 and 40) account for significant adolescent prediction of age 40 PHI. Both components are consequential only from late adolescence. Note that adolescent *cognitive commitment* forecasts PHI at all three adult ages for women, the only finding of such consistent reaches between personality and psychological health in the present study.

Step 4: Adolescent Personality Components Predicting Adult Personality Components (Table 6)

Having established the significant adolescent personality components of adult PHI in Step 3, we now target their power to predict the six personality components of adult psychological health. Table 6 presents the adjusted R^2 and beta weights for each adolescent personality component with the personality components of men at ages 30 and 40 and women at age 40. Only results with significant R^2 are given. The number of such predictors in Table 6 approximately reflects the number of findings of Tables 4 and 5. Thus, *dependability* for men, by far the strongest adolescent multiple predictor of age 40 PHI, exceeds all other predictors in the number of personality components of psychological health at age 40: Adolescent *dependability* yields significant multiple correlations with three adult personality components at age 40, namely *self-confidence* (.25), *cognitive commitment* (.28), and *outgoingness* (.19) (note that all significant adolescent components also predict itself in adulthood and need no further mention here). Only one other adolescent component multiply predicts two components in age 40 men: adolescent *warmth* predicts *self-confidence* (.13) and *dependability* (.09). For age 40 women, adolescent *self-confidence* predicts *outgoingness* (.12) and *dependability* (.08).

Regarding men, all adolescent predictors of age 40 personality components are situated in early adolescence, with the notable exception of one *reversal*, such that early adolescent *dependability* ($\beta = .58$) joins with late adolescent *undependability* ($\beta = -.60$) to predict the age 40

Table 3 Ages 14 and 18 PHI as predictors of ages 30, 40, and 60 PHI by gender

Predictor	30s			40s			60s		
	14	18	aR^2	14	18	aR^2	14	18	aR^2
PHI (men)	**.23**	**.28**	.19**	.55**	**−.08**	.22**	.42*	−.16	.07
PHI (women)	.17	.14	.03	**.24$^+$**	.30*	.17**	.11	.22	.04

Beta bolded if aR^2 $p < .05$

Beta weights given for each time point. aR^2 indicates adjusted R^2

$^+$ $p < .10$; * $p < .05$; ** $p < .01$

Table 4 Ages 14 and 18 personality as predictors of ages 30, 40, and 60 PHI: men psychological health

Predictor	PHI								
	30s			40s			60s		
	14	18	aR^2	14	18	aR^2	14	18	aR^2
Self-confidence	**.16**	**.31**	.16**	**.29**	**.12**	.11*	.27	−.09	.01
Assertiveness	.13	−.09	.00	−.29^{+}	.13	.03	−.17	.12	.00
Cognitive commitment	**.02**	**.36**$^{+}$	.11*	.44*	**−.12**	.10*	.39*	−.27	.04
Outgoingness	.16	.06	.00	.18	.06	.01	.18	.09	.02
Dependability	.10	.23	.06^{+}	.80**	**−.34***	.36**	.35^{+}	−.27	.03
Warmth	.16	.09	.01	.42**	**−.14**	.10*	.36*	−.18	.06^{+}

Beta bolded if aR^2 $p < .05$

Beta weights given for each time point. aR^2 indicates adjusted R^2

$^{+}$ $p < .10$; * $p < .05$; ** $p < .01$

Table 5 Ages 14 and 18 personality as predictors of ages 30, 40, and 60 PHI: women

Predictor	PHI								
	30s			40s			60s		
	14	18	aR^2	14	18	aR^2	14	18	aR^2
Self-confidence	.14	.12	.01	**.05**	**.37***	.12*	−.04	.13	.00
Assertiveness	.03	.03	.00	.00	.17	.00	.09	−.06	.00
Cognitive commitment	**.30**$^{+}$	**.08**	.10*	**.14**	.39*	.22**	.42*	**−.03**	.13**
Outgoingness	.05	.20	.02	.22	.07	.03	.08	.24	.05
Dependability	.16	−.27	.01	.17	−.15	.00	.09	.06	.00
Warmth	−.09	.00	.00	.07	.02	.00	.00	.01	.00

Beta bolded if aR^2 $p < .05$

Beta weights given for each time point. aR^2 indicates adjusted R^2

$^{+}$ $p < .10$; * $p < .05$; ** $p < .01$

component of *outgoingness.* The *dependability*/PHI reversal of Table 4 may then be attributed to adult *outgoingness*; male outgoingness at age 40 is greater when the maturing boy relinquishes dependable behavior for undependability in late adolescence.

Discussion

Longitudinal study of consistency and change, as ours, should be approached with the caveat that findings cannot be presumed to hold for unobserved ages adjacent to observed ones. It would be incautious, for example, to assume that stability prevails over an unobserved age period just because adjacent ages are positively linked—yet—more so for widely separated ages—because the longer unobserved period may conceal overtime change. Nor should predictors be pinpointed only to the age under study, since they might hold as well for unobserved adjacent ages. In the present study, except for the juxtaposition of early and late adolescence, the wide jumps of time separate age points (as much as 20 years between age 40 and 60) and lend pertinence to both cautions. Because of such wide age intervals, the findings of Step 1 pertaining to consistency and change leave open the possible linearity or nonlinearity, including sleeper effects, of intervening times. Findings for Steps 2, 3, and 4, too, must be qualified by the possibility that adolescent/adult prediction cannot conclusively be pinpointed to the adult age under study, but could pertain to adjacent ages as well.

That said, the findings of Step 1 can be best summarized by what is different and what is the same between men and women. For men, six of the seven autocorrelations between PHI at ages 14 and 18 and PHI at ages 30, 40, and 60 are significant; for women, only three of the seven are significant (Table 2). Such continuity for men stretches from age 14 to age 60. For both men and women, adolescent prediction of adult PHI does not decline but improves from age 30 to age 40.

Step 2 reexamines the zero-order correlations of Step 1 under the lens of a multiple correlation analysis in order to separate the specific from the joint contribution of early-

Table 6 Ages 14 and 18 personality predictors of ages 30 and 40 personality components

Predictor	14	18	aR^2	
Predicting				*Age 30 men*
Self-confidence	.27	.28	.23**	Self-confidence
Self-confidence	.00	$.39^+$	.11*	Dependability
Cognitive commitment	.18	.47**	.34**	Cognitive commitment
Predicting				*Age 40 men*
Self-confidence	.19	.29	.16**	Self-confidence
Self-confidence	.56**	−.16	.18**	Cognitive commitment
Cognitive commitment	.34*	.34*	.37**	Cognitive commitment
Dependability	.58**	−.07	.25**	Self-confidence
Dependability	.46**	.12	.28**	Cognitive commitment
Dependability	.58**	−.60**	.19**	Outgoingness
Dependability	$.35^+$	.09	.14**	Dependability
Warmth	.44**	−.10	.13**	Self-confidence
Warmth	.36*	−.02	.09*	Dependability
Predicting				*Age 40 women*
Self-confidence	.11	.37*	.16**	Self-confidence
Self-confidence	.20	$.26^+$	.12*	Outgoingness
Self-confidence	−.02	.35*	.08*	Dependability
Cognitive commitment	.03	.39*	.14**	Self-confidence
Cognitive commitment	.31*	.32*	.29**	Cognitive commitment

$^+$ $p < .10$; * $p < .05$; ** $p < .01$

and late-adolescent PHI to adult PHI (Table 3). This analysis yields a new finding for men undetected in the Step 1 analysis, namely that the predictive power of adolescence for age 40 PHI is due exclusively to age 14 PHI, no longer to age 18 PHI, as reported in Step 1 (the other beta weights of men and women otherwise mirror the zero-order correlations of Step 1).

Step 3 continues the multiple correlation analysis of Step 2, this time taking each of the six adolescent personality components to separately predict adult PHI in order to refine our search for the active elements that forecast adult psychological health (Table 4 and 5). Given the Step 2 findings of adult psychological health, it is not surprising that as many as four of the six personality components in early adolescence significantly predict age 40 PHI for men. At age 30, two adolescent components predict PHI for men. For women, two adolescent components predict PHI at age 40. Note that early adolescence holds sway for age 40 men, whereas late adolescence is pivotal for age 40 women.

The adolescent personality component of *cognitive commitment* is the most common predictor, foreshadowing adult PHI at five of the six ages: for men at ages 30 and 40, for women at ages 30, 40 and 60. *Self-confidence* is a runner-up, showing significance for men at ages 30 and 40 and for women at age 40. These cross-age and cross-gender effects suggest common resources from the past for a wide breadth of adult psychological health, in contrast to age-specific resources that support adult psychological health for a defined period.

Dependability and *warmth* may be designated age-specific uses of the past since they occur only for the PHI of men at age 40. *Dependability* is a singular finding in other respects beyond being unique to age 40: first, in sheer size of multiple correlation (.36) and early-adolescent beta (.80), far outstripping any other personality predictor of adult PHI; next, in reversal of sign ($\beta = -.34$), such that prediction of age 40 PHI is a product of early-adolescent dependability and late-adolescent undependability—the latter also being the sole effect of late adolescence. Note that the fine-tuning of the Step 3 analysis reveals a reversal effect undetected in Step 2.

Step 4 is further fine-tuning by specifying the adult personality components at ages 30 and 40 for men and age 40 for women predicted by the significant adolescent personality components of Step 3 (Table 6). Adult *self-confidence* is commonly predicted by all the significant adolescent components of men for age 30 and 40 and for women at age 40, with adult *cognitive commitment* in second place. The dependability–undependability reversal between early and late adolescence uniquely predicts *outgoingness* at age 40 for men.

The early- to late-adolescent reversal of *dependability* in predicting age 40 PHI for men perhaps best exemplifies the strong suit of longitudinal study to reveal the developmental twists and turns of psychological health—better than sleeper effects that capitalize on random statistical error. This reversal, furthermore, appears to be linked only to *outgoingness* at age 40, a personality component that combines Q-sort items scaled from social engagement to disengagement. That is, *un*dependability in late adolescence enriches adult outgoingness, but does not affect the adult outcomes of self-confidence or cognitive commitment.

As far as we know, reversals have been reported only in our earlier research with the present samples at the Institute of Human Development (Peskin 1972; Peskin and Livson 1981). The particular content of such reversals over these studies has not been replicated in the present study, a likely outcome of differing age intervals (preadolescence and mid-adolescence in the 1972 study), measuring instruments (Q-sort were unavailable for the 1972 report) and statistical structuring of the data (cluster vs. factor analysis of personality components leading to different makeup of components between the present and 1981 studies). Nevertheless, the lack of replication adds a cautionary note to the present finding of a single reversal for men's dependability–undependability.

Yet this *dependability* reversal is noteworthy. First, it is the most powerful adolescent predictor of overall age 40 PHI in men. Next, it is fine-grained in its exclusive link to *outgoingness*, an important component of adult PHI dealing specifically with social engagement. This reversal becomes more evenly balanced between the early-/late-adolescent beta weights when the criterion moves from PHI (.80/−.34) to *outgoingness* (.58/−.60). In short, the step-by-step emergence of the *dependability* reversal is perhaps the most illuminating contribution of our multiple correlation analysis to the longitudinal study of psychological health. Having gone unreported in empirical longitudinal study makes the present finding of disequilibrium a useful convergence of empirical research and developmental theory.

The reversal exemplifies a common recognition in much developmental theory (Bowlby 1988; Erikson 1950; Sullivan 1953), captured in Anna Freud's (1958) well-known formulation that "the upholding of a steady equilibrium during the adolescent period is in itself abnormal" (p. 275). Relinquishing a steady state may serve individuation by moving the adolescent forward from a secure base to test and challenge traditional cultural rules without excessive fears of losing impulse control or social inclusiveness. Perusal of the Q-sort items in the *dependability* component sharpens the picture of the to-be-healthy outgoing and socially engaged man at age 40 who in early adolescence was *dependable, productive, overcontrolled, satisfied with self, calm,* and *ambitious,* and in late adolescence *rebellious, undercontrolled, self-defeating, pushes limits,* and *unpredictable*. These two antithetical sets help organize a third, integrated state of social engagement at age 40—*outgoingness*—different from either of its opposite forerunners. Indeed, there is a single item's overlap between the Q-sort items in the *dependability* component and in the *outgoingness* component.

Such a secure base is also strengthened by the early-adolescent predictors of *self-confidence* and *cognitive commitment* for age 40 PHI in men, already operative for men at age 30. Together with *dependability* and *warmth*, these personality components tap into resources for the complex coordination of relational choices and commitments that come to the fore at the mid-adult transition of family and career building (Erikson 1950; Levinson 1978).

But the adolescent "conduits" to adult psychological health at age 40 are fewer for women. Further, the concept of disequilibrium seems to fit men but not women, the latter showing no indication of drawing on opposite adolescent resources (as we have cautioned above, the limited time span of our data precludes observing any preadolescent changes or reversals). Still, women do not differ from men in bringing adolescence to the same zones of adult psychological health. Women rather differ in following (or finding) different routes to these zones: Thus, adolescent *self-confidence* in women and *dependability* in men attain adult *outgoingness* equally. Indeed, *self-confidence* in women and *dependability* in men are gendered passages to an expanse of similar adult outcomes.

Might secular trends of changing eras play a part in such gender differences? In particular, might the fewer and later predictors for women in our study be attributed to less progressive or farsighted models of mature adulthood due to the gender inequality existing during the adolescent years of the IGS participants' adolescence in the 1930s and 1940s, leaving them to find their own uncertain and individual, rather than collective and mutually enhanced, ways to psychological health (e.g., Rönkä et al. 2003)? An exception to this idea would be women' culturally supported reliance on intellectual competence and achievement in adolescence; indeed, the only adolescent component reaching as far as age 60 PHI is women' *cognitive commitment* (Table 5). Finally, should we expect greater similarity in PHI prediction between men and women growing up in the later twentieth or early twenty-first century, including the dimension of risk-taking and experimentation that the reversal effect has signified for us? Newer longitudinal studies of the adolescent/adult nexus might profitably pursue these questions.

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