

Pathways Linking Childhood Personality to Later Life Outcomes

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ABSTRACT—*Dispositional characteristics are associated with important life outcomes across the lifespan, often predicting those outcomes decades in advance. Evidence demonstrates that personality characteristics measured during childhood and adolescence uniquely affect later life outcomes above and beyond adult personality. Currently, it is unclear why personality produces unique effects at different life stages, given the modest consistency of personality across the lifespan. In this article, we offer possible explanations for why these unique predictive effects may occur, charting pathways that link childhood personality to later outcomes that differ from how adult personality influences the same products. We conclude by suggesting directions for longitudinal investigations into when, why, and how assessments of childhood personality can help advance our understanding of lifespan development.*

KEYWORDS—*personality; personality development; lifespan development*

To predict later life outcomes, it may be important to “know” not only an individual’s adult disposition but also the individual’s personality trait profile as a child or adolescent. Childhood

personality influences important life outcomes in the long term (Friedman et al., 1993; Hampson, Goldberg, Vogt, & Dubanoski, 2007; Moffitt et al., 2011), even when considering later assessments of personality more proximal to those outcomes (Martin, Friedman, & Schwartz, 2007). Evidence for significant distal and proximal personality predictors of success supports a central claim of lifespan theories—namely, that researchers need to understand who an individual is throughout life to understand that individual’s development.

In this article, we put forward several hypotheses intended to integrate assessments of childhood personality into investigations of later outcomes, building from life course models of personality (e.g., Shanahan, Hill, Roberts, Eccles, & Friedman, 2014). First, we outline the *opportunities and snares* hypothesis, which considers how childhood personality relates to later outcomes by predicting opportunities to enter pathways that affect a child’s future. Second, we consider the *differential maturation* hypothesis, wherein the trajectories and rates of personality change and development experienced prior to adulthood may affect later life outcomes. Third, we present the *differential pathways* hypothesis, which suggests that the pathways explaining why personality affects later success may differ across life. Given the focus on traits in the research on prediction, we focus on traits as the personality dimension of interest. However, we also discuss how this framework could be enriched by connecting with other components of personality, such as life narratives.

As a starting point, consider that rank-order stability for personality traits from childhood to adulthood is typically neither zero nor perfect. In other words, although stability estimates may decline for traits as the time between assessments expands, it does not appear that the asymptote for rank-order stability reliably reaches zero (Fraleigh & Roberts, 2005; Roberts & DelVecchio, 2000). For instance, teacher ratings of student personality in elementary school show significant positive associations for most traits with those students’ self-ratings of personality 40 years later in middle adulthood (Edmonds, Goldberg, Hampson, & Barckley, 2013; Hampson & Goldberg, 2006). That said, these associations tend to be modest in

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magnitude at best (r 's < .30). Stability estimates spanning childhood and adulthood are likely reduced by the tendency for children's personality to be assessed by reports by teachers or parents, whereas adults' personality is typically assessed by self-reports. Shifts in rater perspective can affect stability estimates due to observability of the trait and motives of raters (Edmonds et al., 2013; Vazire, 2010). In addition, researchers must be mindful of measurement invariance over time. Any feature of measurement that affects the accuracy of that measurement can also affect estimates of stability, and can have implications for testing the pathways we outline in this review.

That said, given the nonzero stability over time, one mechanism by which childhood personality influences later outcomes is through *personality stability*. For instance, conscientious children are more likely to be conscientious adults, and thus reap the benefits of this trait (for a review of outcomes, see Hill & Jackson, 2016). Accordingly, we use the terminology commonly used by personality psychologists, referring to these individual differences as *traits* or *dispositions*; in so doing, we adhere to more contemporary definitions, which underscore both the continuity in personal characteristics across time and context and the potential dynamic nature of traits throughout life (Hampson & Edmonds, 2018; Roberts, 2009). As such, it is pertinent to consider alternative routes by which childhood personality influences lifespan development, routes that go beyond viewing this influence as simply an artifact of trait stability over time.

CHILDHOOD PERSONALITY AS A PRECURSOR TO LATER OPPORTUNITIES AND SNARES

An alternative possibility builds from a classic tenet of lifespan theories of development and developmental psychopathology, namely that the paths we take early in life contour the options available to us later. Similar to the tree metaphor presented by Sroufe (1997), early events can place an individual into a *branch* that partly determines the opportunities available. Childhood personality can play an important role in this developmental branching, insofar that traits predispose youth to take certain paths. For instance, students who are responsible in the classroom are more likely to attain higher levels of education (Spengler et al., 2015), which positively predict later life successes in many domains. By contrast, less conscientious youth are at greater risk for substance use disorder (e.g., Anderson, Tapert, Moadab, Crowley, & Brown, 2007), which could start them down the path for substance use in adulthood.

Accordingly, one mechanism by which childhood personality affects later development is that early dispositional traits affect the likelihood of avoiding or participating in risky or positive behaviors. Participation in these behaviors has lasting effects, affecting the availability of important opportunities regardless of individuals' later dispositions (see Shanahan et al., 2014, for a discussion of children's self-control on snares). Theories of personality development have labeled these phenomena *selection*

effects because dispositional characteristics lead individuals to select environments that fit those characteristics (Roberts, Wood, & Caspi, 2008). Childhood is especially sensitive to these selection effects because of the time-limited nature of the age-graded roles during this period. For example, putting less effort into schooling one year makes it more difficult to catch up on the material the next year given that the material builds upon itself. In contrast, adulthood has more flexibility in terms of the timing of sequences of age-graded roles (e.g., career, marriage, education). As a result of the opportunities and snares specific to childhood, childhood personality is more likely than adult personality to uniquely predict adult life outcomes because of the compounding nature of these developmental pathways.

When considering how traits intersect with opportunities and snares, we must also recognize that these associations are not necessarily independent from those operating through trait stability. Selection into different environments may hold *socialization* effects insofar that these contexts press individuals to maintain the characteristics that led to the environment in the first place, in line with the corresponsive principle of personality development (Roberts et al., 2008). The *environmental press* can come from relationships or cultural influences, both of which carry expectations for how an individual should act in a given context; for instance, cultures can influence the manner and extent to which individuals express traits (McAdams & Pals, 2006). Moreover, cultures differ in their expected timelines for adult role adoption, and this influences maturation of personality from adolescence into adulthood (Bleidorn et al., 2013).

DIFFERENTIAL MATURATION AS AN EXPLANATION

Meta-analytic work and large-scale cross-sectional studies have elucidated a normative pattern of personality maturation in which individuals tend to become more conscientious and emotionally stable from adolescence into adulthood (Roberts, Walton, & Viechtbauer, 2006; Soto, John, Gosling, & Potter, 2011). However, longitudinal studies of personality change during adolescence have consistently supported another tenet of lifespan theories of development—that individuals differ in their rates of change over time (e.g., Hill et al., 2013; Klimstra, Hale, Raaijmakers, Branje, & Meeus, 2009). Studies investigating personality over different time frames in varying samples have accumulated evidence for variability in individual patterns of change. Understanding whether these differential trajectories of change affect outcomes is essential to further explain the role of childhood personality in adult development.

For instance, consider two children who began childhood with similar levels of conscientiousness, and years later, had similar scores on the same trait as young adults, both showing a normative increase on the trait. Child A may have shown a marked increase early in the process and retained a stable, higher level until adulthood. Instead, Child B showed limited stability and fluctuated quite a bit until a point in late adolescence when the

child matured rapidly and “ended” with levels of conscientiousness similar to the first child. Over time, these different trajectories could be thought of as exposing each child to different patterns of risk.

Central to our argument is the possibility that rates of maturation may matter for later outcomes, even when youth report similar levels of a trait prior to adulthood. Each different path taken might have a distinct cumulative effect. In the earlier example, Child A may be more likely to reap the benefits of being conscientious by virtue of the quicker progression to higher levels on the trait; in other words, individual differences in the *trajectory* of change may matter. However, another aspect to consider is how individuals differ in their personal stability on a particular trait; in our example, Child B had a bumpier path to conscientiousness, which may be reflected by less consistency of personality across days, weeks, months, or years. Despite calls for researchers to consider within-person variability, even across moments and contexts (e.g., Beck & Jackson, 2018; Fleeson, 2001, 2004), most studies of children’s and adolescents’ personality have failed to move beyond yearly assessments of personality. These within-person data can provide valuable insights into whether individuals’ thoughts, feelings, and behaviors reflect their general trait levels. Longitudinal studies with limited assessment cannot identify these shorter term fluctuations in personality, so both children in our example would be expected to show similar consequences of their personality profiles. However, researchers are recognizing increasingly that longitudinal studies of personality development likely obscure meaningful change between measurement occasions, and that our understanding of stability and change requires more frequent assessments (Roberts et al., 2017).

The literature on identity development has provided a groundwork for studying similar constructs using daily assessments among youth, as well as valuable insight into the need to consider the cultural context for this work in predicting well-being outcomes. For instance, research has demonstrated that youth differ in the salience of their cultural identity across days, which in turn influences their well-being (Yip & Fuligni, 2002). Moreover, the daily enactment of familial roles that fulfill cultural expectations appears positively linked to youth’s sense of purpose and meaning (Kiang, 2012). Accordingly, researchers should incorporate information on trajectories of change and within-person variability into models predicting later adult outcomes, recognizing that these trajectories, in both the short- and long-run, may be influenced by societal and cultural expectations.

AGE-DIFFERENTIAL PATHWAYS LINKING PERSONALITY TO OUTCOMES

The role of experiences and interindividual differences in change helps us understand why childhood personality plays a unique role. Another explanation is that exposure to the *mechanisms* linking personality to outcomes differs across the lifespan. It is well

known that the primary mortality risks faced by individuals differ throughout life; for instance, adults are more likely to die from consequences related to heart disease or cancer, which are less likely sources of mortality for children and adolescents (National Vital Statistics Reports, 2018). Accordingly, different pathways may explain links between personality traits and health risks across life. For example, in one study, conscientious adults were more likely to adhere to their medication regimens, which in turn were associated with better self-reported health; however, the strength of this mediational pathway differed across age groups (Hill & Roberts, 2011). Although higher conscientiousness was associated with better self-rated health across all age groups, adherence to medication regimens explained this association better for older adults than for younger adults. These results highlight the important role of adhering to medication regimens in the health of older adults, and suggest that alternate pathways likely link conscientiousness to health in younger adults. Similarly, in meta-analytic work, the associations between conscientiousness and specific health behaviors differ for individuals over and under age 30 (Bogg & Roberts, 2004), underscoring the potential for personality to influence health through different paths at different stages of life.

Another example comes from the association between adult personality traits and economic outcomes, such as income and net worth (Judge, Livingston, & Hurst, 2012). We might expect these effects to be driven primarily by levels of adult personality traits and their influences on proximal mechanisms, such as the extent to which workers carry out their duties and seek promotion, versus the extent to which they behave counterproductively (Mount, Ilies, & Johnson, 2006; Salgado, 2002). However, conscientiousness during childhood and adolescence may be associated positively with later income through promoting educational attainment, encouraging individuals to seek and obtain important career opportunities during and after college, and developing an orientation toward the future that encourages saving and investment behaviors. As such, researchers need to consider more carefully the potential for phase-specific effects of personality on later outcomes (Shanahan et al., 2014), and the possibility that the mediators linking personality to outcomes may shift across the lifespan.

BRINGING IT ALL TOGETHER

Although the pathways we have presented correspond to different causal hypotheses, they are not mutually exclusive or competing explanations. Childhood experiences and behaviors may help further contour or deepen the same personality traits that initially predicted the likelihood of those experiences and behaviors. Childhood personality can shape later development by changing the opportunities available to the individual (e.g., whether someone is ensnared by early issues that lead to less adaptive environments), as well as habitual patterns. Moreover, it is important to consider how habitual these patterns are by

conducting investigations into whether within-person variability predicts later outcomes of interest (Beck & Jackson, 2018). Finally, links between childhood personality and adult outcomes may be mediated by different mechanisms at different points in life. Mechanisms that are especially important at one developmental age may be less relevant or not present at other ages.

Research along these fronts also needs to address two important measurement questions. First, do changes in the structure of personality across the lifespan affect how personality might influence later outcomes? Research has suggested that, for instance, the five-factor taxonomy for personality traits may not crystallize until after childhood (Soto, John, Gosling, & Potter, 2008). Accordingly, we need to address questions of measurement equivalence over time, as well as efforts to equate childhood measures to adult measures. Lifespan developmental psychologists have wrestled frequently with how best to connect early life measures to later assessments, and it is not a new challenge for the field. However, many proposed pathways are contingent on the precise estimation of personality stability from childhood to adulthood. Attempts to accurately estimate and interpret unique effects for child personality, or for personality assessed at a single time, also depend on similar measurement properties operating across time. For instance, one study evidenced zero stability between teacher reports of children's neuroticism and levels of self-reported neuroticism in adulthood (Edmonds et al., 2013). This would suggest that any effect of childhood neuroticism on outcomes in adulthood did not depend on trait stability, in contrast to a scenario where the two indices were highly correlated over time. Thus, researchers need to capture the same construct over time. However, it is unclear whether the observed lack of stability could be due in part to the change in the reporter of the target's personality, how specific descriptors operate when used at different developmental ages or points, or potential changes in the structure of personality over developmental time.

Similar measurement concerns are present with respect to the age-differential pathways hypothesis; namely, what appears to be different mechanistic pathways may in fact be better described as the same general mechanism reflected through different behaviors across life. As an example, though adherence to medication regimens per se may fail to hold similar value in explaining the link between conscientiousness and health across life (Hill & Roberts, 2011), one could find evidence that adherence behavior itself holds similar explanatory value across the lifespan after finding developmentally appropriate corollaries. Research that allows for heterotypic continuity in mediators (different manifestations of the same behavior across developmental periods) may provide fuller insight into whether this pathway differs in explanatory value across life or remains consistently valuable once one accounts for the different forms of the mediator over the lifespan.

Second, research needs to move beyond considering only traits as the unit of measurement. For instance, individuals craft life narratives that provide insights into their subjective perception of how they have changed as individuals throughout their lives,

which is another integral component of personality (e.g., McAdams & Pals, 2006). These life narratives can provide fuller flavor and information to the pathways described earlier, because it is valuable to understand stability of personality from an empirical perspective in addition to gaining insight into whether the individual perceives significant personal change over time. Moreover, the research on life narratives speaks to the value of considering which experiences participants nominate as turning points in life, as well as whether these episodes contaminate or redeem the individual (e.g., McAdams & Bowman, 2001), which would provide valuable context for considering the snares and opportunities hypothesis stated earlier. As such, we see opportunity for connecting the current framework with constructs outside of traits and dispositions, and encourage authors to consider these possibilities in their research.

In this article, we have sought to illuminate some reasons why it is important to consider personality across the lifespan when predicting later outcomes. In particular, we hope this will guide and inform research wherein distal predictors (childhood personality) remain predictive, even when accounting for more proximal measures of the same construct. Each of the proposed pathways merits further attention by the field, and researchers should strive toward developing studies that allow tests of the pathways described across different adult outcomes. In this respect, we hope to better understand how everyone's inner child plays a role in development, even when accounting for their outer adult.

REFERENCES

- Anderson, K. G., Tapert, S. F., Moadab, I., Crowley, T. J., & Brown, S. A. (2007). Personality risk profile for conduct disorder and substance use disorders in youth. *Addictive Behaviors, 32*, 2377–2382. <https://doi.org/10.1016/j.addbeh.2007.02.006>
- Beck, E. D., & Jackson, J. J. (in press). Within-person variability. In J.F. Rauthmann (Ed.), *The Handbook of Personality Dynamics and Processes*. New York, Elsevier.
- Bleidorn, W., Klimstra, T. A., Denissen, J. J., Rentfrow, P. J., Potter, J., & Gosling, S. D. (2013). Personality maturation around the world: A cross-cultural examination of social-investment theory. *Psychological Science, 24*, 2530–2540. <https://doi.org/10.1177/09567613498396>
- Bogg, T., & Roberts, B. W. (2004). Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. *Psychological Bulletin, 130*, 887–919. <https://doi.org/10.1037/0033-2909.130.6.887>
- Edmonds, G. W., Goldberg, L. R., Hampson, S. E., & Barchley, M. (2013). Personality stability from childhood to midlife: Relating teachers' assessments in elementary school to observer- and self-ratings 40 years later. *Journal of Research in Personality, 47*, 505–513. <https://doi.org/10.1016/j.jrp.2013.05.003>
- Fleeson, W. (2001). Toward a structure-and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology, 80*, 1011–1027. <https://doi.org/10.1037/0022-3514.80.6.1011>
- Fleeson, W. (2004). Moving personality beyond the person-situation debate: The challenge and the opportunity of within-person

- variability. *Current Directions in Psychological Science*, *13*, 83–87. <https://doi.org/10.1111/j.0963-7214.2004.00280.x>
- Fraley, R. C., & Roberts, B. W. (2005). Patterns of continuity: A dynamic model for conceptualizing the stability of individual differences in psychological constructs across the life course. *Psychological Review*, *112*, 60–74. <https://doi.org/10.1037/0033-295X.112.1.60>
- Friedman, H. S., Tucker, J. S., Tomlinson-Keasey, C., Schwartz, J. E., Wingard, D. L., & Criqui, M. H. (1993). Does childhood personality predict longevity? *Journal of Personality and Social Psychology*, *65*, 176–185. <https://doi.org/10.1037/0022-3514.65.1.176>
- Hampson, S. E., & Edmonds, G. W. (2018). A new twist on old questions: A life span approach to the trait concept. *Journal of Personality*, *86*, 97–108. <https://doi.org/10.1111/jopy.12304>
- Hampson, S. E., & Goldberg, L. R. (2006). A first large cohort study of personality trait stability over the 40 years between elementary school and midlife. *Journal of Personality and Social Psychology*, *91*, 763–779. <https://doi.org/10.1037/0022-3514.91.4.763>
- Hampson, S. E., Goldberg, L. R., Vogt, T. M., & Dubanoski, J. P. (2007). Mechanisms by which childhood personality traits influence adult health status: Educational attainment and healthy behaviors. *Health Psychology*, *26*, 121–125. <https://doi.org/10.1037/0278-6133.26.1.121>
- Hill, P. L., Allemand, M., Grob, S. Z., Peng, A., Morgenthaler, C., & Käppler, C. (2013). Longitudinal relations between personality traits and aspects of identity formation during adolescence. *Journal of Adolescence*, *36*, 413–421. <https://doi.org/10.1016/j.adolescence.2013.01.003>
- Hill, P. L., & Jackson, J. J. (2016). The invest-and-accrue model of conscientiousness. *Review of General Psychology*, *20*, 141–154. <https://doi.org/10.1037/gpr0000065>
- Hill, P. L., & Roberts, B. W. (2011). The role of adherence in the relationship between conscientiousness and perceived health. *Health Psychology*, *30*, 797–804. <https://doi.org/10.1037/a0023860>
- Judge, T. A., Livingston, B. A., & Hurst, C. (2012). Do nice guys—and gals—really finish last? The joint effects of sex and agreeableness on income. *Journal of Personality and Social Psychology*, *102*, 390–407. <https://doi.org/10.1037/a0026021>
- Kiang, L. (2012). Deriving daily purpose through daily events and role fulfillment among Asian American youth. *Journal of Research on Adolescence*, *22*, 185–198. <https://doi.org/10.1111/j.1532-7795.2011.00767.x>
- Klimstra, T. A., Hale, III, W. W., Raaijmakers, Q. A., Branje, S. J., & Meeus, W. H. (2009). Maturation of personality in adolescence. *Journal of Personality and Social Psychology*, *96*, 898–912. <https://doi.org/10.1037/a0014746>
- Martin, L. R., Friedman, H. S., & Schwartz, J. E. (2007). Personality and mortality risk across the life span: The importance of conscientiousness as a biopsychosocial attribute. *Health Psychology*, *26*, 428–436. <https://doi.org/10.1037/0278-6133.26.4.428>
- McAdams, D. P., & Bowman, P. J. (2001). Narrating life's turning points: Redemption and contamination. In D. P. McAdams, R. Josselson, & A. Lieblich (Eds.), *Turns in the road: Narrative studies of lives in transition* (pp. 3–34). Washington, DC: American Psychological Association. <https://doi.org/10.1037/10410-000>
- McAdams, D. P., & Pals, J. L. (2006). A new big five: Fundamental principles for an integrative science of personality. *American Psychologist*, *61*, 204–217. <https://doi.org/10.1037/0003-066X.61.3.204>
- Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., . . . Sears, M. R. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America*, *108*, 2693–2698. <https://doi.org/10.1073/pnas.1010076108>
- Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology*, *59*, 591–622. <https://doi.org/10.1111/j.1744-6570.2006.00048.x>
- National Vital Statistics Reports. (2018). *Deaths: Leading causes for 2016* (Vol. 67). Washington, DC: Centers for Disease Control and Prevention. Available at https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf
- Roberts, B. W. (2009). Back to the future: Personality and assessment and personality development. *Journal of Research in Personality*, *43*, 137–145. <https://doi.org/10.1016/j.jrp.2008.12.015>
- Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, *126*, 3–25. <https://doi.org/10.1037/0033-2909.126.1.3>
- Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin*, *143*, 117–141. <https://doi.org/10.1037/bul0000088>
- Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, *132*, 1–25. <https://doi.org/10.1037/0033-2909.132.1.1>
- Roberts, B. W., Wood, D., & Caspi, A. (2008). The development of personality traits in adulthood. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (Vol. 3, pp. 375–398). New York, NY: Guilford.
- Salgado, J. F. (2002). The Big Five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, *10*, 117–125. <https://doi.org/10.1111/1468-2389.00198>
- Shanahan, M. J., Hill, P. L., Roberts, B. W., Eccles, J., & Friedman, H. S. (2014). Conscientiousness, health, and aging: The life course of personality model. *Developmental Psychology*, *50*, 1407–1425. <https://doi.org/10.1037/a0031130>
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2008). The developmental psychometrics of Big Five self-reports: Acquiescence, factor structure, coherence, and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology*, *94*, 718–737. <https://doi.org/10.1037/0022-3514.94.4.718>
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2011). Age differences in personality traits from 10 to 65: Big Five domains and facets in a large cross-sectional sample. *Journal of Personality and Social Psychology*, *100*, 330–348. <https://doi.org/10.1037/a0021717>
- Spengler, M., Brunner, M., Damian, R. I., Lüdtke, O., Martin, R., & Roberts, B. W. (2015). Student characteristics and behaviors at age 12 predict occupational success 40 years later over and above childhood IQ and parental socioeconomic status. *Developmental Psychology*, *51*, 1329–1340. <https://doi.org/10.1037/dev0000025>
- Sroufe, L. A. (1997). Psychopathology as an outcome of development. *Development and Psychopathology*, *9*, 251–268. <https://doi.org/10.1017/S0954579497002046>
- Vazire, S. (2010). Who knows what about a person? The self-other knowledge asymmetry (SOKA) model. *Journal of Personality and Social Psychology*, *98*, 281–300. <https://doi.org/10.1037/a0017908>
- Yip, T., & Fuligni, A. J. (2002). Daily variation in ethnic identity, ethnic behaviors, and psychological well-being among American adolescents of Chinese descent. *Child Development*, *73*, 1557–1572. <https://doi.org/10.1111/1467-8624.00490>