Pregnancy, Marriage, and Quitting School Nurture Personality Development? Commentary on Bleidorn, Klimstra, Denissen, Rentfrow, Potter, and Gosling (2013)

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Pregnancy, Marriage, and Quitting School Nurture Personality Development? Commentary on Bleidorn, Klimstra, Denissen, Rentfrow, Potter, and Gosling (2013)

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Bleidorn et al. (2013) examined cross-sectional age differences in personality traits in a large Internet-based sample from 62 countries. Consistent with previous research (McCrae et al., 2005), Bleidorn et al. reported that maturational changes in personality were similar across cultures, but there were small but significant cultural differences in age effects on personality. The authors further tested whether the cultural variation was consistent with predictions from social-investment theory. Social-investment theory predicts that maturational changes (i.e., declines in neuroticism and increases in agreeableness and conscientiousness) are driven by "age-graded life transitions in early adulthood—such as completing education, entering the labor force, marrying, and becoming a parent" (p. 2531). Bleidorn et al. argued that a culture-level variable related to education that they labeled the "job index" was associated with the predicted maturational changes. They found no evidence, however, that culture-level variables related to the age of marriage (indexed by the percentage of a country's teenagers who had ever married and mean age at first marriage) or parenthood (indexed by teenage birth rates) were associated with personality maturation. Still, they concluded that "the investment in these age-graded social institutions, such as marriage, parenthood, and work, can therefore be seen as one of the key driving mechanisms of personality change in early adulthood" (p. 2538). This conclusion is unwarranted for several reasons.

First, Bleidorn's "job" variable is a dubious index of earlier entry into the workforce. The index is derived from measures of education (a composite measure of years of compulsory education and the percentage of tertiary-education graduates) rather than actual participation in the workforce. Presumably, this index was based on the assumption that there is a later transition into the workforce in countries with greater educational opportunities. According to Bleidorn et al.'s index, youths in Pakistan and Zimbabwe have jobs at younger ages than youths in The Netherlands (see Bleidorn et al.'s Fig. 1). Within Europe, the job index suggests earlier entry in the workforce in southern European nations than in Germany. Actual unemployment figures (http://stats.oecd.org/), however, indicate that the rate of youth unemployment is less than 10% in Germany but more than 20% in Italy, Portugal, Greece, and Spain. An index of early entry into the workforce should be positively correlated with youth employment, but Bleidorn's job index has a significant *negative* correlation with the labor-force participation rate of youths ages 20 to 24 years ($r = -.48$, $p = .005$; $N = 33$ overlapping nations; see the Supplemental Material for details). Given such an inverse relation, the results of Bleidorn et al. are in the opposite direction of their conclusion. This is also made evident in Bleidorn et al.'s Figure 2, which shows larger age-related differences in personality in countries with fewer youths in the workforce (e.g., Pakistan) relative to countries with high youth employment (e.g., The Netherlands).

Second, it is debatable whether early entry into adult roles has a positive effect on personality development. Some individuals certainly "grow" when they take on adult responsibilities. Some religious and conservative groups even find most congenial to growth a social system in which women marry and have children at earlier ages. In

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more progressive societies, however, women can choose to delay marriage and childbearing to pursue higher education and personal growth. Thus, people with different value systems will have different opinions on whether marriage and childbearing among teenagers promotes earlier personality growth. But for most people, entering the workforce without higher education or having children at a very young age is associated with worse life outcomes (Hoffman & Maynard, 2008).

Third, longitudinal studies do not support the social-investment-theory hypothesis that marriage, work, and parenthood are related to personality changes in the direction of greater maturity. Indeed, several studies have found that getting married is *not* associated with declines in neuroticism or increases in agreeableness and conscientiousness (Costa, Herbst, McCrae, & Siegler, 2000; Specht, Egloff, & Schmukle, 2011; Vaidya, Gray, Haig, & Watson, 2002). There is some evidence that starting a new job is associated with increases in conscientiousness, but the same studies have found no association with changes in agreeableness and have even shown increases in neuroticism (Ludtke, Roberts, Trautwein, & Nagy, 2011; Specht et al., 2011). There is also no support for the social-investment-theory hypothesis about parenthood; some studies have even suggested that becoming a parent is associated with increases in neuroticism (Jokela, Kivimaki, Elovainio, & Keltikangas-Jarvinen, 2009) and declines in conscientiousness (Specht et al., 2011). Thus, in both cross-cultural and longitudinal studies, these hypotheses derived from social-investment theory are not supported.

Finally, the biological bases of personality traits postulated by five-factor theory should not be interpreted exclusively as being genetic. Cultural differences in the rate of personality change do not necessarily contradict five-factor theory as implied in the target article. Indeed, five-factor theory would predict that differences in allele frequencies, nutrition, disease, pollution, and other factors would influence the level and developmental trajectory of personality traits. For example, to the extent that malnutrition or diseases influence brain development, these factors are likely to influence personality development. Similarly, the average age of puberty varies across nations, and the timing of hormonal changes may influence personality development during adolescence. More broadly, differences in personality development between wealthy and less wealthy nations may derive from differences in several factors (other than social roles) that are consistent with five-factor theory but that were not considered by Bleidorn et al. The cross-cultural differences in the rate of change also tend to be small, as illustrated in Figure 2 of the target article. Between the two countries at the most extreme ends of the spectrum (Pakistan and The Netherlands), the difference in the rate of change was only about 0.1 *SD* from ages 16 to 40.

In conclusion, the research reported in the target article was based on an impressive sample size, and the cross-cultural approach used can be very informative about patterns of personality development, especially during adolescence. The conclusions of the study, however, are not supported by the data presented in the article or in previous studies. More broadly, and contrary to the idea that early entry into adult roles spurs earlier personality growth, teenage pregnancies and a lack of educational opportunities are often a sign of poverty and oppression, and may well lead to stunted growth.

Author Contributions

A. Terracciano is the sole author of this article and is responsible for its content.

Declaration of Conflicting Interests

The author declared that he had no conflicts of interest with respect to his authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at http://pss.sagepub.com/content/by/supplemental-data

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