

This Week's Citation Classic®

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Kagan J. *Change and continuity in infancy.* New York: Wiley, 1971. 293 p.
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A longitudinal study of 180 first-born Caucasian infants seen four times between 4 and 27 months of age revealed minimal preservation of individual differences and important sex and class differences in development. [The *Social Sciences Citation Index*® (SSCI)® indicates that this book has been cited in over 245 publications since 1971.]

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The origin of the research summarized in *Change and Continuity in Infancy* is critical for the understanding of its contents. Howard Moss and I had just finished an analysis of the longitudinal data from the Fels population that resulted in the publication of *Birth to Maturity* in 1962.¹ The important lesson learned from that research was that there were some differences among infants that neither time nor experience subdued. As a result, I became interested, for the first time, in the possibility of temperamental differences among young children—a topic that now occupies most of the work in my laboratory. Additionally, Moss and I were dissatisfied with the quality of the Fels longitudinal data because it consisted primarily of verbal reports and not objective data, and we felt that a satisfying understanding of early development could only be attained through a series of longitudinal studies containing observations that remained close to the child's actual behavior. Finally, along with my colleague Michael

Lewis, I had just begun to look at early cognitive development and became fascinated with the maturation of cognitive functions. Thus, the attraction to temperament and the excitement over early cognitive growth were the incentives for the longitudinal study that I initiated at Harvard soon after arriving in 1964.

I am not certain why the book has been frequently cited. The major chapters are not theoretical constructs but operational variables. This strategy was not a popular way to parse evidence then and it remains unpopular today. The chapter titles read: *Fixation Time, Vocalization, Cardiac Deceleration, and Smiling*, rather than *Intelligence, Arousal, and Affect*. I believe that the original choice of titles was the correct way to organize the evidence because the main findings indicated minimal intercorrelations among the variables. Hence, we could not talk about general affect, general arousal, or general intelligence. More important, there were serious sex and social class differences in the patterning of the variables. Thus, at the level of the evidence, there was specificity and fragmentation. By contrast, the most popular abstract constructs in psychology assume coherences that are hard to find in nature. On reflection, I believe that the results of this work prepared me for my later work in Guatemala by making me more receptive to the hypothesis of discontinuities in development.² I also suspect that the finding that some children showed a slow tempo of play with objects prepared me to award salience to later data indicating temperamental differences in the tendencies toward inhibition and lack of inhibition. Thus, the research summarized in *Change and Continuity in Infancy* seems to have been prophetic of the direction taken by my future research.

1. Kagan J & Moss H A. *Birth to maturity: a study in psychological development.* New York: Wiley, 1962. 331 p.

[See also: Kagan J. Citation Classic. *Current Contents/Social & Behavioral Sciences* 14(4):18, 25 January 1982.]

2. Kagan J & Klein R E. Cross-cultural perspectives on early development. *Amer. Psychol.* 28:947-61, 1973.
(Cited 90 times.)