

THE CRIMINAL MIND AND DEVELOPMENTAL BUFFERING¹

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ABSTRACT: Failure of developmental buffering may underly much criminal behavior.

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A paper by Waldrop et al. (1978) and a research review by Holden (1978) appeared in the same issue of *Science*. Waldrop et al. found that a syndrome somewhat ambiguously called hyperactivity in children was rather strongly associated with minor developmental anomalies, present even at birth. Similar findings have been reported by others (Durfree, 1974; Rapoport et al., 1974; Firestone et al., 1975). Holden's account of work by Yochelson and Samenow (1976-1979) suggests that most confirmed general, "hard-core", criminals had the "hyperactivity" syndrome when they were children.

The possibility of a causal chain here (developmental error to "hyperactivity" to general criminality) deserves serious attention. While failure of developmental precision in one developmental pathway is largely unrelated to failure in others (Van Valen, 1962; Soulé, 1967), the branching and interacting nature of developmental programs ensures that some nonspecificity will occur, as it empirically does (Van Valen, 1962). Both the tangible environment and genes affect sensitivity to the minor perturbations of development (the developmental noise of Waddington, 1957) and there are all possible two- and three-way interactions (Van Valen, 1962). Even such a pervasive phenomenon as human handedness may be triggered by such accidents (Van Valen, 1978).

Presumably only a small subset of "hyperactive" children become general criminals. If the association with criminality is in fact correct, the implied heterogeneity among "hyperactive" children must be explained. And it is entirely possible that one or more links in the proposed causal chain is illusory. Nevertheless, it would be of considerable theoretical and perhaps practical interest to have an inkling as to how much of the criminal activity around us is an eventual result of failures of the buffering of development against its thousand natural shocks, genetic and environmental.

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Literature Cited

- Durfree, K.E. 1974. Crooked ears and the bad boy syndrome: asymmetry as an indicator of minimal brain dysfunction. *Bulletin of the Menninger Clinic* 38:305-316.
 Firestone, P., F. Levy, and V. Douglas. 1976. Hyperactivity and physical anomalies. *Journal of the Canadian Psychiatric Association* 21:23-26.
 Holden, C. 1978. The criminal mind: a new look at an old puzzle. *Science* 199:511-514.

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- Soulé, M. 1967. Phenetics of natural populations. II. Asymmetry and evolution in a lizard. *American Naturalist* 101:141-160.
- Van Valen, L. 1962. A study of fluctuating asymmetry. *Evolution* 16:125-142.
- _____. 1978. The control of handedness. *Behavioral and Brain Sciences* 1:320.
- Waddington, C.H. 1957. *The Strategy of the Genes*. New York: Macmillan. 262 pp.
- Waldrop, M.R., R.Q. Bell, B. McLaughlin, and C.F. Halverson, Jr. 1978. Newborn minor physical anomalies predict short attention span, peer aggression, and impulsivity at age 3. *Science* 199:563-565.
- Yochelson, S., and S.E. Samenow. 1976-1979. *The Criminal Personality*. New York: J. Aronson. 3 volumes.