Letters

President's Intern Program

In 1971, Edward E. David, Jr., science adviser to the President, recognizing the problems that recent science graduates were having in finding employment, obtained from the Department of Labor about $4 million, which was made available on a matching basis in $7000 increments to universities and federal laboratories to employ recent graduates. The program was administered through the National Science Foundation. David reasoned that in time of temporary surplus it was to the nation's advantage to create a productive stockpile of this precious commodity.

As a result of the Administration's initiative, some 570 scientists and engineers have been employed where their training is of immediate benefit to themselves and to the nation. Many have been able during this period to broaden their experience so that they have become even more employable in the future to academic institutions, industry, and government.

Government expenditures in the spirit of the President's Intern Program should be encouraged. I hope that the scientific community appreciates what David has done in these programs and will contact the National Science Foundation and the Office of Science and Technology to urge continuation of President Nixon's Intern Program.

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Newborn Walking

In their report on the walking reflex in infants (21 Apr., p. 314) Zelazo, Zelazo, and Kolb quote the second edition of my book, *The Development of the Infant and Young Child*, published in 1963. If they had looked at the fourth or fifth edition (*1*), they would have noted that, long after the eighth week, babies show the walking reflex if the head is extended, that is, if a finger under the chin pushes the head back. Their observations, therefore, cannot be relied upon unless the posture of the child has been standardized with regard to the position of the head.

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References

1. R. S. Illingworth, *The Development of the Infant and Young Child: Normal and Abnormal* (Livingstone, Edinburgh, ed. 5, 1972).

Zelazo, Zelazo, and Kolb report results that suggest to them a critical period during which the early infantile walking response could be transformed from a reflexive to an instrumental action. This is accomplished by having parents support infants in a vertical, weight-bearing posture daily from the second through the eighth week of life, thus allowing active exercise of the walking and placing reflexes. They incorrectly assert that most infant intelligence tests are predicated on an invariant sequence of motor development. It is the motor rather than the mental scales or subscales that are so predicated (*1*). Their assumption that early walking is desirable and will produce primarily positive consequences can also be questioned. Early walking might prove on various grounds to be quite undesirable.

For example, at the naturally occurring mean age for solo walking (various norms place this from about 12 through 14 months), the average infant's posterior fontanel is closed and his anterior fontanel is closed or nearly closed (*2*). To accelerate the onset of walking would thus unnecessarily expose younger children, who have less complete fontanel closure, to possible central nervous system injury, particularly from penetration or incursion by sharp-edged or pointed objects. In New York City, for example, falls are the leading source of accidental infant mortality between the first and second years and are the second leading source between the second and third years (*3*). Accelerating the onset of walking might increase the incidence of falls by children under 1 year. The lesser protection afforded by the immature skull and other underdeveloped protective equipment of the younger child might contribute to an even higher mortality rate. Even now, children under 1 year more often die from accidents than do those of any other age group, and accidents lead all other causes of death in young children (*3*). It has been estimated that at least 100 crippling or disabling injuries are sustained for every accidental death (*3*). In absolute terms, more than 30 percent of children under 5 years are injured annually, and most of these injuries occur in the home (*4*).

Other potential injury sites are also probable. Leg girth, for instance, increases rapidly in boys up through about 1 year of age, after which the rate of growth declines (*5*). This is primarily due to a rapid increase in muscle mass, which would afford additional protection for the immature long bones. It is, in fact, infants with large leg-muscle masses (as determined radiographically) who become early walkers (*6*). Another complicating factor of risk for the "accelerated walker" is his underdeveloped inhibitory processes and immaturity in the recognition of danger.

Finally, accelerating walking may interfere with natural progressions of reflex development. Children who continue to exhibit certain early-appearing reflexes past the time of their normal disappearance often have associated developmental complications (*7*). One can wonder what happens to righting reflexes and equilibrium reactions in children who, as a consequence of "accelerated walking," spend less time than normal in crawling and so forth. The data required to answer such questions may not be available immediately; associated signs may not manifest themselves until the child is of school age—as appears to be the case with some specific learning disabilities. For this reason, such experimentation should be conducted only with long-term follow-up for possible deleterious after effects.

The work of Zelazo *et al.* might provide a model for therapeutic intervention in the case of some high-