RESEARCH

An Ounce of Prevention

BY GERALD W. BRACEY

Despite $60 million from Eli Broad and Bill Gates, education didn't emerge as a central presidential election issue. This is hardly surprising. The economy seemingly reels from a new blow every day, house prices are still falling, global warming takes on new urgency, energy prices are abating a bit but remaining high, and we are gifted by the occasional nasty surprise, like the Georgia-Russia war and Hurricane Ike.

However, education is sure to get its day in the sun with attention ensured by such groups as the Broader, Bolder Approach to Education, organized by the Education Policy Institute, and the Education Equality Project, featuring New York Mayor Michael Bloomberg, New York City schools Chancellor Joel Klein, and Rev. Al Sharpton. No Child Left Behind reauthorization will doubtless be front page and the fights fierce. One topic likely to arise in the process is what to do about early intervention programs.

Early childhood education concerns James Heckman, a Nobel Prize-winning economist at the University of Chicago. In recent years, he has been quite worried over the downward direction of social indicators and how to turn that around. In a phrase — preschool education. In a May 2008 paper, Heckman links a number of his concerns and prescriptions. He backs up his summary of the situation with a lot of research, some done by himself and colleagues. What follows in italics are his words; my annotations are in plain text.

Many major economic and social problems, such as crime, teenage pregnancy, dropping out of high school, and adverse health conditions, are linked to low levels of skill and ability in society.

Note the word "linked." Heckman is not making a strong causal case. While increases in college attendance rates have slowed, he notes that high school dropout rates are rising. He does not accept the "official" National Center for Education Statistics rate, but his own calculations of graduation rates are higher than those of Chris Swanson of Editorial Projects in Education or Jay P. Greene of the University of Arkansas. He calculates that the rate for native-born students peaked around 80% in the 1960s and has declined 4% or 5% since. More of tomorrow's workforce will come from minority populations in which educational attainment, especially in males, is lower than for whites.

> The crucial feature is a stimulating and nurturing environment.

"What forces have produced these low levels and adverse trends?" Heckman asks. "Are the public schools responsible? Can we look to school reform to fix the problem? Are higher college tuition costs to blame? I argue that the answer is 'no' to all of these questions."

In analyzing policies that foster skills and abilities, society should recognize the multiplicity of human abilities.

Given the relentless push for ever-higher test scores from some "reformers," this contention comes as a pleasant relief. Heckman takes NCLB to task for focusing only on test scores. He adds that "motivation, sociability, the ability to focus on tasks, self-regulation, self-esteem, time preference, health and mental health all matter," as do perseverance, attention, and self-confidence. ("Time preference" is an economics term referring to an individual's tendency to focus on his condition in the here and now vs. thinking about what it might be in the future).

Ability gaps between the advantaged and disadvantaged open up early in the lives of children.

Most of the gap at age 18 is there at age 5. "Schooling plays a minor role in creating or perpetuating gaps," Heckman writes. These gaps include gaps in behavior problems (he does not discuss the possibility of cultural insensitivity or outright racism in the system). Heckman delves into behavioral genetic studies, which have indicated that the nature-nurture debate is over. Nature won. Nurture won. But heritability of I.Q. differs markedly by socioeconomic class. In affluent families, most of the variance comes from genes; in low SES families, variance comes mostly from experience. The

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going theory is that genes set a limit, experience determines how close to the limit the person gets.

Readers of a certain age might recognize the argument deriving from these findings as the opposite of that made during the eugenics movement early in the 20th century. At that time, genetics seemed beyond the reach of intervention and some proposed keeping "inferior" people from having children. Some 75,000 people were forcibly sterilized after the U.S. Supreme Court ruled mandatory sterilization constitutional in 1927. Now, geneticists speak of "gene expression." Gene expression depends a great deal on the environment and the experiences of the person in that environment.

Family environments of young children are major predictors of cognitive and socioemotional abilities, as well as a variety of outcomes such as crime and health.

Heckman cites evidence that the crucial feature is a stimulating and nurturing environment, not lack of financial resources per se. Duke Ellington once said he was loved so much he was two years old before his feet touched the ground. That might have been the source of some of his genius. Heckman cites studies of Romanian children placed in state-run orphanages who emerged with stunted cognitive and noncognitive growth. The longer they were in the institutions, which Heckman calls "atrocious," the less their chances of recovery. In some cases, sensory and social stimulation was so minimal that brain scans showed brain atrophy and pathology, and larger than normal cortical ventricles.

Experimental evidence finds positive effects of early interventions on children in disadvantaged families. . . . If society intervenes early enough, it can improve cognitive and socioemotional abilities and the health of disadvantaged children. . . . As programs are currently configured, interventions early in the life cycle of disadvantaged children have much higher economic returns than later interventions such as reduced pupil-teacher ratios, public job training, convict rehabilitation programs, adult literacy programs, tuition subsidies, and expenditure on police.

Here we enter the realm of sticky wickets. How early is "early enough?" Who represents "society?" The existing studies Heckman cites are familiar — the Perry Preschool Project,[1] the North Carolina Abecedarian project, and the Chicago Child Parent Centers were mostly preschools (the Abecedarian project did intervene to improve health from birth). All of these projects were successful at raising graduation rates, lowering special education referrals, and, in the case of Perry, lowering criminality, raising wages, and raising job and marriage stability. (North Carolina and the Chicago project do not have the longitudinal data to determine this, although Abecedarian plans a followup for its students at age 30).

One set of theoretical curves graphed in the paper shows a much better rate of return on investment at age zero than at age three.

Yet Heckman also cites the prenatal ingestion of alcohol, more prevalent among low-income mothers-to-be, as a behavior that can impair a child into adulthood. Although Heckman doesn't mention it, many low-income pregnant women fail to obtain proper medical attention, especially in the first trimester of pregnancy, which can lead to low-birth weight children with cognitive impairments.

Indeed, one set of theoretical curves graphed in the paper shows a much better rate of return on investment at age zero than at age three, although both returns fall sharply when not followed up with high-quality learning experiences.

Heckman essentially finesses these issues. "In designing any early childhood program that aims to improve the cognitive and socioemotional skills of disadvantaged children, it is important to respect the sanctity of early family life and to respect cultural diversity."

Heckman goes on to say, "It is important to recognize problems with program compliance. Many successful programs change the values and motivation of the child. Some of these changes may run counter to the values of parents." I get nervous when people start tossing around phrases like "program compliance." In the paper overall, one senses that Heckman is concerned with the health of existing society overall, not the advantages to any given individual, and certainly not a radical redistribution of wealth.

James Heckman's paper, *Schools, Skills, and Synapses*, is available as a National Bureau of Economic Research working paper (www.nber.org/papers/w14064) and through the Institute for the Study of Labor (http://ftp.iza.org/dp3515.pdf). The NBER version will cost most readers $5; the labor institute version is free.

1. Bracey was not affiliated with High Scope during the initial Perry research and has not participated in any of the later follow-up studies.

File Name and Bibliographic Information

k0811bra.pdf
Gerald W. Bracey, RESEARCH: An Ounce of Prevention, Phi Delta Kappan, Vol. 90, No. 03, November 2008, pp. 225-226.

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