



MELVIN KONNER CATCHING UP WITH KIDS

THE ANTHROPOLOGIST AND PHYSICIAN

Melvin Konner began his career in the late 1960s studying how hunter-gatherer people in southern Africa's Kalahari Desert raised their children. His new book, *The Evolution of Childhood*, is an effort (960 pages, decades in the works) to explain why children everywhere develop, behave, mature and think as they do. Konner, a professor at Emory University, responded by e-mail to executive editor Terence Monmaney's questions.

How will our understanding of childhood change in the coming decades?

The most impressive findings will come from genetics and brain imaging. Most traits we care about will be influenced by not one or a few but hundreds of genes. Faster and cheaper methods of measurement and analysis will reveal remarkable patterns. Brain imaging has been difficult in infants and children because they don't stay still, but new methods are beginning to compensate for that, and we will know much more about brain function in developing children in real time. This will enable us to separate the aspects of brain

function that are maturational and less influenced by the environment from those that respond most readily to nurture and learning. Periods when children may be sensitive to intervention, to the extent that they are important, will be better defined. At the same time, new research will increasingly be driven by hypotheses from evolutionary theory, even more so as Americans' ignorance about evolution is overcome.

How might scientific insights affect our perception of childhood?

When I think about how our basic views have changed in my lifetime, I think: genes being more influential, infants being more competent, teenage brain growth being more dramatic, and powerful environmental interventions being more specific than we thought. Biology will continue to guide intervention, just as figuring out how the metabolic disorder PKU worked on a chemical level enabled us to test all newborns for it and design a diet for affected babies to prevent mental retardation. Sophisticated developmental analysis of conduct disorder has led to school-based psychological interventions that make a huge difference. Understanding

teen brain immaturity against the background of rising hormones is changing education and legal practice. Medications like stimulants for attention deficit and hyperactivity are both over-prescribed and under-prescribed because we're not good at finding out which child needs them. There will be hundreds more such insights as the complex interplay of biological, psychological and cultural factors is better understood. Some innovative interventions will be in parenting, some in education, some in medicine, some even in play. New discoveries will trounce old ideologies and open all our minds about what to do for children and how to do it.

Is the experience of childhood itself likely to change?

It depends. Sure, it will be great to know more about how to help those children who are already highly privileged to become even better nurtured and educated and turn into ever more effective and happy adults. But scientific advances will matter little without very big policy changes. We already know that it is bad for children to be abused, neglected, ill

without treatment, ineptly educated, sexually exploited and enslaved, yet we do so little to combat these scourges—and I am talking, by the way, about problems inside the U.S., not just on the other side of the planet. We need knowledge but we also need will, and we need a moral compass that will lead us to a better environment for all children everywhere. ●

NO. 24 BRAIN SCANS WILL (FINALLY) ILLUMINATE THE WORKINGS OF THE INFANT MIND.

BRAIN GROWTH

"New research will increasingly be driven by . . . evolutionary theory," says Konner.

