Wisdom and the Adult Brain

It may be hard to teach old dogs new tricks, but it is also true that for some of us, the passage of time results in the attainment of wisdom. Wisdom is a different kind of trick, one that involves the integration of thoughts and feelings, perspective, compassion, and understanding. In these areas, it is adults who excel. The reason wisdom often comes with age is likely due to the ongoing neural plasticity of the brain. As Mohammad Ali once said, "The man who views the world at 50 the same way he did at 20 has wasted 30 years of his life."

When we examine the changes in physical structure of the adult brain, we see a general decrease in the number of cortical neurons (gray matter), with sub-cortical structures far less affected by the passage of time. The connectivity between neurons (white matter) increases into midlife and then begins to decline. Although the loss of structural mass over time is almost always interpreted as reflecting declining function, remember that apoptosis (die-off of neurons) is a normal aspect of brain maturation earlier in development and correlates with increased functioning. Is it possible that, for some aging brains, there is a new kind of programmed loss and reorganization of neural processing that correlates with increased wisdom?

Wisdom may be related to the simultaneous utilization of both hemispheres in processing information about the self and the world. In terms of cognitive processing, older adults are somewhat slower and show a bi-lateral pattern of brain activation. But is taking longer to process information necessarily a bad thing? Might neural reorganization that uses both sides of the brain give us more time to think and more information on which to base our actions? Whereas the stories of young adults are organized around their immediate personal experiences, stories from older individuals often integrate both inner and outer realities into an understanding of the world that is a central component of what we think of as wisdom. Hemispheric integration later in life may be an evolutionary selection, just as hemispheric specialization may support specific skill building more relevant to early life.

Adults whom we think of as "wise elders" are those who had higher abilities early in life, continued to grow and learn throughout life, and are evolutionarily "selected" to be the containers of cultural wisdom in their later years. Keep in mind that written language is just a few thousand years old. Before writing, cultural wisdom was transmitted orally from the old to the young. Not surprisingly, adult brains tend toward storytelling, which may reflect our obligation to transmit cultural wisdom to the next generation. Perhaps adults are at a disadvantage in many memory and IQ tests originally designed to assess the academic progress of students during childhood and adolescence. An understanding of the adult brain informs us that their ability may lie not in learning but in teaching, a task more in line with the life cycle of their brain and its evolutionary role in the maintenance and continuity of cultural knowledge.

The brain is built of millions of neurons and trillions of connections that come together to create what we call an individual. Nature then continues to interweave individuals in ways that expand collaboration in the service of survival. Neurons that fire together, wire together. People who are able to attend to one another, touch, talk, and connect also fire together, wire together, and survive together.