By monitoring brain development, researchers have discovered that the brain undergoes waves of growth (red) and pruning (blue). Between the ages of 3 and 6, children experience tremendous growth in their frontal circuits, accounting for increased attention, vigilance, and alertness. Between 7 and 15, the wave of growth occurs in the temporal and parietal lobes; this period is the most efficient time for children to learn other languages. Between 16 and 20, the frontal lobe undergoes pruning, as life skills are honed. The adolescent gains greater self-control, becomes better at planning, and learns how to regulate his or her behavior.

Like childhood, adolescence is marked by the overproduction of neurons and their selective elimination later. The frontal lobes of a youngster just entering puberty have not yet undergone the pruning that will give her self-control; her behavior is at the mercy of her emotional limbic system, of which the amygdala is an important component. In her older brother, by contrast, the frontal lobes have become more efficient, allowing him to remain calm in the face of his sister's wrath.