



The abstract point is the milestone at which basic thinking breaks through into abstract thinking.

The neocortex is the most developed region of the human brain, where neurons are densely concentrated and form a vast number of synapses. When the number of neurons and synapses reaches a certain threshold, the nervous system does more than transmit signals—it begins to generate new emergent properties, such as abstract reasoning, self-awareness, and logical thinking.

In living organisms, intelligence does not arise simply because a brain exists. It requires two fundamental conditions:

1. **A sufficiently high level of biological complexity**, including a large number of neurons and a dense synaptic network.
2. **The ability to perceive the world and the self**, meaning the brain must possess specialized regions capable of receiving, processing, and integrating information.

Once this threshold is reached, an organism can form logical reasoning and intelligent behavior.

In humans, evolutionary genetics plays a key role. Several genes specific to the neocortex—most notably **NOTCH2NL**—increase the number of neural progenitor cells, resulting in a higher density of neurons and more precise, refined synaptic connections. These differences give humans the ability to think logically, process information, predict the future, and construct mental models of space and time. This forms the foundation of language, civilization, and complex societies.

A similar phenomenon, on a smaller scale, can be observed in other species such as crows, dolphins, and certain primates. Although their brains are smaller, the high density of neurons in particular regions enables them to demonstrate reasoning-like behavior and problem-solving abilities.

From this, we can propose the hypothesis:

Any organism whose nervous system reaches sufficient complexity—large enough numbers of neurons and well-refined synaptic architecture—can develop thought and cognition to some degree.

Intelligence is not exclusive to humans, but rather a natural outcome of complex nervous systems throughout evolution.

Each organism possesses a different degree of neurobiological complexity, with different distributions of neurons and synapses—therefore, each reaches a different abstract point.

All organisms are capable of thinking if they reach their own abstract point.