

strong tendency to follow the more obvious data and to disregard those that are less obvious.

A good example of this is the widespread tendency during the Middle Ages to think that the world was flat. Everyone knew that things fall down, and it was only natural to believe that if the world were not flat anyone who approached its edge would fall off. This idea was very widespread despite the fact that there were data available that should make it obvious to intelligent observers that the surface of the world is round, such as the fact that to a man standing on a high point in a flat area the horizon appears round, and the fact that the superstructure of a departing ship remains visible long after its hull has disappeared from view. Yet these and other data, obvious to any careful observer, made little impression on the mind of most people because of the great impact made by the observed fact that things fall down. After Magellan sailed around the world and proved that it is not flat both ideas came to be widely accepted, though they seemed to contradict each other. It was only after Tycho Brahe and Johannes Kepler had observed the motion of the planets for many years and had carefully charted their courses, that data were available for the forming of a new concept, that things do not actually fall down, but that bodies are attracted to one another. If the earth had been the only planet in our solar system, or if it had been surrounded by a cloudy layer so that the movements of the planets could not be studied, the concept of gravitation might never have been discovered, and humanity would have been left with two proven facts that appeared quite incompatible.