

As we saw in Nathan's reaction to perceiving an image of falling, landing, and hurting, knowledge (in this case his grandmother's warning) can inform or incite an image, and an image (falling and being hurt) can inform or incite something we are in the process of knowing. When a fact or an understanding is accompanied by an image, we are doubly certain that what we know or understand is true. This is perhaps the mind's reiteration of the adage a picture is worth a thousand words.

Solving problems through images can be dramatic. These occurrences often involve solutions to problems that have defied ordinary tactics, such as rational thought, experimentation, and discussion. An image saves the day. Henri Poincaré, the nineteenth-century mathematician, described the circumstances that led up to the solution of a mathematical problem as follows: "One evening, contrary to my custom, I drank coffee and could not sleep. Ideas rose in crowds; I felt them collide until pairs interlocked, so to speak, making a stable combination which I experienced as a mental diagram."

Friedrich Kekulé, who originated the structure theory of organic chemistry, has been called "an intuitive genius." In the late nineteenth century, Kekulé saw an image of a circle in his mind, and recalling the idea that the forces coming from the atom are distributed geometrically, like the points of a tetrahedron, he conceived the molecular structure for benzene.

Albert Einstein appears to have been able to put his images to work on demand. In a letter to Jacques Hadamard, Einstein wrote: "The words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are certain signs and more or less clear images which can be 'voluntarily' reproduced and combined."

A metaphoric image operates much the same way metaphor does in language. It is a kind of poetic double, an implied comparison, in which two things are identified with each other in such a way that the metaphor means the original. These lines from W. H. Auden's poem "As I Walked Out One Evening" provide a good example.

As I walked out one evening,  
Walking down Bristol Street,  
The crowds upon the pavement  
Were fields of harvest wheat.