

## COMMON METHODS OF ACQUIRING KNOWLEDGE

- **Tenacity.** Tenacity describes a willingness to accept an idea as valid knowledge because that idea has been accepted for a long period of time. Tenacity requires no evidence for a belief except that the belief is already accepted.
- **Intuition.** Intuition supposedly operates directly, without any intellectual effort or, according to some, without any involvement of sensory processes.
- **Authority.** Authority is the acceptance of an idea as valid knowledge because some respected source - such as religious writings, Aristotle, the President, the Pope, Sigmund Freud claims it is valid.
- ***The above three assert that: “we know this is true because 1) it has always been so, 2) because we feel it is so, or 3) because the authority says it is so.***
- **Rationalism.** Rationalism is a way of thinking in which knowledge is developed through reasoning processes alone. In the rationalistic approach, information is carefully stated and logical rules are followed to arrive at acceptable conclusions.

Examples: All crows are black. This is a crow. Therefore, this crow is black.

Unacceptable: All crows are black. This is black. Therefore, this is a crow. Or,  
All 4-year old children develop fears of the dark. Lisa is a 4 year old child. Therefore,  
Lisa has developed fears of the dark.

Rationalism alone has its limitations in science: Attaining knowledge, then, depends not only on the reasoning process, but also on the *accuracy* of the premises.

The rationalistic approach allows us systematically and logically to develop a tentative statement (hypothesis) that can then be tested in some other manner – against external criteria.

- **Empiricism.** Empiricism is a way of gaining knowledge through observation of real events; that is, knowing by experiencing through our senses. It is necessary to experience events through the senses, to see, hear, touch, taste, and smell. ***“I won’t believe it unless I see it!”*** Empiricism has its limitations. Scientists can overgeneralize from solely observation.
- **Science.** Science brings together elements of rationalism and empiricism. Science employs rational logic and checks each step with empirical observation. Science then involves the continuous systematic interplay of facts and rational thought. The scientist remains curious, skeptical, and committed using processes that identify or discover facts and then integrate those facts into coherent predictions, explanations, and general principles.