

Cumulative Progress

Good, experimentally ascertained findings are usable by those who follow. The theory, or the human's interpretation of a finding, may disappear but the data remain. New variables may minimize the importance of a certain finding, but all experiments have contributed to this advancement. What is meant by cumulative progress is that those who follow in science always start a little ahead of those who precede. This is not always true of other fields. In many areas of study an individual today is not much more effective than his/her ancient ancestors. Grade school students in science today are doing things people in ancient Greece never considered. Much of current day philosophy still has its basis in the writing of Aristotle and Plato. Data survives, not people.

28-1 When an individual engages in scientific investigation humans may benefit from the successes and failures of those who came before him/her. We have referred to this characteristic of science as:

- A. functional relationship
- B. maximum of communication
- C. regard for question
- D. cumulative progress (D)

28-2 The practice of making scientific knowledge explicit results in:

- A. too much talk
- B. cumulating of scientific knowledge
- C. making scientific knowledge unsound
- D. only implicit results (B)

28-3 The attitude of a scientist about the nature of scientific knowledge would be most likely to include:

- A. the understanding that all worthy scientific knowledge has been accumulated in the past
- B. a belief that knowledge gained outside of science is more trustworthy than that obtained from an always changing science
- C. that science progresses through replacement of old knowledge
- D. the opinion that no scientific constructs should be operationally defined (C)

28-4 It has been stated by some that the primary difference between the culture of animals and that of humans is that humans can accumulate knowledge. Yet, it is science within the human culture that has taken advantage of this characteristic. The primary difference between the culture of human beings and animals is that human cultures:

- A. are not organized
- B. are constructive
- C. change more slowly
- D. evolve and accumulate knowledge (D)