

Knowledge Progression and Breakthrough

Past and Present Knowledge Progression

There seems to be a pattern of knowledge progression: from observation to mathematical formalization to logical computation and to expansion of the range of tolerance creating a fuzzy reality due to the sacrifice of precision. In laymen's term, science is based on empirical verification, mathematics cleans up science, and the logic machine, namely, the computer replaces all the mathematical calculations and even logic in philosophy. In the end, the exact solutions in science and mathematics should provide more accurate description of the fuzzy reality with fuzzy logic. But, these conclusions represent the past and the present states of knowledge; post-science fuzzy logic represents the future of knowledge.

Present and Future Knowledge Breakthrough

In post-science, knowledge beyond science, mathematics and logic come into their own, not solely depending on improving science for their worthiness. Post-science realizes mathematics is for social science, whose solutions, involving infinity, are not subjected to empirically verification, which is the standard of acceptance in science, and must be accepted for their complete mathematical rigor. Also, logic is for life or computer science, whose solutions, involving unlimited complexity, must have a foundation based on logic or integers, as demonstrated by the current computer science. Without a completely automated foundation, the current computer science, being not completely logical, is wrong, for the existing partially automated software has created and will be contributing to complexity crises, where almost all the software budget is absorbed by maintenance due to manual updating from old to new versions.

Even fuzzy logic will stand on its own as a post-creational technology, in addition to being a post-solution technology in the past, and will surpassing post-science, which occupies the next 2000 years. Currently, fuzzy logic is used to improve science by expanding the range of tolerance of scientific products, to make mathematical description of the fuzzy reality more accurate, such as replacing the Exact Solution with the Fuzzy Exact Solution as the most accurate description of reality, and to extend crisp logic to fuzzy logic. However, the real power of fuzzy logic will not be realized until mankind is ready to face the problem of the universe, which is how to survive and flourish in a permanently uncertain future. For example, nature or our creators have used bisexual reproduction for bio-diversification, Human Associative Memory to allow humans to access an unlimited amount of information, multi-cellular design of animals, insects, and plants to allow the ultimate fault tolerance, etc.

The sacrifice of precision in the expansion of the range of tolerance of a creation, whether a human or a washing machine, in order for the creation to survive all the possibilities and to flourish in the permanently uncertain future finally reveals the origin of why reality is fuzzy. Thus, post-science fuzzy logic represents the most advanced vision of knowledge, surpassing the current established knowledge dominated by science by about 3,000 years. With the new field of Epigenetics, which is the feedback system between one's lifestyle, and the expression of one's DNA, Post-science, which made the theoretical discovery of DNA as completely automated software in 1986 vs. the experimental discover of DNA in 1953, completes its speculation that DNA, which is simply programming with 0, 1, 2, and 3, is the wisdom of the universe accumulated from the infinite past.