

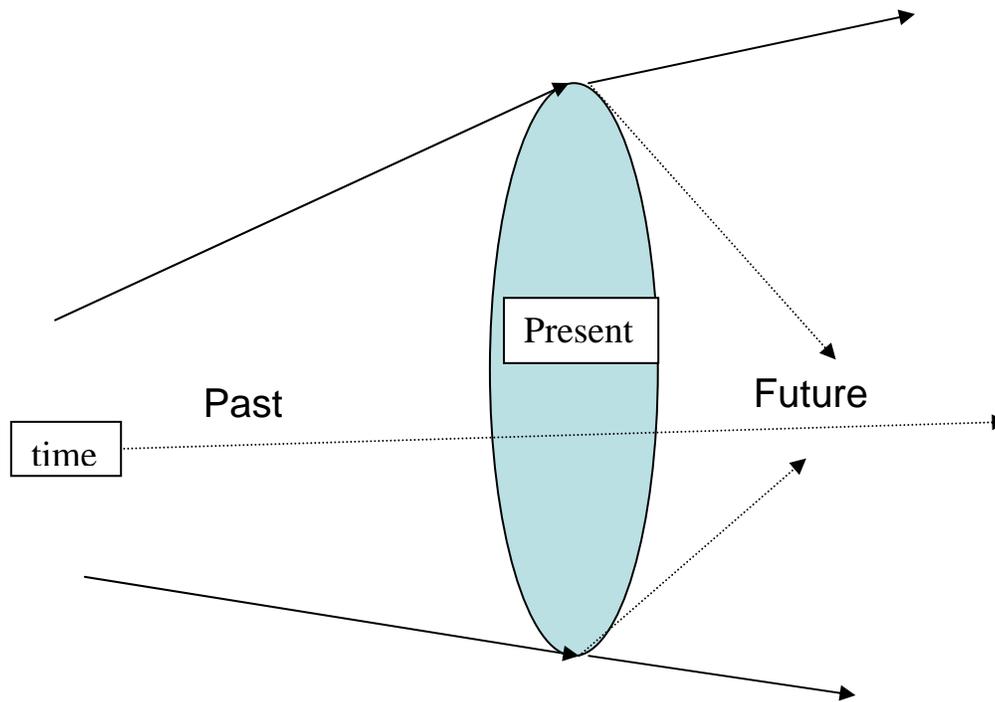
## I-5 Why Look Back?

Reality is represented within the bounds of time and space continuum. The potential (*bhavitavya*) of future promise and joy is built on the past. What we know about such future is that we will look back at the integrity and veracity of the past actions.

Consider two ancient riddles: *He who understands the past, controls the future, and he who lives the present, controls the past and future. Also If poor sort of memory only works backwards, sly wisdom bears no fruit. Auguries of astrologers and seers have no practical value because everything is likely to happen, but we do not know exactly when.*

A Buddhist parable to illustrate the point goes like this: A person is looking for something under a streetlight. A friend walks by and asked "What are you looking for." After hearing the reply he also begins to look for the lost keys. After few minutes of looking around, the friend asks again "Where did you loose the keys?" The reply was, "Oh, over there, about 100 yards away." The friend asked again, "So why are you looking for them here?" The answer was, "that is where the light is."

There are many variations of such searches in virtually all area of human experience. This parable is widely used by modern scientists as an appeal to appreciate the limitations of the prior knowledge (the light). Obviously, if you are looking for something that you do not know, it is futile to look into what you know. Temptation of looking at the world only through the prior knowledge is always strong. It has held its sway for millennia even when it is clear that there is no light there. Fortunately it is not always the case.



*Figure I-1. Certainty around the present is the maximum. The tapering cones of the past and the future meet at the present which has least uncertainty. The space outside the tapering cones includes all forms of uncertainties which we may or may not know about. Both the past and the future are less certain than the present, and uncertainty increases with time. Also note that whereas little can be done about the past, the potential for the future can be greater than the present.*

The parable is deeper. There are two ways to look at the uncertainty related to time. With the cones of uncertainty in Figure I-1 the present is the point where the two cones meet and it is least uncertain:

One way is to walk through the present with your face towards the past. The future will be behind your back. Walking "backwards" into the future may give you a more clear perception of the light from the past. This view of dwelling in the past comes

from the traditions of the Persia, Greece, and the Middle East. It has come to dominate much of the thinking of the major religions of the world. It dominates the academic traditions of analysis after the fact. Children are taught the "tried" that is often confused with the "true." In the historical sense of happenings all learning is about *where the light was* and not where it will be. The past is often *justified* as true but that is only in the sense that it happened. We hardly ever know what happened and how it happened. With past as the guide one tends to place greater reliance on the generalization of the past that come to use through artifacts. It is also misplaces emphasis on the belief that there is little that was not known in the past.

For another view of time imagine walking into the unknown of the future. I believe this is the focus of the *itthivay-nay* approach where decisions are made in real time based on real evidence relevant to the future. By augmenting the perceptions, the past guides only so much as to provide a road map of yesterday, or a snapshot (in the rear-view mirror) of what happened. On the way to the future where you stand now determines the starting point. Little can be done to change this starting point as well as the past. On the other hand concerns about the future can be addressed by doing certain things. Here the wisdom is that once we are suitably grounded and oriented all we need to do is to make use of what comes along while avoiding detours of contradictions and inconsistencies. Rationality lies in directing efforts to ensure a smoother transition into the unknown of the future.

**Why Acknowledge the Past (as in A#1)?**

For several reasons #A1 is a succinct but powerful statement about how the shared knowledge from the past is created, transferred, and ultimately brought to the present. It is an integral part of the individual and social evolution. Whether we appreciate it or not, transfer of past experience as knowledge has been at work forever (*anadi*) and many (*anant*) have contributed at all levels identified in A#1 in generic terms.

**Insight:** The form is simple. Its thrust is on the relationship of the verb "bow" to the class and groups, rather than a particular individual, that are not contemporaries or followers of each other.

**Insight:** The verb bow is used here in the sense of salutation as in *my hat is off to you*, or bowing or covering your head out of respect in other cultures. It is the sense in which Isaac Newton acknowledged the privilege of being able to "stand on the shoulder of the giants." It is not worship, or prayer for grace or enlightenment. It is an expression of appreciation for the role of humans in knowledge transfer.

**Insight:** In this hierarchy: *Arihants* make new in-roads in the interpretation of the extent reality; *siddh* establish validity of the approach, *aacharya* develop the precepts; *upadhyay* explain the precepts to the layman; and *sadhu* test the validity of through practice. In this hierarch of knowledge transfer no distinction is made whether these are different persons or different stages for the same person.

**Insight.** *Namo* has ancient origins. A stone inscription from the Kharvel Empire (ca. 400 BCE) in Orissa reads: *Namo Ar(i)hantanam, Namu Sabb Sigghanam. Namu Jinanam* appears to have been in use before Mahaveer. The term *arihant* is different than *arhat* of Vedic origin that invokes worship and miracle. A related term also refers to a group of monks in ancient Mesopotamia. In the Aryan tradition the term "arhat" refers to the

capable, respectable and the distinguished. This sense is also conveyed by other characterizations that have been associated with the pre-Mahaveer jin monks: *nath* (master), *iser* or *ishvar* (worthy of worship), *dev* (deity) and *bhagvan* (god).

**Insight:** For some this acknowledgement has also come to represent a deeper meaning. Around 800 CE it has been characterized as *mantr(a)*, as a “device (tool) for thought” or “instruction for mind,” that is a Sanskrit but not Prakrit word. Those cognizant of subtleties of words and aficionado of language usage will note the conceptual continuity of the motive-devices such as: *sutr(a)*, linear context dependent device; *stotr(a)*, device for contemplation and emulation; *tantr(a)*, bodily device (for yoga, illusion, deception and magic); *yantr(a)*, physical device such as a tool or machine; *gatr(a)*, by bodily motion; *gayatr(a)*, melody. Such a relationship may be an overstretch for *pitr(a)*, paternal; *matr(a)*, maternal; *bhratr(a)*, fraternal; *bhadr(a)*, driven by common curtesy. Such devices often helps in discerning the content (concept space and the word boundaries) from the cloud of rhetoric and semantic.

**Note.** #A1-23 steps of Jeevatthan give a flavor of what is to follow in terms of the style and economy of words in the rest of the text (Chapters A-H). It is said that around 37AD Pushpadant developed this abstract (#A1-23). This concept template was developed by Bhutbali over the next 50 years to complete five other parts what is known know as the Shatkhandagam (Chapter J).

**Uses of the past.** One does not reinvent the wheel every day, nor does everything repeats itself. Even if we have such feelings we cannot predict which part of the past is going to repeat and when. Of course, seers and oracles have said everything about the

future. At some time or the other, and somewhere or elsewhere, it will all come true if we care to pick and choose. Is it helpful?

Reliance on the past comes from the perceptions, and not even from the wisdom of hindsight. Humans inherited and continue to refine tools and technologies, including the agricultural and communication technologies. This is because not that we have is good for everybody and at all times. There is no point in using the same wheel or cart if it does not do the job. If you think otherwise, ask around how many people want to go back to the life of 100 years ago. Our genetic makeup is not meant to start from the scratch. We mimic and learn from the experiences of our own and hopefully of the others to nurture desirable and undesirable transitions permitted by the nature.

We also know more about what does not work. Ability to do harm has also increased. Whether we admit it or not collective experience of the past has made us wary of many things. Ready flow of information also identifies the broader concerns as we get a better grasp of usable facts of reality such as "One does not create something out of nothing." With such realization most people have done away with the idea of perpetual motion machines including omniscience of sorts embedded in ideas of infinite energy, knowledge, wisdom, or information. Have it changed beliefs, attitudes and behaviors? Do people relent to the obvious or even to the established facts? My answer is qualified yes. We may not have the tyranny of omniscience, but it does crop up from time to time in many garbs.

Rational behavior with explicit attention to the tools of the thought and reason is a relatively recent development in most cultures. It requires use of conceptual tools to make real time choices and decision to deal with present and to forge the future. We have made progress in access to information. It does not mean that predicting the future is around the corner. We can not avoid unpleasant happenings, but we have increased ability to

deal with the consequences. Methods of forecasting, planning and game theory rely on such tools to offer solutions in the form of education, public services, health care, insurance, and other forms of help when and if needed. Such solutions do not necessarily ward off the reptilian instincts that lead to wars, aggression, environmental degradation, and over-consumption. At this level the significance of the ancient negations (on violence, lying, illicit behaviors, and possessions) is still in place.

In short, the value system behind irrational impulses need be examined carefully. Beyond that rationality of coexistence lies in coherence of thoughts, words and actions towards common concerns and goals. In this sense empirical approaches of the past continue to be relevant if adopted suitably. Their conceptual basis remains relevant as long as our instincts and concerns prevail.

**One sometimes finds what one is not looking for**

The information content of perfect disorder is minimal. Even armed with perfect knowledge we should know what we really want and evaluate consequences of our choices. However, there is something to be said about empirical searches in which *luck favors the prepared*. Another version attributed to Luis Pasteur is: "Chance and coincidences favor prepared minds." Consider account of coincidences in the life of another microbiologist.

Alexander Fleming was born as the seventh of eight children of a farm helper in Scotland. Alec, as he was called, "unconsciously learned a great deal from nature." Alec's father had once saved life of his Master. In gratitude, the Master paid for the education of Alec's elder brother, Tom. When their father died, Tom was opening a medical practice in London. He encouraged Alec to enter business, where he did not do well. Then he joined the Army and again did not do well. After Alec

inherited 250 pounds from his uncle, he took the qualifying examination for medical school. He topped. He chose St. Mary's Hospital because he had played water polo against them. In 1905, for random reasons he specialized as a surgeon, and then found out that he did not like surgery. Alec came to bacteriology because the captain of St. Mary's rifle club, a bacteriologist, wanted a good shot for his team. He knew about Alec's shooting skills from the Army days.

Fleming stayed at St. Mary's for the rest of his career. During his wartime services Fleming recognized a need to control wound infection. In WWI more people had died of wound infection than with gunshots. The only available treatment was crushed garlic. In the 1920s, Fleming found that lysozyme, an enzyme occurring in egg white and body fluids, such as saliva, tears and urine, had a weak antibacterial effect.

His lab was often in disordered state. On one of the cleaning days, he noticed "something funny": One of the dishes infected with a mold has killed the *Staphylococcus* bacteria. He later identified the mould as *Penicillium notatum*. This mould strain was being studied a floor below. It had entered Fleming's lab through windows left open in both the labs during a warm August day, when Fleming was on holidays. His report published in 1929 attracted little attention. He later purified a small amount of penicillin from the mould. That too attracted little attention. His studies were delayed when his coworkers relocated or died. During WWII Howard Florey and Ernst Chain picked up on the earlier findings to isolate penicillin. In recognition for their contributions, Alexander Fleming (1881-1955), Chain and Florey were awarded the Nobel Prize in 1945.

Could anybody have planned the course of this development? Since this beginning by chance hundred of antibiotics have saved millions of lives, and have protected many

more from debilitating infections. One of the first patients to benefit from penicillin was the son of the master whose life was saved by Alec's father about 50 years before. Ironically, the over-reliance on antibiotics in hospitals and feedlots for animals and poultry has also created major health hazards. New strains of bacteria resistant to multiple antibiotics have appeared at a rapid rate in the environment where antibiotics are excessively used.

## Contents of Volume I

# Representation and Quality of Perception

- I-1. What Is Of Interest?
- I-2. In Short, What Is Being About?
- I-3. Critical Contemplation
- I-4. Representation and Abstraction
- I-5. Why Look Back?
- I-6. An Ancient View of Being
- I-7. Processing Reality
- I-8. What Is In An Abstract?
- I-9. What Is in a Word?
- I-10. Defining Coordinates
- I-11. What Is Sensibility?
- I-12. Independence for Survival
- I-13. Is It Sustainable?
- I-14. Ascertaining Nature's Veracity
- I-15. What Is in a Name?
- I-16. Human Natures
- I-17. Contradiction Violates Reality
- I-18. Rationality of Self-Interest
- I-19. Tools for Representation
- I-20. Satprarupana