M. RAM MURTY

The recent pandemic and the health regulations imposed globally remind us of orthodox Jain practices. The principle of *ahimsa* in particular and the practice of vegetarianism in Jainism represent a unique beginning in the history of the human race. Pandemics are certainly not new, but the Jains seemed to have had some insight into their cause and how to prevent them. Long before any scientific microbial theory, the Jains had a theory of "karmic matter" that led to a code of conduct emphasizing hygiene and communal health, especially with its cardinal principle of the sanctity of all life. In this article, we will explore this theme in the context of the present global health crisis, discuss how some of these ideas penetrated into Buddhism and Hinduism and offer some recent medical research that supports some of the practices of the orthodox Jains. We will also indicate briefly how Jainism influenced the philosophy of Mahatma Gandhi and touch upon the evolution of the Jain canon, as it stands today, and what it can teach us. Viral pandemics and climate change are two of the greatest threats to the survival of the human race, and we can extract important lessons from Jainism and chart an intelligent path forward for the future.

Introduction

The coronavirus pandemic of 2020 and its aftermath lead one to ponder about how we got into this state of planetary paralysis. The prevailing scientific view is that it arose in a meat market in Wuhan, China as a result of animal slaughter, most likely the pangolin, an 'exotic' animal in the anteater family although there are other hypotheses being advanced as to the source (Balaram, 2021). The virus most likely originated in a bat and the pangolin was the host for the virus. In their recent paper in the journal *Microbial Physiology*, Reddy and Saier argue that earlier pandemics of the twentieth century arose in a similar fashion. They present scientific data to substantiate their assertion (Reddy, Saier, 2).

Looking at the major epidemics of the twentieth century before the covid crisis, they write, "SARS, which caused the 2002 epidemic, was caused by a coronavirus, i.e., SARSCoV. It arose in Guangdong Province, China, infecting some 5,000 people with a case fatality ratio of 6.4 %. Subsequently, the overall fatality rate in several other less prepared countries was found to be as high as 15 % (Cao et al., 2011). The majority of the patients in the initial stages of infection were known to have lived near produce markets, and as many as 40 % of early CoV patients were food handlers with extensive exposure to animals (Xu et al., 2004). The virus was traced to a palm civet (Panguma larvata), a raccoon dog (Nyctereutes procyonoides), a Chinese ferret badger (Melogale moschata), and humans working in live animal markets in the Shenzen municipality."

Other viral epidemics that did not originate in China have again been shown

Prof. M. Ram Murty, FRSC, is a distinguished Professor and Queen's Research Chair at the Department of Mathematics and Statistics, Queen's University, Canada.

to arise from the slaughter of other animals. For instance, the Middle East Respiratory Syndrome (MERS) was also traced to a bat, but the camel was the intermediate host (Reddy and Saier, 2020). The Ebola virus seems to have arisen from "bush meat". The 1957 Asian flu, the 1968 Hong Kong flu, the 1977 Russian flu all originated in China and have been traced to pig farms there. They have been shown to be the source of H1N1-like viruses. The Spanish flu pandemic of 1918 was caused by an H1N1-like virus of mammalian origin (Reddy and Saier, 2020). "A third of the world's population was infected during this pandemic that killed over 50 million people worldwide and an estimated 675,000 people in the USA." (Johnson and Mueller, 2002)

The notorious BSE or "mad cow disease", has been shown to arise from the slaughter of cows that were fed meat bone meal. "In the early 1900's, cattle feed manufacturers started supplying farmers who fed their cows with meat bone meal made with discarded bones and internal organs of slaughtered cows and sheep. Farmers in other European countries and the USA soon adopted this practice as it increased the growth rates of the animals. This may have been the origin of BSE, first, involving the spread of this prion disease from sheep to cattle and, second, promoting the spread of the disease throughout the cattle industry." (Reddy and Saier, 2020)

Thus pandemics are not new to this planet and must have been present even in ancient times. Because travel was not rapid as it is now, the rate of transmission of viral infections was far less before the twentieth century. With the increase of air travel, viruses spread faster in the jet age. But what causes them? How can we prevent them?

Only after the advent of the scientific revolution and the microbiological theory of germs and viruses did we begin to realise what was going on. This knowledge helped us to contain them to some extent. The social measures we have adopted such as mask wearing, face and hand hygiene, and physical distancing remind one of some of the customs, still in vogue, of the Jain religion. It is worth exploring Jainism in particular since the Jains seem to have clued in before anyone else that pandemics are caused by animal slaughter. They were the first to adopt strict vegetarianism as a religious practice. In fact, the practice of vegetarianism seems to originate with the Jains (Spencer, 84). It is a corollary of the principle of non-violence (ahimsa) which is one of the pillars of the Jain faith.

The Jain religion is one of the oldest in the world and its adherents seem only to be in India although now there is a considerable Jain diaspora outside of India. In the Jain scriptures, we find strict rules to be followed by a Jain monk. He must not possess anything apart from a blanket, an alms bowl, a broom to sweep the ground and a cloth over his mouth and nose (Dasgupta, 172). The reasons given for the last injunction seem very sanctimonious: "lest he should kill the microbes in the air" and thus violate the principle of *ahimsa*. Another reason given is more comical: "lest insects enter into his mouth" (Dasgupta, 172). The last reason, comedy aside, is actually very practical in some parts of the world where small insects called mayflies emerge in swarms during springtime, and it is virtually impossible to avoid them while walking. I have already used my mask this spring for this purpose and it is quite effective!

The prescription of the broom is of considerable interest as it is essential to practice cleanliness. Evidently, cleanliness as a means to both individual and communal health is indicated by this requirement. In fact, cleanliness was seen as a form of meditation. In his memoirs, the famous Gandhian and founder of the Bhoodan Movement, Vinoba Bhave writes, "I also regard sanitation work as a means of meditation. Cleanliness for me has a spiritual aspect, so I use it in this way. When I settled in Brahmavidya Mandir in 1970, I began regular cleaning work and found that as I worked I was inwardly close to the experience of meditation and even of *samadhi* (state of enlightenment). That is why I regard my sanitation work as a work of meditation." (Bhave, 238) For Vinoba, cleanliness is not only next to godliness; it is identical with it.

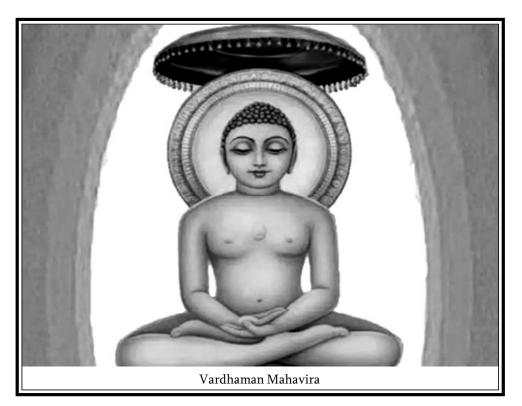
The rules regarding the broom and the wearing of the mask suggest that the Jains were aware of how diseases spread. It seems to me that such rules and regulations deteriorate over time either in their practice or to the reason why they are practiced and often sanctimonious reasons are ascribed to them. In fact, many religious practices that we see nowadays may seem strange, and even the adherents are sometimes unaware of why they follow them. But if we trace back these customs to their original source or sources, we find often a profound reason for such a practice rooted in health and hygiene.

The Indian greeting of saluting others with folded hands (called the *anjali mudra* in Sanskrit) and saying '*namaste*' connotes mutual respect but also underscores an important practice for higher life. The literal translation of *namaste* is: "I salute the divine in you" though the customary meaning is "I salute you". Not only is the greeting symbolic of mutual respect, but it is also effective in reducing community transmission of viral infections since it is a non-contact form of greeting. The world can adopt this form of greeting instead of shaking hands. But it is doubtful that it will do so.

The Jain practice of *ahimsa* is another case in point. It may have been taken to the extreme of not even killing an insect or "the microbes in the air" making it nearly impossible to implement. The rigid rigor with which it is practiced by the Jains opens it up for criticism. Many practicing Jains, even to this day, have not taken up any profession involving agriculture and often go into commerce mainly for this reason, it seems. But the original idea of *ahimsa* (non-violence) is at the heart of the practice and the survival of the human race may very well depend on everyone to adopt it.

Mahavira and Jain Metaphysics

Mahavira is considered the founder of Jainism though the philosophy had earlier origins. His life story seems to have some similarities with the life of the Buddha. Born as Vardhamana (and later called Mahavira or "Great Hero") in the town of Vaisali, (about 27 miles north of Patna in modern day Bihar in North India) around 550 BCE, he was the second son of Siddhartha and Trisala of the Kshatriya (warrior) caste. Some biographies call him a prince and he may well have been since there were many provincial kingdoms at the time. Later, he married Yasoda and had a daughter by her. In his thirtieth year,



when his parents died, he took the permission of his elder brother Nandivardhana and became a monk. After twelve years of self-mortification and meditation, he attained enlightenment. He lived to preach for thirty years more, and attained *moksha* (emancipation) some years before Buddha (480 BCE - 400 BCE) in about 480 BCE. (Dasgupta, 173)

Buddha's life has a similar trajectory and his embrace of asceticism was more dramatic. He escaped the confines of his palatial bedroom in the middle of the night and by morning, he was incognito having the physical appearance of a mendicant. The royal prince was nowhere to be found. After years of stern asceticism, Buddha discovered the "middle path" and taught the path of non-violence. Thus, the principle of *ahimsa* also forms a pillar of Buddhism.

Jain metaphysics seems to be a harmonious median between Vedanta philosophy and Buddhist philosophy as to the nature of reality. In the Chandogya Upanishad, for example, we find the example of the clay pot used to demonstrate the nature of reality. The substance clay is real, but the pot is simply a transformation, a change of the fundamental substance. The implication of Vedanta then is that the changeless is real, and the changing is unreal. This the Buddhists deny. They say that we can only perceive change and since the changeless cannot be perceived or inferred, there is no need to postulate its existence. Only the changing exists. In other words, only qualities exist. Jain ontology reconciles both these extreme positions and states that pure being is neither absolutely unchangeable nor the momentary changing qualities or existences, but involves them both. (Dasgupta, 175) The notion of being then involves a threefold unfoldment: the changeless, and some things which change, and some things which do not. All affirmations have only a relative reality and thus a form of relative pluralism is a central feature of Jain philosophy. Vedanta gives a different explanation.

But it is the theory of life forms (*jivas*), that lies at the heart of Jain thought which gives rise to the corollary of vegetarianism. To me, it appears to be the earliest viable theory of microbes, long before the invention of any microscope. In Jainism, life forms are classified according to the number of sense organs they possess. The lowest class consists of plants since they only possess the sense of touch. The next class consists of worms that possess only touch and taste. Higher still come insects that possess touch, taste and smell, like ants. Higher still are creatures that possess touch, taste, smell and sight. Surprisingly, bees belong to this category. Finally, we have animals that possess all five senses. (Dasgupta, 189) The human being has a sixth sense namely that of mind (manas). The first class that possesses only the sense organ of touch is further subdivided into four classes according to their density which progresses from the coarse element of earth, then to water, to fire, to air, and even more microscopic, the ether. We thus enter into a remarkable view of worlds within worlds of life forms, quite a spectacular deduction at a time when there were no microscopes.

The theory of *karma* in Vedanta philosophy is really the theory of cause and effect. It is not so much a rigid law as it is a guiding principle. That is, the *karma* theory does not imply a rigid determinism as it is often thought but more about probable effects. In Jain philosophy, the karma theory seems to assume a more rigid form. We reap what we sow. Our past karma determines our present condition in the most rigid fashion. This is amplified by the theory that karma is material. The actions of body, speech and mind create subtle karma matter that sticks to the soul and this is the cause of human bondage. The enclosed soul thus moves from life to life, its future course being determined by actions in the present life. The method of release from this bondage is similar to the principle of yama in the eight-fold system of Patanjali's Yoga Sutras. non-violence (ahimsa), truthfulness (satvam), continence (brahmacharya), non-stealing (asteya) and non-receiving of gifts (aparigraha). In fact, as the Yoga philosophy came after Jainism, and Patanjali does say he is compiling earlier knowledge, it is quite possible that the *yama* principle of Yoga philosophy came from Jain metaphysics. But in contrast to the general outline given by Patanjali, the Jain texts expand and amplify these practices leading to very rigid and exacting observances. (Dasgupta, 195) In particular, one is led to the edict that ahimsa must be observed at all times and one cannot kill life even unintentionally.

Ahimsa, or the practice of nonviolence implies non-injury to fellow human beings, but also non-injury to all life forms. Thus, the practice of vegetarianism is an immediate corollary. Pushing this further and seeing how milk and dairy products are produced, veganism becomes a second corollary. It need not be if cows are treated humanely and the milk is extracted by gentle methods. As the cow provided nourishing milk (like a mother), and even cow dung was useful, sometimes as fuel, sometimes as plaster on houses, both Buddhism and Hinduism adopted "the sacred cow" and so, the cow has come to occupy a venerable position in the Indian consciousness. Some Jains believe that cow's milk is really meant for the calf. So today, many practicing Jains are vegans for this reason.

Mahavira insists that he is not the founder of Jainism and that it had existed much earlier. He spoke of generations of teachers (tirthankaras) that had come before him. The early teachers, with their strict injunction of vegetarianism may have noted the intimate link between what we eat and our ability to control the mind. Swami Vivekananda makes the following insightful remark connecting food and mind in his exegesis of Raja Yoga. "Certain regulations as to food are necessary: we must use that food which brings us the purest state of mind. If you go to a menagerie, you will find this demonstrated at once. You see the elephants: huge animals, but calm and gentle; and if you go towards the cages of the lions and tigers you find them restless - showing how much difference has been made by food. All the forces that are working in the body have been produced out of food; we see that every day." (Vivekananda, 585)

Technically, the Jain religion is not theistic. The goal of the Jain monk is emancipation (*moksha*) from the cycle of birth and death, morphing from one life form into another in a seemingly endless cycle (Dasgupta, 207). The way to extricate oneself from this endless cycle is the practice of *ahimsa* (non-violence) combined with attention (*avadhana*) or as the Buddhists would later call it, alert mindfulness. Thus, *ahimsa* and *avadhana* form the two pillars of practice for the orthodox Jain. We will say more of this below.

There were no codified Jain scriptures for a long time since the tradition insisted on the exercise of the power of memory to transmit its knowledge from generation to generation. With the passage of time, many of the teachings were forgotten and a decision to compile them was made only much later in the post-Buddhistic period around 320 BCE. These recordings are called the Agama Sutras and they are written in a precursor to Sanskrit called ardha magadhi prakrit language. Due to differences in interpretation of teachings, and due to differences in the reliability of sources, the Jain faith split into several sects, the swetambara and the digambara being the two dominant branches. The latter sect believes that the original teachings of Mahavira have all been lost while the former recorded most of them by compiling the recollections of various phenomenal monks, who had trained their memories to recite entire works. A similar tradition existed in both Buddhism and Hinduism, where in the case of the latter religion, it is well-known that the Vedas were preserved in this manner for a long span of time.

The preservation of any religious tradition is largely rooted in books. In the introduction to *Raja Yoga*, Swami Vivekananda writes, "If you analyse the various religions of the world, you will find that they are divided into two classes: those with a book and those without a book. Those with a book are stronger and have a large number of followers. Those without books have mostly died out and the few new ones have very small followings. Yet in all of them we find one consensus of opinion: that the truths they

teach are the results of the experiences of particular persons." (Vivekananda, 579)

With its insistence on the avadhana tradition, Jainism nearly died out. The Agama Sutras of the Jains are a compilation of the teachings of Mahavira, written several centuries after the advent of the sage. But Jainism again lacks a single text (such as the Bhagavad Gita, the Bible or the Koran) to point to as its essential scripture. As late as the twentieth century, Vinoba Bhave, a true votary of non-violence and a formidable scholar of Indian philosophy, noted this plight of Jainism. In his autobiography, he writes, "I have said a number of times to my Jain friends that they should have a book about their religion comparable to the Gita which gives the essence of the Vedic religion in seven hundred verses, or to the Dhammapada of the Buddhists, thanks to which the Buddhist religion is known twentyfive hundred years after its birth. For the Jains this was difficult, they have many sects and many books, but no one book which holds among them a position like that of the *Bible* or the Koran." (Bhave, 208) Finally, as late as 1974, Vinoba's dream had been realized and the Jain scholar, Varni, wrote the Samana suttam.

An important feature of the Jain religion is the training of the memory and acquiring the power of *avadhana* or attention. Some scholars (like Radhakrishnan) often translate this as 'concentration' but the term seems to have deeper shades of meaning. It is admitted that this power of the mind by itself is not desired, but that it must be combined with the principle of *ahimsa* and the higher purpose of enlightenment. One of the earliest of the Jain scriptures, *Tattvarthadigama Sutra*, underscores this point. "Concentration is confining one's thoughts to one particular object. It is of four kinds: painful, wicked, righteous and pure. The last two are the causes of liberation. Wicked concentration is delight in hurtfulness, falsehood, theft, and preservation of objects of sensual enjoyment. Righteous concentration is contemplation on the subject matter of scriptural teaching, the removal of wrong belief, the knowledge and conduct of people, the fruition of *karmas* and the nature and constitution of the universe." (To be continued)

References

- Balaram, P., The murky origins of the coronavirus SARS-CoV-2, the causative agent of the COVID- 19 pandemic, Current Science, Vol. 120, No. 11, June 2021, pp. 1663-1666.
- ♦ Bhave, V., Moved by Love, The Memoirs of Vinoba Bhave, Second Edition, Paramdham Prakasham, Wardha, 2006.
- Cao WC, de Vlas SJ, Richardus JH. The severe acute respiratory syndrome epidemic in mainland China dissected. Infect. Dis. Rep. 2011 Feb; 3(1):e2
- Dasgupta, S. (1922). A History of Indian Philosophy. London: Cambridge University Press.
- ♦ Johnson NP, Mueller J. Updating the accounts: global mortality of the 1918-1920 Spanish influenza (pandemic. Bull Hist Med. 2002; 76(1): 10515.
- Reddy, B. L., and Saier, M. (2020). The Causal Relationship between Eating Animals and Viral Epidemics. Microbial Physiology, 2-8.
- Spencer, C. (1996). The Heretic's Feast. A History of Vegetarianism. London: University Press of New England.
- Vivekananda, Swami, The Yogas and Other Works, Ramakrishna-Vivekananda Center, New York, 1996.
- Xu RH, He JF, Evans MR, Peng GW, Field HE, Yu DW, et al. Epidemiologic clues to SARS origin in China. Emerg. Infect. Dis. 2004 Jun; 10(6): 1030-7.