

TANTRIC BUDDHISM

—NALINAKSHA DUTT

INTRODUCTION OF BUDDHISM INTO TIBET

It is a matter of common knowledge that a few centuries before the reign of King Srong btsan-sgam-po, the warlike Tibetans were extending their sway over Kashgar, Kucha, Karashahr, and Khotan, and had occupied, though temporarily, these four garrisoned cities by defeating the Chinese army. Their occupation of Central Asia upto the borders of China is amply proved by the existence of a large collection of Tibetan manuscripts in the Chinese cave temple of Tun-huang. The dialect of the Central Asian inscriptions of the 7th Century A. D. discovered at Niya and other sites is also intermixed with Tibetan words. Now there can be no doubt that the Tibetans extended their territory before the 7th century A. D. not only to Central Asia but also upto Baltistan and Gilgit (Bru zha). Here evidently they came across Buddhist monks and monasteries, and realized the importance and wide popularity of the religion. At this period, the form of Buddhism prevalent there was mainly Tantric; and so it is quite likely that Tantric Buddhism percolated into Tibet before King Srong-btsan-sgam-po established it in his realm formally. His Nepalese queen brought with her the images of Akhsobhya, Maitreya and Tara, that is, the gods worshipped by the Tantric Buddhists, and so it is evident that the form of Buddhism first introduced into Tibet from Nepal and Central Asia was Tantric. King Srong-btsan-sgam-po's descendant Khri-srong-lde-btsan at the advice of Santaraksita invited the famous Tantric teacher Padmasambhava from Uddiyana of the Swat Valley on the N. W. borders of India (now West Pakistan). In order to re-orient the religion in his realm The sect started by Padmasambhava, known as *Nying ma pa*, thenceforth became the recognized and state patronized religion of Tibet.

TANTRIC BUDDHISM IN INDIA

In India, Tantricism has a long history. It may be as old as Vedism, for in the *Atharvaveda* there are incantations which are believed to produce supernatural effects. The belief in the efficacy of *mantras* has been prevailing in India from time immemorial and it is still prevalent widely among the Indians.

The *mantras* (मन्त्र *gsang-sngags*) do not perhaps always carry a meaning

but their correct intonation was and is still considered and believed to have an effect. The earliest form of such *mantras* in the Buddhist literature is known as *Dharanis* (धारणी *gzungs*) which are found in very early Mahayana texts. The corresponding compositions in Pali are called *Parittas* (परीत्त-*yongs-su-skyobs-pa*)

Asanga in his *Bodhisattvabhumi* (Ch XVII, p.185) offers an exposition of the term *Dharani*. He writes that *Dharani* means that a Bodhisattva preserves in his memory *Dharma*, its *artha* and the *mantras* for an unlimited period of time. The first and second, *Dharma-dharani* and *Artha-dharani* mean that a Bodhisattva remembers the texts (*granthas*) as well as their meaning (अर्थ *don*) on account of their sharp and excellent memory. The third is *Mantra-dharani*, by which is meant that a Bodhisattva on account of his control over meditations, can relieve the sufferings of beings by uttering spells (*mantras*), and the fourth is *Ksanti labhaya dharani* (क्षान्तिलाभाय धारणी *bzod-pa-thob pa*) by which is meant that a Bodhisattva, who leads a highly restrained life, learns some spells by which he perfects himself in perseverance (*Ksanti*). The spells are like *Iti miti kiti-bhiti ksantipadani svaha* (इति मिति कितिभिः क्षान्तिपदानि स्वाहा). Though the words of the *mantras* do not convey any particular meaning, a Bodhisattva realizes their intrinsic value, viz., the nature of their indescribability (निरमलाप्य खभावता), and hence he does not seek their literal sense. From such interpretations, it appears that the efficacy of a *mantra* depends more on the will-power of the mantra-reciter, who knows how to control his thoughts, than on the actual words composing the spells. The intonation and repetition of the spells may have a value of their own.

TANTRICISM

Tantricism is essentially an esoteric form of religion in which meditation forms the core. The meditations were not of the type found in early Buddhist texts but needed many artificial aids under close and direct supervision of a perfect spiritual guide (गुरु *bla-ma*). There are five sections in the Tantric spiritual culture viz (i) rites and ceremonies (क्रिया *byed-pa*), (ii) meditational practices and observances for external and internal purity (चर्या *spyod-pa*), (iii) finger gestures and physical postures (मुद्रा-*phyag-rgye*), utterance of spells (मन्त्र *gsang-sngaygs*), (iv) meditations (योग *rnal-'byor*) and (v) higher type of meditations (अनुत्तरयोग *bla-na-med-pai rnal-'byor*) to realize the oneness of the diverse beings and objects of the universe, that is, वज्र *rdo-rje*).

The minimum requirements of a Tantric adept are the knowledge

of spells and their correct intonation, the various fingerposes and sitting postures and various diagrams (मण्डल *dkyll-'khor*) for the purpose of meditations as also for security from evil forces and lastly formal initiation (अभिषेक *dbang skur*) by a spiritual preceptor (Guru) into form of spiritual culture.

According to the Tantrics, the human body is the microcosm which contains the lowest and highest form of conceivable worldly existence. It can be turned into a hellish or a heavenly state. The process by which a human being can be raised spiritually is centred round the three veins in the backbone (cerebro-spinal axis) called in Hindu Tantras: Ida (इडा), Pingala (पिङ्गला) and Susumna (सुषुम्ना), of which the corresponding Buddhist terms are Lalana (ललना), Rasana (रसना) and Avadhutika (अवधूतिका). Ida is on the left side and Pingala on the right side of the central vein Susumna. The two side veins entwine the central one, Ida from left to right and Pingala from right to left without touching the Susumna. All the three, two of which in a spiral form rise from the anus (मूलाधार) to the centre of the eyebrows, that is, Pineal Gland (आज्ञा). In between the two there are four stations known as Lower Lumber region (स्वाधिष्ठान), Lumber region (मनिपुर), Middle Thoracic region (अनाहत) and cervical region (विशुद्ध). The two side veins in Buddhist Tantras represent knowledge (प्रज्ञा *shes-rab*) and expedient or compassion (उपाय/करुणा *thabs/snying-rje*). The latter is dynamic representing worldly forces and the former is static (inactive, pure knowledge). The central vein Susumna or Avadhutika, represents Bodhicitta or Vajra, in which the functions and effects of the two side veins are united into one, the perfect unity taking place when the mind force reaches through the central vein to the centre of the eyebrows. At this point oneness of the worldly forces and the Truth is fully realized. The Tantric adepts practise meditation with the artificial aids to push up the mind-force from the lowest (*muladhara*) to the highest (*ajna*) point and thereby achieve perfect knowledge or salvation. The merging of the two, Prajna and Upaya, at the top in Avadhutika (*Kun-'dar-ma*) is represented by the image of Yabyum in Tibet. It denotes the perfect Bodhicitta or Vajra, in which disappears the distinction between worldly activity and transcendental knowledge.

What has been stated above briefly may be explained in further details. The central object of Tantricism is the realization of worldly existence (संसार *'khor-ba*) as nonexistent in reality (निर्वाण *mya-ngan-las-'das-pa*) by means of breath control and regulation (प्राणायाम) combined with concentration of thoughts. The philosophy of the identity of Samsara and Nirvana was first propounded by Nagarjuna in his *Madhyamaka-karika*

XXV. 20). The Tantric saints adopted this philosophy and devised the psycho-physical process of identifying *samsara* and *nirvana* with the two veins on the right and left of the central vein. The right vein Rasana (रसना/पिक्वला—*ro-ma*) represents worldly existence (*samsara*). It is this vein through which a Bodhisattva exercises his compassion (उपायकौशल्य=*thabs-la-mkhas pa*) for his own spiritual advancement as well as for the good of the worldly beings, which really have only conventional existence. Without the assumption of such existence a Bodhisattva cannot develop his compassionate mind, which must have a basis. The left vein Lalana (*brkyang-ma*) represents Nirvana, the culmination of soul-lessness (अनात्मता—*bdag med-ma*) and substancelessness (शून्यता—*stong-pa nyid*) of worldly existence. The means for attaining Nirvana is knowledge (Prajna) of real state of worldly objects and beings. A Bodhisattva develops Prajna through the left vein. By means of breathing exercises a Tantric Bodhisattva makes compassion and knowledge descend along the two veins to commingle at the bottom of the cerebro-spinal axis and ascend upwards through the central vein, Avadhuti (=Susumna) to the Brahmarandhra where the two forces, *karuna* and *prajna*, in union, produce the Bodhicitta (बीज *sa-bon*) for supreme enlightenment. It is this seed which fructifies into Sambodhi, making a fully enlightened Samyak Sambuddha.

In the Tantric texts the above mentioned process of the union of compassion and knowledge has been explained by metaphors, similes and symbols taken from unsophisticated and vulgar language, bewildering to an average reader, who is prone to interpret them literally or etymologically. For example the term Candali does not mean a woman of Candala caste but the highest stage of perfection. Candali is a combination of Candra (moon = उपाय = कर्णा) and Ali (vowel system—प्रज्ञा). It denotes the union of Upaya and Prajna or Samsara and Nirvana, producing the Bodhicitta, for which the term Bija is used. In short, Bija is produced by the union of Candra and Ali. The saintly authors of the Tantric texts did not adhere also to the grammatical rules, particularly those of gender. They used, as and when necessary to suit the purpose of expressing their ideas, feminine terms for masculine and vice versa. A few instances of such uses are given below:—

- i. रसना कालि—उपाय—कर्णा = चन्द्र—हे (of हेवज्र) —ग्राहक ।
- ii. ललना—अलि—प्रज्ञा—सूर्य—वज्र (of हेवज्र —ग्रहच ।
- iii. अवधुती—चण्डाली—बोधिचित्त—बीज (सत्त्व)—चित्त

(Pure Mind)-विज्ञप्तिमात्रता ।

[हेवज्र is rendered in Tibetan in three forms : *skye-rdo-rje*, *dges-pa-rdo-rje*, *dgyes-pa-rdo-rje*].

IDENTITY OF THE WORLDLY FORCES AND THE TRUTH

The Buddhist Tantricism may have borrowed the lines of spiritual practices from the Hindus but it retained the Mahayanic philosophy of शून्यता / *stong-pa-nyid* (Characteristics-lessness) or तथता / *de-bzhin-nyid* (Thatness / Sameness) or विज्ञप्तिमात्रता / *rnam-par-shes-pa-nyid* (Pure Consciousness apart from Sense-consciousness). In the *Guhya-samaja*, an early Tantric text, Vajra is defined as the Reality or the highest Truth. It is explained as the oneness of the diverse objects and beings of the universe, *i.e.* Thatness of the Madhyamiks. It says that in reality, there is no such distinction as male and female, good and bad, foul and sweet. The distinction made between one object or being and another is conventional. Likewise the distinction made between a householder and a recluse is conventional. This realization of oneness of everything of the universe is the aim of a Vajrayanist, to whom the phenomenal world of desires derived through the six sense-organs is identical with the Reality/the Truth /the Sunyata. As space exists everywhere and is neither contaminated nor uncontaminated by foul odour or sweet scent so does the Truth/the Vajra, which remains ever unaffected by worldly enjoyments or aversion to same. A Bodhisattva must attempt to develop a mental state (Bodhicitta=Vajra) in which will vanish the distinction between the two opposite extremes. He should realize that acts of passion are not apart from the Truth and so it is stated in the Tantric texts that hatred, delusion and attachment as well as the practices (*dharma*) for realizing the Truth and the Truth (Vajra) constitute the five means of escape from the world of desires (कामघातु *'dod pa'i-khams*).

The *Guhya-samaja* offers a detailed exposition of the oneness of the diverse universe and the highest Truth. Its contention is that the universe with its multifarious objects and beings as also their activities good or bad is an emanation of the Adi-Buddha, Vairocana. Hence, a person's acts of merit or commission of offences have only a conventional value of their own in this world of existence, though they have none in reality. It is this fact that the text wants to drive home into the minds of Tantric adepts and ascetics. The text abounds in passages depicting the most unsocial and immoral life of a person as well as the extreme life of asceticism of a Tantric adept to show that in reality there is no difference between the two modes of life. A few extracts are given here by way of illustration :

प्राणातिपातिनः सत्त्वा मृषावादरताश्च ये ।
ये परद्रव्याभिरता नित्यं कामरताश्च ये ।
विष्णुत्राहारकृत्यर्था भव्वास्ते खलु साधने ॥

मातरं बुद्धस्य विभोः कामयेन्न च लिष्यते ।
सिद्धते तस्य बुद्धत्वं निर्विकल्पस्य धीमतः ॥

(गुह्यसमाज. GOS. p. 20)

[Transl. A Tantric ascetic, who can partake of urine and excrement as food becomes spiritually advanced even if he kills living beings; speaks falsehood, becomes prone to stealing other's properties and keeps himself immersed in worldly pleasures.

The wise, who is free from all misconceptions, attain Buddhahood by desiring to enjoy the mother (*i.e.* Prajna or Prajnaparamita) of the Lord, the Buddha but without clinging to her (*i.e.* wisdom knowledge) as something to be attained.]

The underlying idea of these extracts is that killing and stealing are as much conventional (non-existent) as is the acquisition of knowledge (prajna).

In the same text there are also numerous passages giving an exposition of the Madhyamika philosophy. One or two extracts are given below by way of illustration :

अनुत्पन्ना इमे भावा न धर्मा न च धर्मता ।
आकाशमिव नैरात्म्यमिदं बोधिनयं दृढम् ॥
अभावाः सर्वधर्मास्ते धर्मलक्षणवज्रिताः ।
धर्मनैरात्म्यसम्भूता इदं बोधिनयं दृढम् ॥
अनुत्पन्नेषु धर्मेषु न भावो न च भावना ।
आकाशपदयोगेन इति भावः प्रणीयते ॥

(गुह्यसमाज. GOS, p. 12)

[Transl. All that exist are without origin, hence there are neither objects nor their inherent nature. Substancelessness is similar to open space; this is the firm law of Bodhi. All objects are non-existent and bereft of characteristics as they are produced from "non-substance" (नैरात्म्य); this is the firm law of Bodhi. Objects without origin can neither have existence nor be objects of thought. It is by using the word "open space" (आकाश) that existence is attributed to it.]

APOTHEOSIS OF PHILOSOPHICAL CATEGORIES

The important terms used in Buddhist philosophy like स्कन्ध, धातु, भूमि, प्रज्ञा, कुशलधर्म and अकुशलधर्म (constituents of a being, elements and sense-organs, stages of spiritual progress, knowledge, and moral purities and impurities) have been apotheosized into Buddhas, Vajras, Saktis, goddesses and Bodhisattvas. By such apotheosis it is indicated that everything worldly issued out of Adi-Buddha. It can be compared to Vedantic conception of the identity of the universe and the Brahman.

In the *Guhya-Samaja* and *Nispannayogavali* almost all *Dharmas* of any importance have been apotheosized and their location in the Mandalas have been determined with description of their forms, colour and mudra. A few of these are mentioned here :

ELEMENTS (धातु = *Khams*)

पृथिवी is represented by	लोचना / <i>spyan</i>
जल	-do- मामकी / <i>bdag-gi-ma</i>
वह्नि	-do- पाण्डुरवासिनी / <i>gos-dkar-ma</i>
मरुत्	-do- समयतारा / <i>dam-tshig-gi-sgrol-ma</i>

SENCE OBJECTS (आयतन = *skye-mched*)

रूप is represented by	वेरोचन / <i>rnam-par-s nang-mdzad</i>
शब्द	-do- रत्नाकर / <i>rin-chen-'byung-ldan</i>
गन्ध	-do- रागधर्मधर / <i>'dob-chags-chas-'dzin-ma</i>
रस	-do- अमोघवज्र / <i>don-pod-rdo-rje</i>
स्पर्श	-do- अक्षोभ्य / <i>mi-'khrugs-pa</i>

CONSTITUENTS OF A BEING (स्कन्ध = *Phung-po*)

रूप is represented by	वेरोचन / <i>rnam-par-s nang-mdzad</i>
वेदना	-do- रत्नसम्भव / <i>rin-chen-'byung-ldan</i>
संज्ञा	-do- अमिताभ / <i>o'd-dpag-med</i>
संस्कार	-do- अमोघसिद्धि / <i>don-yod-grub-pa</i>
विज्ञान	-do- अक्षोभ्य / <i>mi-'khrugs-pa</i>

DOORS OF ACTION (कर्मद्वार = *las-kyi-sgo*)

काय is represented by	वेरोचन / <i>rnam-par-s nang-mdzad</i>
वाक्	-do- अमिताभ / <i>o'd-dpag-med</i>
चित्त	-do- अक्षोभ्य / <i>mi-'khrugs-pa</i>

ROOT CAUSES OF IMPURITIES (अकुशल-मूल = *dug-gsum*)

राग	is represented by	अमिताम / <i>o'd-dpag-med</i>
द्वेष	-do-	अक्षीम्य / <i>mi-'khrugs-pa</i>
मोह	-do-	वैरोचन / <i>rnam-par-s nang-mdzad</i>

In this way there are apotheoses of the Bhumis (stages of spiritual progress), Paramitas (perfect virtues), Vasitas (controls obtained by a Bodhi-sattva) and so forth.

By making worldly forces and factors as emanations of the Adi-Buddha attempt has been made to impress upon the Tantric adepts that they should develop such a mental state that they would not distinguish between *samsara* and *nirvana*. In order to realize such oneness an adept should be well trained in meditation. As a matter of fact, the Tantrik method produced quick effects and helped many saints to realize the Truth. It also conferred many supernatural powers on many adepts who could not rise up to the highest spiritual stage. Many of these succumbed to the worldly temptations and indulged in drinks and debauchery. It is this class of false Tantrics who debased the religion and its sublime esoteric practices.

Bla-ma

To guard against the pitfalls, to which a Tantric adept is liable, directions are given in the texts about the duties and functions of a spiritual guide (*guru = acarya = sastri*). An *acarya* specializes in certain Tantric methods and practices, and so he is directed to take only those disciples, who are inclined to the Tantric practices followed by him. The preceptor is required to put forth his best energies to protect his disciples from evil forces by *mantras* and *mandalas* and to train them up in the rituals and forms of worship, in which he is proficient. He is to watch his disciples closely so that they may not slip away from the right course. He is to impart instruction to them in meditational exercises and in the philosophy of the oneness of the universe and the Truth.

Padmasambhava succeeded in training up a number of Tibetan Lamas who rose to the highest stage of perfection. For his saintliness and masterly expositions Padmasambhava is revered by the Tibetans as the Second Buddha. Through the help and guidance of these Lamas the Tantric religion became popular all over the country.

In later times many of the adepts failed to imbibe the true spirit of Tantricism and abused their privileges. To counteract such abuses in Tibet, Tsong-kha-pa made an attempt to reform the religion by eliminating the chances of lapses and making monks observe strictly the ecclesiastical laws of the pre-Tantric period of Buddhism. Tsong-kha-pa did not decry Tantricism as a whole and was fully aware of its noble ideal and quick method of realization but he felt that it would be difficult for the young trainees to keep the actual object in sight, and hence the esoteric system might do more harm than good for the lack of true spiritual guides. For this reason he and his disciples started the Ge-lug-pa sect.

MANTRA OF SIX SYLLABLES *y-ge-drug-ma*

The wide prevalence of Tantricism in Tibet is proved by the fact that the Mantra ॐ मणिपद्मे हूँ / *Om-ma-ni-padme-Hum* is on every body's lips and is found to be written at all religious sites. The Mantra appears for the first time in the Sanskrit text *Karandavyuha* in which the following interpretation of the Mantra is given : Mani=Perfect Knowledge (Prajna or Vajra) the producer of Tathagatas, who are seated on Padma=Lotus=Avalokitesvara. The Mantra of six syllables is the innermost core (हृदय / *spyang-rje*) of Avalokitesvara. It is also called षडक्षरीमहाविद्याराज्ञी "the queen of knowledge consisting of six letters". It is believed that its repeated utterance induces concentration of mind and brings about spiritual elevation and leads even to the highest knowledge. To the householders its utterance confers all the conceivable earthly and heavenly blessings.

TANTRIC IMAGES

In India from the 7th century onwards Perfect Knowledge (Prajna) derived from the well-known text *Prajnaparamita* was deified into a goddess called Prajnadevi (*yum-chen-mo*). An alternative name of this goddess was Tara, that is, she who rescues beings from the ocean of misery. Thus Prajna which makes a being a Buddha became the goddess Tara and was regarded as the mother of Buddhas. In consequence of such deification there was at this time an exuberance of Tara stotras.

Another very popular god of the Tantrics was Bodhisattva Avalokitesvara the embodiment of amity (मैत्री/*byams-pa*) and compassion (करुणा/*snying-rje*). The Bodhisattvas after initiation are asked to develop Bodhicitta i.e. the resolution to attain Bodhi and for that to dedicate the life to the service of others, in other words, they are not only to fulfil the first

five perfections (*paramitas*) but also to exercise amity and compassion to all beings. So long they exercise these two functions they retain the notion of the world (*samsara*) and its beings and objects. By gradual extension of the scope of amity and compassion towards all beings of the four corners of the world, they realize the sameness of all beings. Through this realization they are in a fit and proper mood to acquire perfect knowledge (*prajnaparamita*) or the Bodhi. In early Buddhism there is the prescription for monks to practise 'four immeasurables' (अप्रमाण= अप्रमाण/*trad-med-pa*) viz. love (मैत्री), compassion (करुणा), joy at others' success (मुदिता/*dga'-ba*) and equanimity (उपेक्षा/*btang-snyoms*). A monk is required to extend these four mental states towards all beings including his enemies and thereby realize that he is identical with others. Out of these four immeasurables, the Mahayanists picked up only the first two. All of these are meant for adepts only who are struggling to rise above worldly discrimination. The Tantrayanaists retained the underlying principles and magnified their importance and deified them as Avalokitesvara who is believed to have preferred to remain a Bodhisattva in order to be able to render service to all worldly beings through the exercise of amity and compassion. Consequently he continues to be ever in Samsara and does not aspire to attain Nirvana or Sunyata in which case he would cease to be active. He therefore represents worldly altruistic activity. All Bodhisattvas aspiring to attain Bodhi must at first go through this training of exercising universal amity and compassion, which practices are called Expedient (*upaya*) in Tantric texts. In other words, he engages himself in altruistic functions in the world. It is after attaining perfection in these that he may unlike Avalokitesvara aspire to attain perfect knowledge (*prajna*) represented by the goddess Tara. It follows therefore that the worldly means (*Upaya*) end or merge in perfect knowledge (*Prajnaparamita*) when one is said to attain Bodhi and become a Buddha. This merging of *Upaya* in *Prajna* is the ideal of the Tantrayanaists, who, however as explained above, widened the scope of worldly activities but retained the underlying principle.

In Hindu Tantra also there is similar conception. Sakti, the female goddess, is represented as the cause of liberation while Siva, the male god, represents the forces of bondage (*samsara*) corresponding to Tara and Avalokitesvara respectively of the Buddhist Tantra. These two parallel conceptions in the Hindu and Buddhist Tantric systems brought about the coalescence of the two systems in South-East-Asia. In India particularly it is one of the many causes for the merging of Buddhism in Hinduism leading ultimately to the disappearance of Buddhism from

[With this introductory paper by Professor Nalinaksha Dutt we open in these pages a symposium on the Tantras : the different systems and their contents, their origins and affinities. Contributions on the various issues and facets will be published from time to time.

Dutt is categorical about exchange of ideas between mystics of different schools, Buddhist and Brahmanical (later Hindu). Some Western scholars (e.g. Lama Anagarika Govinda : *Foundations of Tibetan Mysticism*, London, 1959) reject the possibility of exchange between Buddhist and Hindu systems as in their opinion the nature and the purpose of the two are fundamentally different. Such scholars reject the description of the deity Prajna as Sakti (e.g. Snellgrove : *Hevajra Tantra*, London, 1959). On the otherhand some Western scholars describe the female consort of Buddhist Tantra as Sakti without any reservation (e.g. Hoffmann : *The Religions of Tibet*, London, 1961, Marco Pallis : *Peaks and Lamas*, New York, 1949, and Nebesky-Wojkowitz : *Oracles and Demons of Tibet*, London, 1956).

Scholars who reject the possibility of the two Tantras influencing each other do not notice the coalescence in South-East Asia and the active exchanges between mystics of India and Tibet independent of their denominational labels, as pointed out by many Indian scholars (e.g. Bagchi : *Studies in the 'Tantras*, Calcutta, 1939).

Recently exchanges between Indian (Buddhist as well as Hindu) and Chinese (Tao) esoteric systems have been emphasized (e.g. Needham : *Science and Civilisation in China*, Cambridge, 1954-56 and Suniti Kumar Chatterjee's Address at the XXV International Congress of Orientalists, Moscow, 1960). Dutt's 'A Note on Mahacinatara' is appended at the end of this issue of the *Bulletin*.

Our obituary on Dr, Benoytosh Bhattacharyya also contains relevant matter.—NCS]