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Sickness, Disease and Death in Tribal Society : A view from the Santal World

Dr. Sitakanta Mahapatra

In every society, birth of a child, attainment of puberty and death are considered the most significant events in the life-cycle of the individual. These phenomena are obviously biological, indicating stages in the life-process of the individual but society tends to look upon them also as marking social transitions of considerable significance. Since life is a journey from one stage of existence to another, the transition from each stage to the next has to be socially accepted, approved, recognised, regulated and sanctified. For the concerned individual such transition should also be rendered smooth, easy and natural without undue psychological crisis. Further, it may also be necessary to link the customary social rules and conventions of celebrations with the invocation of the blessings of supernatural beings as a desirable thing. The transition from one phase to another is always both a risk and an adventure. The protagonist is required to embark on a new phase of life or existence to which he is a stranger. A girl attaining puberty is a different person—not merely physically or biologically but also, and more so, socially. Invoking the blessings of the gods and *bongas* is, therefore, necessary to enable the protagonist to have a smooth passage into the new phase of life and proper performance on that stage. This is how what is primarily a biological phenomenon is linked to socially prescribed patterns of behaviour and religion and rituals play an important role in regulating such

rites of passage. These rites of passage are primarily social in nature providing communal evidence of the involvement of those not merely undergoing the rite but also those witnessing it and those who are aware that it has taken place. The rites and their performance thus mark the essential unity of the community. The duties, obligations, privileges, etc. of the individual are taken as desirable or prescribed behaviour-patterns for not only the initiate but also the other members of the society. Thus they fix new codes of conduct, new norms of behaviour for all members of society. Rites of passage impress upon the protagonist the obligations of his new status and the acceptable behaviour associated therewith.

In every society, the phenomenon of death has been looked upon with awe, wonder, fear and a unknown sense of mystery. Anthropologists have tried to study the relationship between a society's approach to religion and its definitions of death. Herman Feifel who weighed somewhat different criteria in establishing his religious and non-religious groups held that a religion is related to its definitions of death. It was seen that the anxiety and fear of the non-religious about death generally signified the following emotions.

"My family may not be provided for"

"I want to accomplish certain things yet"

"I enjoy life and want to continue", etc.

The main emphasis was thus on the fear of discontinuity of life on earth and a wistful feeling and anxiety for what will remain behind rather than what would come after it. The phenomenon of death itself raises disturbing and profound mores and metaphysical questions. Some of these could be :

Why do little children die ?

Why do people in old age or those suffering from chronic or incurable diseases and for whom life is a continuous misery are not visited by death ?

Why does death overtake some members of a group as in a train or air accident while others survive ?

Why do individuals generally considered to be pious and righteous die sometimes early in life whereas those considered to be wicked or evil live longer ?

The questions are almost endless and in seeking answers to them human ingenuity has been taxed in several ways. One aim of the religious view is to make death morally acceptable. Even this is done by providing a definition of life that is not really the end of an existence but a new beginning. It does not terminate with the physical death of the body but rather continues in a different form or on a different plane.

Ordinarily no individual allows himself to think about death. It is considered a morbidity we are all ashamed of. Sometime it is even considered to be an obscenity. The evasion of death would thus seem to be one of the functions of culture. As Freud put it "we have shown the unmistakable tendency to push death aside, to eliminate it from life. We have tried to keep a deadly silence about death..." (1925). There is, however, a genuine bewilderment about the phenomenon of death. All the world over primitive societies accepted the universe as a home and there was no question of alienation. Pascal's exclamation 'The silence of these infinite spaces makes me afraid' would not be understood by primitive societies which are more immersed in the here and now, the pleasure and pains of life and the joys and

sorrows of day-to-day living. Lack of any obsession with death or a consuming anxiety about its coming is a characteristic which the Santal shares with other primitive communities. An almost stoic acceptance of death as an inevitable phenomenon is sometimes overlaid by a feeling that while on this earth one should never turn one's back on the pleasures that the world has to offer. Simultaneously, an attempt must also be made to appease the evil bongas or spirits who cause disease and death and who may use the witches for the same purpose. This is linked in its turn to the invocation songs or the *Bakhens*, and the exorcism practised by the Ojhas.

Evil and malevolence are thus an accepted part of the life process and the Santal lives with it using ritual, prayer, indigenous medicines and invocations as possible cures. The social attitude towards disease and death is, therefore, one of quiet acceptance and finding suitable mechanisms of social defence. The essential purpose of the *Bakhes* is to induce the evil spirits to cease doing the mischief.

The Santals thus accept death as a phenomenon ordained by the God, the Maranburu. His is the destiny of quiet acceptance. But under growing rationalism and the questioning spirit the educated Santals of the younger generation ask for answers to myriad questions surrounding the enigma of death. There is no satisfying answer and anxiety can sometime be the result of the quest for clarity. The Santal was never apathetic to questions of life and death. He only accepted the answers given by traditional religion and mythology. These are sometimes found inadequate to the new generation.

It wont be right to maintain, however, as some scholars tend to do, that the Santal was always indifferent to the question of death. It was not, as if, he could sneak like a character in Dostoevsky's novel, "I don't care what happens to the world as long as I get my cup of tea". It is true the Santal was never obsessed with the idea of Death. The death-instinct was never very strong and suicide extremely rare even in historical times. Nor did the Santal ever have a nagging fear of old age.

Rattray Taylor quotes the example of a child who when he told his father, "I am five years old today, papa", got the quick reply, 'Five years nearer your grave' (Taylor: 1958).

W. H. Auden was right when he said. 'Man has created Death'. The Santal believes that Death is only a happening, an event, no doubt of deepest significance but since there can be no control over it men need not get bogged down with it nor pine or grieve over it. It deserves to be accepted as a fact of life like so much else that happens to us. It is too important an event for the Santal, no doubt, but it holds no fear. He was perfectly adjusted to the rhythm of death as a punctuation in the life-cycle until the new rationalism and questioning spirit created complication.

To the Santals, health and a normal span of life are natural. illness and disease, accidental death and death due to apparently unspecified or unknown causes, death at a premature age—all these are something *unnatural*. Every individual should normally live to a ripe old age and then die. Death is, as a Santal would say, like the dropping of ripe fruits from a tree. It comes at the end of the circle, when its time comes. Any interference with the normal expectation of life and disease-free condition of the body must be due to evil forces, forces foreign and inimical to man.

Modern medicine and developments in modern biochemistry and physiology have told us a lot about the nature and cause of disease and sickness. Death is after all, not merely a meta-physical problem; it is also a problem in physiology and biochemistry. The functioning of blood cells and tissues, vital activity of the heart and lungs, etc. have been understood today much more comprehensively than in olden days. And yet the mystery of death still remains unexplained.

Modern medicine has the confidence to cure diseases by scientific diagnosis of the causes. For the Santals, however, these causes are not *natural* causes. To them "nature should run its course; any disturbance must be due to extraneous malevolent influence." The external forces, by general belief, are supposed to be evil

spirits, inimical to mankind, "These spirits or bingas are hungry, displeased, hurt or envious and they have propensity to 'eat' people." The Santals have a number of ideas as to how these evil spirits become hungry, displeased, hurt or envious. Mostly it arises out of ignorance. The bingas reside in a tree or hillock and if one cuts the tree or destroys trees on the hillock that could be enough to displease, enrage or hurt an evil bonga. They do not think it is possible to know beforehand that any tree, hillock or physical object is possessed by an evil bonga or in which an evil bonga resides. There are no external symptoms of this. But when a boy climbs such a tree and falls down he suffers serious injury. It is a sure sign that the tree has been possessed. Such a tree then becomes an object of worship. In certain cases the trees also wither and die in a year or two from the accident. This is explained by the Santals as a proof that the trees cannot stand the impact of the evil bonga 'possessing' it. (Bodding: 1925). Natural or physical causes for the death of the tree do not occur to him easily. Implicit in this is a theory of "pollution" of an object by coming in contact with or being possessed by the evil spirit. Also implied is the belief that the evil impact can be transmitted to human beings from the "possessed" object or person. Hence, the need to depollute or cleanse the possessed object from the evil touch, to exercise the spirit that has taken possession of an object or a human being.

It is pertinent to point out at this stage that intuitive realisation and belief are more important in this connection than reasoning or logic. Often this author tried to reason that the fall from the tree could be quite accidental and in that sense natural and that it may have nothing to do with evil spirits. To the Santal, however, what is accidental cannot be natural. It is natural to climb trees and gather fruits and flowers. It is equally natural to swim across a stream or go into a forest at night or cut trees in a hillock. If one is drowned to death, falls from a tree, bitten by a snake, injured by a bear or devoured by a tiger these are all unnatural situations and the causes, therefore, cannot be natural. It is, therefore, a problem in

comprehending and explaining the meaning of accidents, unnatural situations and unusual event. A displeasure of the bongas and the curse due to such displeasure are important elements to his mind. To him, the spirits are often used by the witches, and the latter direct them against the persons to whom they are inimical. The Santals have a theory that the mischief or injury done by the evil bongas are reversible. When propitiated such bongas can cease doing the mischief but they are incapable of undoing the mischief already done.

Psychologists and socio-psychologists hold that the awareness of pain and response to pain vary from culture to culture. Pain is not merely physical; it is also the awareness of an injury at the psychic level. It is common knowledge that individual variations apart, different cultures have different theories explaining the nature and origin of pain and its role in human life. The capacity to bear pain without flinching also varies from culture to culture. It involves mental agony and anguish. The awareness of pain is linked to the general approach to life and death and the mental capacity to reason out the situation which is painful, unpalatable or inimical and the extent to which it can be remedied or rectified. This is why a culture which emphasises the other world puts a low premium on the awareness of pain and encourages to tolerate it and accept it. As a matter of fact deprivation of happiness or infliction of misery and pain in this world is supposed to be recompensed by their contraries in the next world. Since the present world is illusory or unreal (according to

certain world-views) one's preference for the world hereafter is the real task before the mind. Therefore, bodily or mental pain are to be tolerated as something in the nature of trials to be undergone, something akin to purificatory processes from which one emerges purer and stronger like gold out of fire. The Santal does have a faint belief in life after death and he attaches much value to it. On the other hand he does not have any conception of salvation or *mukti* from the cycle of life. He is deeply attached to life, fond of its many-coloured grandeur, its pain and its pleasures, the moments of gay abandon punctuating economic misery and Physical agony. His painthreshold is therefore fairly high. Very rarely the Santals would denigrate life, curse it or commit suicide. Instances of suicide are very few and comparatively much less than in the non-scheduled areas surrounding it,

The higher level of the painthreshold is mainly due to the traditional folklore of the tribe and its willingness to accept pain as a given thing that is to be tolerated. One can invoke the spirits, crave their indulgence or propitiate them for removing pain both physical, mental and psychic social and individual. Remedy for pain, in any case, is not very much in human hands. It is destiny, it is not susceptible to human operations and activities. Agony arising out of disease or death, social factors or family circumstances are tolerated fairly, quietly. Sickness can be cured by spirit possession, by the "charmed word" by ojhas or people who have access to the supernatural. Death can't be prevented. It can only be tolerated by the community sharing the grief, by "socialising" as it were.

Secretary,
Harijan & Tribal Welfare Department,
Bhubaneswar.

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Reforms of Jail Administration in Orissa : A Critique

Shri Amarendra Mohanty

A prison today serves three purposes which may be described as custodial, coercive and correctional. Though the last of these which concerns the use of imprisonment as a form of legal punishment, now takes the primary place, it is in historical perspective a comparatively new conception, not all the implications of which have yet been worked out. In its origins the prison served only the custodial function: it was a place in which an alleged offender could be kept in lawful custody until he could be tried and if found guilty, punished. The judges went out to 'deliver the gaols'—to clear them not to fill them. The punishments for treasons and felonies were banishment or deate; for misdemeanors, public shame, physical punishment of fines. It is less than a hundred years since the use of imprisonment as a primary punishment for crime began to receive serious consideration. Custodial function of the prison has not lost its importance.

The coercive function means that imprisonment may be used to persuade a person to comply with an order made by a Court of law, whether civil or criminal; if he complies, he is released. The first use of the prison in this way was against convicted offenders.

Finally, imprisonment takes its place as one of the punishments which a Court

may impose on those convicted offences against the criminal law¹. This is the correctional purpose.

Reforms in prison administration came to occupy public attention more than 150 years ago when the British Parliament passed an enactment in 1824 with regard to prison administration. In India in 1836, a Committee on Prison Reforms was formed with eminent persons like Lord Macaulay as members to make amendments to prison manuals. Another Committee with almost the same objectives was brought into existence in 1864. No appreciable dent was made either in the pattern of administration of the prisons or in the outlook on the position of the convicts. With a view to bring about an overall change in Indian Jails, the Indian Jail Committee was appointed in 1919. This committee went into the question in depth and examined the prevailing conditions in the prisons not only in India but also in other countries like U. K., U. S. A., Japan, Phillipines and Hongkong. The committee in its report stated very clearly the essential objectives in the prison administration and the qualification and training of the officers connected with the task of looking after the inmates in a prison. But this report was not implemented by the Government. 30 years after Dr W. C. Reckless was deputed by the U. N. in 1959 who studied

1. Frank Newsam. "The Home Office" George Allen Wnwin London. 1954, P. 144.

the prison administrations in India and recommended for the development of whole time probation and after care services, the establishment of new jails to perform specialised functions, legal substitutes for short sentences of imprisonment, reduction in the number of undertrial prisoners, separation of juvenile delinquents from the adults and the revision of Jail Manuals. Dr. Reckless's recommendations proved to be successful and the first open prison was set up at U. P. for the first time. The Probation of Offenders Act was enacted in 1958 & whipping was ordered to be abolished. In 1956, the Government of India appointed the All India Jail Manual Committee which produced a set of medical prison rules in 1959.

To awaken the activities in the direction of desired changes in Prison Administration, the Government of India framed the working group of Prison Administration in 1972. It emphasised that the supreme aim of punishment was the protection of the society through the rehabilitation of the offenders and their reassimilation in the society after their release from the prisons.²

In Orissa, the Government had appointed a committee in 1952 under the chairmanship of late Lal Mohan Patnaik, to recommend the measures to be taken for improvement of jail administration. The Government showed its indifference to the recommendations of this committee. The Government of India sent a letter on seventh February, 1976 urging upon the State to bring into effect the recommendations of the working group of 1972. In this background the Government of Orissa appointed a committee in 1979 under the chairmanship of Hon'ble Justice Harihar Mohapatra.

The pattern or the present administration of prisons in Orissa is reflected in the Orissa Jail Manual which was compiled in 1942. The existing manual was based on the old conception of crime, punishment and detention in prison. A comparison between two judicial views, one in 1871 in England and another of the Supreme Court of India in 1978 would show the change in the concept. In *Ruffin v/a Commonwealth*

(1871) the learned Judges stated about a convict. He has as consequence of his crime not only forfeited his liberty but all his personal rights except those which the law in its humanity accords to him. He is for the time being the slave of the State. "A hundred years after, the learned Indian Judges in *Charles Sobraj v/a Superintendent, Central Jail, Tihar* (1978) laid down: a prisoner retains all rights of a free citizen except those lost necessarily as an incident of confinement".

There is no scope of doubt that the primary objective of punishment is reclamation and rehabilitation of the offender and that there should be a fundamental continuity in programmes of prevention, control and treatment of delinquency, and crime and of after care services. Progressive criminologists all over the world have insisted that a prisoner is most likely to reform himself by phases of care, welfare, discipline, social reeducation, training of treatment of offender. Correctional work is an important aspect of general social welfare & social defence and it is intended to develop a sense of integrity and self respect in the prisoner. That is why, in a gradual process that the old corporal nature of punishment came to be replaced by detention in prison. The main contents of the modern integrative theory of punishment are correction, reformation, rehabilitation and resocialisation. Gandhiji once said that the prisons should be treated like hospitals, as offenders like sick persons need be treated.³

The committee headed by Hon'ble Justice Mohapatra, prepared a questionnaire and circulated it among 850 persons. These 850 persons included ex-ministers, ministers, M.L.As., M.Ps., Judicial officers, visitors, Freedom fighters, District Magistrates, Superintendent of Jails, Advocates, C.D.M.Os., S.D.Os., Prisons Welfare Officers, Government Officers, Non-Officials. Out of 850 persons 163 persons replied to the questionnaire. The committee also visited some of the Jails in our State and Jails outside the State situated at Vishakhapatnam, Hyderabad, Secunderabad, Nabha and Delhi. The committee also has revised the existing Jail Manual.

2. Justice Harihar Mohapatra Report on Jail Reforms. 1981 (Unpublished) P. 5.
3. Ibid, P. 7

Besides the Committee also has drafted some new legislations such as the Orissa Prisoner's Release on Probation Act, 1981, the Orissa Borstal School Act, 1981, the Orissa Borstal Schools, 1981 and the provisions under the children Act, 1960 pertaining to the establishment of certified Schools for Boys and Girls.

The committee has recommended for the establishment of Central Prison in Orissa. Since the absence of a Central Jail in our State has been urgently felt, the Government should take immediate steps for the construction of a Central Jail in Orissa.

The committee further has realised that the existing buildings in some of the Sub-Jails and Taluk-Jails are not only very inadequate but also are in very dilapidated condition.⁴ Acute overcrowding in most of the Jails, Sub-Jails continued to be the problem during the year under report, specifically on account of admission of large number of under trial prisoners. This presents considerable difficulties to the jail administration.⁵ Therefore, it is high-time that such buildings should be rebuilt and newly constructed.

It has been seriously felt that the existing Jail staff are inadequate for the smooth functioning of the jail duties. Justice Mohapatra committee has also suggested for the increase of the staff in jails for the speedy execution of rehabilitation and after care services. This suggestion of the committee should be immediately implemented by the Government.

The committee too has recommended for the equalization of the scales of pay of jail personnel with corresponding police cadre.

The committee has also recommended for quarters provision inside jail campus for at least half of the officials so that they can be punctual in their duties. This recommendation is no doubt a healthy one and requires active consideration of the Government.

But one thing which the committee has missed in its report is regarding the absence of exclusive jail for female prisoners in our State. There being no exclusive jail for female prisoners in this State, they were confined in the regular prison in separate enclosures set apart for them.⁶ The Government should construct one separate prison for women prisoners in Orissa.

The escape of prisoners from jails in our State has also been a matter of serious concern to all of us. Recently four undertrial prisoners escaped from Koraput Sub-Jail on the night of the 17th December 1983. It is learnt from Government sources that out of these four prisoners, two were involved with robbery. After this incident two jail warders have been put under suspension.⁷ The Government should be vigilant over this issue.

The basic principles of the prison system should be as follows.

Firstly, that for all prisoners with sentences of suitable length, the prison regime should be one of constructive training, moral, mental and vocational.

Secondly, that such training can be fully carried out only in homogeneous establishments set aside for the purpose, though the principle should apply, so far as practicable within limitations of an ordinary prison to all persons alike.

Thirdly, there should be open prisons, since men can only acquire a sense of responsibility by exercising it, and experience has shown that a high proportion of prisoners can be trusted to exercise it in open conditions.

Fourthly, that the services of community outside the prison should be enlisted to help in the training at every practicable point, so as to break the tradition that the prisoner is a person out of the society.

Fifthly, that this continuing responsibility of society should be maintained after his discharge by effective aid towards social rehabilitation.⁸

4. Ibid. P 80

5. Annual Administration Report of the Jail Department for the year 1979. Office of the Inspector-General of Prisons, Orissa. P. 13.

6. Ibid P. 12

7. "The Samaj" (Oriya daily), Cuttack dated the 19th December 1983, P. 8 Column 6.

8. Frank Newsam, "The Home Office", Opcit, P. 144.

Man with vision :

Veeresa Lingam : Patriot Reformer and Visionary

Ka Naa Subramanyama

India is what she is today because of the materialisation, wholly or in part of the dreams and visions of people fired with indomitable patriotism combined with a zeal for reform. Veeresa Lingam of Andhra Pradesh was one of them. His name will remain for ever a beacon of light for those who fight against injustice, oppression and superstition.

The fourth quarter of the nineteenth century in India reached out to a modern India, full of ideas of social reform, suggestive of what the future India should be.

Men of vision were aware of India as an entity that was total and indivisible culturally and emotionally. However, they tried to forge new attitudes in education, social norms and relationships that were extraordinarily formative and constructive as far as future was concerned.

One such person with a vision of India as a whole and complete entity, was Veeresa Lingam Pantulu, born of middle class Brahmin parents in Rajahmundry. He was destined to make a name for himself as the father of modern Telugu prose and poetry, particularly as its first novelist and as the father of Telugu journalism. He set up the first Widows' Home in the South and was a welcomer of the National Congress, when it was set up. When the third meeting of the Indian National Congress met in Madras, he was one of the delegates. Later, he kept away from it. He lived till 1919, never giving up on his fights for a New Woman and a New Education to make a New India.

He was an Andhraite and his labours were primarily directed towards the Telugus. The nationalist poet of the Tamils, Subramania Bharati (1882—1921) thought of him as the exemplary Indian of his day. With regard to social reform and the embodiment of it by personal example and precept, he was the greatest living person from 1890 to 1916 in Madras.

Veeresa Lingam's was once a wealthy which had fallen on days of poverty. He wanted to be a lawyer but he failed his law examination yet he was considered an excellent student. He came to his ideas of reform and the India ahead of him in time through reading the Bengali pioneers like Raja Rammohan Roy and Keshab Chandra Sen.

Even when a school boy of 12, his capacity to fight injustice was demonstrated. Being saddled with an inefficient Headmaster in school who taught English indifferently and who was merciless in beating those whom he could. Veeresa Lingam petitioned the authorities to replace the Headmaster. When the petition had little effect, he

organised a strike which was successful. The Headmaster was replaced.

He was appointed Telugu teacher to a few Englishmen who helped him in his educational career. He became Telugu Pandit and later had schools under him. He developed his ideas on education through practical knowledge. He was the founder of the Theistic High School in Rajahmundry.

Veeresa Lingam was far in advance of his times in his educational ideas. He believed in vocational education but he wanted it leavened with an acquaintance with practical experience in fine arts. He wanted education to set the moral tone for students at an early age. He believed in religious education, basing it on generally acceptable religious principles, probably what might be called secularism in the present age and day. He was sure that men and women should have equal opportunities for education in the new sciences and arts.

He was the first educationist in Madras who, trying to teach students a trade, engaged a tailor to teach tailoring. He seconded it by a master to teach fine arts. He did not believe in segregation of boys, girls and promoted co-educational schools wherever he could.

Another early act of Veeresea Lingam was against petty corruption in Government offices. He took such action as made life impossible for the corrupt. In the words of V. R. Nirla, biographer of Veeresea Lingam, he stood up often alone to war against corruption. One such struggle of his at Rajahmundry led to the suspension and alleged suicide of the District Munsiff, to the suicide of the Government Pleader who was his accomplice, to the dismissal of the Sheristatdar and his subsequent ending up in a lunatic asylum and to the prosecution and imprisonment of the Record Keeper. For years afterwards, the name of Veeresea Lingam struck terror into every official with a shady record.

It was his innate sense of justice that made him take up the cause of women's uplift, especially widow remarriages. In 1874, inspired by Veeresea Lingam, some admirers of his set up a school for girls in Davelshwaram where he was Headmaster—

it was the first instance of a Girl's School at that time in India. He might have come to his ideas of education about women from Bengali and Maharshtrian examples, but he was more consistent and pursued them with unremitting energy till the day of his death. He pleaded the cause of women's education and widow remarriage through magazines he founded, edited and financed. Often to his own detriment and at the expense of his economic well-being.

He had to face social ostracism because of his advocacy of reforms where obscurantism and superstitions of families and society concerned militated against him. But he did not mind. For the sake of domestic peace, he had educated his wife Rajyalakshmi, in his own house. She stood by him throughout his life, aiding him as no one else could have, though herself not moved with such faith as her husband had in new measures. Especially in the matter of widow rehabilitation and remarriage which Veeresea Lingam undertook on a large scale, her responsibilities were all the more greater, the hardships she underwent all the more. W. R. Nirla writes "More than any other associate who contributed most to the success of Veeresea Lingam as social reformer was his wife. To follow her iconoclast husband, always at war with the society of his day, was in all conscience no easy task. Neither the faith that burned in him nor the zeal which sustained him was hers by nature. Her education at best was limited; her early background was wholly conventional. She was by temperament retiring; she sought neither fame nor glory; yet she stood like a rock by his side, cheerfully supporting him in everything he said and did". The burden she had to bear was, in a way, heavier. It was comparatively easy for him to offer shelter to young widows who sought his protection; but she had to feed them, to cloth them and to comfort them, as if she had been their mother. Because of social boycott, cooks were frequently quitting without notice; other help in her daily chores was equally undependable. Unaided, she had to run an ever enlarging home, consisting of strange members, gathered from different places. They were of diverse and difficult temperaments. One self-pitying widow could be trying enough;

she had to take charge of scores. Large and insistent were the demands made on her and her husband by the widows whom they enabled to remarry. They were often clamouring for monthly allowances and for additional assistance every time a new baby arrived. Often, again, the couple had to suffer base ingratitude and vulgar abuse from the very people for whose sake they suffered and sacrificed. A less daring woman and a less devoted wife would have wavered in her devotion and steadfastness.

The first widow remarriage under Veeresā Lingam's auspices took place in his house on 11 December, 1881, after three years of polemical preparation of the ground. Physical violence to put a stop to the marriage did not deter the reformer in carrying it through and arranging a second remarriage within four days. In a small place like Rajahmundry, opposition to a newfangled thing like widow remarriage could be easily whipped up, but Veeresā Lingam did not give up till he had arranged twenty-nine remarriages at Rajahmundry and neighbouring places, before he shifted his activities to a larger city like Madras, where opposition could be managed and contained. He set up the first Widow's Home in Madras in 1892. The next was in Rajahmundry. Widow remarriage programme was the most sensational and successful of his reform programmes.

All these were only a part of a national dream which was like a constant flame in his heart. In his writings, one comes across sentiments which tell us his motivation. In one of the editorials in a Telugu paper he edited he wrote: "Modern science is a fair maiden; she has been brought here by western scholars. With the lamp of new knowledge, she is dispersing the darkness of ages; the demons of blind beliefs and prejudices are on the run. Now a war is on between truth and untruth, between wisdom and stupidity, between the old world and new. No one can stay neutral in the struggle; one should range oneself on his or that side. We have no doubt as to the choice of the wise, or of the final outcome. The battle may be long and

bitter, but ultimately knowledge and truth will triumph against ignorance and untruth". Obviously Veeresā Lingam no need to say, cast his lot in the fight on the side of wisdom and truth.

On the difficulties of writing to condemn entrenched powers, he had this to say "if bribery is condemned, local officials would be enraged; if concubinage is derided, rakes of the town would be irate; if dead customs and traditions are attacked, ignorant and bigotted would fly at our throat; if mere observing of the externals of religion while disregarding its morals are denounced, clergy would sewar vengeance—if our journal is to fulfil even a fraction of its chosen mission, it has to defy the fury of such a wide and vicious circle",

Dr. Vasireddy Malathi Trust, Rajahmundry, has instituted an annual award for investigative reporting in respectful memory of Veeresā Lingam.

This was written early in his career as reformer. But on the day of his death on 2 May, 1919, he dictated his last wish to his young friend and colleague, A. Lakshmi-pati, in the following words, "I am departing before completing many of the tasks which I have undertaken during my lifetime. I hope and trust that my friends and comrades and the lovers of reform would carry forward my unfinished work. The mass of our people are weighed down under ignorance and superstition and are devoid of all the better things of life. It is your duty to give them education and enlightenment, culture and freedom, equality and justice. I beg of you, I beseech you, to do your best for your dumb millions".

For more than half a century, Kandukuri Veeresā Lingam did his personal best in the light of what he felt was his inescapable duty to bring education and enlightenment, culture and freedom, equality and justice to men and women, directing his acts towards the dumb millions who are devoid of the better things of life. It was not for nothing that Veeresā Lingam often appropriated for himself editorially the term "we of the modern civilisation hailing the years of modernity and greatness ahead".

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HEALTH EDUCATION IN SCHOOLS

Dr. A. K. Mahapatra

The importance of imparting health education in schools has been well-felt not only in our country but in other countries also. The target of providing health facilities to every individual by 2000 A.D. will not be achieved unless we introduce health education as a curriculum in different schools, and apprise the youngsters of very many health habits. Our Union Government have taken some tangible steps in this regard. Laying stress on the curative aspect won't suffice. The preventive and the promotive aspect of human health cannot be ignored. It is high time for all voluntary agencies, the Government, the parents and every individual at large, to think of the preventive aspect of different diseases. Early diagnosis of a particular disease and its prevention is good, but it cannot be possible for all individuals, and as such stress must be given on a few health tips/health habits to prevent occurrence of a good many diseases in future. Sending doctors to different pre-primary and primary schools to make early diagnosis of some ailments and suggest its prevention is only an expensive task on the part of the Government/any voluntary organisation. However, such things have to be encouraged and the children should get benefit of consulting physicians/surgeons to establish the conditions of their health and to detect the persons in ailment in its early stage. Such detection and its proper follow-up action along with treatment would save a lot of State revenue/personal expenditure. Mass detection of diseases in its early stage saves a lot of health hazards and therefore, it is welcome.

Faulty habits

The causation of diseases depend mostly on faulty health habits/diet in-take. If one is very particular about the inculcation of a good many healthful habits, he can definitely avoid a lot of health hazards. Health education, therefore, primarily lays stress on inculcating healthful living/health habits which should start only from the family. The parents have a greater role to play. Children imitate the parents their way of living. Therefore, the parents first of all must know what is prescriptive for health and what is prohibitive.

Health is defined as the state of mental, physical and spiritual well being, not mere absence of diseases. The approach to healthful living has to be made on this premises. The importance has assumed such dimension that it is to be started forthwith, right from pre-primary/primary schools. The children ought to learn healthful habits. The teachers have their roles to play; keeping in view a few healthful tips to be practised during the school hours.

Healthful habits

Such healthful habits mainly consist of keeping the body fit, to carry out day-to-day work with safety. Longevity is important, but life with safety is still more important. One may work actively but his activities are meaningless if it is not mingled with smooth safe performances. This can only be possible if one inculcates healthful habits from the very beginning. Regular flusing out of the

stomach is important, and one does so; but if one is not particular about his diets, the body again receives some amount of toxins through the food stuffs. Hence, the eating habits have to be known keeping health conditions in view. Eating to live is not proper attitude, but eating to live peacefully/healthfully is the right attitude.

In view of the above, it is high time that we should incorporate health education in different schools specially at pre-primary and primary levels. Way of life has to be made such regular that one has the requisite amount of resistance against many diseases. This is not only possible but always practicable. Most of the diseases originate from wrong eating habits, irregular living and haphazard approach to life. Children learn the basic norms of life and habits. Once learnt during ones infancy, it is retained up to the last gasp of life. Hence, healthful tips have to be taught to the pre-primary and primary students so that they leave indelible impressions on their minds. Children are imitative by nature. They imitate their parents, their lulu-friends and teachers at the school' Hence, the parents have to behave in presence of their children. The teachers have to lead the students in the schools.

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Treatments

Treating people at the hospital is not always possible, for the hospitals are less in number, people always do not go to the hospital, and cost of the medicines show a galloping increase. Loads on the hospital can be minimised to a great extent only when people live according to the norms of life., abiding by a few health-tips at their homes. This is a stage only when diseases can be prevented. If stress on the preventive aspect is given from the beginning, naturally, hospital attendance will decline and people will live healthful life.

The curriculum of the health education has to be arranged such that the students must learn how to live, how to love each other. Health is not merely absence of diseases but an equilibrium of one's mental, physical and spiritual well being, and hence, healthy approach to life has to be considered from this parameter.

If we educate our children how to lead life, we go a long way in achieving the target of health for all by 2000 A.D. Health is everybody's right. It is not to be snatched away from someone. It is purely individual. It has to be inculcated. It has to be lived. It is to be felt.

20-POINT PLAN REVIEWED

1,54,497 families have been benefited under the integrated Rural Development Programme during the current financial year till the end of February, 1984. 31,723 Scheduled Caste and 38,641 Scheduled Tribe families are included under the above beneficiaries. Under the National Rural Employment Programme 1 crore 27 lakh 98 thousand mandays were created for development work during the said period and employment opportunities were given to the economically weaker sections. Besides rehabilitation of 4253 bonded labourers, 83,001 Scheduled Caste and 76,262 Scheduled Tribe families were economically assisted till the end of February, 1984 during the current financial year.

WATER HYACINTH :

The Useful Weed

Shri Ramesh Chandra Parida

The nature never produces anything that does not serve the creation. Everything has its usefulness provided it can be put to proper use. Before he learnt the use of fire or the construction of house, wood must have appeared useless to the then men. Similar must have been the fate of the medicinal plants before he learnt the use of medicines. Therefore, what appears to be a waste today may be a source of riches tomorrow. It is science, which makes that possible. The many exciting uses that it has recently put to water hyacinth, so far considered as an obnoxious problem weed, speak brilliantly about it.

Water hyacinth (*Echhorhia crassipes*) a native of Amazon basin was introduced to Asia in 1905 by a Thai King as an ornamental plant, but, soon it turned out to be a nuisance, thanks to its prolific capacity to grow. It is called "bilatidal" in Oriya and "paniki gras" in Hindi. At present, it is causing menace to more than 50 countries around the world and those which are mostly affected are India, South Africa, Egypt, Australia, Brazil, Pakistan, Thailand, Sudan, Zaire, Argentina, China, Bangladesh, Indonesia, Philippines, Puerto Rico and Venezuela. In India, it has been estimated that a total area of 200,000 hectares is covered under this aquatic weed, including 80,000 hectares in Bihar and 12,000 hectares in West Bengal. The other States severely affected by it are Assam, Uttar Pradesh, Orissa, Kerala, and Tamilnadu. Its prolific growth both on fresh water as well

as sewage water surface, adversely affects fisheries, navigation agriculture and public health. Several attempts at national and international levels to control and to eradicate it have proved futile. However, during the recent days the scientists have succeeded in converting it into an invaluable boon of the nature. They have found it to be a potential source of organic fertilizer cheap biogas, high quality vegetable protein, chemicals, fibres, vitamins minerals, pulp etc. and ironically, this environmental nuisance is also being used as an effective tool to fight water pollution.

Organic Fertilizer

Water hyacinth which is exceptionally rich in potash, when dried contains 75.8 per cent organic matter, comprising 1.5 per cent N₂ and 24.2 per cent ash containing 28.7 per cent potash, 7 per cent phosphorous and 13 per cent lime. This makes it very good for compost making. On an average, water hyacinth compost (on dry weight basis) contains 2.05 per cent nitrogen, 1.1 per cent phosphorous, 2.5 per cent potassium, 3.9 per cent calcium. The average C. N. ratio of water hyacinth is 23:1, which compares favourably with that of legumes (20:1 to 30:1) and is better than that of several other straws with C:N of 90:1. It is twice as rich as town compost and four times as rich as farm-yard manure, in potash.

The process of composting water hyacinth is similar to any standard one now in use.

Even it can be allowed to decompose naturally for 3 to 6 months, preferably under a cover.

The doses of this compost recommended for hectare of land is 20 tons for rice, 5 tons for jute and 5 tons for maize, it is also very suitable for ground nuts and vegetables. However, caution must be taken to avoid the use of water hyacinth plants containing toxic substances as fertilizer, because, the soil gets polluted due to contamination.

Water hyacinth roots are particularly goods for biofertilizer. Those roots are associated with endotrophic micorrhiza, which are capable of phosphate solubilization. Cross inoculation studies show that water hyacinth root containing micorrhiza, when inoculated, could infect the roots of maize, green gram, black gram, beans, etc.

Biogas

The process of generating biogas from water hyacinth is exactly similar to the process of generating it from cow dung in "gobargas" plants, which are now in use in various parts of our country. In the simplest form this gas can be generated by feeding the digester cylinders with water hyacinth vegetable matter and rotating them. Then the digester fluid is allowed to undergo anaerobic fermentation. The solid end product can be used as fertilizer. However, with a suitable mixture of cow dung and water hyacinth the yield can be improved. It has been found out that a combination of cow dung, old slurry and chopped water hyacinth in a proportion $2 : \frac{1}{2} : \frac{1}{2}$ give the maximum yield. Moreover, the residue obtained from such a mixture after biofermentation has also the best manurial value.

The fuel value of the gas generated due to fermentation is satisfactory. It contains 60.80 per cent methane and the rate of methane production can be affected by stirring the digester fluid during fermentation and also by raising the temperature. The fuel value of this biogas has been calculated to be 21,000 BTU (British Thermal Unit) per cubic metre, which is satisfactory enough.

(1 B. T. U. = the heat required to heat 1 lb of water through 1° F in the vicinity of 60° F).

One Kg. of dry water hyacinth on anaerobic fermentation can yield 350 to 411 litres of biogas. The wood, thanks to its prolific growth, can produce about 600 Kgs. of dry water per hectare per day. That means in a day from one hectare the biogas production comes to 229,400 litres. So, it can be a viable alternative to natural gas.

Cellulose digestion is the rate limiting step in the production of methane from water hyacinth. Work is being done at the Regional Research Laboratory, Jorhat to improve the cellulose digestion in a biogas digester. It has also developed a gas plant, specially for this purpose and the technical know-how regarding setting up one can be obtained from its scientists. Similarly, the scientists of the Central Engineering Research Institute, Durgapur have also designed a plant for continuous generation of biogas from water hyacinth, which can generate 3,000 litres of gas per day. Besides, work is also going on at the Haryana Agriculture University, Hissar, the Indian Institute of Technology, Madras and the National Aeronautics and Space Administration, U. S. A. to improve the process and to increase the yield.

Animal feed

Water hyacinth contains 26 per cent crude protein, 26 per cent fibre and 8 per cent carbohydrate by weight. Besides, it is pretty rich in minerals. Therefore, it can be used as animal and poultry feed. In nutritional value it can be compared favourably against any grass. Moreover, it also contains vitamins in substantial quantities.

The University of Florida, U. S., has successfully tested water hyacinth as an animal feed and the U. S. National Aeronautics and Space Administration has recommended it for mixing with conventional diet (up to 20 per cent) of beef cattle and other domestic animals.

Water hyacinth can absorb heavy metals and toxic substances from water. Therefore, the plants grown on industrial sewage, etc., should be avoided for use as animal feed.

Paper and Asbestos

Water hyacinth can be utilised for making paper, paper board and asbestos cement sheets. The pioneering work in this field has been done by the scientists of the Regional Research Laboratory, Jorhat and a pilot plant for making those has been set up at the Regional Research Laboratory, Hyderabad in its collaboration.

The composition and fibre dimensions of the stalk of this weed can be compared with those of straw, bamboo, bagasse, etc. the traditional raw materials used for paper making. Therefore, only that part of the plant is considered ideal for this purpose. Paper or other allied products made up of the entire plant are not of good qualities.

The process of making paper from water hyacinth involves similar operations as necessary for making it from other traditional raw materials. However, the pulp yield in this case is comparatively low and due to the soft and weak fibre characteristic of this pulp, the beating time to get the desired degree of freeness is exceptionally low. Similarly, the shrinkage property of unbleached pulp is also high, which can be minimized by careful bleaching, stock preparation and by adding 10% of waste paper pulp or any other fibre such as, bamboo, jute, rag etc, A major drawback of water hyacinth, pulp is its easy hydration and slow drainage properties, making it difficult to use in high speed machines. To overcome this the scientists at the Regional Research Laboratory, Jorhat, are attempting to use it for preparing grease-proof paper, which is made at higher freeness and from a very hydrated stock. This paper finds extensive use in packaging industries.

Water hyacinth fibre has many similarities with asbestos fibre. However, asbestos fibre is non-combustible, whereas, this fibre is combustible. That is why, the hyacinth fibres are kept in a cement matrix in form of a sheet, which is almost impervious. This also prevents decomposition due to weathering and microbial action of the fibre. Such asbestos sheets can be used for rural housing.

Waste-water treatment

Water hyacinth was so far considered as an environmental nuisance and thus, a major

health hazard. But, ironically, now-a-days it is being employed to fight water pollution.

An important characteristic of water hyacinth is that it can absorb at remarkably high rate, minerals, nutrients, heavy metals, organic substances etc. from waters. Therefore, it is found to clean up metal and toxic materials from sewage water and can purify waste-water from various industries, which are the major sources of water pollution.

Experiments have shown many exciting results regarding this quality of water hyacinth. Treatment with this weed has been found to have reduced the pollutants by 75 % to 90 %. It can absorb 77 % of lead from industrial effluent in 24 hours and has proved its ability to absorb other heavy metals like cadmium, nickel, chromium, zinc, copper, iron etc. and even radio active metals, which are very difficult otherwise. These metals when present in water in higher levels affect human system. Besides, the levels of Biochemical Oxygen demand, Total suspended solids PH etc. of waste-water can be brought down to tolerable limits by water hyacinth.

The treatment of waste-water with this weed does not have any after-effect, as the case may be with chemical treatments. Moreover, this is the cheapest method. The National Aeronautics and Space Administration, U.S., has already created an experimental water hyacinth chemical waste filtration system for treating the effluents from their photographic laboratories, which has shown excellent results. The Central Leather Research Institute, Madras also has been successfully using this weed for the treatment of tannery effluents.

One more benefit that can be derived from treating industrial effluents with water hyacinth is the metals it absorbs can be recovered. The weed grown over the effluents can be first used for biogas production and the solid material left out which is unsuitable for use as fertilizer, as it contains the toxic substances absorbed by the plants, can be accumulated in pits.

After sometime it would be economically viable to extract the metals, especially, the valuable ones, from that.

Further Reading

- (1) "Prepare compost from water hyacinth" Khanclwal, K.C., Organic Recycling in Agriculture, Fertilizer Division, Ministry of Agriculture and Irrigation, New Delhi, Page 15—17, 1979.
- (2) "Water hyacinth to fight water pollution" Haque, Md. A. and Sharma, S., Science Reporter, 17 (12), Pages 756—762, 1980.
- (3) Annual Report 1981 of Regional Research Laboratory, Jorhat, Pages 20—21.
- (4) "Microbiological Changes accompanying degradation of water hyacinth in an anaerobic digester" Rajasekharan, P., Madras Agric. Jorhat, 67 (1), Pages 39—41, 1980.
- (5) Paper form water hyacinth, Regional Research Laboratory, Jorhat (1981).
- (6) "Imported weeds; Water hyacinth" Singh, R.A.; Kissan World. Vol. 5, Page 36, 1978.
- (7) "Water hyacinth an answer to energy problem" Deopawar, S., Science Reporter, 20 (5), Pages 293-294, 1983.

E-4, Krishivihar

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OUAT Colony, Bhubaneswar-3

SEMINAR ON CHANGING PROFILES OF HUMAN RESOURCES MANAGEMENT

Man is trying to conquer space and time, hunger and disease and exploring possibilities to avoid aging and death. This was indicated by the Finance and Law Minister, Orissa Shri Raghunath Patnaik in a seminar held at Cuttack on April 1 on the subject 'Changing Profiles of Human Resources Management'. The Seminar was organised for the first time in Orissa by the College of Accountancy and Management Studies.

Addressing the Seminar Shri Patnaik stated that lot of achievements were possible in the world with the development of science and technology at present. But 'man' himself was the major factor for his self-advancement and general developments, he stated.

He further stated that our pride for the rich spiritual and cultural heritage and historic past faded now due to materialistic development, our country now get up from its slumber and did not like to remain undeveloped, he said. Shri Patnaik paid tributes to statesmen like Pandit Nehru and others for their unstinted efforts to develop science and technology in the country.

In fact very good studies have been made in the field of science and technology, agriculture and industry as well as education and health, he stated. India has now stabilised its position and stood with a few other rich and prosperous countries; despite poverty and backwardness we are proud of our people becoming a big source for our industrial and scientific advancement. He expressed his happiness that all our people were strewn by an unseen thread of unity though ours is a country of many religions, varying dialects and languages, different culture add social customs.

Large number of small and big industries have now come up in Orissa. The youth of the State has become enterprising and adventurous. For this the institution should live up today to day's need and reshape our human resources. In this context we have to take calculated steps and surcharge the spirit of our youth with zeal and determinations, he stressed.

HOMOEOPATHIC SYSTEM GAINS GROUND IN ORISSA

Shri Biraja Kumar Das

Gravity existed before Newton; so did Homoeopathy before Hahnemann. Hippocrates first and then Paracelsus did mention about it earlier. Before Hahnemann and since the time of Paracelsus there had been several other methods of Homoeopathic treatment like Doctrine of Signature, Doctrine of Macrocosm, Doctrine of Likeness and Doctrine of Confinement. But the concept of "Like cures Like" gained currency after Hahnemann's working on a translation of Cullen's *Materia Medica*, his dis-satisfaction with the medical practice of his day and his investigation into it in a very long series of experiments. And finally it was accepted as a method of treatment based on 'observation and experience'. Even after this it had been put to test time and again and all the time it had stood to ground. And this brought about a revolutionary change in the method of treatment which crowned Hahnemann with the title, "the Father of Homoeopathy" as Hippocrates, "the Father of Medicine".

Though centuries have passed since Hahnemann, one is yet to know for sure whether Homoeopathy is a Medical Science or an Art or both. Homoeopaths have to dispel the doubt. In spite of this, it has been widely and wildly circulated that, of late, more and more practitioners of Modern Medicine are turning towards homoeopathy. This may be a debatable point. But partly to ascribe to such views was one of London's leading Pathologists

in the Open Door Television Programme. He was of the opinion that when in some instances Modern Medicines do or do not work, homoeopathic treatment does work. Lord Cohen of Birkenhead, an adept in the field of orthodox medicine, was also of the definite opinion that to have a successful practice, the study of the whole man, the basic tenet of Homoeopathy, is to be made. Some of the practitioners of orthodox medicine have their sincere conviction that homoeopathic medicines often have powerful beneficial effects and they also are 'completely without side effects'. It is, perhaps, this power in homoeopathic medicine which gives Homoeopathy its rightful place in Medicine today.

So, perhaps, for this and for the fact that medical attention is first becoming the rich man's inconclusive dreams and the poor man's recurrent nightmare in whole of the world, our country has taken the lead to help this principle thrive till date, the way it deserves. And it is a good omen that the Central Government has, of late, started taking special care for its all round development. Different States have also not been lagging behind. Even some States have gone a step ahead in giving due recognition to this principle as early as 1950 or even earlier to that. And Orissa is one of such States. The contents hereafter only relate to our State. These are backed by facts and figures purely based on recorded evidence.

Progress of Homoeopathy

(A) Though this system has gained ground in the State of Orissa during the first half of the twentieth century, it received its due recognition by the State Government only in the year 1956, when the State Assembly passed the Orissa Homoeopathic Act, 1956. Thereafter this system has never looked back inside the State of Orissa. Dispensaries both on non-Government and Government sectors started functioning all over the States. But as a matter of fact, prior to June, 1968, all the Government programmes relating to Homoeopathic system of medicine were being implemented and executed by the Directorate of Health Services (Allopathy). It was only during June, 1968, the State Government was pleased to decide to have a separate Directorate for the India System of Medicines and Homoeopathy. And as a prelude, the post of Chief Medical Officer (Homoeopathy) was created to look after this system of treatment. This interim arrangement came to an end when the Directorate started functioning independently in the year 1972. To give further impetus to progress, Government was kind enough to create the post of Deputy Director, Homoeopathy, during September, 1979. Besides, six posts of Inspectors have been created and each has been allotted a Zone (the State has been divided into six zones for the present) having a specific number of dispensaries, to deal with. On the teaching side, the Government, besides the post of the Principal-cum-Superintendent has created a good number of posts in different cadres for its college functioning at Bhubaneswar. And creation of some other posts are in the offing. Government has also become liberal to extend financial assistance for its allround development as will be evident from the facts and figures dealt with separately.

(B) The Orissa State Board of Homoeopathic Medicine is a creature of the Orissa Homoeopathic Act, 1956. The Board Office started functioning in the year 1957 with the nucleuse staff of 4 members including the Secretary-cum-Registrar and since then the number of staff is on the increase to cope with the work load which is ever on the increase. The post of Secretary-cum-Registrar was for the first time filled up by

means of an open advertisement in the year 1972 after due decision was taken by the Government to this effect.

The first elected Board having 13 members (President to be nominated by the State Government +10 members to be elected from amongst the homoeopathic doctors registered under the Board +2 members of the said Assembly) started functioning in the year 1965. Till that date nominated Boards were functioning.

The Board exercises wide powers in all matters relating to Homoeopathic like regulating to Homoeopathy practice, Homoeopathic education including research, encouraging scientific methods of manufacturing Homoeopathic Medicines, adding the Homoeopathic Dispensaries. These powers have been vested upon the Board by the Orissa Homoeopathic Act, 1956, Orissa Homoeopathic Rules, 1960 and other Regulations framed to these effects.

(C) Homoeopathic Doctors have been posted in the 37 Primary Health Centres which have been meant primarily for the Allopaths till date. This has been done by our Government in a phased manner.

This apart, a scheme on "Prevention and Control of Chicken Pox" has since been introduced and the unit is attached at present to the Government Homoeopathic Hospital, Bhubaneswar. Another unit has also started functioning in Sambalpur district of the State.

Also the scheme on "Morbidity Survey on Filaria" under the Homoeopathic system of medicine has been taken up and the unit is functioning in the subdivision of Khurda.

The scheme on "Eradication of Malaria" is another mile-stone in this line.

To add another feather, the scheme of "Morbidity Survey on Yaws" has been its dawn and the unit is operating in the district of Koraput.

Training of Homoeopathic assistants, attached to all Government Hospital and Dispensaries has been taken up in phased manner to help them acquire at least the minimum knowledge in the line.

Besides, proposals are afoot to have a Homoeopathic Pharmacy attached to the Government, Homoeopathic Medical College Bhubaneswar, now renamed as Dr. Abhin

Chandra Homoeopathic Medical College, to create Drugs and Statistical Cell and a Health Education Cell in the Directorate of Indian Medicines and Homoeopathy and to have a scheme on the survey of medical plants in Orissa. And above all, to go for Post-Graduate study in Homoeopathy.

To cap it all, the State Government has been pleased to allow two Clinical Research Units of the Director, Central Council for Research in Homoeopathy to function inside the State with the Co-operation of the State Government.

Standard of Education—Past and Present.

Homoeopathic Education in the State was in doldrums till the year 1969 when Two Colleges (Dr. Abhin Chandra Homoeopathic Medical College, Bhubaneswar and Co-operative Homoeopathic Medical College, Berhampur) after being duly affiliated to the Orissa State Board of Homoeopathic Medicine started imparting teaching in Homoeopathy extending over a period of 4 years inclusive of 6 months compulsory houseman-ship training leading to the Diploma of D. H. M. S., when for such diploma in all other parts of the country the duration was Four Years only. To have still better products, sometime after, the minimum eligibility for entry in to such course was raised to I. Sc. by the State Government instead of Matriculation though Matriculates were eligible for such course till the year 1982. Subsequently another Homoeopathic College at Rourkela, Utkalmani Homoeopathic Medical College by name and of late, the Mayurbhanj Homoeopathic medical College at Baripada have been affiliated to the State Board and have since been functioning.

In the meantime, Dr. Abhin Chandra Homoeopathic Medical College, Bhubaneswar and Co-operative Homoeopathic Medical College, Berhampur have switched over to Degree Courses and have been affiliated to Utkal University and Berhampur University respectively. Another Degree College in Homoeopathy at Sambalpur has been affiliated to the Sambalpur University. The Utkalmani Homoeopathic Medical College, Rourkela, is imparting training both for Degree and Graded Degree and Diploma Courses.

At present three batches of degree students of Dr. Abhin Chandra Homoeopathic Medical College, who have come out successful from the Utkal University, have already completed their intership in the Homoeopathic Hospital attached to the said college. Degree holders from other colleges will come out successful in near future.

This State has the distinction of having representation in the National Institute of Homoeopathy, Calcutta, almost every year, since the latter's inception.

To round up, we may say that we have been giving much stress on quality rather than on quantity.

Statistical data

1. There is a steady increase in the grants sanctioned by the Government to the Orissa State Board of Homoeopathic Medicine.

There is also proportionate increase of the financial aid by the Government to different Government and non-Government Organisations. The following table will show the keen interest Government is taking for the development of this system of treatment.

Budget Provision for the year/years	Homoeopathy		Administration in General (in lakhs)	Total (Sl. 2+3+4)
	Excluding Dr. A.C.H.M.C. & Hospital (in lakhs)	Dr. A.C.H.M.C. & Hospital (in lakhs)		
(1)	(2)	(3)	(4)	(5)
1974—78 (Four years)	73.56	14.23	18.11	1,05.90
1978-79 ..	28.86	4.22	7.71	30.79
1979-80 ..	39.12	5.06	9.08	53.26
1980-81 ..	47.34	5.74	8.59	61.67
1981-82 ..	52.00	5.97	11.26	69.23
1982-83 ..	61.53	5.45	12.53	79.53

2. The total number of Homoeopathic Dispensaries in the State is about 300, out of which 245 are owned and run by the State Government. And at least one

Homoeopathic Medical Officer has been kept in charge of each dispensary. The number of Government Dispensaries opened each year has been detailed below:

Period		Number of Government dispensaries opened	Total
(1)		(2)	(3)
(i) By 1970	..	48	48
(ii) By 1975	..	138	138
(iii) During	1976-77	10	148
	1977-78	10	158
	1978-79	27	185
	1979-80	40	225
	1980-81	08	233
	1981-82	08	241
	1982-83	04	245

Besides these 245 Government Homoeopathic Dispensaries there are 37 Homoeopathic units attached to 37 Primary Health Centres and each unit is being managed

by a Homoeopathic Medical Officer appointed by the State Government and the Homoeopathic Medical Officers have been given gazetted status.

The average number of patients treated in the Government Homoeopathic Dispensaries of the State till 1982 is given in the Table below :—

Year	Total No. of patients treated during the year	No. of dispensaries functioning	Average No. of patients per dispensary	Daily average
(1)	(2)	(3)	(4)	(5)
1976	18,01,412	148	12,172	33
1977	16,24,073	152	10,215	21
1978	20,56,193	185	11,215	30
1979	25,31,157	185	13,682	38
1980	33,14,356	215	15,415	42
1981	39,86,208	235	16,154	44.5
1982	47,82,841	242	19,763	54

When the keenness of our Government for the advancement and development of this system of Treatment is above board, it is to be seen how best the persons who are at the apex of the Homoeopathic Hierarchy can exploit it. In the absence of a sense of dedication by the Homoeopaths, this Method, which still needs proper nurturing, will meet its Waterloo sooner or later. And the Pall-bearers, who will be none other than the Homoeo-

paths themselves, will also sing their Swan song. This will bring about an untimely and abrupt end to a Method of Treatment which has no parallel. So, to help this method thrive, what is most needed now is a Bandwagon of honest, sincere and dedicated Homoeopaths, who can help the Government and other organisations implement and execute their plans and programme in minute details in years to come.

Secretary
State Homoeopathy Directorate
Bhubaneswar

ORISSA RANKS SECOND IN THE COUNTRY IN DISTRIBUTION OF HOUSE SITES

Orissa has secured second position in the country by achieving 211.2 per cent of the target so far as distribution of house sites is concerned. It has exceeded the target by more than two times. In the matter of providing house for the economically weaker sections, Orissa has also secured second position in the country.

In addition to this Orissa's performance has been adjudged as very good by the Planning Commission in the sectors of construction assistance, assistance to Scheduled Caste families, slum improvement, setting up of bio-gas plants, tree plantation and establishment of primary health centres.

Re-organisation of Market Research and Development

Dr. Suresh Chandra Mallick

Among all the factors needed for stabilisation of prices of agricultural commodities marketing has become the most crucial factor, because the overall supply and demand conditions of agricultural commodities are closely associated with the nature of marketing activity. It is a process which starts with the farmer's decision to produce a saleable farm commodity, and it involves all aspects of the marketing structure or system, both functional and institutional, with technical and economic consideration, including product assembly, processing, distribution and use by the final consumer. It is a fact that marketing activity was, and still is, a means by which people better themselves relative to their environment.

Marketing of agricultural produce has assumed the greatest importance in the present day of scientific agriculture. There has been increased production of cereals, vegetables and commercial crops in the State. But it is a fact that most of the farmers are not satisfied with the market rate of their goods. The consumers are also not happy as they pay more for unit of the commodity, they purchase in the market. There is regional imbalances in prices and availability of goods. The rudimentary manner in which market services are provided by a large number of inexperienced and untrained intermediaries not only make the market imperfect, but also

retards further development of market services.

If the market organisation and structure are effective, the farmers will get due reward for their farm produce. Agriculture can be a business proposition if the farmers are able to sell their saleable surplus with a fair price.

In no case the State Government can take up the purchase and sale of all the agricultural commodities cent per cent. But if it intervenes in marketing in some of the agricultural commodities or if it modernises the market services, the result will be a success. It is an irony of fact that the Directorate of Agriculture and Food Production advocates for maximisation of output but has nothing to do with the prices, purchase and sale of agricultural commodities. There was a marketing section in the Directorate of Agriculture and Food Production even during Grow More Food Campaign and it continued in the Directorate till 1955. Since then marketing of Agricultural produce such as Potato, Green Gram, Black Gram, Ragi, Horse Gram, Brinjal, Tomato, Coconut, Groundnut, Chilly, Jute, Mango, Banana are not the subjects of any of the Government Departments. (Only rice marketing is carried out by the Food and Civil Supplies Department). All other crops are set free at the mercy of the unscrupulous middlemen as there is neither any Government regulation nor any inter-

The Directorate of Agriculture and Food Production devotes all its attention for maximisation of agricultural output without any arrangement to convert the output into money i.e. without any arrangement for its sale. This is the main reason why agricultural business is now called the worst paying business among all.

It is overdue but not too late to think for reorganisation of "Market Research and Development" section in the Directorate of Agriculture and Food Production for the benefits of lakhs of farmers who have taken up agriculture not as a business but as a way of life for generations.

Aims and objects

1. To undertake market surveys
2. To collect market informations from different markets for the purpose of market Research.
3. To predict the market rate of different agricultural commodities for the future for the benefits of farmers who desire to grow crops for the coming season or year.
4. To undertake purchase and sell of perishable vegetables both in peak season and in off-season.
5. To explore markets in other States for sale of agricultural product.
6. To increase producer's share in consumer's rupee and to decrease consumer's price for agricultural produce and to have an evenly supply of agri-produce to the markets.
7. To save the farmers from the hands of unscrupulous village traders.
8. To encourage the farmers to grow double and triple crops during a year and to earn an income daily by growing vegetables.
9. To create opportunities for agro-based industries.
10. To have adequate storage facility for less perishable commodities.

How to Start

The "Market Research and Development" Scheme is a vast Scheme which involves huge amount of capital for fulfilling its aims

and objectives. As the scheme will operate developmental work, transaction of rupees for purchase and sale of agricultural commodities over time and space, the details of the scheme with its infrastructure should be carefully studied before the work is taken up by the Directorate.

To start with the scheme, a Market Specialist may be requisitioned from the Orissa University of Agriculture and Technology for a period of two years in order to work out the details of the scheme. In the first year he will undertake a market survey for the entire State and in the second year a small unit can be started on experiment basis for a glorious future.

Designation: Chief Marketing Officer (Ex-cadre) Scale of pay: Rs. 1,300-1,800. Terms of appointment: Two years with lien from Orissa University of Agriculture and Technology, i.e., from the 1st April 1984 to the 31st March 1985.

(1) At present the Chief Marketing Officer may be appointed in the existing vacancy of similar grade for the year 1984-85 (one year only) in the Directorate of Agriculture and Food Production although the post is ex-cadre.

(2) In the year 1985-86, the post of Chief Marketing Officer (ex-cadre) will be created by the Government or will be transferred from some other departments of Agriculture and Co-operation. (There was a post of Joint Director of Agriculture (Marketing) in the Directorate of Agriculture and Food Production before 1955.)

Pre-requisites

The Chief Marketing Officer will avail facilities such as office car, office accommodation, furniture, almirah, steno, typist, office assistant and one driver from the existing resources available in the Directorate of Agriculture and Food Production only for one year, i.e. 1984-85. But during 1985-86 the details of the Scheme will be met from the plan scheme for the section "Market Research and Development". (To be created)

The Chief Marketing Officer will prepare a survey report independently during 1984-85 on the basis of which the Market

Research and Development Section will be created and expanded if the State Government feels the urgency and necessity of the Scheme.

A Market Research and Development Section in the Directorate of Agriculture and Food Production will have a positive relationship on the progress of agricultural business in the State. Unless the farmers

are assured of fair price and easy market facility, they will not get constant encouragement for growing different crops all the year round. The Minor Irrigation Projects and Lift Irrigation Projects have not made any headway in the State partly due to absence of fair price to the farm produce. The peasants of the State can derive more profit if the marketing organisation is effective. Let us go one step forward.

Reader in Agricultural Economics,
Orissa University of Agriculture & Technology
Bhubaneswar-751003

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OVER 39,000 TUBE-WELLS IN 4 YEARS

The State Government have launched a massive scheme for supply of drinking water to 27077 identified problem villages, out of which the anticipated coverage by end of this month would be 25,556 villages benefitting a total population of 110.66 lakhs out of these villages, 16,339 will be fully and 9217 be partially covered.

Since 1980-81, total 39,664 tube-wells have so far been installed in the problem villages of the State as against only 11,846 tube-wells which were installed since Independence up to end of the 5th Five Year Plan. Thus, the recent achievement would be 300 per cent extra over the coverage made during the last plan periods.

PISCICULTURE AND AMMONIA POLLUTION

Dr. Narendra Prasad Das

Most majority of our children suffer from proteincalorie deficiency because we as their parents, have never thought of meeting the protein needs of human diet squarely, largely due to our ignorance. Animal protein, is highly essential for growth of our children and for repair to bodily losses in adults. Such protein, one can obtain from milk, meat, egg and fish. Of all these sources of animal protein, fish is the cheapest, safest and easily available. Fish-flesh is, in fact the principal source of animal protein for the common mass in our country and pisciculture is, therefore, a necessary adjunct to agriculture in the country. Though due to ignorance, carps are considered the most prized fish in our State, very recently attention of the pisciculturists in other parts of the country have been drawn towards the culture of the common airbreathing fishes, popularly known as cat fishes, murels and the perch (Magur, Singi, Sheula, Gadisa, Chenga, Kau). These fishes are viewed in Orissa as "lesser" fishes perhaps due to their easy availability and partly due to their habitat which includes swamps, roadside pools, ponds and tanks in the countryside. But some of these fishes, especially the murels (*Channa* species : Gadisha and Sheula, etc.), are prized more than the major carps in South India (Andhra Pradesh in particular) and in West Bengal. In Orissa the majority of the rural folk because of their peculiar circumstances, have also to depend on these fishes. In Orissa and West Bengal, however traditionally the climbing perch and cat fishes (Kau, Magur, etc.). are considered

very delicious and desirable for the sick. Culture of these airbreathing fishes is much easier and therefore, there is an immediate need for increasing production (number) of these fishes in pools and tanks and also for promoting the growth of these fishes.

Culture of the murels and catfishes should be encouraged because not merely their breeding in caprive tanks is very easy compared to the impossibility of breeding of the carps, but these fishes are extremely hardy to various stresses in the environment. They not only tolerate, but admirably adapt to natural stresses like high temperature (more than 35°C), low oxygen tension, high carbondioxide concentration and acidity (low PH) of water in the environment. Another important stress-factor to which these fishes can adapt to a reasonable extent is ammonia pollution of the surrounding water.

Water pollution has been a problem of very great concern in India. Ammonia is perhaps the commonest of chemical pollutants of water. Not only it is a very common industrial waste, but it also occurs very widely in nature. Effusing from decomposing organic matter, it is plentiful in shallow stagnant waters and marshes where the airbreathing fishes also live. Such habitats are further replenished with extra ammonia that is excreted and so freely liberated into such sites, by the aquatic organisms living in such niches and also by the birds and reptiles frequenting these hunts. Ammonia also accumulates

in such environments from the washing down of the nitrogenous manures and fertilizers used in the agricultural fields. Fishes themselves are no less in ammonising their own homes. They excrete 60 to 90 per cent of excretory nitrogen in the form of ammonia.

Protein, which is so important for all forms of life, is the chief source of ammonia in the body of any organism. Proteins in the food, when digested, liberate amino acids that are then taken up (assimilated) by the tissues for making up (biosynthesis) body proteins. But not all the amino acids are thus ideally utilized always. Some amino acids go in surplus which through several biochemical steps give rise to ammonia in the body. Ammonia which is highly toxic for any organism even in moderate concentrations, is excreted as such by aquatic organisms like fishes and is transformed into less toxic uric acid or urea in higher organisms. In man it is excreted as urea. Thus ammonia is a very interesting pollutant; on one hand it is a natural end product of protein digestion in the body and on the other hand it is highly toxic even in very modest doses. In fact for the high toxicity of ammonia, it should not be termed as an ordinary pollutant, but as a severe toxicant.

Notwithstanding acute toxicity of ammonia, almost all the organisms are endowed with some mechanism or other to fight out ammonia toxicity. Sites like brain and liver are well known even in the fishes we eat, for detoxification of ammonia. Brain is known to be more important in this respect where, ammonia forms the amino acid glutamine. This glutamine thus carries off excess ammonia to various parts of the body, especially to the liver for further break down.

Undesirability and wasteness of a substance is actually its inappropriateness in time and space. Likewise all the biochemical by-products are not always undesirable for the living organism. Therefore, while some

such by-products are excreted out some are recycled as useful metabolic intermediates. Even substances excreted at a particular time, may prove to be indispensable at another moment. Usefulness of ammonia thus has also been significant. Ammonia with carbon dioxide is responsible for the formation of shells in snails and other related animals. Urea is also needed for regulation of water content (osmoregulation) in the body of some marine fishes and frogs. Ammonia is also utilised by many minute organisms like bacteria. The cattle take advantage of such micro-organisms (microbes) in their intestine and utilize ammonia resulting in increase of protein yields. However, so far as fishes in general and the airbreathing fishes in particular are concerned, much has not been on record to demonstrate use of ammonia by the fishes.

However, research work of this author has proved that, even though ammonia is very toxic for the murels, at a particular concentration it can be beneficial for the fish. Exposure of the murrel green snakehead (*Channa Punctatus*—GADISHA in Oriya) to about 100 ppm (parts per million) of ammonia in the surrounding water is fatal for the fish, and the fish tolerates very well a concentration of ammonia up to 30—40 ppm without showing any biochemical lesion. But when the fish is exposed to about 70 ppm of ammonia in the surrounding water dramatic rise in the free amino acid content of some tissues is marked within 3—7 days of exposure, and a remarkable augmentation of protein is witnessed within 7—15 days of ammonia treatment. Eventhough the dramatic rise had a considerable fall at the end of 15 days, the net gain in amino acid and protein contents of the tissues after one month was quite heartening.

Although a lot of work has to be undertaken in this regard before giving a fullproof formula of ammonia for our pisciculturists a modest beginning has been achieved as it reveals the exciting possibility of using ammonia, as common a pollutant, for manuring the nursery tanks of our pisciculturists.

Reader in Science,
SCERT, Orissa

A Step towards the Health for all by 2000 A. D.— Welfare village : Rebatiraman

Shri D. G. Mohapatra

A few years ago they were quite unknown. Though their village Rebatiraman is located only 2 Kms. away from Puri town, famous for the temple of Lord Sri Jagannath, very few people know them. The village situated in the bank of river Mangala consists of 52 families out of which 46 belong to the scheduled castes locally known as Doma and Bhoi. These poor souls many of them under the clutches of liquor, were leading a very miserable life. With little resources they were just passing their days on a hand to mouth existence. Due to lack of health consciousness, some of them were suffering from various dreadful diseases and their children from a number of common ailments.

These days are now changed. - Thanks to the Prime Minister's new 20-Point Programme which gave a new face lift to the village and converted them from unknown to prominent and from ignored to popular. The workers of Puri Satyasai Seva Samity adopted the village and started the weekly Balvikash classes and Bhajans. They aroused a sense of ethical values among them and as a result, the wine-addicted villagers gave up their drinking habits. The women folk were helped to organise the Easwamma Mahila Samity through which the block authorities are feeding 50 children, pregnant nursing and mothers under the National Feeding Programme. The ten poorest of poor villagers were given loans for purchase of

goats and sheep with 75 per cent subsidy under ERRP Scheme. The village was connected with an approach road from the main road. The most acute drinking water problem was solved when the local P. H D. authorities sunk two tube-wells in the village. The D. I. C., Puri opened a training centre in which six women are now undergoing training on palm-leaves craft. An Industrial Co-operative Society is also being set up to finance the village artisans and sell their products through it.

The Health and Family Welfare Department also came forward to lend their helping hand to the villagers who were till now unable to come out of the age-old bonds of poverty and diseases. Detailed discussions were conducted in the District Family Welfare Review Committee and Chandanpur P. H. C. took up the challenge to undertake this hard task to make Rebatiraman an ideal welfare village. The main architect of this innovation concept "Welfare village" Dr. B. D. Sahu, C. D. M. O. (F. W.), Puri outlined in an interview that the inhabitants of such a village would be free from almost all diseases and in the long run the eligible couples would be accepting the small family norm, i.e., the ultimate aim of this scheme.

Survey

At the outset a thorough socio-economic survey was conducted which revealed a number of vital health problems. Health of

472 villagers including sputum of 7 was examined. 106 children were immunised and 55 children were given Vit. "A" solution to prevent blindness. 72 people were supplied with Folifar tablets to prevent anaemia. 51 persons were administered Titanus Toxoid injections. 43 children were given anti-Polio injections. To eradicate Malaria, D D. T. was sprayed in all the houses of the village. The blood samples of 289 persons were examined and treatment was done. 297 people were inoculated with anti-cholera vaccines. Two trench latrines were installed, three soak pits were dug and the villagers were explained about the health hazards of using open field for defecation. Three Filaria and two leprosy cases were detected and treatment was started. The baneful effects of a large family were explained which resulted in accepting of Family Planning methods by 53 couples.

Field Publicity Officer,
Government of India, Puri

That was an evening to remember, the evening of 18th September 1983. Rebatiraman was crowded with the people from the neighbouring villages. The State and District Level Officers were assembled to watch the inaugural ceremony. The villagers were well-dressed and children were in a festive mood. The local M. L. A. Shri Gadadhar Mishra declared it as a "Welfare village". Dr. T. N. Pani, Chief District Medical Officer, Puri who is the main silent approver of this scheme behind the screen in his welcome address remarked that Rebatiraman would stand as a milestone in the history of health services and its echo would resound in nook and corner of the entire nation.

A once gloomy and dispirited village is now bubbling with enthusiasm. Looking forward to a richer and fuller life. This is an example where people's participation and official help have borne expected results.

ORISSA STANDS FIRST IN SUPPLY OF DRINKING-WATER

Orissa has secured first position in the country in supply of drinking water by achieving 126.4 per cent of the target. The planning Commission in their review of the performance on twenty Point Economic Programme of all the States and Union Territories in the country have placed Orissa in the First Performance Group. States which have achieved between 30 to 98 per cent of the target for 1983-84 have been placed under this group. Other major States included in this group are Gujarat, Tamilnadu, Madhya Pradesh and Himachal Pradesh.

Life and Development of Bondas

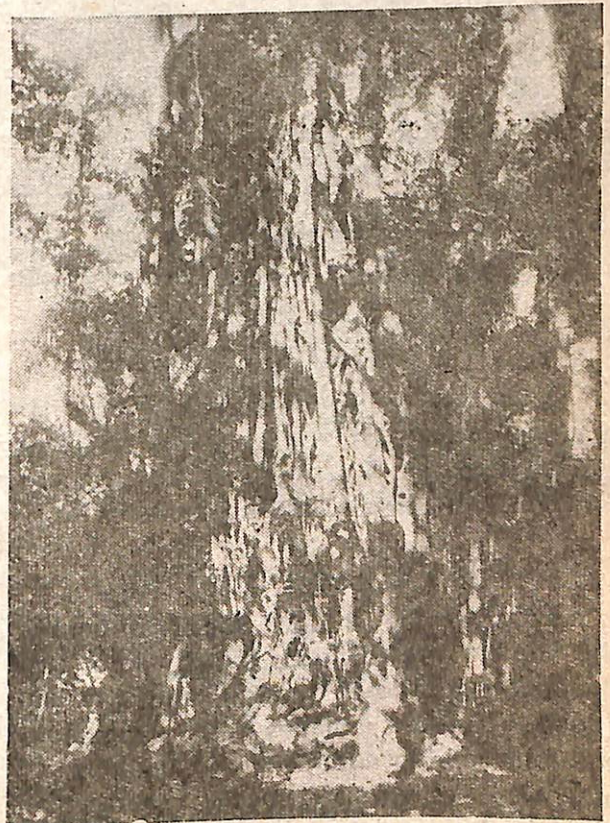
Shri Jagannath Dash

The Bondas are one of the most interesting primitive tribes of Orissa. With the scanty and peculiar body dress, in general, of the males and females and the clean-shaved head as well as heavy mass of colourful necklaces in case of the females, in particular, they stand in sharp contrast to their neighbouring tribes. The term 'Bonda' in the native's dialect means "naked people". As the legend goes, it is believed that during the age of the Ramayan the Bondas were cursed by the Goddess Sita to remain naked for ever. The Bondas call themselves an 'Remo' which means 'man'.

Towards the North-West of Machchkund, Bondas are concentrated in and around the high hills situated between $82^{\circ}-15'$ — $82^{\circ}-30'$ (West-East) latitude and $18^{\circ}-15'$ to $18^{\circ}-30'$ (South-North) longitude. These hills are usually named as Bonda Hills which are situated in the Khairput Block of Malkangiri Subdivision of Koraput District. According to the census reports of India, the Bonda population was 2,565 in 1941 census, 3,641 in 1951 census, 4,677 in 1961 census and 5,338 in 1971 census showing a gradual increase of the Bonda population since 1941.

The Bondas speak an Austro-Asiatic language belonging to Mundari-group. They are found to have linguistic and cultural affinities with the neighbouring communities like the Gadaba, the Parenga and the Didayi. According to Dr. Elwin, the Bonda settlements can be divided into 3 types, (i) Bara—Jangar group situated on 3,000 Ft. high hills, (ii) the Gadaba group

of villages and (iii) the plains villages. But on the whole, the tribe can be divided into two groups:—(i) Lower Bonda, (ii) Upper Bonda. The Lower Bonda in the Gadava villages and Plains villages live in multicaste and tribal villages, whereas the Upper Bondas are settled on the hills known as Bonda Hills, the elevations of which vary from 2,000' to 4,000'. The Upper Bondas are very little exposed to the outside world due to the hill barriers. This natural or



Bonda Supreme Deity "Pata-Khanda"

geographical separation from the outside world has rendered a number of benefits to the Bondas, as a result of which, they are very little exploited by the outsiders and at the same time they have been also able to preserve their indigenous culture.

Life and Culture

The Bondas, being very much hostile, are known for their extremely aggressive nature which very often finds expression in homicides in their society. Normally they are very gentle, brave, hard-working and hospitable. But the continuous conflicts for generations, too much of intoxication and fear of sorcery, often cause blood feuds among them. Besides the individual or family-level conflicts, clan conflicts as well as feuds are also remarkable in the Bonda Hills.



"SITA KUNDA" in the Bonda Hills

As regards the Bonda Social Structure, the Bondas are divided broadly into two moieties—the notal (cobra) and the kilo (tiger). These moieties are exogamous and totemistic in nature. The moieties are otherwise known as 'Bansa' organisation. There is also another exogamous, patrilineal clan organisation known as 'Kuda'. The

Bondas usually use their respective Kuda titles along with their names. Moreover, each village is also found to be exogamous and within the village the villagers are related to each other as "Soru-bhai". In the village the head man is known as the Bad-Naik, who is assisted by Challan, Dangra-Majhi, Kirsani and 'Sisa', the village priest.

The Bonda boys and girls have their respective dormitories situated inside the village. The girls' dormitory is known as "Selani-dingo" and that of the boys' is known as "Ingersin". Pre-marital sexual relationship is not permitted in the Bonda society. The Bonda boys usually visit the girls' dormitory of other villages where they all-sing and dance with the girls. In such occasions they get opportunities to select their suitable life partners for marriage. Very peculiarly, among the Bonda married couples, the grooms are found comparatively younger than the brides. In the Bonda marriage system, the widows are also permitted to marry their deceased husband's elder brother. Like most other tribes of Orissa, marriage by capture, marriage by elopement and marriage by negotiation are very common in the Bonda society.

Although the upper Bondas remain on the hill tops, they are mainly agriculturists. They practise both 'Podu' cultivation and stream-led-land cultivation. Because of extensive 'Podu' or shifting cultivation, the forests are being cleared up day by day which on the other hand has caused the decrease of animal population in the forest. As a result of this, hunting, a much cherished practice of the Bondas, is now restricted only to communal hunting expeditions during the festivals. The Bondas are known for their expertise in utilizing the stream water for irrigation. Very skillfully, they channelise the stream water to the paddy fields situated in the hill terraces and also convert the little stream beds into rice fields. Their traditional cultivation programme includes mainly paddy and oil-seed niger in these terraces. In the swidden (Danger land or up land) plots which are owned by the respective lineages, they grow millets, pulses, cucumbers, gourds and castor trees. In the kitchen garden, the Bondas cultivate tobacco, pepper and

plantain which are consumed as well as sold in the markets. They also sell jack-fruits and broom sticks in the market for cash. Besides the agriculture, the Bondas also collect roots and tubers from the forest for their daily consumption.

The Bonda huts on the hill tops amidst plantain garden and other natural scene make a very enjoyable and picturesque scene to any outsider visiting the area. The huts are thoughtfully planned as per the need following an indigenous pattern. It consists of one big multipurpose room and two smaller rooms one on each side. The big room is used as the bed room as well as the kitchen. Out of the two smaller rooms, one is used for the domestic animals and the other one for storing purpose. There is one long varandah in front of these 3 rooms which is tightly fenced on 3 sides and utilised for sitting as well as other domestic activities. These huts are usually thatched with the jungle grass or straw.

The most remarkable part of the Bonda culture is their dress pattern. No other tribe in Orissa is found with such type of peculiar and interesting dress pattern. The Bonda females weave in their most simple and small loom a 2-3 Ft. long and 10" wide cloth known as 'Renga' out of the 'Kerang' fibres collected from the jungle and coloured yarn purchased from the local market. This is the only dress for the females which is wrapped around the pelvic girdle in order to hide the genitals. In the same way the males also put on a small cloth purchased from the weekly market known as "Dom" cloth. The Bonda female's love for the ornament is worth mentioning. They adorn themselves with a number of long bead necklaces which are hanged down up to the naval portion to hide their nudity. The sense of beauty of the Bonds female is really wonderful. The females cleanly shave each other's head and wear a palm-leaf strip around it. In addition to the necklaces, they also worn a number of metal rings around the neck. Unlike the females, the Bonda males worn only a few necklaces in addition to bracelets and armlets.

The meeting place of the Bonda village is known as "Sindhabor" which is a megalithic platform constructed either in the

centre or in one end of the village. Here the villagers sit together for group discussions and gossip. In some villages the shrine of the village deity 'Hundi' is erected near the 'Sindhabor'. The village deity, is the Bondas believe, protects the villagers from the calamities, dangers and diseases. In the village Mudulipara the shrine of their supreme deity 'Pata Khanda' is erected under a great Banyan tree. Here a sacred sword is carefully kept on the tree which symbolised the deity. Once in a year the Bondas gather here to worship their supreme deity.



A Bonda girl with traditional dress

Development

It is significantly noted that due to the natural isolation from the outside world, although the Bondas have maintained their indigenous culture to the greatest extent, ultimately they have been deprived of modern amenities, scopes for learning and imitating new things in order to widen their world view through the outside contact. Thus, due to the natural hill barriers they are still continuing in a backward condition. Although they are least mobile so far as their occupations are concerned, under the pressure of poverty, a few of them used to go to the

Balimela Dam site for earning at the time of its construction. It is again surprisingly found that a few Bondas were also working in the tea gardens of Assam for some years in order to earn money for their marriage.

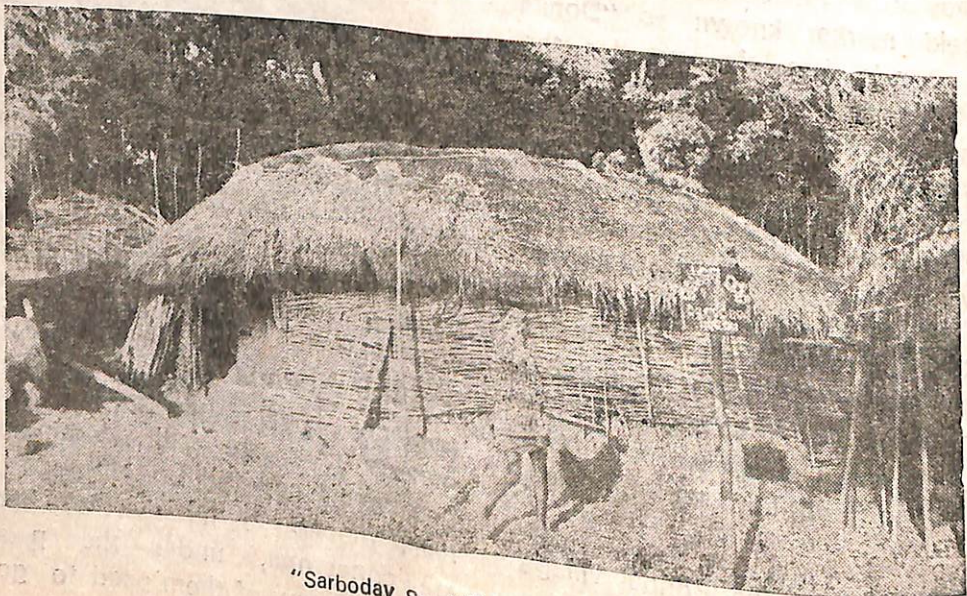
It is quite remarkable therefore, that rapid industrialization in Koraput district has no considerable impact on the Bondas. Keeping in view their backwardness and sufferings, our Government has constituted only recently the Banda Development Agency through which commendable success has been achieved in the Bonda Hills. It is because of the sincerity of the Project Leader of the B. D. A. and his associates as well as the Bonda-culture-oriented programmes, there is always ready response from the Bondas.

The Bonda Development Agency is an autonomous agency which has been functioning since 1977 at Mudulipara. The Agency has a coverage area of 130 Sq. Kms. having a population of 4,751 which includes 4,336 Bondas both in the plains and hills. At Mudulipara, in addition to the headquarters of the B. D. A., there is one Ashram School for the Bondas and other backward communities. One Police-Station is also established at Mudulipara to maintain discipline and order. At present the Bonda Hills is connected with the outside world through 3 communicable roads. The first one is started from Gobindapalli through Kadamguda and Similiguda to reach the Bonda hills. The second one is started

from Khairput (situated on the side of the Govindpalli-Balimela highway) via Kamarput and Jodiguda. The third one is started from the Machhkund river side through Kenduguda. The Khairput and Mudulipara are now directly connected through a jeepable hilly road.

Besides the impact of the industrialization and urbanisation, which was quite insignificant before the functioning of the B. D. A. in the Bonda Hills, the role and impact of the voluntary agencies as well as neighbouring caste cultures are also in the same way negligible. Therefore, the whole story of development of the Bondas delineates the successful implementation of the Government Welfare Programmes through the Bonda Development Agency in respect of their Agriculture, Horticulture, Healthcare, Education, Animal Husbandry, etc.

As regards the agriculture, constant persuasion and approach of the project staff have made it possible to convince the people to accept a number of high yielding variety of seeds, agricultural implements. And largely because of demonstration programmes, people now have successfully adopted the cultivation of spices like chili, ginger and turmeric, vegetables like cabbage, tomato, radish, brinjal, potato, etc. in their wet land. As they were previously equipped with the knowledge of the irrigation by utilizing the stream water, the introduction of improved variety of agriculture has helped them to raise double or triple crops in a year.



"Sarboday Samiti" at Mudulipara

Introduction of formal education, although considered as the major aspect of the development activities in a society, has a story of utter failure in the Bonda Hills. Tribal & Harijan Welfare Department of Orissa has already established 8 Lower Primary Schools and one Ashram School in this area. But the Bonda children are not found to be interested in such formal education. It may be believed that as they lack similar formal educational institutions in their culture previously, they cannot readily accept such formal education. Moreover, the tribal children are found to take important roles in the family economy, because of which they have very little time throughout the day to devote for the study. Therefore, B. D. A. officials have started to have started imparting non-formal education to the Bondas in line with their cultural set-up. At present such programmes find ready response from the people in 6 such centres. In these centres, provisions for reading materials, mid-day meals, game articles, toys, etc. have been arranged to attract and encourage the children for such educational programmes. Here the students are taught to read, write and speak in Oriya. The adult literacy programme in the Bonda Hills is also found equally effective, but the progress is rather slow. As a part of educational programme, the Bondas are also taught the general knowledge about the health-care, good manner, morality, demerits of alcoholism etc. through group discussions. Thus, non-formal centres are now playing a very crucial role for the socio-economic development of the Bondas.

Horticultural programmes have been also successfully implemented in the coverage area of the Bonda Development Agency. It is found that the plantation of tamarind and jack-fruit plants has been accepted by the people without any difficulty, because of their previous acquaintance with such plants. According to the report of the Bonda Development Agency, 1982, the in-situ plantation of jack-fruit, tamarind and mango has been successfully undertaken in about 450 acres of land. Besides this, avenue plantation and backyard plantation programmes have also been implemented by supplying seedlings, grafts and gottis of various fruits to the people.

Along with the horticultural programmes, soil conservation programmes have been also undertaken in the area through cashew plantation to check the soil erosion. Under such programmes, cashew plants have been planted in about 50 acres of land, 64.50 acres of land have been developed and 9 nos. of stone boundaries have been constructed by the end of 1981-82, for the development of the land and the people.

In order to provide the Bonda people with the facilities for health-care and drinking water, the Bonda Development Agency has also taken necessary steps. As per the report of the B. D. A., 1982 so far 11 wells and 2 cisterns have been constructed in ten village to provide the Bondas with drinking water. Modern medicines are now supplied to these tribals. In spite of their age-old magico-religious practices, they are showing interest towards modern medicines. The role of the Government is also worth mentioning for popularising the herbal medicines out of the local species.

Like most other tribes of Orissa, the poor Bondas are also greatly affected by the bonded labour. The Bonda Development Agency has successfully pointed out 60 such cases by 1982 and released 14 gotis by paying back their outstanding dues to their respective masters. The Agency has also rightly organised Hills LAMPS at Mudulipara to provide production and consumption credit, marketing facilities for surplus forest and agricultural produce to the poor tribals. Besides the above schemes, the LAMPS also finances its members for various productive activities.

Under other development activities of the Bonda Development Agency, programmes relating to road communication, animal husbandry irrigation are remarkable. Attempts have been successfully made to interconnect the interior villages through roads. So far 21 Kms. long have been constructed under this programme. As the Bondas are habituated with rearing domestic animals, which is a very significant feature of most of the tribes, of Orissa animal husbandry programme is very much popular among them. By 1982, according to the report of the B. D. A., 352 numbers of bullocks, 922 numbers of goats and sheep,

26 numbers of bucks and rams, 58 numbers of bucks. and 30 numbers of cockerls have been supplied to the Bonds so that, they can multiply the animal population through proper care and earn sufficiently. So far as the irrigation is concerned, dug-wells, and irrigation channels, have been constructed and Diesel pumpsets as well as hand pump sets have been arranged for facilitating agricultural activities in the Bonda Hills.



Bonda Women shaving each other

Conclusion

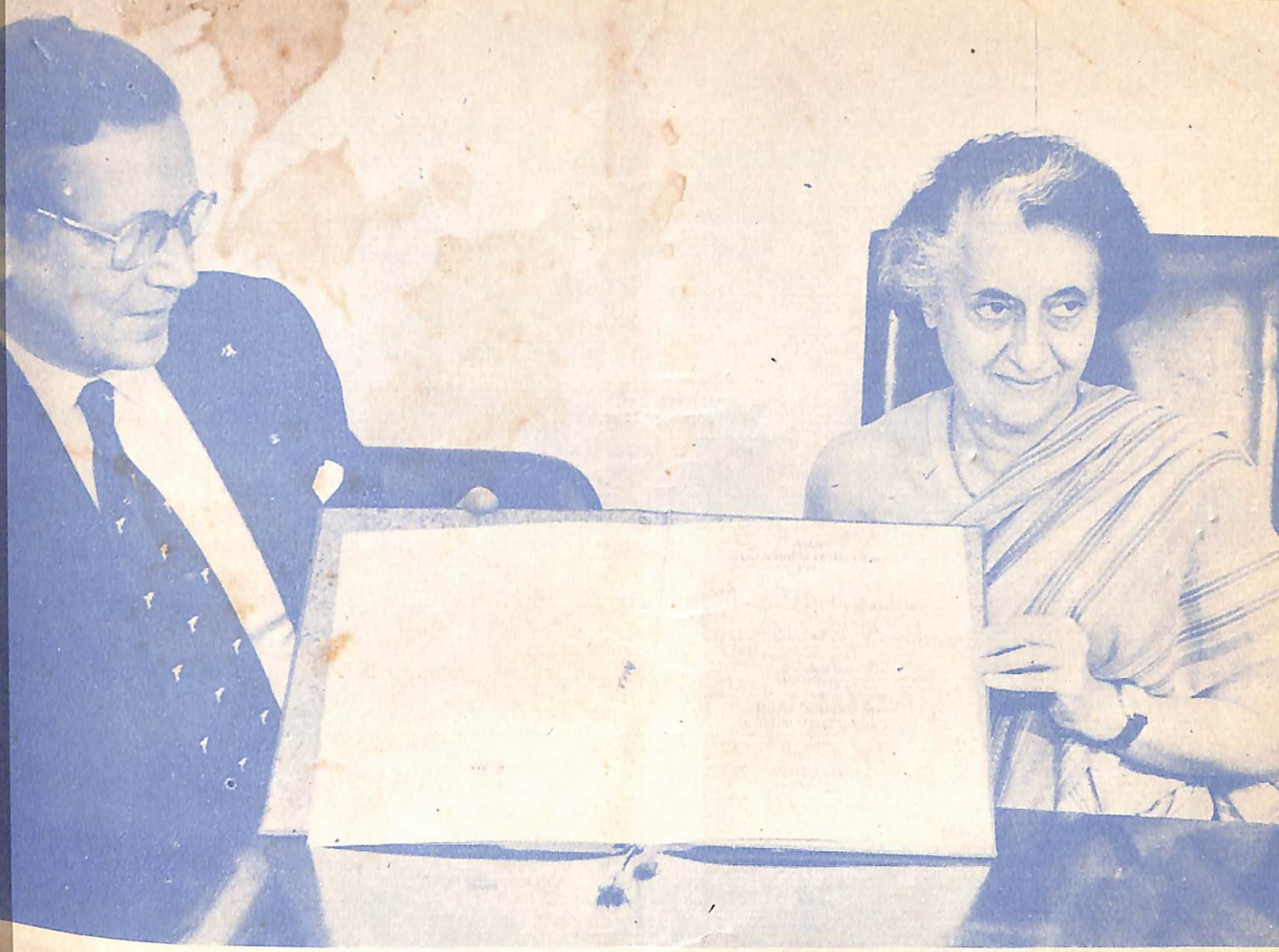
As it is clear from the above development situation in the Bonda Hills, the Bonda Development Agency is covering the full gamut of development and welfare activities in the area so far as the allround progress is concerned. The living conditions of the Bondas prior to the functioning of the B. D. A. had not been changed since Independence. Therefore, by any standard the efforts of the B. D. A. is spectacular and impressive. It is a great pleasure to note that Government of India has taken much greater attention in the fifth and sixth five-year plans for the development of the isolated tribal areas. In respect of the development of the isolated Bondas in the Bonda Hills, the development programmes of the Government are not only resource-oriented but also people-oriented, which is the key-factor behind the story of success in the Bonda Hills.

It is therefore, no wonder that culture-oriented programmes have greatly minimised the socio-cultural barriers to development in the Bonda Hills.

Reference

- (1) 'Adivasi'—1963—64—No. 3
1st January—1964—Tribal Research
Bureau, Orissa,
- (2) A brief Note on the Bonda Development Agency (1977—1982) July, 1982.

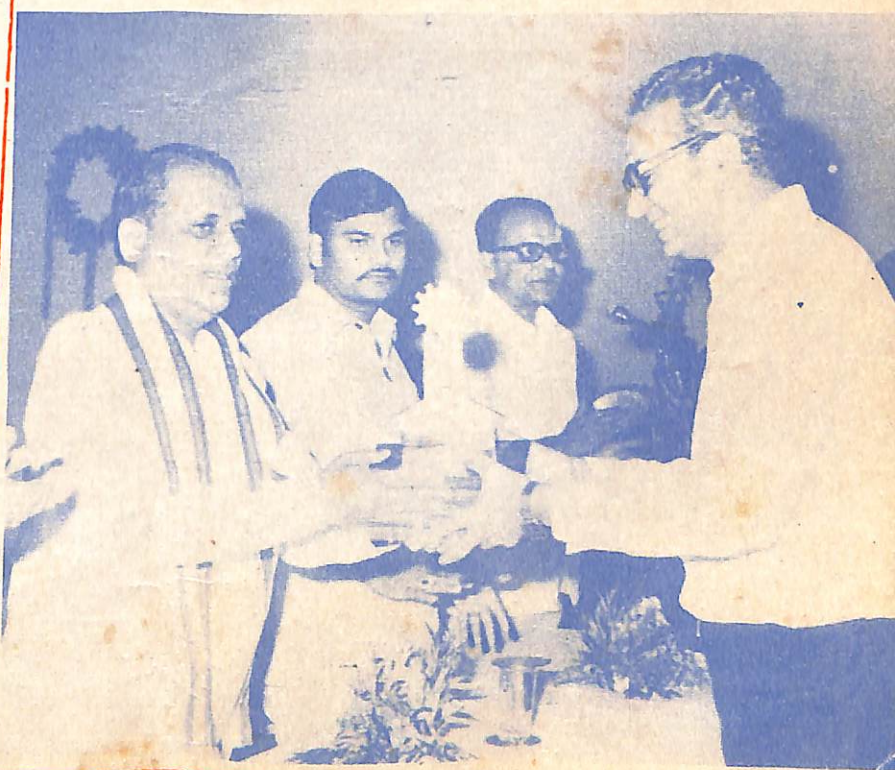
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