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ChatGPT-The New Human?

By Uday Kumar Varma

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Few things in recent past have stirred our minds, ignited our inquiry and whetted our curiosity as much as ChatGPT. Technologists, scholars, academicians, artists, musicians, writers, journalists, students, and of course governments, there is no section of society that is not talking about it. Since, its launch in November last year. millions across the world have used it and millions more want to do so. It has become the most successful progress in the realm of AI(Artificial Intelligence).

What is ChatGPT?

On November 30, 2022, Open AI, a non-profit and open-source Artificial Intelligence venture, based in California, USA launched a prototype of a chatbot called ChatGPT. The acronym expands to 'Chat Generative Pre-Trained Transformer'. It uses Natural Language Processing and the source of its data is textbooks, websites, and various articles, which it uses to model its own language for responding to human interaction. It is a chatbot (a chatbot mimics a human conversationalist), but is far more accomplished and versatile. it can write and debug computer programs; it composes music, writes teleplays, and tells fairy tales. It writes essays, and answers test questions at a level above the average human test-taker. It can write poetry and song lyrics. It can emulate a Linux system; simulate an entire chat room and play games like tic-tac-toe. It can even simulate an ATM.

How Did the World Receive It?

The response to this new technology bomb shell was overwhelming. Some even called it a 'New Human'. Others called it the first major breakthrough in AGI-Artificial General Intelligence. The critics, however, labelled it merely a major language processing tool.

"The striking thing about the reaction to ChatGPT is not just the number of people who are blown away by it, but who they are. These are not people who get excited by every shiny new thing. Clearly, something big is happening." wrote Paul Graham of Y Combinator. Elon Musk who had cofounded Open AI in 2015 but quit in 2018, wrote "ChatGPT is scary good. We are not far from dangerously strong AI". The New York Times conservatively labeled it "the best artificial intelligence chatbot ever released to the general public", while The Guardian noted that it was able to generate "impressively detailed" and "human-like" text. Technology writer Dan Gillmor used ChatGPT on a student assignment, and found its generated text was on par with what a good student would deliver and opined that "academia has some very serious issues to confront". The Atlantic declared ChatGPT as part of "the generative-AI eruption" that "may change our mind about how we work, how we think, and what human creativity really is" and included it among the major "Breakthroughs of the Year".

It's Impact

Its developers emphasise its positive impact inter alia on education, employment and most of all human creativity. That it aced an MBA examination of Wharton, can answer questions of a relatively complex nature, and write an analysis of an event better than a seasoned journalist, has raised endless questions. A huge debate is raging across countries as to how the world needs to respond to this new human.

ChatGPT can be used to generate personalised study materials and quizzes for students, allowing them to learn at their own pace and according to their specific needs. This can be particularly beneficial for students who may struggle with traditional classroom settings or for those who want to explore a subject in more depth. Additionally, ChatGPT can be used to grade written assignments, freeing up teachers' time and providing more accurate and consistent feedback to students.

In terms of employment, ChatGPT can be used to automate repetitive and time-consuming tasks, such as data entry and customer service. This can lead to increased efficiency and productivity in the workplace, as well as the creation of new job opportunities in fields related to the development and maintenance of language models. In the field of creativity, ChatGPT can be used to generate new ideas and concepts, allowing for the creation of more diverse and original content. For example, ChatGPT can be used to write novels, poetry, and screenplays, or to generate new music and visual art. This can open up new opportunities for artists and creators and can also lead to the creation of new forms of art and entertainment.

Clearly, the world is not going to be the same anymore. The most telling aspects will be on human creativity. We are going to be seeing painters and musicians of great merit not because they were born with a certain talent but because they have the advantage of access to ChatGPT.

And the age of knowledge workers is likely to see an early demise. All that a knowledge worker in blood and flesh can perform can be done better by this new human. "ChatGPT is only the latest example of technology that seems to be able to carry out tasks that not long ago seemed to require the services not just of human beings but of humans with substantial formal education," wrote Paul Krugman, the Nobel prize winning economist.

This versatile Chatbot has been embraced by most with excitement and anticipation. Other search engine giants as Google lost no time in launching services that piggybacked on it. Using AI extension, services like ChatGPT Writer, Web Chat GPT, Merlin, Chat GPT Prompt Genius, and Share GPT, have been introduced that are revolutionising the use of internet. Much more is likely to follow. Other tech companies are already in advance stage of launching similar services.

ChatGPT has unleashed a tool that is immensely versatile and useful. It does and will further facilitate a lot of processes that consume time. A paradigm has been introduced, one that is likely unstoppable. Given human nature, the frontiers will be constantly pushed. The future is full of exciting anticipation.

Limitations

With all the thrill ChatGPT has stirred, it is still a machine and suffers from multiple limitations. Most evident is the 'hallucination' it suffers from. Common to large language models, it means it may write plausible sounding but incorrect or nonsensical answers.

Presently, it has limited knowledge of events that occurred after 2021. 'I'm well aware of ChatGPT's limitations. That it's unhelpful on topics with fewer than 10,000 citations. That factual references are sometimes false. That its ability to cite sources accurately is very limited. That the strength of its responses diminishes rapidly after only a couple of paragraphs. That ChatGPT lacks ethics and can't currently rank sites for reliability, quality or trustworthiness. 'Is one indictment voiced by University of Texas history professor Steven Mintz.

The Undesirable Aspects

There are some areas where clearly the impact could be negative. Job displacement is one. The automation of repetitive and time-consuming tasks by ChatGPT can lead to job displacement, particularly in fields that involve language-based tasks such as data entry and customer service. Creativity and originality may be another casualty particularly in fields such as literature, music, and art.

Then there is the issue of biases and discrimination that may creep in due to their presence in the large data sheet of text which it accesses. The biases may range from race, gender, political affiliations and the like, having serious and long-term implication. ChatGPT uses large amounts of data to generate its output, which could potentially be accessed and used by malicious actors. This could lead to privacy breaches and other security issues. There will also be unintended consequences, that will get revealed as the world sees more of it.

Dependence on technology is yet another major concern, particularly in fields such as education, where students may rely too heavily on the personalised study materials generated by the model. This could result in a lack of critical thinking and problem-solving skills. The New York State has already banned the use of ChatGPT in its school on complaints that students were using it for writing their assignments.

In conclusion, ChatGPT has the potential to greatly impact various industries, including education, employment, and creativity, by automating repetitive tasks, generating personalized study materials, and providing more accurate and consistent feedback, and also by providing new ideas and concepts, allowing for the creation of more diverse and original content. However, it is important to be aware of the potential challenges and unintended consequences that may arise as it becomes more widely adopted and to address ethical concerns related to the use of language models.

Should it be Regulated?

And yet, the fact remains that Chat GPT still is essentially a search engine though with the capability to process and present information in precise orderly language. The AI part is its articulation. And one needs to remember that what Chat GPT is doing it today, has been work in progress for many years. It's nothing new, only much grander and more versatile.

The other tech companies will soon offer better, more efficient, AI equipped chatbots. The future is both exciting and promising. The challenge is how to leverage it towards greater good. The opposition may come from governments, academicians, moralists. Yet, some governments may find remarkable uses for the same. Indian government, for instance, contemplates integrating it with WhatsApp to disseminate government messages.

Many have advocated its regulations. Governments mostly like to regulate. Yet, regulating it has many demerits. Its negative impacts are well understood but the remedy lies in insulating the consumers from misuses, its capacity to generate a false narrative, and designed distortions by educating them. This effort is under way in any case for other social media platforms. The same needs to be strengthened.

The fact remains that regulating it will be easier said than done. It deserves to be welcomed and embraced for its immense potential, while countering its pernicious aspects. Our response merits a new paradigm, a better intelligence not circumscribed by stereotyped thinking.

P.S. One of the paragraphs above was created by ChatGPT. Can you find which one?

Indian Air Force's Revised Doctrine Adopts A Holistic

By Diptendu Choudhury

Author is a retired Air Marshal who was part of the team that drafted the new IAF doctrine

Since national security is every citizen's concern and given the efforts underway to evolve national defence and security strategies, the doctrine credibly conveys what aerospace power has, can and will do for the nation, and the need for greater awareness of it.

The doctrine has the potential to accommodate major changes in wartime strategy that allow for the use of future precepts in the employment of aerospace power in the Indian security context.

The history of India's use of air power in all its wars has been one of restraint, except during the 1971 war. The chequered leveraging of this potent military instrument has been due to two aspects. The first is the worldwide inadequacy in the comprehension of the inherently complex and rapid technology-driven changes in air power's characteristics and capabilities. The other is India's traditional surface-dominant security outlook that stems from dealing with a primarily continental threat. Both these factors have led to the continued viewing of air power from the isolated lens of a support service to the continental and maritime domains, despite the long, consistent, and demonstrated commitment of the Indian Air Force to national security.

With Asia as the crucible of the geopolitical churn in the world order, and the harsh reality of two adversaries with capable air forces on India's unresolved borders, addressing the security challenges to the country require multi-domain expertise. A continued two-dimensional approach seriously impacts national security — along with narrowing India's strategic outlook, it limits its response options. The IAF's revised doctrine, therefore, underscores the necessity of a more holistic approach towards India's security and lays out what aerospace can do to bolster it. It provides for a clearer understanding of the redefined characteristics of aerospace power and its expanded capabilities, not just with respect to contemporary and future warfare and conflicts, but also its place in fostering nation-building, strengthening regional security and contributing to India's larger national interests.

A pithy articulation of the Service objectives — evolved out of combat experience, invaluable assessments of international conflicts and its experience gained in international exercises — underpins the doctrine. A novel air strategy covers the entire spectrum of future aerospace applications: Apart from peace and war, this also includes the unique no-war-no-peace condition confronting the country. State-sponsored terrorism, increasing border stand-offs and internal security challenges make peace in India uneasy. Aerospace power helps shape security operations and external and internal security. Sovereignty protection, deterrence, air diplomacy and nation-building remain peace-time imperatives.

The doctrine has the potential to accommodate major changes in wartime strategy that allow for the use of future precepts in the employment of aerospace power in the Indian security context. The doctrine's focus on the criticality of controlling the skies — its absence in the Russia-Ukraine war has been conspicuous — is a justified imperative for India's future joint military strategies as adversarial air powers will make all battle spaces highly contested. The IAF's robust joint credentials, demonstrated in every conflict, remain a dominant flavour in its wartime air strategy, which flows out of the joint military strategy, and is laterally connected with the land and maritime strategies. Offensive air operations and air defence, the two indispensable pillars of air power, create the conditions for the holistic application of combat power, comprising the IAF's coordinated operations along with army and naval operations. All of IAF's enabling, enhancing and sustaining operations, underpinned by air mobility operations, directly and indirectly, contribute to the combined application of combat power.

IAF's only conduct of strategic air operations was in the 1971 war when critical high-value targets of West Pakistan's vital energy system comprising its oil tanks, refinery, gas plants, and communication systems — including road, rail and bridge networks — were targeted with devastating effects and strategic outcomes. While the resulting acute shortage in fuel stocks forced the enemy to resort to imports, IAF's sustained attack on the Pakistan army's communication networks significantly dented the latter's ability to fight, contributing to the failure of its muchvaunted offensive plans. This vital aspect of IAF's offensive capability, which seeks to strike the enemy's strategic and high-value counter-force and counter-value target systems deep inside the adversarial heartland. The impacts on the enemy's politico-military will and ability to wage war have been given significant doctrinal salience. With the expansion of battlespaces beyond the traditional air, land, and sea domains, and the necessity of a multi-domain approach in India's future joint military strategy, battle space transparency, combat networks, cyber and electronic warfare, information warfare and the vital techno-logistics constitute the foundation of IAF's future air strategy. Since doctrinal reviews are undertaken regularly to keep pace with the rapid technology-driven changes in air power tactics and concepts of operations, human resources, training, and operational testing and evaluation remain priority doctrinal precepts.

Read complete article on website indianexpress.com

Indus Water Treaty India - Pakistan

By Lt Gen V A Bhat

Gen Bhat served as the Director-General of Quality Assurance (DGQA) at the Department of Defence Production (Ministry of Defence) affairs.

On 27 January 2023 India sent a notice to Pakistan to review or modify the existing Indus Water Treaty signed in 1960. The notice was issued as Pakistan was raising repeated objections to constructions of Hydel water projects on the Indian side. It gave Pakistan 90 days to reply our notice. At the time of independence, the boundary line between the two newly created independent countries i.e., Pakistan and India were drawn right across the Indus Basin, leaving Pakistan as the lower riparian. Moreover, two important irrigation head work, one at Madhopur on Ravi River and the other at Ferozepur on Sutlej River, on which the irrigation canal supplies in Punjab (Pakistan) had been completely dependent, were left in the Indian Territory. A dispute thus arose between two countries regarding the utilization of irrigation water from existing facilities. Negotiations held under the good offices of International Bank for Reconstruction and Development (World Bank), culminated in the signing of Indus Waters Treaty (IWT) in 1960. The Treaty was signed at Karachi by Field Marshal Mohammad Ayub Khan, the then President of Pakistan, Shri Jawaharlal Nehru, the then Indian Prime Minister and Mr. W.A.B. Illif of the World Bank on 19th September 1960. The Treaty however is effective from1st April 1960 (Effective Date). India did stop the flow of water briefly in the skirmish of 1948 but restored it the moment cease fire was declared. (RIPARIAN MEANS THE LEGAL RIGHTS OF THE OWNER OF LAND WHERE A RIVER FLOWS). The Indus system of rivers comprises of main stem of Indus River along with its five left bank tributaries, namely, the Ravi, the Beas, the Sutlej, the Jhelum and the Chenab and a right bank tributary, namely, the Kabul which does not flow through India. The Ravi, the Beas and the Sutlej are together called as Eastern Rivers while the Chenab, the Jhelum and the Indus main are called as Western Rivers. The Treaty provides India an absolute control of all the waters of Eastern Rivers while Pakistan shall receive for unrestricted use all those waters of the Western Rivers which India is under obligation to let flow beyond the permitted uses. India is permitted to use the waters of Western rivers for

- a. Domestic use
- b. Non consumptive use
- c. Agricultural Use
- d. Generation of hydro-electric power

India is also permitted to construct storage of water on Western Rivers up to 3.6-million-acre feet (MAF) for various purposes. The use of water for agriculture use, storage of water, and generation of hydroelectric power has some restrictions not included in this article.

Both India and Pakistan undertook to establish a permanent post of Commissioner for Indus Waters. The two Commissioners constitute the Permanent Indus Commission (PIC). Unless either Government should decide to take up any particular issue directly with the other Government, each Commissioner will be their representative of his government for all matters arising out of this Treaty The purpose and functions of the Commission inter alia are to:

- a. establishes and promote cooperative arrangements for the Treaty implementation.
- b. furnishing or exchange of information or data provided for in the Treaty; and
- c. promotes cooperation between the Parties in the development of the waters of the Indus system.
- d. examines and resolve by agreement any question that may arise between the Parties concerning interpretation or implementation of the Treaty.

The Commission is required to meet regularly at least once a year, alternately in India and Pakistan and also when requested by either Commissioner. The Commission is also required to undertake tours of inspection of the Rivers and Works for ascertaining the facts connected with various developments and works on the rivers. To enable Pakistan to satisfy itself that India's planned projects are within the Treaty provisions, India is required to communicate to Pakistan, in writing, their information specified in the Treaty. Pakistan can raise objections within three months of the receipt which are then resolved under Article IX. Article IX of the Treaty deals with the settlement of differences and disputes. If the Commission is unable to resolve a specific problem, provisions have been made for reference to a Neutral Expert Committee.

Further, Article XII (of PIC) provides for the provisions of the Treaty to continue in force until terminated by a duly ratified treaty between the two Governments. (Brief of the IWT) as brought out above.

THE OBJECTIONS RAISED BY PAKISTAN FOR PROJECTS BEING CONSTRUCTED BY INDIA ARE MORE THAN WHAT INDIA HAS RAISED. The initial disagreement began when India started planning the Kishanganga hydropower project on a tributary of the Jhelum River. The Jhelum is one of the three western tributaries of the Indus whose waters are supposed to be for Pakistan's use under the treaty. India is allowed to build projects but not to limit water flow on these rivers – whereas it can do as it likes with the three eastern tributaries of the Indus River. Objection was raised by Pakistan as they had planned project on their side on the river Neelum. Kishenganga is known as Neelum on the Pakistan side. This project was designed in 1988 a year later than planned by India in 1987. Pakistan objected to diverting a small portion of the water in the river Kishenganga to another tributary of the Jhelum (Not Kishenganga). A competent authority allowed as envisaged in the IWT allowed India to go ahead with this project as the overall water flowing to Pakistan did not change.

There is The Tulbul project north of Wular Lake was suspended in 1987 after Pakistan objected. India has now decided to review this project. Pakistan's Left Bank Outfall Drain (LBOD) project passes through the Rann of Kutch in India's Gujarat. The project was constructed without India's consent. India has objected because this is in contravention to the IWT. Pakistan if it wants can flood Gujarat if it wants to by constructing the LBOD The lower riparian state is in India and hence it needs to be given all details. Pakistan in 2021 raised objection to the construction of the Ratle Dam (850 MW) on the river Chenab in the district Kishtwar, on Indian side of the border. The foundation of this dam was laid in 2013 but the construction activity was delayed inordinately due to non-allocation of funds. Funds were released in 2021 and the constructing activity has commenced. India suggested that this dispute be given to a neutral expert chosen by Pakistan. After initially agreeing to a neutral expert Pakistan said they wanted a Court of Arbitration (COA) to look into this issue. India objected to this move and insisted on Neutral Expert.

A Court of Arbitration can give a stay order on the issue till a decision is arrived at, effectively further delaying the already behind schedule project as also escalating the cost further. World Bank decided that both the COA and Neutral expert would proceed simultaneously. India has ignored this COA approach and not even appointed representative to argue on its behalf, not halting the construction. This is what the present state of this Project is. After the Pulwama terror strike, India has decided to go ahead with all the projects on our side of the border, to avoid delay and cost escalation. There are many reasons why India wants to renegotiate this IWT of 1960. The IWT gave India only 20% of the water and balance 80% to Pakistan. With the rise of population, the need of water for of Power generation and irrigation is much more. India may be wanting a very rigid mechanism to address the objections raised by either party. First Bilateral, then Neutral Expert and finally approach COA. The Dams being built today are way different than those of 1960. Pakistan has continuously raised objections whenever these new design dams are proposed in these rivers. The 90 days' time limit given by India expires in the last week of April. Difficult to predict the response of Pakistan but it will be in their interest to be positive and accept the offer without any preconditions or any third-party mediator as India is unlikely to accept any thirdparty consultancy. This negotiation is going to be very hard and difficult as both sides will try to get the best to suit their own interest. After 50 years of the IWT being promulgated a lot of water has flown down the Indus River and its tributaries and at the present juncture the relations have nosedived between the two countries with terrorism raising its ugly head in the last 25/30 years.

As The Ukraine War Drags On, China Is Growing Uneasy

By Srikanth Kondapalli

Author is Dean of School of International Studies and Professor in Chinese studies at Jawaharlal Nehru University.

Beijing has halted fresh Belt and Road Initiative investments in Russia and tried to mediate with a few visits and phone calls to several western leaders. However, nobody gave importance to the Chinese offer for negotiations.

As the Russian invasion of Ukraine enters its second year and the path to ending the war remains uncertain, China is increasingly feeling constrained by and conflicted with its national interests and strategic goals, the exaggerated limitless partnership with Russia, and its overdependence on the North Atlantic Treaty Organization (Nato) and G-7 countries for its economic and technological rise. The war has shattered Beijing's assiduously built narrative of peace and stability that benefited it with the free flow of goods, services and investments, making it the world's second-largest economy. It was a major beneficiary not only of globalisation, but also trade with western countries. The conflict has dented its ambitions of emerging as a dominant country by shifting the global focus to Russia.

In the initial stages of the conflict, China blamed Nato's military expansion as justification for Russian actions. It opposed western sanctions on Russia as these were contributing to the rise in prices of food, fuel and fertilisers. Since then, its energy imports from Russia have boomed, increasing from \$35 billion in 2021 to \$60 billion in 2022, with some local currency transactions.

Then politburo standing committee member Li Zhanshu's visit to Russia on September 7 last year underlined that Beijing planned to back Moscow's need to secure its core interests, including in Ukraine. However, as international criticism mounted and the threat of global isolation solidified, China appears to have started reassessing its priorities and postures. In recent weeks, Beijing has professed neutrality, saying that every nation's sovereignty and territorial integrity should be respected, advocated peaceful resolution through dialogue, negotiations and restraint, and talked about curbing the spill over effects of the war on food and energy prices.

Beijing has halted fresh Belt and Road Initiative investments in Russia and tried to mediate with a few visits and phone calls to the leaders of France, Germany, Hungary, Finland and others. However, nobody gave importance to the Chinese offer for negotiations as it is not an honest broker and, in fact, a marginal player in the main war theatre.

China is also constrained by the United States (US)'s criticism and sanctions threats. President Joe Biden told his counterpart Xi Jinping that China should not provide material support to a desperate Russia. However, it was reported that China exported Su-35 fighter aircraft components, high-resolution satellite images from a Changsha-based firm, and chips to Russia last year. This resulted in US sanctions on Chinese firms. This is a worry for China because it is dependent on Nato and G-7 for fuelling its rise in the international system, with trade worth nearly \$3 trillion. In contrast, its trade with Russia is only about \$120 billion.

The most crucial opportunity for China in the Russian occupation of parts of Ukraine was the possibility of reunifying with Taiwan. Even though Ukraine and Taiwan have different continental and maritime contexts, China, at one time, was tempted to invade Taiwan. However, Beijing dragged its feet as a Russian victory proved elusive.

Moscow has been a long-standing military superpower. But Chinese commentators were surprised by how Russia could not successfully clinch the matter in Ukraine. On the other hand, they noted the heavy casualties and destruction on the Russian part as well and detested the possibility of getting bogged down in the Taiwan Straits with millions of casualties.

Chinese analysts' opinions range from outright criticism of the Russian invasion of Ukraine, such as by Gong Fangxin, a retired People's Liberation Army officer and faculty at National Defence University, the conflict becoming collateral damage to China, in the words of Fu Cong, ambassador to the European Union or a critique of the "wolf warrior" stance of the US and the NATO expansion.

How this conflict could come to an end is anybody's guess. But the position of Chinese analysts can be summarised in three scenarios. They find both opportunities and challenges for Beijing in all three. First, as the death toll and all-round destruction mount for both sides, calls for negotiations to end the war have become louder. This scenario offers Beijing an opportunity to bounce back and grab a seat at the table, although it has less credibility with the Ukrainians. China's leaders have not met any Ukrainian leaders so far in deference to the Russian side.

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Nation is Indebted to: Dr Mahendra Kumar Mishra



Eminent linguist and folklorist Mahendra Kumar Mishra from Odisha has been nominated for UNESCO's International Mother Language Award 2023 for his lifetime service for promotion of mother language in India.Dr Mahendra Kumar Mishra is a well-known folklorist of India. He has conducted intensive field work on tribal culture of Odisha and Chhattisgarh.

His major work on Odisha folklore is Visioning Folklore (2002) Saora Tales and Songs (2005) Oral epics of Kalahandi (2007) Oral poetry of Kalahandi (2008). He is the author of five books on Odia and tribal folklore. He has also compiled Folktales of Odisha (National Book Trust, New Delhi).

In a communiqué to Mishra, Director general of International Mother Tongue Institute (IMLI), Dhaka, Prof Hakim Arif, has invited him to the awards ceremony.

February 21 is celebrated as the International Mother Language Day, as declared by the United Nations in the year 2000.

Sri Mahendra K Mishra has been honoured with this award by Bangladesh Prime Minister Sheikh Hasina, this year on February 21 in Dhaka.

Language Movement Day, also called Language Martyrs' Day, is observed in Bangladesh on February 21 for commemorating the language martyrs of East Pakistan who fought imposition of Urdu and established Bangla as their official language nearly two decades before Bangladesh became an independent country.

Mishra was the Odisha state coordinator for Multilingual Education (1996- 2010) and was a pioneer in adopting mother tongue based multilingual education in primary schools.

He was also instrumental in promoting endangered languages in school education and his trial in using folklore in school curriculum has been widely applied in the elementary schools of Odisha and Chhattisgarh.

The linguist had received the Odisha Sahitya Akademi Award in 1999. He was also the recipient of Veer Shankar Shah Raghunath Award, instituted by the government of Madhya Pradesh, in 2009.

He was also awarded by the Kalevala Institute, Turku, Finland for translation of Finnish epic-Kalevala- into Odia in 2001.

Mishra is a member of the Language Development Board of Central Sahitya Akademi.

It is a pride for all that in today's world Mr Mishra has worked with passion for acceptance and use of mother tongue for teaching of children. He has contributed immensely by his research and work for tribal languages in India.

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