

PRISON ADMINISTRATION IN INDIA WITH THE HELP OF ARTIFICIAL INTELLIGENCE

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ABSTRACT

Prison administration is an important part of the Administration of criminal justice. Prison is a place where custody of any prisoners is with the state and the custody of under trial prisoners assigned to the state by the court as judicial custody. State government and judiciary both are the guardian of the prisoners and responsible for prison condition. There are no interference of civil society and other private individual in prison administration. The condition of prison show the real position of the government functioning. There are so many problems in the prison like overcrowding, corruption, bribing, torture of prisoners, untrained prison staff, and violence in prison etc. The prison condition in India is like a hell on the earth. It is fact that the judiciary has played a very important role in for the reformation of the prison but still condition of the prison is not good. Now the age is technological advancement. The technology of artificial intelligence has power to effect revolutionary change in the society. The Artificial Intelligence have been proved its ability of speech recognition, image recognition, emotions recognition, decision management, deep learning, machine learning, robotic process automation, natural language processing in the field of e-commerce, Healthcare, agriculture, game and entertainments, education, banking, marketing, navigation and travel, drone, security and surveillance, robot, web shopping program, traffic control system etc.. Chatbot, self-driving car, block chain, robot, drone and robo-cops are also some other examples of the AI. The technology of artificial intelligence can be helpful in prediction of recidivism of prisoners, surveillance and security of prisoners, psychology treatment of the prisoners and other prison administration.

Keywords: Administration of criminal justice, Prison Administration, Artificial Intelligence, prison reform, crime

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Introduction

Prevention of crime from society is a fundamental duty of the government. It can be possible with the help of an efficient administration of criminal justice. There are three major component of administration of criminal justice police, court and corrections. It is the duty of the state to create crime free atmosphere in the society by the enforcement of moral and legal obligation upon the subject of the state. There should be a strong snoop system of the government for information about the criminals and other protective measures should be applied by the state. These protective measure should be apply before the committing the crime by the criminals. Once the crime has been committed then only two things remain to be done one is contrition (pashchatap) for the state and society and the atonement (parayaschita) for the offender. After happening the crime in the society the state and society should explore the reason for the happening of crime and accept the responsibility for it and should develop the mechanism so that something like this doesn't happen in the society, by sending the criminal to jail for his atonement. Such type of atmosphere should be maintained in the jail so that the criminals realize their abusive or criminal mentality and be prepared for atonement because the prison is the best place of the atonement for the criminals.

Meaning and Definition of prison

“Prison has been defined as any jail or place used permanently or temporarily under general or special orders of the State Government for the detention of prisoners and includes all appurtenant land and buildings”.² Imprisonment is one of the punishments prescribed under Indian Penal Code, 1860.³ It is one of the most common forms of penalties in modern times. Law provides for imprisonment in majority of cases and reserves death penalty for some gravest of crimes. In India, law is well settled that

² The Prisons Act, 1894, (9 of 1894), s3 (1)

³ Indian Penal Code, 1860, s 53.

capital punishment is to be utilized only in rarest of rare cases.⁴ Hence, use of prison system is inevitable and all pervasive in criminal justice system.

Historical background

Prison system in India is not a new one. It was in existence since time immemorial. In *dwaper age* Lord Shri Krishna was born in Prison (*Kans ka Karavas*).⁵ Although prison administration is found in Maurya dynasty, Gupta dynasty, Saltant period, and Mughal period, Contemporary prison system in India has its legacy of British rule. The modern prison system in India originated by the lord TB Macaulay, TB Macaulay in his Minutes of 1835 described that "*Imprisonment is the punishment to which we must chiefly trust*"⁶

Theories of Punishment

There are several theories of punishment like deterrent, preventive, reformatory, retributive and compensation. The object of deterrent theory is to prevent crime by the infliction of an exemplary punishment on the offender and to put an end on the crime by causing fear of the punishment in the minds of criminals. The object of preventive theory is the preventing of crime by inflicting the death penalty on the criminal. Retributive theory regards it as perfectly legitimate that evil should be returned for evil or an eye for eye and tooth for a tooth. While the purpose of reformatory theory is reformation, rehabilitation and re-socialization of the offenders, this theory believes that "*Crime is the outcome of a diseased mind and Jail must have an Environment of Hospital*".⁷

Objectives of the prison

The main purpose of the prisons is the punishment, deterrence, rehabilitation and reformation of the criminals. Prison performs the essential function of keeping criminals segregated from society. The modern philosophy is that prisons must change the heart and mind of criminals and serve as correctional homes rather than place of torture. In present times, main goal of correctional system is expected to be the rehabilitative

⁴Bacchan Singh v. State of Panjab, AIR 1980 SC 898

⁵ Sri Mad Bhagwat Mahapuram, Geeta Press Gorakhpur, Volume II, Part X, Texts 46-48.

⁶ N.K. Chakrabarti (ed), *Administration of Criminal Justice Institutional corrections*, 7 (Deep & Deep Publication Pvt. Ltd. F-159 Rajori Garden, New Delhi-110027)

⁷M.K.Gandhi, *The Voice of Truth: Part-I*, (Prabhat Prakashan) & Harijan, 2-11-47, pp.395-96.

treatment of offender, and thus, the reformation and re-socialization of the offender⁸. The penal system of India believes in reformation of prisoners, where they will never commit the crime in future and understand their responsibilities, towards their families and society and make them a responsible citizen of the country. The other aspect which is related to this is the under trial prisoners who are the prisoners which are put behind the bars because the trial is pending against them.

Problems in Prison of India

Prison system in India is suffering from multiple problems like overcrowding,⁹ increasing ratio of under trial prisoners¹⁰, inhuman behavior and torture with prisoners¹¹ bribing,¹² corruption, extortion, mal-administration, inadequacy of prison staff,¹³ untrained prison staffs, no classification among the prisoners on the basis of criminal history, discrimination amongst the prisoners on the basis of money and political approach, cut off the prisoners with the outside world, inadequate legal aid facilities, delay in trial, more discretion to judges in sentencing, political influence in granting parole,¹⁴ inadequate psychological treatment to the prisoners, murder,¹⁵ unnatural

⁸ M.C Valson, *Prison as a Home for Correction*, 280, (Cochin University Law Review, 1981) Available at : <http://dspace.cusat.ac.in/jspui/bitstream/123456789/11108/1/Prison%20as%20a%20Home%20for%20Correction.PDF> (visited on 03/05/2020)

⁹ As per prison statics India 2018, release by national crime record bureau (NCRB), the total population of all 1339 prison of India was 4,66,084 against the authorized capacity of 3,96,223 prisoners (Figures as on 31 December, 2018)

¹⁰ As per prison statics India 2018, release by national crime record bureau (NCRB), population of under trial prisoners were 3,23,537 among the total 4,66,084 prisoners while 1,39,488 were convicts. (Figures as on 31 December, 2018)

¹¹ Writ petition (Civil) No. 406 of 2013 Re Inhuman condition in 1382 prison with I.A. No.68248 of 2017

¹²In *Suneel Battra v. Delhi Administration Justice AIR 1978 SC 1675* Krishna Iyer wrote that this suggested: "that bribery, at the point of barbarity, is a flourishing trade within the house of punishment itself."

¹³ As per prison statics India 2018, release by national crime record bureau (NCRB), sectioned prison staff was 85840 while 60024 was actual staff and 25816 posts were vacant.

¹⁴ Paroles, furloughs: How Sanjay Dutt walked in and out of jail in 5 years, *Hindustan Times*, Feb. 25, 2016, available at <https://www.hindustantimes.com/india/paroles-furloughs-how-sanjay-dutt-walked-in-and-out-of-jail-in-5-yrs/story-P7A6RR38hJuMfHO3YO9o2N.html> (visited on 10/04/2020),

¹⁵ As per prison statics India 2018, release by national crime record bureau (NCRB), no. of prisoner's murder by inmates were 10 during the years of 2018, (Figures as on 31 December, 2018)

death,¹⁶ suicide by prisoners,¹⁷ jail break,¹⁸ escape by prisoners from jail,¹⁹ violence among the prisoners,²⁰ violence between prisoners and prison staff,²¹ problems of women prisoners etc.

Prison reform in India:

Prison reform in India has been made by the government of India from the post-Independence era. British government made many reform in prison system of India before independence. After the independence state government as well as judiciary has made so many significant reforms in the prison system of the India in the form of prison legislation, prison manuals and judicial pronouncement.

Prison legislation in India:

There are so many prison legislations in India which are contributing in the reformation of prison system in India like The Prison Act, 1894, The Prisoners Act, 1900, the transfer of prisoners Act, 1950, The Probation of Offenders Act, 1958, The Repatriation of Prisoners Act, 2003. Other legislation are also contributing in prison reform like Legal Service Authority Act, 1987, Protection of Human Rights Act, 1993, Criminal Procedure code etc.

Prison reform committees

Government of India has constituted so many prison reform committees for prison reform. The first jail reform committee was setup in 1836 with Lord McCauley as the chair of committee. After that in 1864, the Second Commission of Inquiry for Jail Management and Discipline was setup. The Indian Jail Reforms Committee 1919-20

¹⁶ As per prison statics India 2018, release by national crime record bureau (NCRB), death of 1,845 prisoners in prison and 149 death was un-natural death during the year of 2018, (Figures as on 31 December, 2018)

¹⁷ As per prison statics India 2018, release by national crime record bureau (NCRB), it was 129 suicide by the prisoners in the prison during the year of 2018, (Figures as on 31 December, 2018)

¹⁸ As per prison statics India 2018, release by national crime record bureau (NCRB), there were 30 incidents of jail break in India during the year of 2018, According to prison statics India 2018, release by national crime record bureau (NCRB), (Figures as on 31 December, 2018)

¹⁹ As per prison statics India 2018, release by national crime record bureau (NCRB), 673 prisoners were escape from the jail during the year of 2018, (Figures as on 31 December, 2018)

²⁰ As per prison statics India 2018, release by national crime record bureau (NCRB), 163 inmate were injured and 1 inmate killed in jail due to clashes/ clashes in jail, (Figures as on 31 December, 2018)

²¹ As per prison statics India 2018, release by national crime record bureau (NCRB), 163 inmate were injured and 1 inmate killed in jail due to clashes/ clashes in jail. (Figures as on 31 December, 2018)

which was headed by Sir Alexander Cardio. After independence, Jail Reform Committee, 1946, All India Jails Manual Committee 1957-59, All India Committee on Jail Reforms 1980-83 was constituted by the government of India under the chairmanship of Justice Anand Narain Mulla. In 1987, the Government of India appointed the Justice Krishna Iyer Committee on jail reform. On the basis of recommendations of all those committees government of India has made reformative changes in the prison system of India.

Model Prison Manual

Prison manual is a composition of rules and regulations regarding prison administration. Every jail governed by it. Prison reform is a state subject so every state has its prison manual. All India committee on prison reform (1980-83) had recognized the necessity of uniformity in law of prison in India. The Supreme Court of India in *Ramamurthy v. State of Karnataka*²² also recognized the need of consolidated laws regarding prison administration in India. These recommendations and directions keeping in mind a Model prison manual was prepared in 2003 to prison reform in India. Now Model Prison Manual 2016 has been prepared by the Ministry of home affairs Government of India New Delhi.

Role of judiciary in prison reform

In India, Supreme Courts and High Courts have been entrusted by the Constitution with duty to protect fundamental rights of the citizens. In *Suneel Battra v. Delhi Administration*²³ the petitioner was convicted under death sentence, wrote a letter to one of the judges of Supreme Court regarding the inhuman condition of prison. The letter was converted into a habeas corpus proceeding. Court appointed amicus curiae. The amicus curiae after visiting the jail reported that the prisoner sustained serious anal injury because a rod was driven into that aperture to inflict inhuman torture. The victim was tortured because of “an unfulfilled demand for money.” In his opinion for the Supreme Court, Justice Krishna Iyer suggested that: “that bribery, at the point of barbarity, is a flourishing trade within the house of punishment itself.” Again in *Re Inhuman Condition*

²² AIR 1997 SC 1739

²³ AIR 1978 SC 1675

*in 1382prisons*²⁴former Chief Justice of India R.C. Lahoti wrote a letter to the Supreme Court bringing to notice a story in newspaper named Dainik Bhaskar that highlighted the inhuman conditions existing in 1382 prisons of India. The Supreme Court of India took cognizance of this letter and passed an order directing to protect human right of prisoners to be faithfully implementation by the union of India and state government. In *Shri Dilip K. Basu vs State of West Bengal &Ors* on 24 july2015 the Supreme Court held that the State Governments should take steps to install CCTV cameras in all the prisons in their respective States, within a period of one year from date of judgement but not later than two years. It is a good step by Supreme Court of India to make prison technologically advanced. The Supreme Court has declared in several cases that a person in prison does not deprive of all fundamental rights enshrined in Indian constitution.²⁵ Indian judiciary has recognize so many fundamental rights to the prisoners like Right to fair trail,²⁶ Right to speedy trail,²⁷, Right to legal aid,²⁸ Right against the cruel and the unusual punishment,²⁹ Right of inmates of protective homes,³⁰ Right to meet with friends, relatives and consult with lawyer,³¹ Right against solitary confinement and handcuffing.³²It is fact that the judiciary has played a very significant role in reforming the prisons but condition of the prison is not still satisfactory.

Rights of prisoners under the Prisoners Act 1894

Indian prison system governed by the prison Act 1894 this act provides rights and facilities to the prisoners like Accommodation and sanitary conditions,³³ Provision for the shelter and safe custody of the excess number of prisoners who cannot be safely kept in any prison,³⁴ Provisions relating to the medical examination of the prisoners by a well-

²⁴ AIR 2016 SC 1008

²⁵ D. B. M. Patnaik v. State of A. P., AIR 1974 (SC 2092)

²⁶ *Zahira Habibullah Shakh (5) v. State of Gujarat*, (2006) 3 SCC374, 396

²⁷ *Hussainara Khatoon v. home secretary, Bihar*, (1980) 1 SCC81

²⁸ *M.H. Hoskot v. state of Maharashtra*, (1978) 3 SCC 554

²⁹ *Jagmohan Singh v. State of U.P.*, AIR 1973 SC 947

³⁰ *Upendra Baxi v. State of U.P.*, (1983) 2 SCC 308

³¹ *Suneel Battra v. Delhi Administration* A.I.R 1980 S.C 1579

³² *Prem Shankar Shukla v. Delhi Administration*, AIR 1980 SC 1535

³³ The Prisons Act, 1894 (9 of 1894), s 4

³⁴ The Prisons Act, 1894, (9 of 1894), s7

qualified Medical Officer,³⁵ Provisions relating for the separation of prisoners like containing the female and male prisoners, civil and criminal prisoners and convicted and undertrial prisoners,³⁶ Provisions relating to the treatment of undertrials, the civil prisoners, parole and temporary release of prisoners.³⁷

International conventions and regulation on human rights of prisoner

There are following conventions and regulation and guidelines to protect the human rights of prisoners at International level:

- Standard Minimum Rules for the Treatment of Prisoners (OHCHR, 1955)
- Principles of Medical Ethics relevant to the Role of Health Personnel, particularly Physicians, in the protection of prisoners and Detainees against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (UN Medical Ethics, 1982)
- Convention against Torture (UNCAT, 1984)
- Body of Principles for the Protection of All Persons under Any Form of detention or Imprisonment (Principles of Detention, 1988)
- Basic Principles for the Treatment of Prisoner (UNPTP, 1990)
- United Nations Standard Minimum Rules for the Non-Custodial Measures (The Tokyo rules, 1990)
- Declaration on the Protection of all Person from Enforced Disappearance. General Assembly Resolution 47/133(UNDPED, 1992)
- United Nation Standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules) Resolution adopted by the General Assembly on 17 December 2015.

Is present prison administration in India successful in its object?

If we look in the present scenario the prisons are the place where there no proper facilities are available to achieve the desired objectives of reformation, rehabilitation, re-integration in society of the prisoners. The prisons are instead contributing to offenders

³⁵ The Prisons Act, 1894, (9 of 1894), s 24 (2)

³⁶ The Prisons Act, 1894, (9 of 1894), s 27

³⁷ The Prisons Act, 1894, (9 of 1894), ss 31and 35

becoming habitual offenders³⁸. *The institution of prison, however, suffers from several shortcomings and falls short of its ideal of reformation and treatment of prisoners. There are quite often complaints of violation of human rights of prisoners by prison authorities. Quite often, we hear news of criminal activities inside the premises of jails.* There are so many reason which create hurdle in prison reformation like corrupt prison staff, pendency of cases in the courts, no accessibility of civil society in the jail, mindset of the prison authority as British rule, neutrality of the political party, state government, central government and cultured society about the prison reformation. Therefore the progress in the agenda of prison reform is very slow. Due to these reasons the conditions of Indian jails are very poor and the prisons are totally fail to fulfill its main objectives of the reformation, rehabilitation and resocialization of the prisoners. *Recently, in Re-Inhuman Conditions in 1382 Prisons* ³⁹ *dealings with inhuman conditions in prisons and in particular with the problems of unnatural deaths and suicides. In the words of the Court;*

“It is time for the State to go beyond projections through circulars and advisories and actually come to grips with reality as it exists in a very large number of prisons. What is practiced in our prisons is the theory of retribution and deterrence and the ground situation emphasizes this, while our criminal justice system believes in reformation and rehabilitation and that is why handcuffing and solitary confinement are prohibited. It is this ‘rejection’ of the philosophy of our criminal justice system that leads to violence in prisons and eventually unnatural deaths.”⁴⁰

On the basis of above explanation we observe that lots of efforts has been made to reform prison condition not only on state level but on national and International Level also. Many International conventions and regulations have been made on prisoners’ human right. So many researches have been done on the prisoner’s rights and prison conditions in India. There are several legislations, prison manual, and committees report on the

³⁸ A habitual offender is a status usually given to a repeat felony offender. If a person has committed two or three previous felonies or numerous misdemeanors, they may be subject to being labelled a habitual offender.

³⁹ (2017) 10 SCC 658

⁴⁰ Id., at para. 49

prison reform and to protect prisoner's rights. No doubt Indian judiciary is playing very significant role in prison reform in India. Despite the conditions of prison in India is still far from satisfactory. Now it is time to seek new alternate to reform prison administration and these alternate should differ from traditional alternate. This is the age of technology therefore we should take the shelter of the technology to reform prison administration in India.

Artificial Intelligence and Prison reform

We are living in the age of technological advancement. The Technology of Artificial Intelligence (AI) has a special place in all technological advancement made today. Artificial Intelligence affects business, employment, crime, justice, war, society and sense of human being. It has been observed that the development of artificial Intelligence has the power to transform our future more than any other technology⁴¹. Artificial Intelligence and machine learning has potential to effect revolutionary change in the world.

Meaning and definition of Artificial Intelligence

John McCarthy coined the term Artificial Intelligence in 1956 as branch of computer Science concerned with making computers behave like human. He defined the term Artificial intelligence as: "the science and engineering of making intelligent machine, especially intelligent computer programs"⁴². Microsoft defines AI as: "a set of technologies that enable computers to perceive, learn, reasons and assist in decision-making to solve problems in ways that are similar to what people do"⁴³. Sunder Pichai define as "AI is computer programming that learn and adapts"⁴⁴. The Artificial Intelligence consists with computational model of human behavior or computer programs that behave like human and computational models of human thought process or

⁴¹ Max Tegmark, *LIFE 3.0, Being Human in the age of Artificial Intelligence*, (Publisher: Knopf (August 29, 2017)

⁴²Recherd Kemp, *Legal aspect of Artificial Intelligence*" (Kemp IT Law, v2.0 September 2018)

⁴³ Brad Smith and Harry Shum, *The Future Computed: Artificial Intelligence and its role in society*, (Microsoft, January 2018), p.31 available at <https://news.microsoft.com/uploads/2018/01/The-Future-Computed.pdf> (visited at 29/04/2020)

⁴⁴ Sunder Pichai's CEO blog post, *AI at Google: Our Principles* Published Jun 7, 2018, available at <https://www.blog.google/technology/ai/ai-principles/> (visited on 29/04/2020)

computer programs that operate the way humans do, Computational system that behave intelligently and rationally⁴⁵.

On the basis of above definition we can say that the Artificial Intelligence is an area of computer science that mainly focuses on the making of such kind of intelligence machine that works and gives reaction like human being. When any system adapts itself according to a situation in any environment is called intelligent or programing such machine which can think and act like human intelligence is known as Artificial Intelligence. So Artificial intelligence is a computer programs to solve complex problems same like as human solves the problems.

Machine learning and deep learning

Machine learning provides systems the ability to automatically learn and improve from experience. It can be in the form of supervised, unsupervised and semi supervised machine learning algorithms. Deep learning is an artificial intelligence function that imitates the working of the human brain in processing data and creating patterns for use in decision making. Deep learning is a subset of machine learning in artificial intelligence that has neural network capable of learning unsupervised from data that is unstructured or unlabeled.⁴⁶

The difference between machine and deep learning

Machine learning uses algorithms to parse data, to learn from that data and informed decision based on what it has learned, but still need guidance of human and deep learning structures algorithms in layers to create an artificial intelligence decision on its own without human interaction.⁴⁷

Role of Artificial Intelligence in Prison Administration

Now we will discuss the role of artificial intelligence in prison Administration in following heads:

⁴⁵Andrew Ng, *6.825 Techniques in Artificial Intelligence, What is Artificial Intelligence?* Lecture 1.1. available at <https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-825-techniques-in-artificial-intelligence-sma-5504-fall-2002/lecture-notes/Lecture1Final.pdf>(visited on 04/05/2020)

⁴⁶ Source investopedia.com

⁴⁷ Benny Goedbloed *Artificial intelligence in a prison environment* CDPPS CYPRUS 21 – 22 May 2019, available at <https://rm.coe.int/benny-goedbloed-ai-in-a-prison-environment-cdpps2019/168094ac84> (visit on 04/04/2020)

I. Tracking, and monitoring of Inmates:

Artificial Intelligence is connected sensors, tracking wristband, face recognition, speech recognition and data analytics etc. Now this is the time this type of technology should be used in prison turning as a smart prison. Recently china and Hong Kong announced that their governments were using technology of artificial Intelligence for monitoring inmates in prison every day and involved in monitoring the locations of individual inmates and activities including their heart rates, to identify abnormal behavior such as self-harm or violence against others⁴⁸. According to a report in the *South China Morning Post*, the network will stream the data it collects to "a fast, AI-powered computer that is able to recognize, track, and monitor every inmate around the clock" and, "At the end of each day, generate a comprehensive report, including behavioral analysis, on each prisoner using different AI functions such as facial identification and movement analysis".⁴⁹ "Prison breaks, murder and suicide in prison will be history," and suggested that unethical behavior from prison staff, such as taking bribes, torture of prisoners, might become a thing of the past⁵⁰.

II. Home detention:

Form of home detention can be successful using Artificial Intelligence, machine learning algorithms and lightweight electronic sensors and cameras to monitor convicted offenders on a 24-hour basis. A combination of different technologies and a vast amount of data can predict various situations where the offender is in violation of his home detention, and the system is able to start automated procedures to prevent specific actions from the offender or alert officials and law enforcement agency.⁵¹ Overcrowding is a major problem in the Indian prison system and the home detention can be helpful to reduce overcrowding in Indian prison.

⁴⁸ NilaBala & Lars Trautman, *Will artificial intelligence help improve prisons? China and Hong Kong have started using tech to create "smart" prisons. Should the U.S. consider following their lead?* MAY 3, 2019 (VISITED ON 04/04/2020)

⁴⁹ Ibid

⁵⁰ Ibid

⁵¹ Benny Goedbloed *Artificial intelligence in a prison environment* CDPPS CYPRUS 21 – 22 May 2019, available at <https://rm.coe.int/benny-goedbloed-ai-in-a-prison-environment-cdpps2019/168094ac84> (visit on 04/04/2020)

III. Prediction of inmate's behavior:

We can predict the abnormal and suspicious behavior of each prisoner using AI functions such as face recognition, voice recognition, moment analysis and other machine learning software.⁵² The video analytics software detects not only suspicious behavior but also detects items being recognized as phones, drugs or weapons. AI empowered system capable to analyses footage from surveillance cameras in cells, corridors and along the prison's perimeter, detecting behavior like climbing, loitering, fighting, suicide attempts and vandalism. It can send an alert to the prison authorities.⁵³ If prison authorities find abnormal behavior of any prisoner then they can provide psychological treatment to that prisoner. With help of this technology we can prevent the murder, suicide, and violence with prisoners, violence with prison staff and other criminal activities in the prison. We can make prison better, safer place for inmates and prison staff alike.

IV. Prediction of Recidivism among the prisoners:

Recidivism is one of the most fundamental concepts in criminal justice system. It refers to a prisoner's relapse into criminal behavior, often after receiving sanctions or undergoing intervention for a previous crime. Recidivism is the most common outcome (dependent) variable in all of criminal justice research and the rate determines the success or failure of a correctional system. A research by (Gray, Birks, Allard, Ogilvie, Stewart and Lewis, 2008) states that risk assessment procedures occupy a central role in the Criminal Justice System decision making process and typically involve a prediction about the likelihood that an individual will re-offend. Use of data mining techniques like decision trees and neural networks has proved to have the potential of improving prediction accuracy of risk assessment compared with the traditional statistical techniques

⁵² Nila Bala & Lars Trautman, *Will artificial intelligence help improve prisons?* China and Hong Kong have started using tech to create "smart" prisons. Should the U.S. consider following their lead? MAY 3, 2019 (VISITED ON 04/04/2020)

⁵³ Benny Goedbloed *Artificial intelligence in a prison environment* CDPPS CYPRUS 21 – 22 May 2019, available at <https://rm.coe.int/benny-goedbloed-ai-in-a-prison-environment-cdpps2019/168094ac84> (visit on 04/04/2020)

like the regression model, because with model efficiency prediction results will be of great significance to the public safety and offender rehabilitation⁵⁴.

V. Transparency in granting Bail, parole and sentencing:

AI can play a critical role in achieving fairer and more efficient pretrial and jail systems, in particular through risk assessment software. Unlike other applications of risk assessment AI, such as for sentencing or parole, pretrial applications have relatively simple goals, involve fewer complex legal questions, and have outcomes that are quicker and easier to measure. Thus, it is likely that the pretrial and jail stages will be the testbed for broader deployment of AI technology in the justice system. Of course, AI will not (and should not) supplant human judgment any time soon. A machine cannot yet read a defendant's demeanor or assess the full context of facts the way an experienced judge can. But AI can counter certain human biases and, if deployed in a transparent manner, can help advise judges in ways that will produce better outcomes—such as reduced crime rates and lower jail populations⁵⁵. The power of machine learning like huge data collection, quick data analysis, prediction is more efficient than a human judge. A well informed judge can make a good decision it will be based on the merit and without human bias. This type of risk assessment software will help judge in granting bail, probation and sentencing of the prisoners.⁵⁶ Use of AI empowered risk assessment in granting bail, parole and sentencing not only more transparent and quicker but also fairer and more accurate.

VI. Artificial Intelligence as Confinement Friend:

⁵⁴ JUDY W. GIKARU, *Predicting recidivism among inmates population using Artificial Intelligent (AI) techniques: A case study of Kenya prisons department*, P58/76338/2012, available at <https://pdfs.semanticscholar.org/2235/6f3d057177f0afba2d193a6d97c8b6965c08.pdf> (visited on 04/05/2020)

⁵⁵Rizer, Arthur and Watney, Caleb, *Artificial Intelligence Can Make Our Jail System More Efficient, Equitable And Just*, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3129576 (visited on 03/04/2020)

⁵⁶ Share Tonn, *Can Artificial Intelligence make the bail system fairer and safer?* (Stanford (Engineering), Research & Ideas Artificial Intelligence, Technology & Society March 19, 2019) available at <https://engineering.stanford.edu/magazine/article/can-ai-help-judges-make-bail-system-fairer-and-safer> (visited on 05/04/2020)

Life of prisoners far from their family goes on in an absolutely unchanging routine. There is a mind destroying idleness. The prisoners are tortured by a feeling of uncertainty and indefiniteness. The prisoner suffers silently. He is surrounded by persons but he is solitary and alone in his mental suffering in this constant company. Incarceration leads to the progressive poverty of the body, mind and spirit. Solitary confinement is a type of brutal punishment. The prisoner are the person who is isolated from his or her family and the society no one in the jail to hear his or her pain and what he want to say because media and civil society are prohibited to enter in prison and to meet with prisoners. Solitary confinement is a type of detainment in which a prisoner is detached from any human contact, frequently except for individuals from jail staff, for 22– 24 hours per day, with a sentence going from days to decades. The physiological impact of this discipline influences the brains of the rebuffed people.⁵⁷So, there should be a system of artificial intelligence which will be able in conversation and to understand the pain and feelings of the prisoners and able to talk with the prisoners to avoid the abuse of the isolation of the prisoners. In present scenario only artificial intelligence can help the prisoners like god in solitary confinement. Conversation quality of Artificial intelligence as human being with the human being can be useful for prisoners which are in the solitary confinement. Conversation quality of artificial intelligence can provide information regarding request of such prisoners and identify risk and harm to self and other person. This technology can be useful to provide psychological treatment and legal counsel to the solitary confinement prisoners. This technology can be helpful in social connectivity of individual prisoners and like a true human companionship. If we use Artificial Intelligence robot for conversation with the solitary confinement prisoners then we can save such prisoners, prison staff and other prisoners from potential harm.

Prison will develop as a place of Atonement rather than Punishment

Some people has fear of god they think that god is omnipresent so they avoid to involve in crime. And some people avoid crime due to fear of defaming in the society. But

⁵⁷ Sneha and K. Roja, *A Study on Solitary Confinement as a Punishment*, 863-878, International Journal of Pure and Applied Mathematics, Volume 120 No. 5, 2018,

criminals have neither fear of god and nor society because they do not believe in the existence of god and they know that society have no power to punish him. They have some fear of punishment. But our criminal justice system depend upon evidence viz witness and other proof. Generally people do not want to become a witness against the criminals to avoid unnecessary problem faced by the witness other proofs are usually destroyed by the criminals at the time of committing the crime. Therefore criminals may easily escape from the grip of law. When they live in the jail equipped with the technology of artificial intelligence then they can realize that their every activity of every minute in jail can be tracked and monitored. The prison administration is capable to analyze their conduct, to predict their recidivism, and to predict their other physical as well as mental activities. Then they will realize that they cannot hide their crime and criminal behavior because the artificial intelligence is not god but not less than God. Then they will realize his criminal mentality and will try to reform their conduct.

Conclusion

Now this is the time to use technology of Artificial Intelligence in prison administration. The working of Artificial intelligence is more justifiable, fair, transparent, accountable, efficient, accurate and huge collection of data and quick data analysis than a human being as well as no fear to misuse of power through biasness, sexual exploitation, corruption, bribing, coercion, threat, undue influence and other violence against prisoners. The use of Artificial Intelligence in the prison administration will be helpful in the implementation of rule of law as well as upholding the prisoner's right and prison conditions in India. The Artificial Intelligence have been proved its ability of speech recognition, image recognition, emotions recognition, decision management, deep learning, machine learning, robotic process automation, natural language processing in the field of e-commerce, healthcare, agriculture, game and entertainments, education, banking, marketing, navigation and travel, drone, security and surveillance, web shopping program, traffic control system etc. Applications of artificial intelligence are being used in phones, cars, classrooms, home and work places. When everything else smart then why should not be smart prison?The applications of artificial intelligence can be helpful

in monitoring and tracking of prisoners, prediction of prisoner's behavior and recidivism of prisoners, home detention, as a confinement companion, granting bail, parole and sentencing. Applications of artificial intelligence may be helpful to remove most of the problems of prison. Government of India is working on smart city project but it should rather work on smart prison prior to the smart city. No one can judge a state without observing the treatments of state with its prisoners. State as well as judiciary both are the guardians of the prisoners and responsible for prison conditions. It is also noted that there is a minimum interference of civil society in prison administration. The condition of prison shows the reality of the state functioning. A state can set an example of its functioning with the efficient prison administration as 'Smart Prison'. Government can observe the experience of the functioning of a 'Smart Prison'. If it gets success in prison administration then use of Artificial Intelligence can successfully be applied on whole administration of the criminal justice and after that on other departments of the Government to remove corruption, mal-administration and arbitrariness of the government officials and uphold rule of law in the country. It is the bounded duty of state to provide criminal justice to the people at any cost. Human life and crime free society is more important than cost.