



Shri Shivaji Education Society, Amravati's
Jijamata Mahavidyalaya, Buldhana

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SELF STUDY REPORT

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Shri Shivaji Education Society, Amravati's
Jijamata Mahavidyalaya, Buldhana

SELF STUDY REPORT

CRITERION - III

Research, Innovations and Extension

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Research Publication and Awards

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**Total number of books and chapters in
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national/ international conference proceedings
(last 5 years)**

Book/Chapter Published During the Year: 2017-2022

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NAAC Reaccredited 'B' (CGPA 2.88) 2013-18

Website: www.jmvbuldhana.ac.in
E-mail : principaljmvbuldhana@gmail.com



Dr. Panjabrao Deshmukh
Founder President

Hon'ble Shri Harshvardhan P. Deshmukh
President
Shri Shivaji Education Society, Amravati



Capt. Dr. Prashant P. Kothe
Principal
Mobile No. 9822461416

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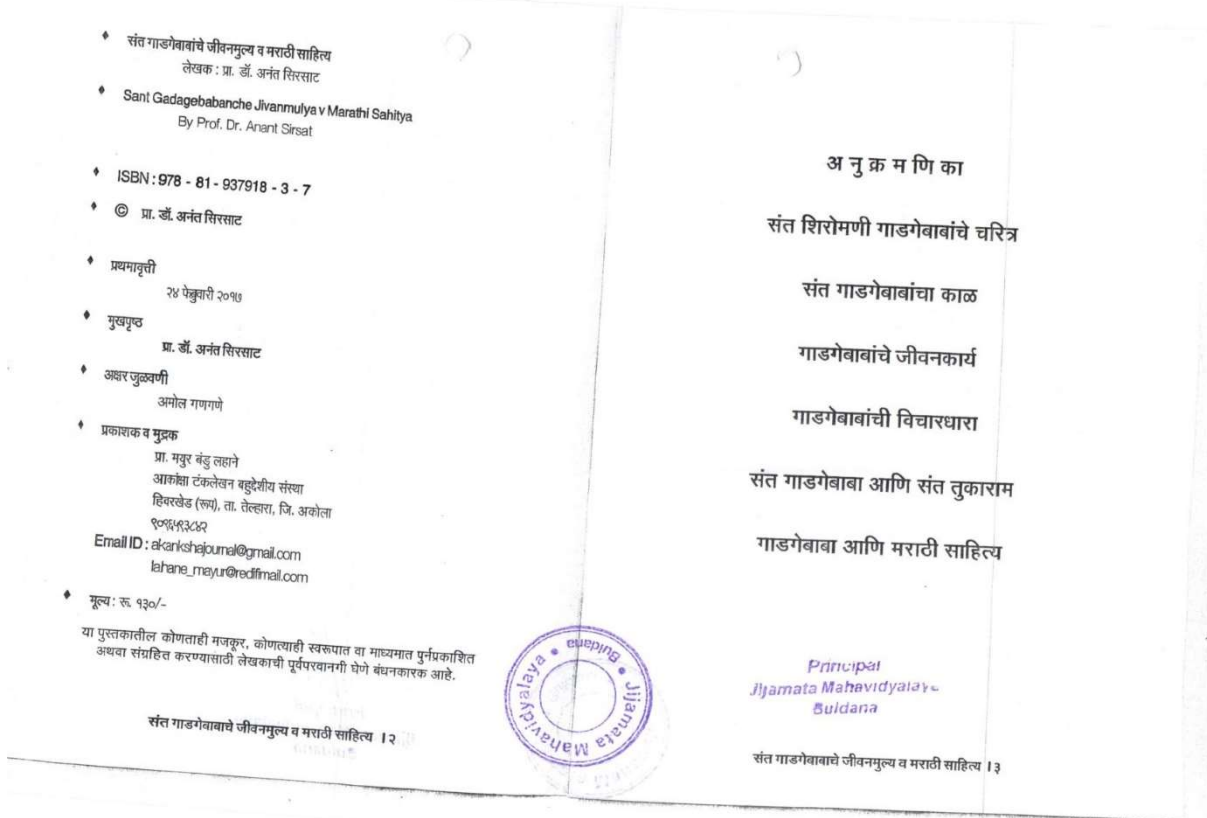
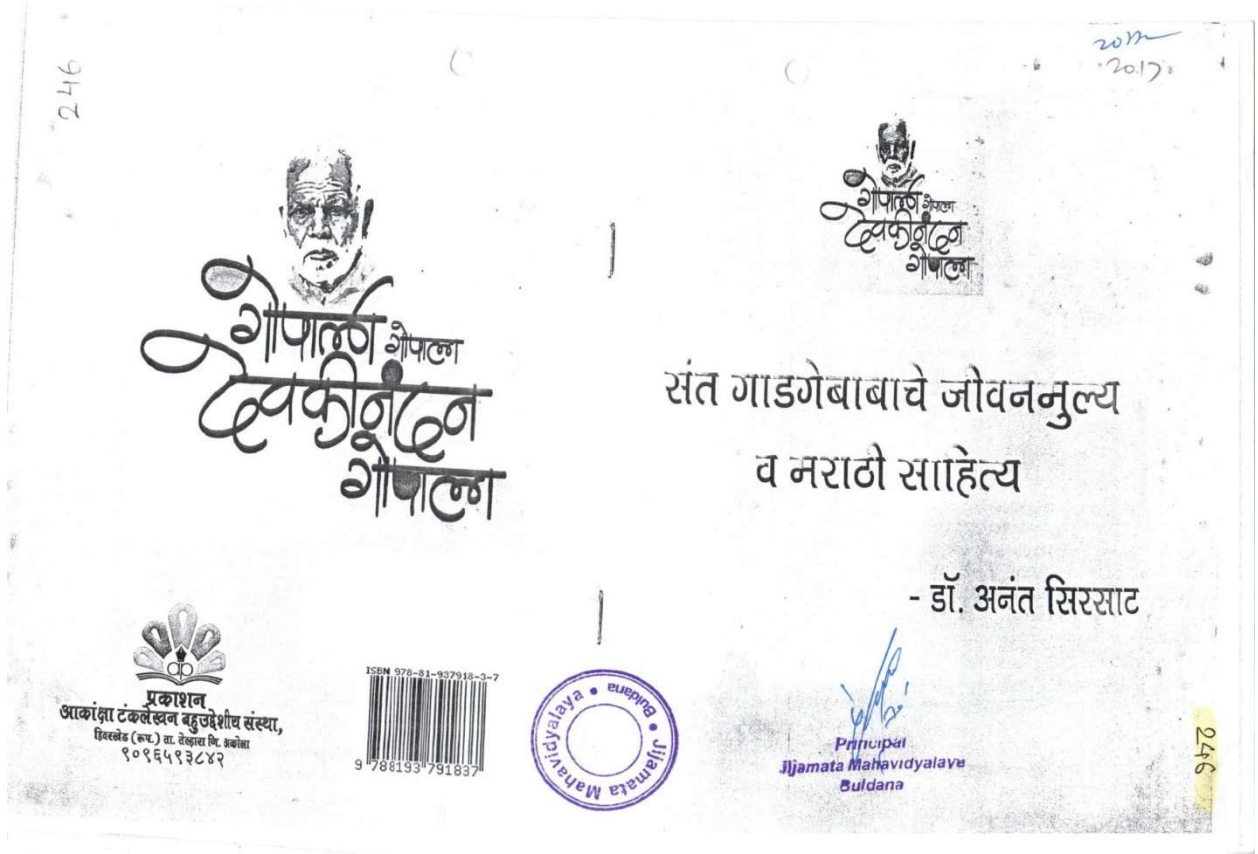
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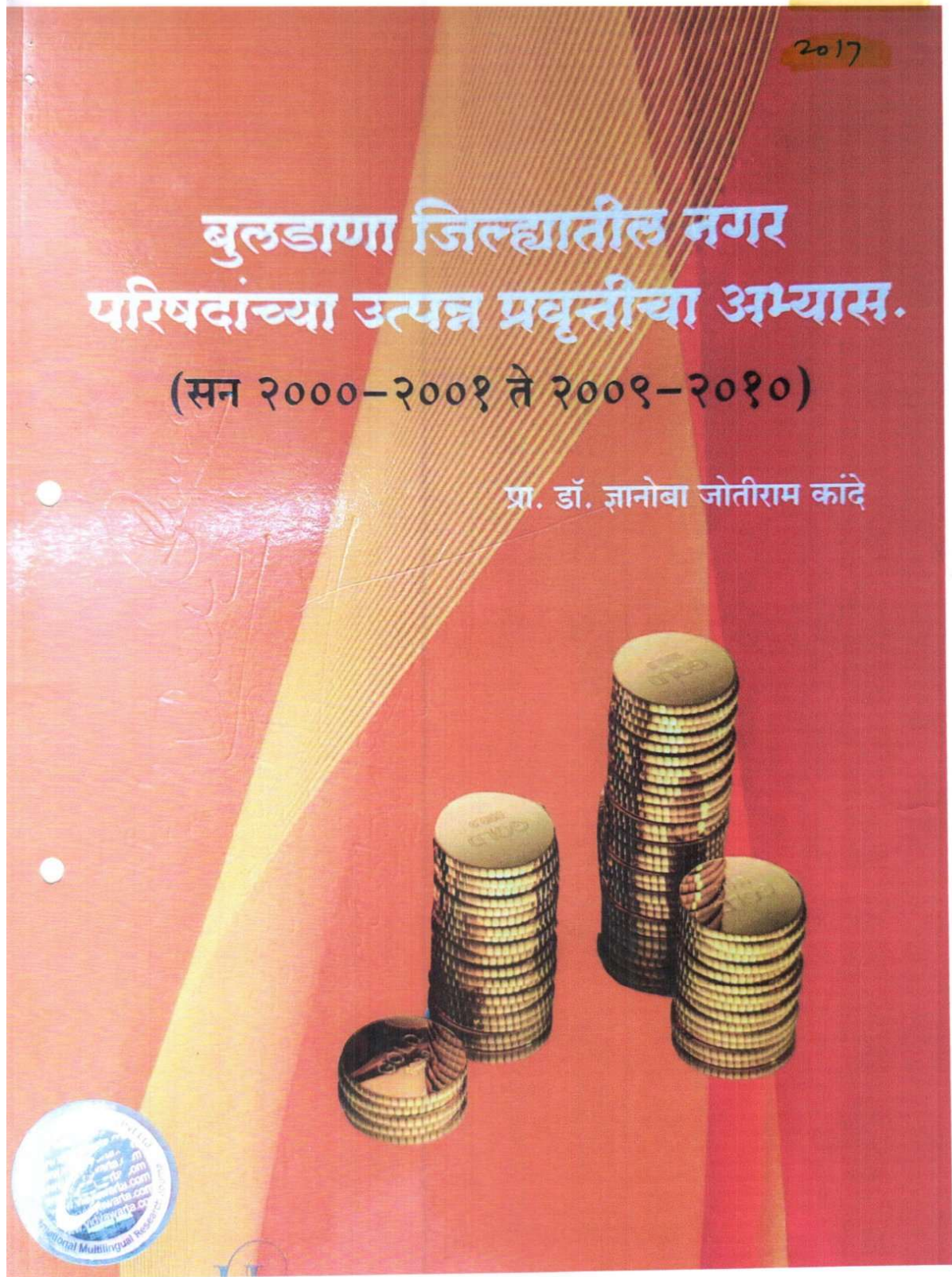
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(IQAC Coordinator)
Coordinator
I.Q.A.C.
Jijamata Mahavidyalaya
Buldhana - 443001




Dr. Prashant P. Kothe
(Principal)
Principal
Jijamata Mahavidyalaya,
Buldhana





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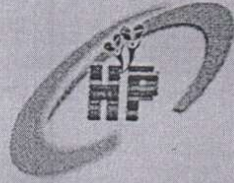
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(सन २०००-०१ ते २००९-१० या काळातील)”

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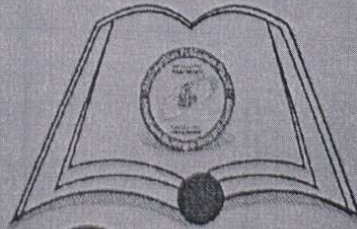
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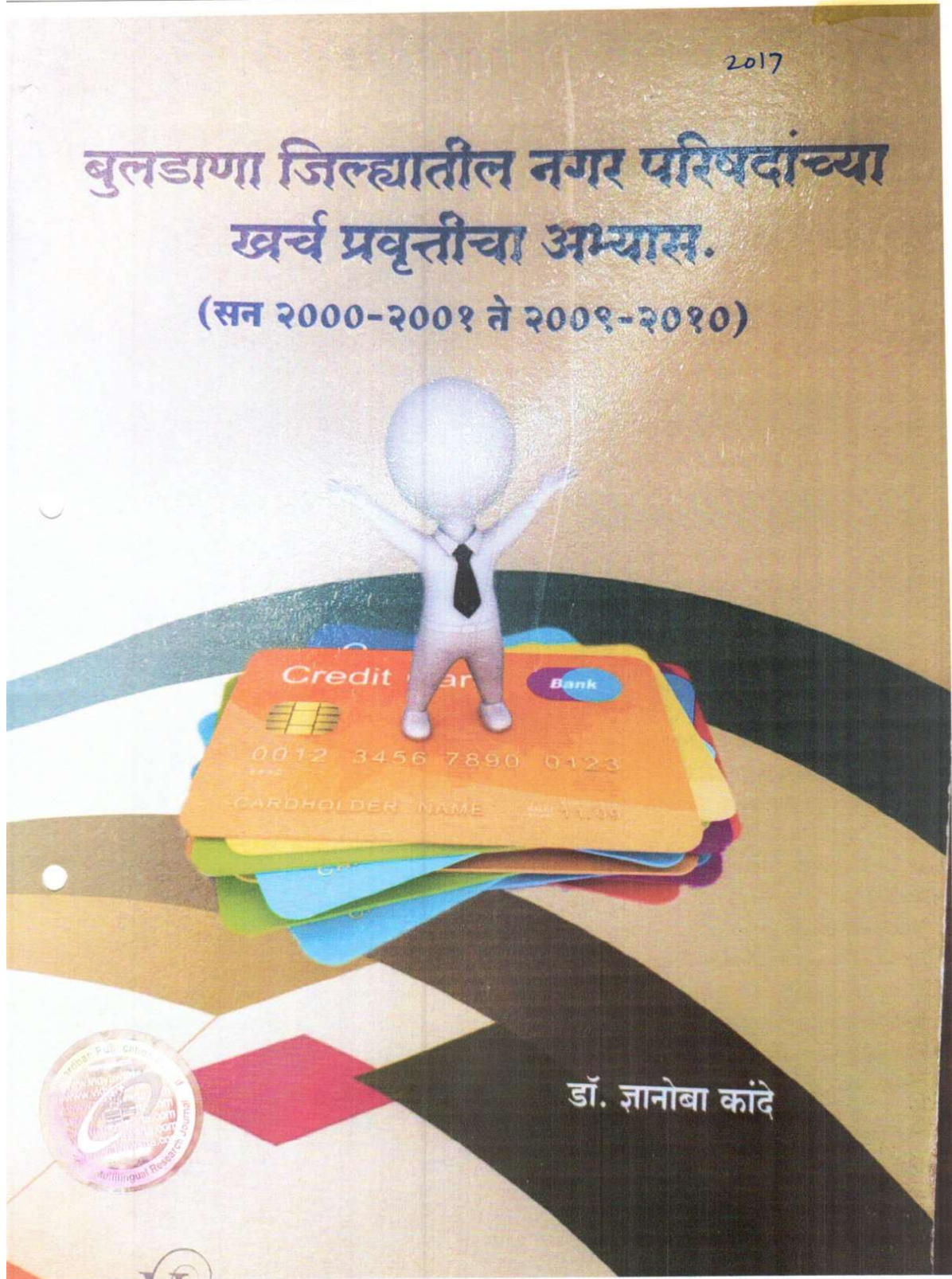
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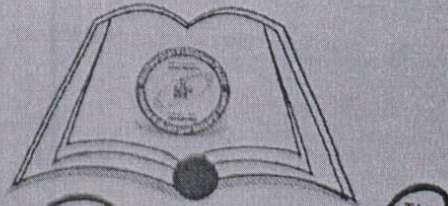
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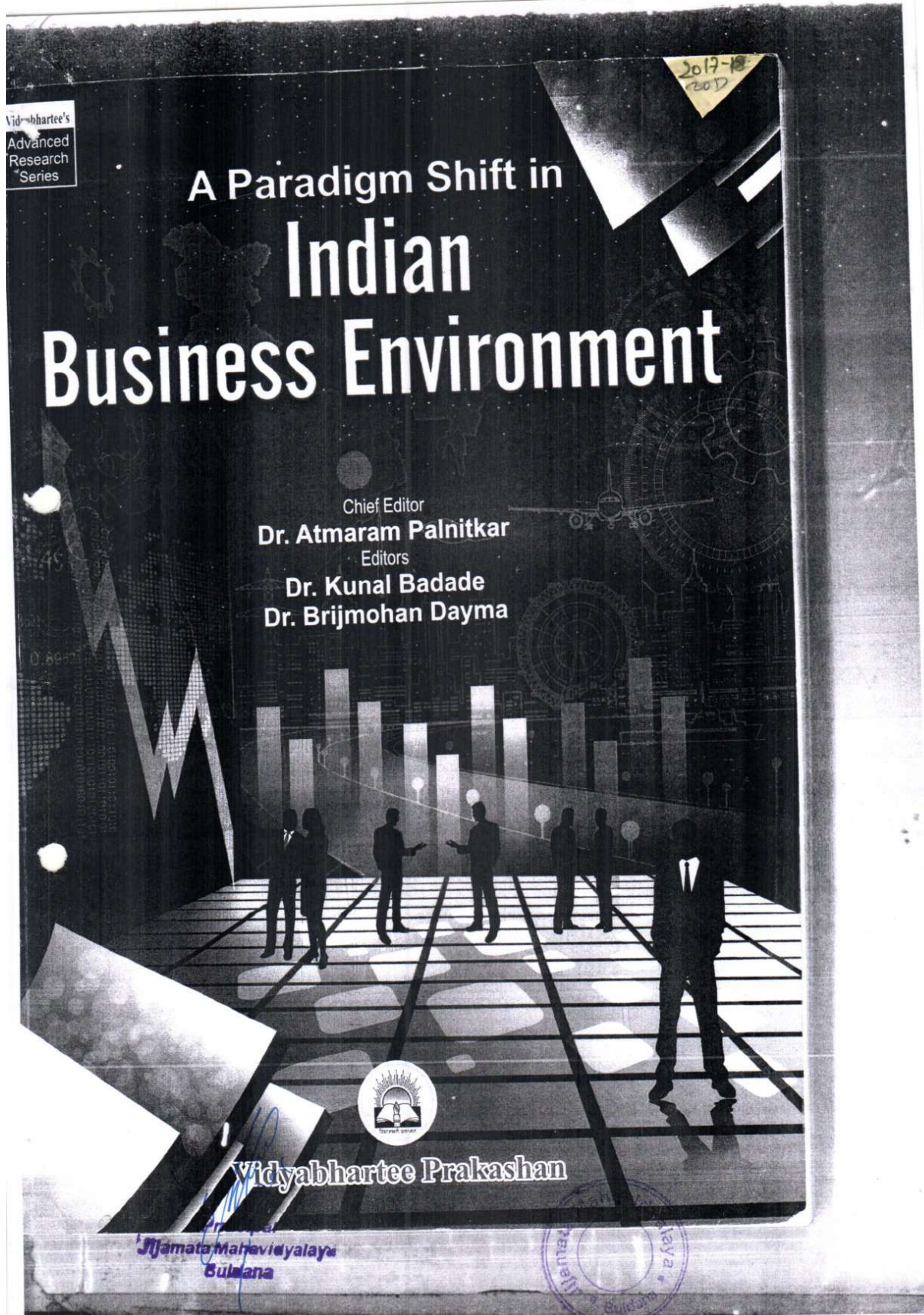
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Impact of E-Commerce in Today's Business World

Prof. Suresh N. Gawai

Associate Professor in Commerce,
Jijamata Mahavidyalaya, Buldana, E-mail id- sureshgawai@rediffmail.com

Introduction:

Virtual companies and the internet are changing traditionally accepted economic practices and making competition even fiercer than it has ever been in the past. As the internet opens up larger markets to take advantage of, more and more flexible competitors are entering your MARKET, all offering better priced value propositions in order to steal MARKET share.

e-Business: changing the landscape of your industry, the threat is real and it is here to stay!

Being an industry leader today is in no way a security blanket to confirm tomorrow's success. In order to maintain competitive advantage and emerge as an industry leader tomorrow, established old school companies must be ready to take on the challenge of some difficult and painful changes.

Not only in leveraging IT to its limit but also to change the way employees and administration think and work to a whole new level.

A new threat to traditional enterprise has arrived and established vertically integrated companies are caught off guard on how to defend successfully and win the war to retain existing market share while expanding to new markets. Why has the world of e-Commerce caused such a problem to established enterprise? The reason being that most brick and mortar companies are still strategizing to win according to old rules that do not apply in today's e-Market. Today's truly successful companies must embrace Information Technology and leverage it in order to achieve great results. Traditional Economic truths are no longer applicable in the virtual world of the Internet and in e-Business, as accepted principles in Physics are not applicable with the inversed world of a black hole.

Following are some major changes to basic traditional economic thinking and business strategy that should be looked at carefully in order to adapt successfully into the future and experience growth.

Vertical Integration is the Way, or May be Not...

Vertical Integration was tried tested and true in the past. The idea being that if you want something done right, do it yourself. Companies as they grew larger decided to include more and more processes to be completed in house. The entire process from R&D all the way down the chain to the retail level was handled in house in order to ensure that it be done exactly according to the requirements set forth at the offset. However this mentality is costing companies large unnecessary overheads making them inefficient and inflexible. In today's marketplace there is an immergence of many smaller highly SPECIALIZED firms who can execute these processes much more efficiently.

Stick to your core activities. If you are not the absolute best in the industry for performing a function that can be bought from another provider, DO NOT DO IT YOURSELF.

Today's economy is a truly global one. Outsourcing to another company specializing in a given function can help reduce unnecessary overheads, capital costs and INVESTMENTS, allowing a lot more room to maneuver and focus on providing customers with a value product ensuring success.

Traditional companies proud of the costly infrastructure and processes implemented through years of painful implementation and careful thinking are finding themselves being out-matched by smaller,

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leaner companies, even startups, based on the e-Commerce model. e-Commerce allows new startups to grab a hold of MARKET share previously held by traditional companies very quickly as, in most cases, they do not carry inventory and do not have to deal with large overheads. Most e-Commerce enterprises will sell items that are shipped directly to customers from distributors. This allows more fund allocation to finding out what the market is asking for and to ensuring superior customer service. Amazon.com is a good example of how a virtual company challenged traditional enterprise and grabbed a fair market segment, forcing tradition book stores to also offer their products online often at a reduced price to what they would be sold at in store.

This is easier said than done as major INVESTMENTS have been made in the past into the production and supply chain in order to add value to the process. Therefore the disintegration of an enterprise is an extremely scary thought; however, the alternative is even bleaker.

Careful thinking and forging of the right partnerships is a must in order to ensure success.

A classic economic theory is that of Decreasing Returns to Scale, which states that no enterprise can continue to grow forever profitably. However, this principle does not apply directly to e-Business, which has been shown to be able to sustain incredible growth extremely fast while increasing returns the whole way. The reason being that e-Commerce is based heavily on information and communication and travels light.

As most e-Businesses have minimal infrastructure and inventory, it is possible to minimize the effect of this classically accepted economic theory. The bulk of INVESTMENT can be allocated to R&D, IT Infrastructure (made upfront) and client relations/support. After which the cost per unit decreases dramatically compared to traditional models.

Increased returns to scale are also clearly evident for companies in the information based product industries; where distribution and SALE through e-Commerce can bring the cost per unit to almost zero. A good example of such enterprise would be software vendors who allow customers to research and purchase products and added licenses directly online. This allows a higher level of customer involvement, support and satisfaction. Most vendors allow clients to download a trial version of the latest release directly online after filling out a simple questionnaire that can be later used for R&D and marketing efforts. These trial versions are either limited time trials or with limited functionality, the former being more popular. The concept of try it before you buy it can truly be applied in this case.

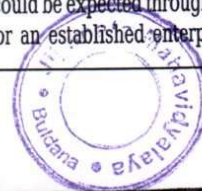
Other PRODUCTS can also experience what is known as network effects causing the value of each unit to go up as number of individuals using each unit increases. A good example is how the common use of flash as a medium to display videos online has caused most users to have the flash plug-in installed on their computer. There are other platforms for displaying videos online provided by competitors to Adobe; however, as the popularity of Flash grows it is becoming more and more of an industry standard and therefore benefiting from the network effect.

Another major factor resulting in Increased Returns to Scale is an industry locking in to a specific vendor's products. In any given industry, established standards are imperative for collaboration, therefore MARKETS will converge towards the technology that is most likely to win out; this effect allowing popular vendors to grab a strong hold of a given MARKET. In most markets there will be two or three top vendors who are enjoying such loyalty from clients. Microsoft products, for instance, have such a market share on commonly used software applications and EBAY is a good example of an online auction house.

Another example was in the case of Beta vs. VHS - VHS dominating the MARKET and never allowing BETA to gain popularity in the marketplace.

The flexibility and scalability of e-Commerce allows companies to grow rapidly and adapt quickly to satisfy the MARKET demands without suffering from Decreasing Returns to Scale.

Once vertical integration is re-assessed and quality partnerships are forged, a successful online initiative can result in much greater Increased Returns to Scale than could be expected through traditional methods. It is important to understand that the online venture for an established enterprise should



always be part of a complete business model and not always intended to replace existing methods of distribution and sales but rather to act as an additional venue to gain exposure and increase returns. Some vendors chose to abandon traditional storefront for a complete virtual storefront. DELL Computers are a good example of such a company that has experienced incredible growth while showing Increased Returns to Scale while focusing their efforts on customer service, customer specific solutions and made to measure PRODUCTS. However this is definitely not a solution for every company.

This is not to say that Decreasing Return to Scale is no longer applicable as it is still the case when DEALING with tangible physical assets. However this economical principle has less effect when it comes to intangible intellectual property and is only applicable to intangible value components of a business. In traditional business models it is almost impossible to think of such intangibles and customer service without the consideration of physical assets, capital as well as recurring costs. In e-Commerce it is possible to easily separate these components from the physical and therefore allow easy scalability and flexibility with minimal added cost. A good example is the outsourcing of customer service to offshore providers, driving the cost down dramatically while allowing easy scalability without added cost in infrastructure, HR and training.

The result being that in any given industry the choices are made early on by customers. First on the scene will always gain a stronghold on the market, giving it enough momentum to carry on successfully into the future. This trend can only be upset by either the vendor making serious strategic mistakes or a competitor OFFERING a revolutionary new solution with added value at a lower cost making the transition between vendors worthwhile.

Return on Intangibles:

The centrality of physical assets is becoming less important in today's commercial reality. In the past, the intangible assets helped businesses be competitive in their industry but strong emphasis was also put on their physical assets such as plants and equipment along with good management(HR), customer relations & support and IT infrastructure to achieve competitive advantage. However these intangibles have had little or no value when separated from a business's physical core. Intellectual property added value and was considered as part of the cost of doing business but not a source of revenue to the business in itself. Developers were not be able to effectively collaborate with manufacturers to produce the goods causing returns to be small and the manufacturers would eat into the developer's profits during the negotiations; the cost of collaborating between developers and manufacturers was too high.

The internet has allowed companies to give more emphasis to the intangibles and bring them to the front line and turn their value into revenue. Making communications and collaboration between companies easy and inexpensive, e-Commerce allows intangible assets to be leveraged across a much larger buyer base. As e-Commerce offers a model with no more time and space constrains, companies no longer have to co-locate with the tangible means of production.

A good example is eBay. With almost no physical assets, eBay was valued at \$1.88 billion dollars at the IPO, surpassing Sotheby's value of \$1.02 billion dollars. Physical assets are not important to businesses within the eEconomy as was in the Industrial age. But instead it is a company's intellectual property and customer relationships that drive e-Commerce businesses and result in positive cash flow and returns.

Once again a sour note to more established enterprises with large physical assets and overhead. Such businesses also have great intellectual property, loyal customer base and market insight gained through years of experience. However the profit margins that can be leveraged through these intangibles are all minimized by the inefficiency and high cost of their physical assets.

The Assumption of "Perfect" information:

One of the basic traditional assumptions in Economics is the assumption that actors in an economy have access to 'perfect' information. Meaning that vendors know what buyers want and the buyers know exactly what all the vendors are OFFERING. This assumption has never been truer than in

the internet era.

Information has never been perfect and accurate, as it is difficult and expensive to acquire quality information with some players having more than others. Not all vendors are equal and have access to the same quality of information. For instance, consumer goods manufacturers have spent large amounts of money in an attempt to gain insight into the likes, dislikes, needs and behaviors of their respective markets. In the past it was considered a breakthrough when MARKETING personnel were able to understand and dissect a large vague client base into smaller less vague customer bases.

Customers also had very little insight about the quality, price, availability and alternative sources before making a choice in purchasing a product or soliciting a service. A customer's primary source of information was advertising, provided directly by the manufacturers designed to entice a potential client to buy, and through word of mouth reference from a known party, both sources being not objective and/or accurate.

The introduction on the internet allows sellers to be able to get insight on their customer's habits and hopes, not only at a segment level, but an individual level, translating into quality targeted products and services being offered to clients. The web is having an enormous impact on how customer-driven businesses conduct R&D, service and MARKET their products to existing and potential clients. Having such information allows vendors to be able to offer clients exactly what they want, developing a loyal client base that is fully satisfied. A good example is Dell Computer Corporation. Before, clients would step into a retail storefront and purchase a pre-configured PC that had been designed to appeal to a given broad MARKET segment. In today's world of design your own PC, Dell offers clients the opportunity to purchase exactly the PC they are looking for, having 100% customer satisfaction.

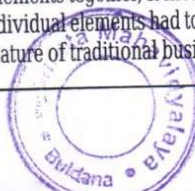
The other main aspect that the internet has revolutionized is the availability of an extensive array of resources about any given PRODUCT to the client. Comprehensive information regarding a vendor, their product lines and even reviews made by countless individuals and its price relative to almost all of its competitors are available online, usually free of charge. As a result, sellers have lost the power they have gained from the inequality of information, to the extent where price is no longer the main prerogative, but rather client satisfaction. Customers are always being bombarded with better propositions from competitors and vendors must always stay a step ahead to maintain their client base.

As a result the customers are always searching and finding great bargains. Priceline.com for instance, invites their clients to 'make offer' to airlines and HOTELS FOR their air travel and accommodations at a desired destination, which airlines and hotels with otherwise empty seats or rooms can decide to take or leave.

Today's buyers and sellers are both living in an Information Age. We see companies offering clients more and more transparency in terms of their OFFERS vs. that of their competitors, with some even going as far as to provide this information within their own website. For instance, Progressive.com has made it the center of their marketing strategy to show their clients the offers they would get from competitors, something unheard of in the past.

The term 'Perfect' is still not applicable, but we are the closest today than we have ever been in the past. MARKETERS and strategists now must learn to make sense of the vast volume of information they are faced with on a daily basis and learn to read trends and filter garbage quickly enough to act faster than ever before.

The last revolutionary effect of e-Commerce on strategy stems directly from the fact of its very virtuality. In the past businesses wanting to enter the marketplace had to depend upon the design, means of production, marketing, planning and SALES being coordinated by a central vertical enterprise converging finally at a physical location; the storefront. This meant a daunting and expensive task for new sellers wishing to enter the market. If they did not have the right elements all in place and a proper vision of the future and were unable to bring all the necessary elements together, it meant that they would not be able to participate in the game and succeed. All these individual elements had to be performed under one roof, creating the vertical model thanks to the limiting nature of traditional business in terms of the high costs



of collaboration and poor communications between partners.

These classical restrictions do not apply in the e-Commerce business model as coordination can be achieved easily, virtually, at a very low cost. Entire supply chains can be created quickly through linking desktops together. The physical locations of the seller, the warehouse and the payment processor and whether it is three independent companies is a fact that is immaterial to the buyer of e-Commerce storefronts. All the buyer expects is that the quality, price and service are met according to their wants. This all looks like a great opportunity for any business person looking to carve out a small piece of the market. Unless you are an established enterprise, in which case the online e-Commerce sellers are a real dangerous threat. What is to prevent any random person from registering a URL and entering your market and stealing your share? Not much, and it is being done everyday, putting established businesses on their knees. On the other hand, with the industry experience and expertise that established firms have, along with their existing customer base, what is stopping these businesses from doing the same? The answer is fear of change and the costs involved in adapting. But unfortunately there is not much choice in the matter. If you want to survive you must adapt and evolve. Forward thinking CEO's will always maintain their competitive advantage and survive in an even fiercer marketplace.

Senior executives are notorious for not being proactive. Always being reactive and not willing to embrace the changes in the marketplace, especially in terms of the real threat posed by the online sellers. Always thinking in brick and mortar terms and being unable to process the virtual world of e-Commerce. Meeting the new challengers in the marketplace and emerging victorious can only be achieved by beating the new comers at their own game. It's time to start thinking outside the box and restructuring your business to adapt to the new market.

A prime example of an established enterprise having difficulty competing with the newly emerging e-Businesses is that of Blockbuster vs. Netflix. Blockbuster is an enterprise that has enjoyed many years of success within the MARKET, as one of the largest video rental and SALES franchises in the world. Netflix, being a new e-Commerce enterprise offering a value proposition to the customers of Blockbuster, has managed to steal a segment of their market. As the threat was perceived to be real and dangerous, Blockbuster has implemented a value added feature to their regular in store rentals by allowing customers to rent films online (which they receive in the mail) and exchange them at a physical storefront if they wish, giving them the added option of exchanging the viewed DVD for a new one at a local Blockbuster franchise. Whereas the clients of Netflix have no such option but to mail the DVDs back and eagerly wait for their newly selected films to arrive in the post.

The first step in such a frightening evolution is to re-evaluate your business model, putting less emphasis on the physical infrastructure. Keep in mind the golden rule : 'Stick to your core activities. If you are not the absolute best in the industry for performing a function that can be bought from another provider, DO NOT DO IT YOURSELF"

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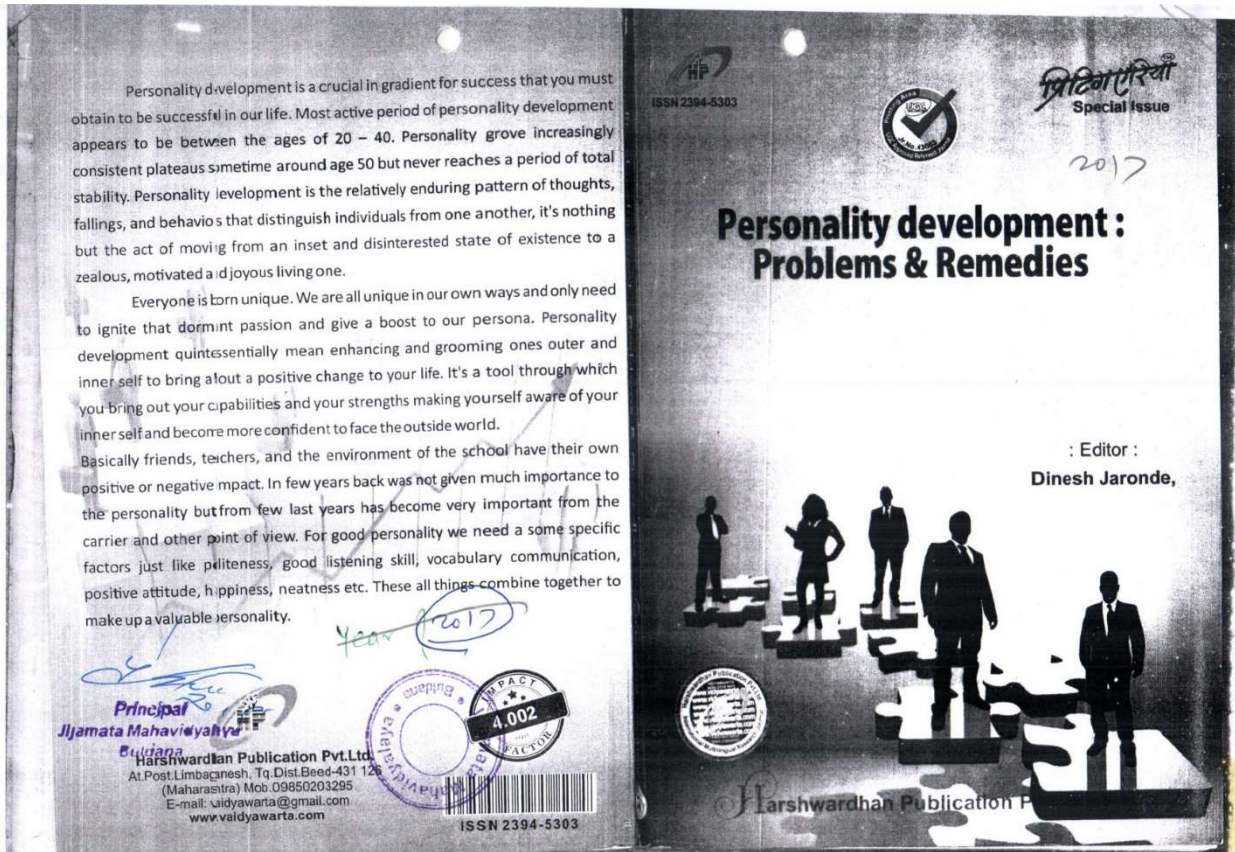
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 objectives and also helps us in our day to day life. Every person interact with a person having attractive personality A great overall personality is very important in the life of an individuals. Without influencing others you can't get success in today's competitive world. Competitive is increasing day by day and there no less of talent individual possession high all device results and willing to work hard to achieve their goals.

For the completion of this special issue, we have collected articles and research papers on "Personality development : Problems & Remedies" from students, teachers, professors, thinkers, and scholars and compiled selected ones in this special issue which, we hope, will prove useful and enlightening documents for all readers. The Editorial Board acknowledges the help, suggestions, and guidance received. Our special thanks go to article/paper writers and our publisher. All our well-wishers are worthy of gratefulness.

Prof. Dinesh Jaronde

Principal
 Jijamata Mahavidyalaya
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09

Stress Management

Prof.Suresh N.Gawai,
M.Com.M.Phil., Associate Professor in Commerce,
Jijamata Mahavidyalaya, Buldana

Introduction

Stress is a fact of everyday life. When people reach out for help, they are often dealing with circumstances, situations, and stressors in their lives that leave them feeling emotionally and physically overwhelmed. Many people feel that they have very little resources or skills to deal with the high levels of stress they are experiencing. The information in this manual has been compiled to provide information and education about stress, the effects of stress, and the most popular stress management and relaxation techniques that are being used today. This information could be helpful for people who want to learn how to react to stress in a more constructive, proactive way. The basic premise of this manual is that the benefits of stress reduction and relaxation techniques can be best noticed after they have been practiced regularly over a period of time.

Stress: What is it?

Although we all talk about stress, it often isn't clear what stress is really about. Many people consider stress to be something that happens to them, an event such as an injury or a job loss. Others think that stress is what happens to our body, mind, and behavior in response to an event (E.g. heart pounding, anxiety, or nail biting). While stress does involve events and our response to them, these are not the most important factors. Our thoughts about the situations in which

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is to learn about the mind-body connection and to the degree to which we can control our health in a positive sense.

Sources of Stress

We can experience stress from four basic sources:

The Environment – the environment can bombard you with intense and competing demands to adjust. Examples of environmental stressors include weather, noise, crowding, pollution, traffic, unsafe and substandard housing, and crime.

Social Stressors – we can experience multiple stressors arising from the demands of the different social roles we occupy, such as parent, spouse, caregiver, and employee. Some examples of social stressors include deadlines, financial problems, job interviews, presentations, disagreements, demands for your time and attention, loss of a loved one, divorce, and co-parenting.

Physiological – Situations and circumstances affecting our body can be experienced as Physiological stressors. Examples of physiological stressors include rapid growth of adolescence, menopause, illness, aging, giving birth, accidents, lack of exercise, poor nutrition, and sleep disturbances.

Thoughts – Your brain interprets and perceives situations as stressful, difficult, painful, or pleasant. Some situations in life are stress provoking, but it is our thoughts that determine whether they are a problem for us.

Types of Stressors

Situations that are considered stress provoking are known as stressors. Stress is not always a bad thing. Stress is simply the body's response to changes that create taxing demands. Many professionals suggest that there is a difference between what we perceive as positive stress, and distress, which refers to negative stress. In daily life, we often use the term "stress" to describe negative situations. This leads many people to believe that all stress is bad for you, which is not true. Positive stress has the following characteristics:

we find ourselves are the critical factor. When something happens to us, we automatically evaluate the situation mentally. We decide if it is threatening to us, how we need to deal with the situation, and what skills we can use. If we decide that the demands of the situation outweigh the skills we have, then we label the situation as "stressful" and react with the classic "stress response." If we decide that our coping skills outweigh the demands of the situation, then we don't see it as "stressful." Stress can come from any situation or thought that makes you feel frustrated, angry, or anxious. Everyone sees situations differently and has different coping skills. For this reason, no two people will respond exactly the same way to a given situation. Additionally, not all situations that are labeled "stressful" are negative. The birth of a child, being promoted at work or moving to a new home may not be perceived as threatening. However, we may feel that situations are "stressful" because we don't feel fully prepared to deal with them. Stress is a normal part of life. In small quantities, stress is good; it can motivate you and help you become more productive. However, too much stress, or a strong response to stress can be harmful. How we perceive a stress provoking event and how we react to it determines its impact on our health. We may be motivated and invigorated by the events in our lives, or we may see some as "stressful" and respond in a manner that may have a negative effect on our physical, mental, and social well-being. If we always respond in a negative way, our health and happiness may suffer. By understanding ourselves and our reaction to stress-provoking situations, we can learn to handle stress more effectively. In the most accurate meaning, stress management is not about learning how to avoid or escape the pressures and turbulence of modern living; it is about learning to appreciate how the body reacts to these pressures, and about learning how to develop skills which enhance the body's adjustment. To learn stress management

- Motivates, focuses energy
- is short-term
- Is perceived as within our coping abilities
- Feels exciting
- Improves performance

In contrast, negative stress has the following characteristics:

- Causes anxiety or concern
- Can be short or long-term
- Is perceived as outside of our coping abilities
- Feels unpleasant
- Decreases performance
- Can lead to mental and physical problems

It is somewhat hard to categorize stressors into objective lists of those that cause positive stress and those that cause negative stress, because different people will have different perceptions and reactions to particular situations. However, by generalizing, we can compile a list of stressors that are typically experienced as negative or positive to most people, most of the time.

Examples of negative personal stressors can include:

- The death of a partner
- Filing for divorce
- Losing contact with loved ones
- The death of a family member
- Hospitalization (oneself or a family member)
- Injury or illness (oneself or a family member)
- Being abused or neglected
- Separation from a spouse or committed relationship partner
- Conflict in interpersonal relationships
- Bankruptcy/money problems
- Unemployment
- Sleep problems
- Children's problems at school



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- Legal problems
- Inadequate or substandard housing
- Excessive job demands
- Job insecurity
- Conflicts with team mates and supervisors
- Lack of training necessary to do a job
- Making presentations in front of colleagues or clients
- Unproductive and time-consuming meetings
- Commuting and travel schedules

Examples of positive personal stressors might include:

- Receiving a promotion at work
- Starting a new job
- Marriage or commitment ceremony
- Buying a home
- Having a child
- Moving
- Taking or planning a vacation
- Holiday seasons
- Retiring
- Taking educational classes or learning a new hobby

Internal Sources of Stress and Anxiety

Stressors are not always limited to situations where some external situation is creating a problem. Internal events such as feelings, thoughts, and habitual behaviors can also cause negative stress.

Common internal sources of distress include:

- Fears (e.g., fears of flying, heights, public speaking, chatting with strangers at a party)
 - Repetitive thought patterns
 - Worrying about future events (e.g., waiting for medical test results or job restructuring)
 - Unrealistic or perfectionist expectations
- Habitual behavior patterns that can lead to stress include:
- Over scheduling
 - Failing to be assertive



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- Failing to set and maintain healthy boundaries
- Procrastination and/or failing to plan ahead

Cognitive Aspects of Stress and Anxiety

Anxiety is a feeling that we commonly experience when faced with stressful life events. Anxiety can be one of the most distressing emotions that people feel. It is sometimes called "fear or nervousness". Common reactions to anxiety include:

Physical Symptoms:

- Sweaty palms
- Muscle tension
- Racing heart
- Flushed cheeks
- Light headedness

Behaviors:

- Avoiding situations where experiencing anxiety might occur
- Leaving situations when feelings of anxiety begins to occur
- Trying to do things perfectly or trying to control events to prevent danger

Moods:

- Nervous
- Irritable
- Anxious
- Panicky

Thoughts:

- Overestimation of danger
- Underestimation of your ability to cope
- Underestimation of help available
- Worries and catastrophic thoughts

Stressors can contribute to our feelings of anxiety. Examples of stressors that contribute to feelings of anxiety might include trauma (being abused, being in an accident, war); illness or death, things we are taught ("snakes will bite you");

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things we observe (an article in the newspaper about a plane crash); and experiences that seem too much to handle (giving a speech, job promotion or termination, having a baby). The thoughts that accompany anxiety involve the perception that we are in danger or that we are threatened or vulnerable in some way. A threat of danger can be physical, mental, or social. A physical threat occurs when you believe that you will be physically hurt (e.g., a snake bite, a heart attack, being hit). A social threat occurs when you believe you will be rejected, humiliated, embarrassed, or put down. A mental threat occurs when something makes you worry that you are going crazy or losing your mind. The perception of the threats varies from person to person. Some people, because of their life experiences, may feel threatened very easily and will often feel anxious. Other people may feel a greater sense of safety or security. Certain life experiences such as growing up in a chaotic home with volatile surroundings may lead a person to conclude that the world and other people are dangerous. The perception of danger and sense of vulnerability may have helped a person survive as a child. Being able to recognize danger and its early warning signs are critical to one's emotional and physical survival. Some may have developed a very fine ability to spot and respond to dangerous situations. As an adult, it may become important to evaluate whether or not it's possible that one is over-responding to danger and threat. Perhaps the people in their adult life are not as threatening as the people in their childhood. One might consider whether or not their resources and abilities to cope as an adult open new and creative ways of responding to threat and anxiety.

Signs and Symptoms of Stress Overload

It is important to learn how to recognize when your stress levels are "out of control" or having an adverse effect. The signs and symptoms of stress overload can be almost anything.



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Stress affects the mind, body, and behavior in many ways, and everyone experiences stress differently.

Three common ways that people respond when they are overwhelmed by stress are:

1. An angry or agitated stress response. You may feel heated, keyed-up, overly emotional, and unable to sit still.
2. A withdrawn or depressed stress response. You shut down, space out, and show very little energy or emotion.
3. Both a tense and frozen stress response. You "freeze" under pressure and feel like you can't do anything. You look paralyzed, but under the surface you may feel extremely agitated.

The following lists some of the common warning signs and symptoms of stress. The more signs and symptoms you notice in yourself, the closer you might be to feeling stress overload.

Cognitive Symptoms:

- Memory problems
- Inability or difficulty concentrating
- Poor judgment
- Seeing only the negative
- Anxious, racing, or ruminating thoughts
- Constant worrying

Emotional Symptoms:

- Moodiness
- Irritability or short-tempered
- Agitation, inability to relax
- Feeling overwhelmed
- Sense of loneliness or isolation
- Depression or general unhappiness

Physical Symptoms:

- Aches and pains, muscle tension
- Diarrhea or constipation
- Nausea, dizziness, or butterflies in the stomach



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- Chest pain or rapid heartbeat
- Loss of sex drive
- Frequent colds
- Shallow breathing and sweating

Behavioral Symptoms:

- Eating more or less
- Sleeping too much or too little
- Isolating yourself from others
- Procrastinating or neglecting responsibilities
- Using alcohol, cigarettes, or drugs to relax
- Nervous habits (nail biting, pacing)

Keep in mind that the signs and symptoms of stress also can be caused by other psycho-logical and medical problems. If you're experiencing any of the warning signs of stress, it's important to see a doctor for an evaluation. Your doctor can help you determine whether or not your symptoms are stress related.

50 Common Signs and Symptoms of Stress:-

1. Frequent headaches, jaw clenching or pain
2. Gritting, grinding teeth
3. Stuttering or stammering
4. Tremors, trembling of lips, hands
5. Neck ache, back pain, muscle spasms
6. Light headedness, faintness, dizziness
7. Ringing in the ears
8. Frequent blushing, sweating
9. Dry mouth, problems swallowing
10. Cold or sweaty hands, feet
11. Frequent colds, infections
12. Rash'es, itching, hives, "goose bumps"
13. Unexplained or frequent allergy attacks
14. Heartburn, stomach pain, nausea
15. Excess belching, flatulence
16. Constipation, diarrhea



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17. Difficulty breathing, sighing
18. Sudden attacks of panic
19. Chest pain, palpitations
20. Frequent urination
21. Low sexual drive or performance
22. Excess anxiety, worry, guilt, nervousness
23. Increased anger, frustration, hostility
24. Depression, frequent or intense mood swings
25. Increased or decreased appetite
26. Insomnia, nightmares, disturbing dreams
27. Difficulty concentrating, racing thoughts
28. Trouble learning new information
29. Forgetfulness, disorganization, confusion
30. Difficulty in making decisions
31. Feeling overwhelmed
32. Frequent crying spells or suicidal thoughts
33. Feelings of loneliness or worthlessness
34. Little interest in appearance, punctuality
35. Nervous habits, feet tapping, fidgeting
36. Increased frustration, irritability
37. Overreaction to petty annoyances
38. Increased number of minor accidents
39. Obsessive/compulsive behaviors
40. Reduced work productivity
41. Lies or excuses to cover up poor work
42. Rapid or mumbled speech
43. Excessive defensiveness or suspiciousness
44. Problems with communication
45. Social withdrawal or isolation
46. Constant tiredness, weakness, fatigue
47. Frequent use of over-the-counter drugs
48. Weight gain or loss without diet
49. Increased smoking, alcohol, or drug use
50. Excessive gambling or impulse buying

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As demonstrated in the preceding list, stress can have wide ranging effects on emotion, mood, and behavior. Equally important but often less appreciated are effects on various systems, organs, and tissues all over the body, as illustrated in the following diagram.

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सर्जनशीलता वाढविण्याचे उपाय

कु. अनिता बापूराव सुर्यवंशी

ए.फिल.; संशोधक विद्यार्थिनी,
पालि एण्ड बुद्धिद्वय विभाग

डॉ. बाबासाहेब अंबेडकर मराठवाडा विद्यापिठ, औरंगाबाद

• प्रस्तावना

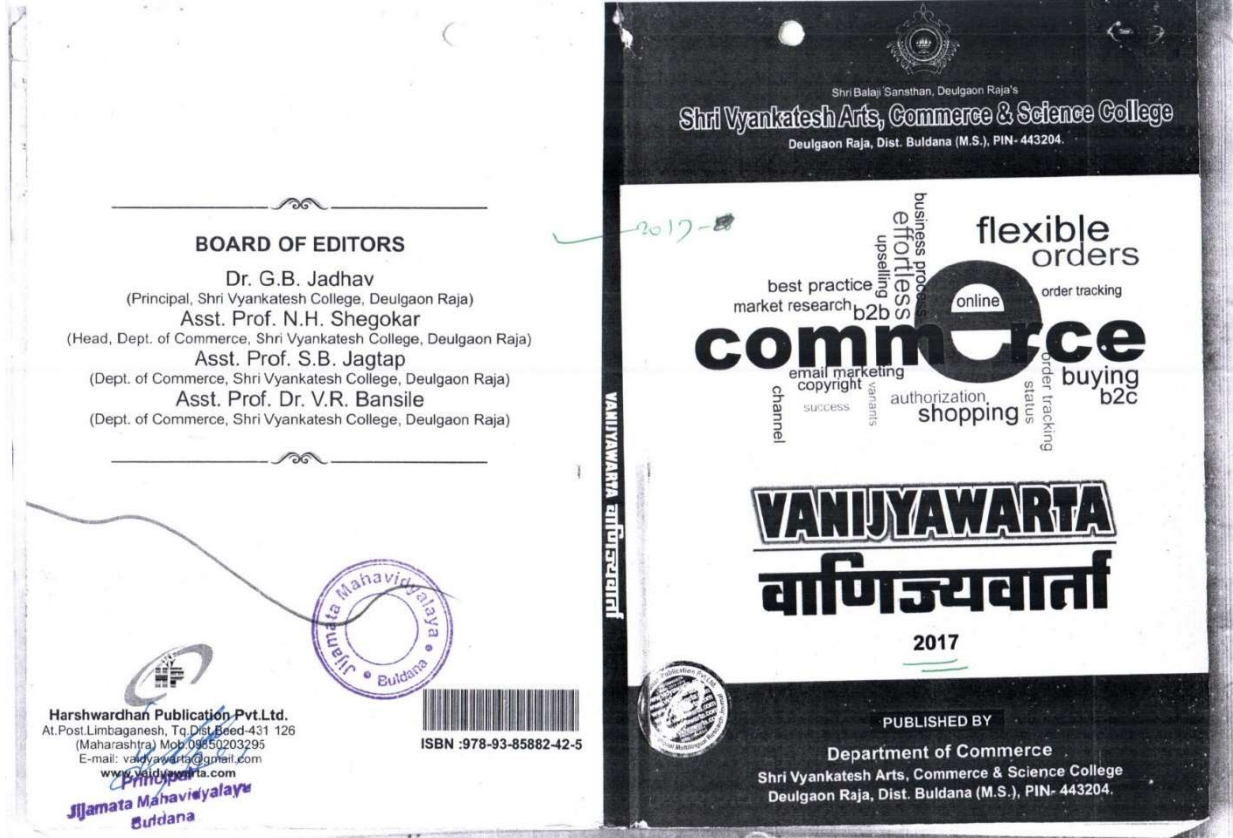
सर्जनशीलता या शब्दातील 'सर्जन' म्हणजे 'नवनिर्मिती' होय. यात नविन रचना, नवीन दृष्टीकोन, नविन अनुभवाला समोरे जाणे, साचेबंद चौकट मोडण्याची वृत्ती, या सर्व स्वरूपाचे गुण प्रत्येक व्यक्तीत कमी अधिक प्रमाणात आपण पाहत असतो. समाजात कार्य करणारी व्यक्तीत कार्य आणि व्यवसाय यांच्यात एक वेगळी रचनात्मकता आपल्याला पाहण्यास मिळते. उदा. सुतार लाकडापासून वेगवेगळ्या वस्तू बनवितो, चित्रकार आपल्या आवडत्या रंगाने एक नविन कलाकृति तयार करतो, कवि कविता करतो, गीतकार गीत तयार करतो, सांगणे एवढेच की प्रत्येक व्यक्तीत सर्जनशीलता आपल्याला दिसून येते, पण आपल्याला ती सर्जनता ओळखून त्याचा विकास केला पहिजे.

• सर्जनशीलतेची व्याख्या व स्वरूप

सर्जनशीलता काही व्याक्तीनाच प्राप्त होते किंवा सर्जनशीलतेची क्षमता निसर्गत: मोजक्याच व्यक्तीत असते असे नाही. तर ती सर्वांना प्राप्त होणारी संपादित असून तिचा आविष्कार फारच कमी व्यक्तीकडून होत असतो, असे एरिक फार्म म्हणतो तसेच सर्जनशीलतेचे स्वरूप सांगताना लिहितो.

"creativity does not refer to a quality which particularly gifted persons of artists could achieve, but to attitude which every human being should and can achieve" – Enrich fromm.





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A clear objective – to re-engineer processes and enhance judicial productivity both qualitatively and quantitatively to make the justice delivery system affordable, accessible, cost effective, transparent and accountable.

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09

 **E-Commerce in India-A Game Changer for the Economy** 

Prof. Suresh N. Gawai
Associate Professor in Commerce
Jijamata Mahavidyalaya, Buldana

Introduction

E-Commerce has transformed the way business is done in India. With attractive and convenient shopping options at the core of the consumer facing business, the e-Commerce industry offers the power to create innovative, sustainable, consistent and seamless shopping experience across all channels. In the last 4 years, while the e-Commerce B2C segment has grown significantly leading to creation of many Unicorns, the focus of the investors going forward seems to have shifted to profitable growth to achieve a stabilization of the economic model. This seems to be resulting in collaborations and partnerships across the value chain with the aim to optimize the costs. Simultaneously, the e-Commerce B2B segment is showing signs of rapid digital adoption which is likely to feed the significant rise of MSMEs and entrepreneurs from the Indian hinterland. The growth of the e-Commerce industry has been triggered by increasing internet and Smartphone

Penetration in not only metro cities but also in tier two & three cities of India. Mobile devices are further expected to

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drive sales via e-Commerce platforms over the next 5 years. While the e-Commerce space has rapidly evolved, several challenges have surfaced primarily in areas of taxation, logistics, payments, internet penetration and skilled man power. In taxation, for example, the lack of a uniform tax structure leads to several issues such as double-taxation or impediments in the free flow of goods across the country. However, the ensuing Goods and Services Tax (GST) is expected to help in overcoming these challenges through a uniform tax structure. Clearly defined rules for e-Commerce transactions in GST and a consultative approach while framing these rules will be favorable to both, the Government of India as well as the e-Commerce companies.

Logistics lies at the heart of e-Commerce and a large number of third-party logistics service providers have entered this space to provide customized last-mile deliveries. In line with the trend for increased e-Commerce uptake in tier two and tier three cities, e-Commerce and third party logistics service providers are partnering with players with existing infrastructure in tier two and tier three cities (e.g. India Post) to facilitate deliveries in these cities. However, the increasing logistics costs related to last-mile delivery, especially on account of return orders, requires innovative and analytical driven models that will enhance operational efficiencies in the logistics value chain. This will help e-Commerce companies in their drive towards profitability. From a payment perspective, Cash-on-Delivery (CoD) continues to dominate the payments for e-Commerce sales in India which in turn presents its own set of unique challenges. Digital payments (eg. mobile wallets) are slowly gaining traction. The growing usage of mobile internet and the implementation of the UPI are expected to give further impetus to the growth of digital payments.

In the last 18 months, the Government of India has announced several flagship programs namely, Digital India, Make



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in India, Start-up India, Skill India and Innovation Fund. The timely and effective implementation of these programs will support the e-Commerce eco-system to overcome the challenges related to ineffective rural internet penetration and lack of skilled manpower. As the digital eco-system evolves in India, the e-Commerce companies on their part need to continually innovate embrace digitization and analytics to remain relevant. Further, to differentiate, the e-Commerce companies will have to in parallel, focus both, on business-as-usual and also on disruptive growth towards building legacy firms.

E-Commerce and the Indian economy The Indian economy has been consistently showing good signs of growth, with the average GDP growth rate at 7.5% in 2015-16. The retail sector is showing a promising trend of 11% CAGR, growing from an estimated size of USD 600 Billion now to USD 1 Trillion in 2024. Although, currently the total e-Commerce spend in India accounts for less than 2% of the total retail spending, e-Commerce has become a key driver to create new markets in erstwhile unreachable geographies. The Indian consumers are rapidly advancing towards adopting technology. While the overall tele-density is 81.8%, the mobile tele-density is also high at 79.8% as of November, 2015. Additionally, during the same time, India beat the United States of America to become the 2nd largest market after China, for smart phones with 220 Million users – This was attributable to the availability of highly affordable smart phones and with easy-to-use features which helped first-time Smartphone users leapfrog from the desktop/laptop phase. Internet penetration is also significantly rising with the number of internet users at 354 Million as of September, 2017. In addition, there is a shift in mobile usage from voice to data. Mobile internet spend has risen from 54% to 64% from 2014 to 2015. This is due to an availability of high-speed 3G & 4G internet connectivity at affordable prices which has led to an increase in



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transactions done via mobile2.

India's rank for ease of doing business went up by 12 in just one year due to an improved regulatory framework thus creating a conducive business-friendly environment8. These factors have positively impacted Private Equity and Venture Capital investments into the country touching USD 20 Billion in 20159. Majority of these investments have been in e-Commerce industry. The e-Commerce industry is expected to form the largest part of the Indian Internet market with a value of approximately USD 100 Billion by 20208. In addition to transforming and revolutionizing the retail sector in India, it is also facilitating MSMEs to jump the evolution loop by providing means of financing, technology and training. Advent of technology enabled innovations such as Digital Payments, Hyper-local Logistics, Analytics driven Customer Engagement and Digital Advertisements have enabled the e-Commerce industry to grow at a much faster rate. Within the e-Commerce industry, the Gross Merchandise Value (GMV) is an important metric for valuations especially during the early stages of growth. The majority of B2C e-Commerce companies, globally, despite being operational for 5-20 years, report low profitability. The situation in India is no different i.e. a growing GMV but at an overall loss as the e-Commerce companies establish themselves. The GMV for B2C segment in India was approximately USD 16 Billion in 2015. This trend however does not hold true for the B2Be-Commerce companies which are profitable with greater GMV values. The Indian B2B e-Commerce market potential was valued at USD 300 Billion in 2014, and is expected to reach USD 700 Billion by 202011. The higher profitability in the B2B segment is attributed to reasons such as lack of heavy discounts, greater emphasis on quality rather than on price, and higher volumes of purchases.

Existing and Emerging e-Commerce business models

Globally, e-Commerce has been operating via various



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models such as B2B, B2C, C2C, Aggregators, and Hybrid.

In India, leading current e-Commerce companies under different business models are enumerated:

E-Commerce models	Leading companies*
B2C e-Commerce marketplace	Snapdeal.com, Amazon.com, Flipkart.com
B2C e-Commerce Inventory Led	BigBasket.com, FirstCry.com, Zovl.com
B2C e-Commerce Aggregator	Uber.com, olacabs.com
C2C e-Commerce	Clouddacar.com, quickr.com, olx.in
B2B e-Commerce	mjunction services limited (metajunction, coaljunction, buyjunction, etc.), cloudBuy.com, tolexo.com, industrybuying.com, power2sme.com, Amazonbusiness.com Omni-channel Retailers Shopper Stop Ltd., Infinitti Retail Limited Cromia, Raymond Limited

Table 1: Indicative list of current leading e-Commerce models in India

*Verticals	Leading companies
Online Travel	Makemytrip.com, yatra.com, clestrip.com, goibibo.com
Online Real Estate	Magicbricks.com, 99acres.com, commonfloor.com, Housing.com
Online Fashion	Jabong.com, Mynta.com, Zovl.com, yepme.com, limeroad.com
Online Furniture	Fabfurnish.com, Pepperfry.com, urbanladder.com
Online Education	Purple Squirel Eduventures, Plancess.com
Online Food and grocery	Zomato.com, Foodpanda.in, TinyOwl.com, igBasket.com, Grofers.com

Table 2: Indicative list of emerging Vertical Specific e-Commerce companies in India

Source: Deloitte Research *Note: Domain names

The growth of the B2B e-Commerce segment is relatively slower compared to the B2C e-Commerce segment in India. This is because the entry barriers in the B2B e-Commerce are more than those in the B2C e-Commerce industry. A B2B e-Commerce company has to have a strong business model, long term logistical arrangements with rail, road and ports and also adhere to stringent regulatory and taxation governance. With an aim to tap the huge potential in the B2B e-Commerce market in India,

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apart from the existing B2B companies, leading B2C companies have also started to build their own platforms for small business owners and traders. This is expected to be supported by rising expectations among growing number of companies to conduct buying and selling online and a shift to conduct procurement transactions through internet rather than the erstwhile Electronic Data Interchange (EDI). Understanding this untapped potential of the B2B e-Commerce industry, the Government has allowed 100% FDI in B2B e-Commerce which has enabled global successful B2B e-Commerce companies such as Walmart and Alibaba to evince interest in the India B2B e-Commerce industry.

Online retailers going 'offline' and vice-versa

Several e-Commerce companies are opening physical offline stores. Such 'Experience Centres' offer online buyers the touch-and-feel experience, thus offering an integrated shopping experience especially for products with high-price points. Companies such as FirstCry, Pepperfry, Flipkart etc. have opened physical stores to complement the online sales and experience. Similar option of click-and-collect is extended by Amazon in India by providing physical locations for customers to pick up the products at a time convenient to them. On the other hand, various offline retailers have started their online ventures or partnered with leading e-Commerce companies to attract customers at all touch points. For example, Future Group inked an exclusive deal with Amazon while Tata Group owned Cromia, partnered with Snapdeal to sell private brands online.

e-Commerce aggregators digitizing traditional offline businesses

Besides the conventional services for utilities, fashion & lifestyle, electronics, etc. there is a new trend of emerging e-Commerce aggregators that are aiming to digitalize several offline services and creating a convenient ecosystem for consumers. In areas such as truck booking, healthcare, real-estate to name a few which have been traditionally offline, there has



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been a rise of online aggregators.

Emerging verticals*	Leading Companies*
Online Health	Portea.com, Healthkart.com,
Online Laundry	Wassupondemand.com, DoorMint.in, LaundryWala.co.in
Online Entertainment	Netflix.com, ErosNow.com Hooq.com
Online Truck Booking	TruckSuvidha.com, TruckMandi.in, ThKarrier.com, Fortigo.com

Table 3: Indicative list of emerging Online Aggregator Models in India

*Note: Domain names

Online aggregators besides providing comparison of price and features across service providers are also connecting buyers directly with sellers, thus reducing costs to consumers by obviating middle-men.

Key developments in 2014

Mobile to be the most influential aspect of e-Commerce

With mobile apps being developed by most e-Commerce websites, smart phones are increasingly replacing PCs for online shopping. In 2013, only 10% of the mobile users used smart phones, and only 5% of the e-Commerce transactions were made through a mobile device. This figure has more than doubled, and more than 13% of all e-Commerce transactions today happen via mobile3. According to some industry players, over 50% of the orders are being placed through mobile apps, which is not only leading to substantial customer acquisition but also building customer loyalty for various brands. However, most mobile transactions so far are for entertainment, such as booking movie tickets and music downloads. This trend will change soon with more and more merchandise being ordered online.

More business coming from smaller towns

e-Commerce is increasingly attracting customers from Tier 2 and 3 cities, where people have limited access to brands

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 but have high aspirations. According to e-Commerce companies, these cities have seen a 30% to 50% rise in transactions.
Enhanced shopping experience

Besides general online shopping, customers are also shopping online for weddings and festivals, thanks to wider range of products being offered and aggressive advertisements. The free and quick shipment and wider choice of products, along with the ease of shopping online as compared to in-store shopping, is also helping e-Commerce gather momentum. Further, e-Commerce companies are doing rapid business due to sales. New concepts such as sales on weekends, holidays and festivals are attracting a lot of new customers and building customer loyalty among existing customers. Television and social media, particularly Facebook, are playing a proactive role in promoting e-Tailing through aggressive advertisements. This has helped several e-Commerce companies build substantial brand image.

Exclusive partnerships with leading brands

Over the year or so, there has been a trend of exclusive tie-ups between e-Tailers and established boutiques, designers, and high-end lifestyle and fashion brands. For instance, in 2014, Jabong added international fashion brands such as Dorothy Perkins, River Island, Blue saint and Miss Selfridge, along with local fashion brands through Jabong Boutiques. Similarly, Mynta benefited from exclusive tie-ups with brands such as Harvard Lifestyle, Desigual and WROGN from Virat Kohli.

Expanding the product basket

There is a recent trend of relatively newer products such as grocery, hygiene, and healthcare products being purchased online. Similarly, lingerie and Indian jewellery has also been in great demand among customers outside India. Export comprises 95% of cross-border e-Commerce, with the US, UK, Australia, Canada and Germany being the major markets.

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Key market factors to be evaluated before entering a new e-Commerce business

To achieve their vision, e-Commerce companies will need to understand the intricate landscape of new markets in addition to their own internal capabilities and limitations. The following factors must be considered:

- **Market size:** Before moving too aggressively into a new market, it is important to consider how sizeable the overall opportunity is.
- **e-Commerce readiness:** It is essential to fully understand the payment and logistical infrastructure, consumer behavior, retail opportunity and technological developments.
- **Scope of growth:** It is also important to look at the internet penetration, demographics of the online buying population & understand which phase of development each market is in.
- **Barriers to entry:** Players should understand the regulatory environment and connect with solution providers, content distribution networks, and digital agencies.
- **Competition:** There is also a need to do an in-depth assessment of what competitors are doing, their online strategy and the nature of each offering.

Conclusion-

The e-Commerce industry in India may currently be behind its counter parts in a number of developed countries and even some emerging markets. However, with India's GDP growth pegged at 6.4% by the International Monetary Fund and the World Bank, it is expected to grow rapidly. Moreover, the Indian e-Commerce industry has access to funds from within the country and international investors. Overall, the e-Commerce sector is maturing and a number of serious players are entering the market. What differentiates the Indian e-Commerce market from that of a country like China is that while market concentration in China

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 is largely on account of Alibaba-owned Taobao and Tmall (with these players holding a higher percentage of market share than the to players in most of the other major markets), in India the market share is divided amongst several ecommerce companies, each coming up with its own business model. As a result, customers have a wide range of products and services to choose from. In our view, there is humongous potential for e-Commerce companies owing to the growing internet user base and advancements in technology. However, this will not be without its share of challenges, be it operational, regulatory, or digital. How a company prepares itself to meet these challenges will decide whether or not it succeeds.

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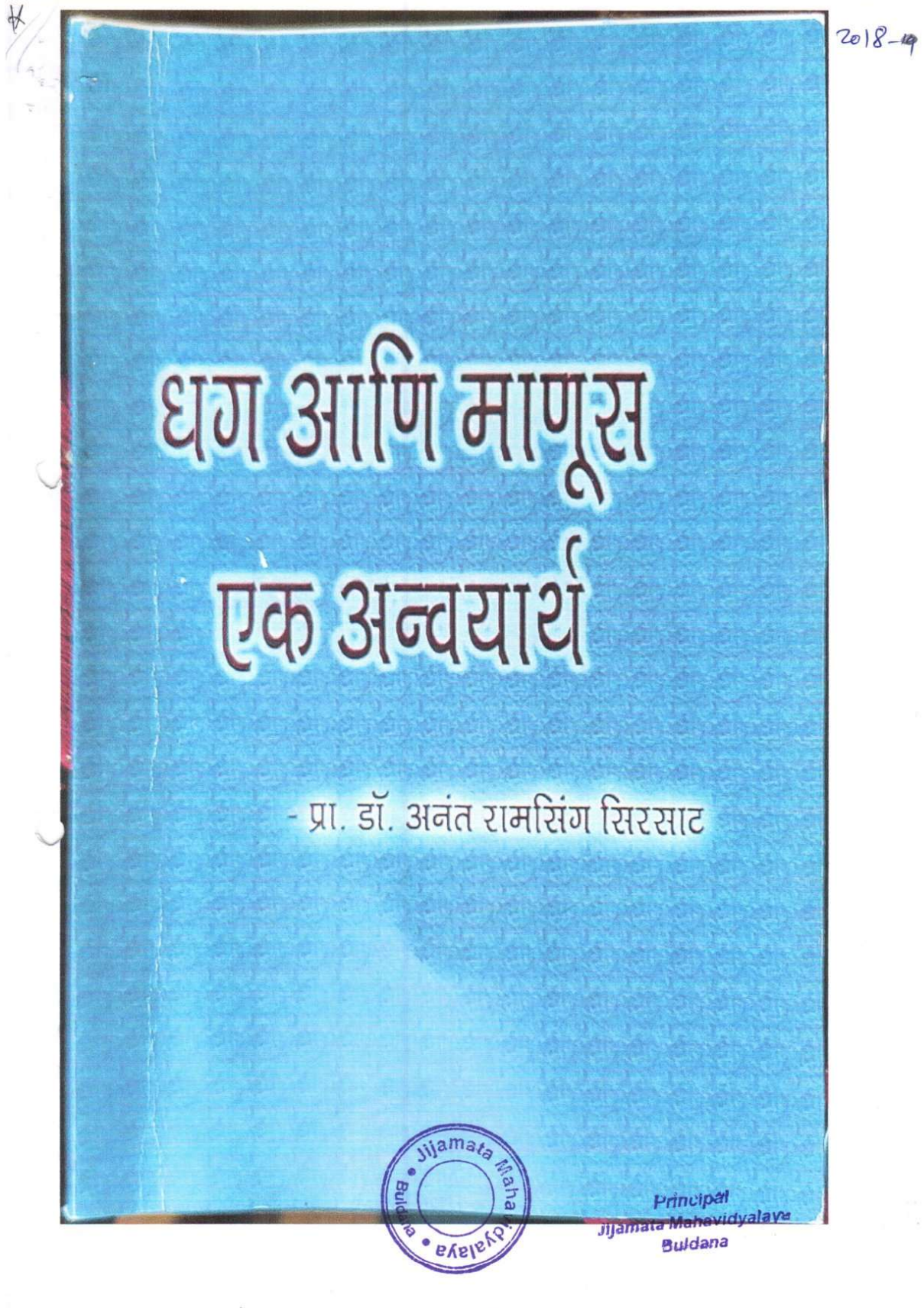
**Bancassurance:
 A win-win Model**



Dr. Prashant M. Pisolkar
 Asst. Professor & Head, Department of Commerce,
 Shankarlal Khandelwal Arts, Science & Comm. College, Akola (M.S.)

Introduction:

With the globalization and liberalization, the service sector has been witnessing a lot of changes. The life insurance industry in India has been progressing at a rapid pace since opening up of the sector in 2000. The size of the country, a diverse set of people combined with problems of connectivity in rural areas, makes insurance selling in India a very difficult proposition. The traditional distribution channels of insurance companies are costlier as the population of insurable over one billion in over country. Due to heavy competition among the insurers, they have to incur heavy distribution expenses. Life insurance companies require immense distribution strength and tremendous manpower to reach out to such a huge customer base. This distribution will undergo a sea change as various insurance companies are proposing to bring insurance products into the lives of the common man by making them available at the most basic financial point, the local bank branch, through "Bancassurance".



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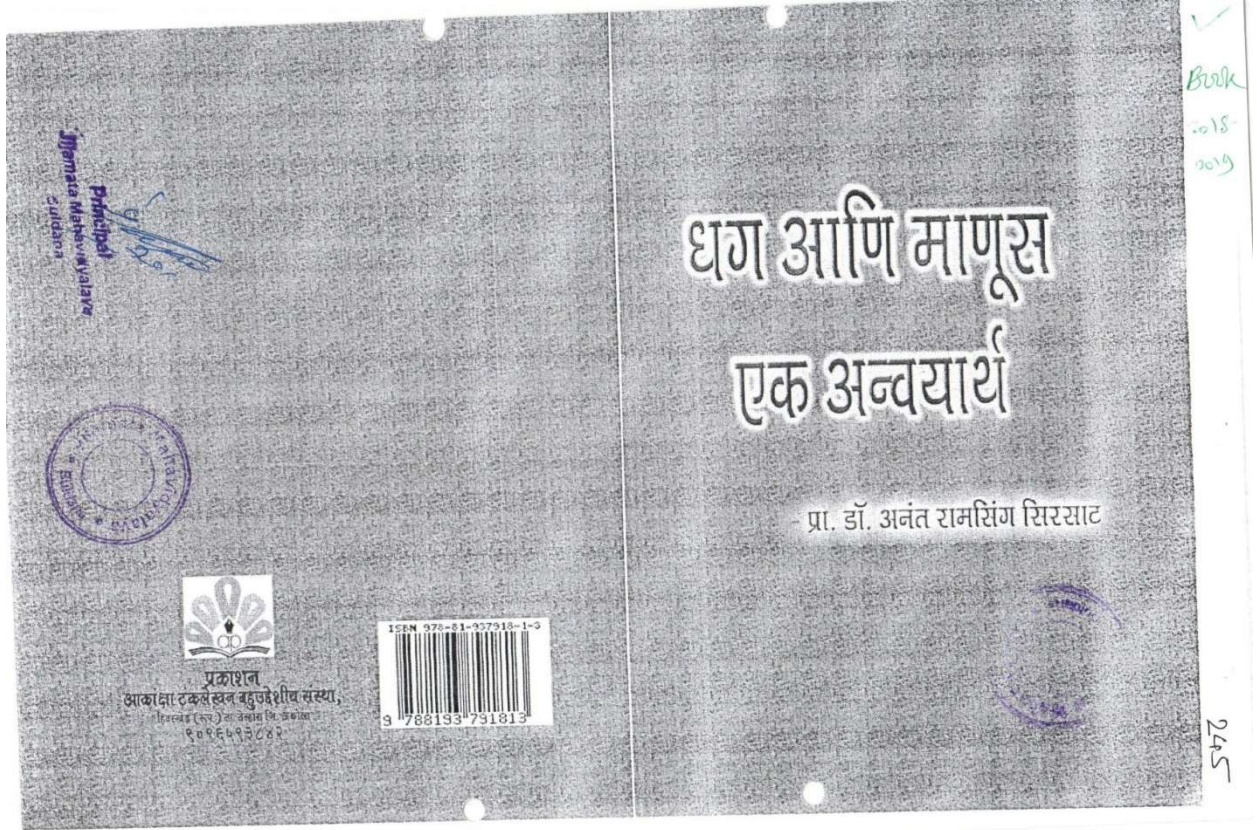
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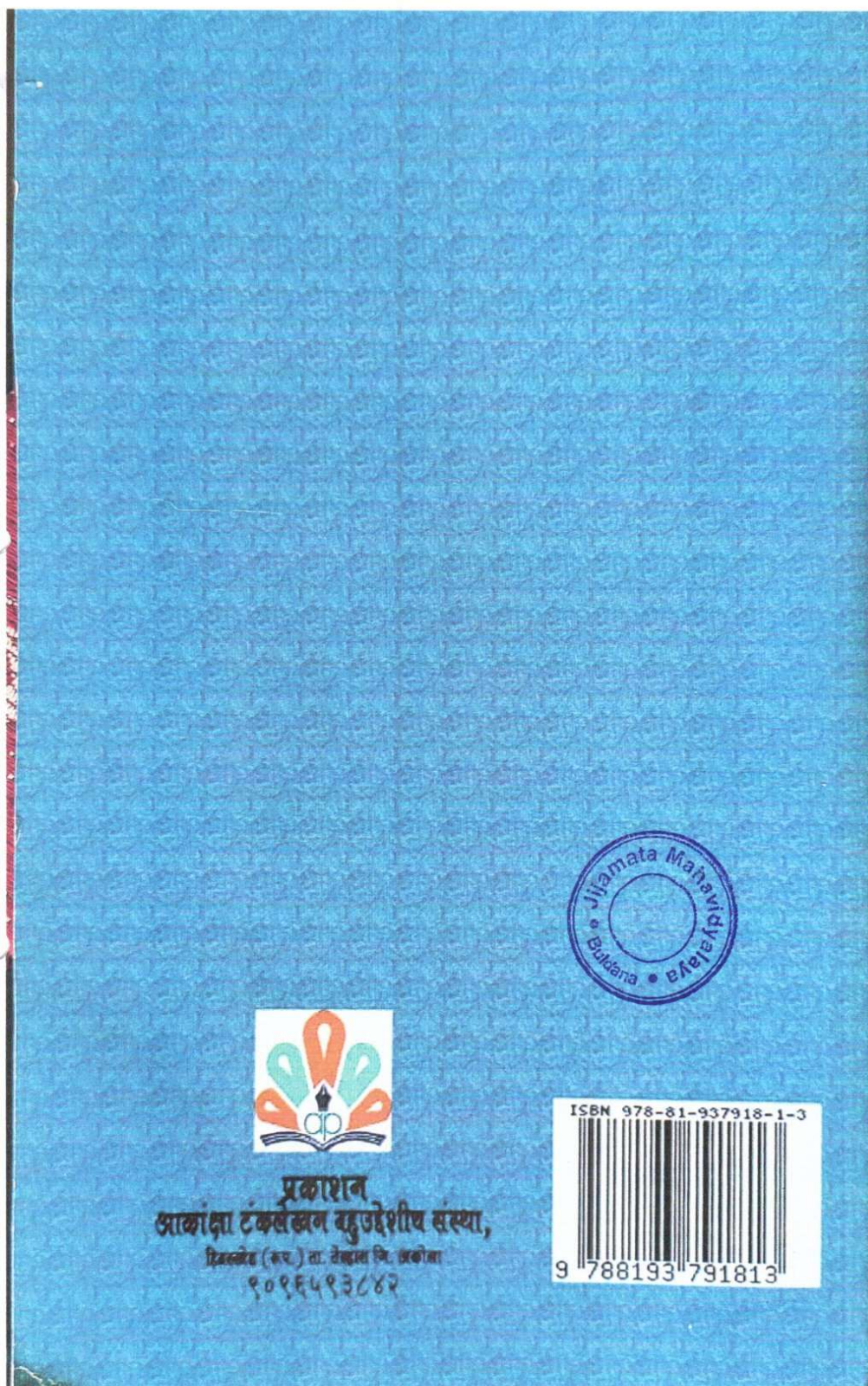
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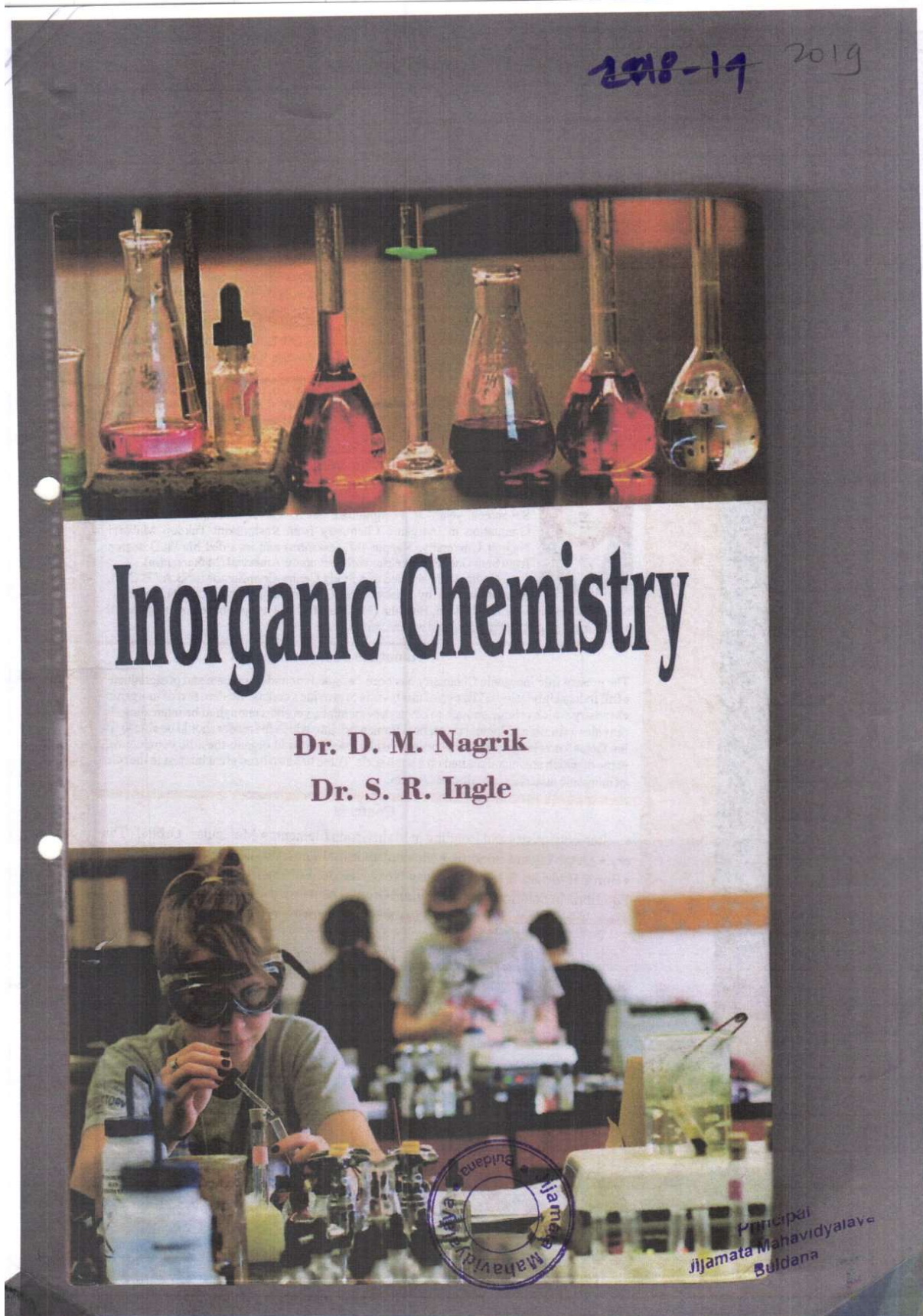
समाजजीवनाची नोंद करणारा वाङ्मयप्रकार म्हणून जन्माला आलेल्या कादंबरीत सामाजिक वास्तव हेच द्रव्य असते. सामाजिक वास्तव व व्यक्तिनिष्ठ वास्तव असे वास्तवाचे विभाजन होऊ शकत नाही. व्यक्ती आणि समाज यांच्यातले हे विभाजन सर्जनप्रक्रियेला परवडणारे नाही. समाजाला आधारभूत अशा प्रेरणांवरच आजच्या सर्व सौंदर्यकृती निर्माण होतात. सौंदर्याचे निकषही प्रायः समूहनिष्ठ असतात. संपूर्ण मानवी व्यक्तिमत्त्व मांडणे म्हणजेच माणूस व समाज यांमध्ये असलेले एकजिनसी संबंध मांडणे होय.

- भालचंद्र नेमाडे

धग आणि माणूस : एक अन्वयार्थ / ३







Inorganic Chemistry

About the Author



Dr. D. M. Nagrik is working as Assistant Professor at Department of Chemistry, Vidarbha Shikshan Prasarak Mandal's G. S. College, Khangaon (U. S. Maharashtra). He has teaching and research experience of Ten years at U.G. and P. G. level. He has published three patents on mutually important biologically active heterocycles. He is working as Editor in Chief for International research journal for innovations in Chemistry. He has completed his Post-Graduation in Inorganic Chemistry from Sant Gadge Baba Amravati University, Amravati (Maharashtra) and awarded his M.Phil. and Ph.D. degree from Sant Gadge Baba Amravati University, Amravati (Maharashtra).

He has been worked as a Buldana district NSS Coordinator, Sant Gadge Baba Amravati University, Amravati (Maharashtra). He also worked as a District Nodal officer (Skill Development) for Buldana District. He has dedicated his services and involvement with the environment related activities.



Dr. S. R. Ingle is working as Associate Professor and Head Department of Chemistry Jijamata Mahavidyalaya, Buldana (Maharashtra). He has teaching experience of Thirty one years at Undergraduate level and Seventeen years at Postgraduate level. He has completed his Post-Graduation in Inorganic Chemistry from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur (Maharashtra) and awarded his Ph.D. degree from Sant Gadge Baba Amravati University, Amravati (Maharashtra).

He has been worked as a Study Centre Coordinator for B.A / B.Com. programme run by Yashwantrao Chavan Maharashtra Open University, Nashik at Jijamata Mahavidyalaya, Buldana (Maharashtra). He has published many research papers in the journals of national and international repute.

About the Book

The present title Inorganic Chemistry has been designed for undergraduate and postgraduate of all Indian Universities. The aim of this book is to provide a concise modern text of inorganic chemistry which is large enough to cover the essentials, yet short enough to be interesting. It provides a simple and logical theoretical framework into which the reader should be able to fit his factus knowledge. There has been considerable interest in organo-metallic compounds, some of which are manufactured on a large scale. There has also been great interest in the role of inorganic materials in biological system.

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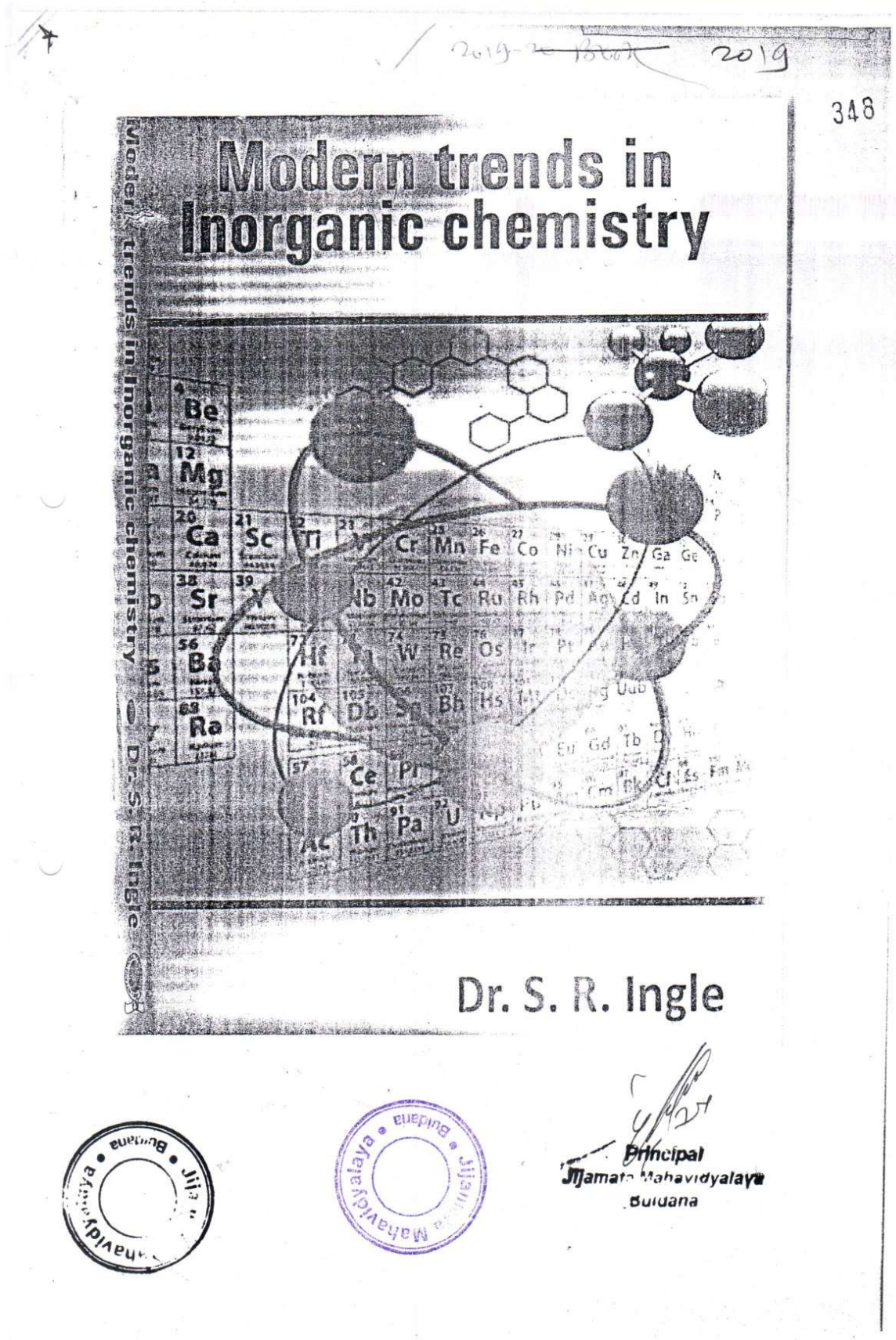
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Modern Trends in Inorganic Chemistry

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Modern trends in Inorganic chemistry

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About the Author

Dr. S. R. Ingle is working as Associate Professor and Head of Post Graduate Department of Chemistry at Shri Shivaji Education Society Amravati's, Jijamata Mahavidyalaya, Buldana (Maharashtra). He has teaching experience of Thirty two years at Undergraduate level and eighteen years at Postgraduate level. He took his undergraduate education from Shri Shivaji Arts, Commerce and Science College, Chikhli, District-Buldana. (Maharashtra). He has completed his Post- Graduation in Inorganic Chemistry from Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur (Maharashtra) and was awarded Ph.D.degree from Sant Gadge Baba Amravati University, Amravati (Maharashtra). He has been worked as a Study Centre Coordinator for B.A./ B.Com. programme run by Yashwantrao Chavan Maharashtra Open University, Nashik at Jijamata Mahavidyalaya, Buldana from July 1997 to Oct 2012. He also worked as a District Director for Buldana District as per appointment by Registrar, Yashwantrao Chavan Maharashtra Open University, Nashik (Maharashtra) from July 2012 to Dec 2013. He has dedicated his services and involvement with the Maharashtra Talent Search project conducted by Nowrosjee Wadia College, Pune (Maharashtra), for identifying potential youth and promoting them to achieve excellence in every walk of life. As mark of respect Nowrosjee Wadia College, Pune (Maharashtra) honored his contribution by awarding him a MTS Badge, Symbolizing as an Ideal Teacher.

About the Book

Inorganic chemistry, the study of all the elements and their compounds with the exception of carbon and its compounds, which fall under the category of organic chemistry. Inorganic chemistry is significant in all modern areas of life and science. It represents one of the fastest growing and exciting areas of scientific research. The impetus for this research is the practical essential role inorganic chemistry plays in biology, pharmaceuticals, and advanced materials. Inorganic compounds can be formally defined with reference to what they are not organic compounds. They may be classified by the elements or groups they contain. The major classes of inorganic polymers are silicones, silanes, silicates and borates. Today, industries such as microelectronics depends on inorganic chemical techniques for producing high purity films on single crystal chips. Their is just the tip of the iceberg. With intensified funding in research and improving tools and techniques, the scope of inorganic chemistry is continually widening to bring within purview such issues such as understanding the role of transition metals in the biochemical catalysts called enzymes. The purpose of this book is to make career aspirants well-informed well considered decision from among the available choices. Not primarily a do it yourself like career manual but nevertheless the book contains much that will assist people to manage their own careers better.

Contents

• Introduction • Classification of the Elements • Coordination Compounds • The Gas Phase • Chemistry of Elements • X-rays and Crystals • Electromagnetic Radiations • Polymers in Inorganic Chemistry • Atomic Force Spectroscopy • Covalent Bond



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Academic and Administrative Audit

Edited by Dr. B.U.Jadhav, Dr. Rohidas Nitonde and Dr. Vijay More

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17.

Role of Stakeholders in the Academic and Administrative Excellence of Higher Education Institution

Subodh N. Chinchole,

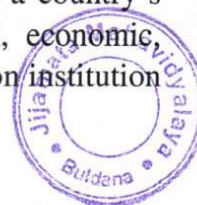
Asst. Professor, Jijamata Mahavidyalaya, Buldana (MS)

Abstract: The higher education institutions, as human resource centres, have to register a very significant contribution to a country's all-round and sustainable development. Therefore, the issues of quality and excellence in higher education need to be regularly addressed by the policy makers and reviewed frequently to assure a continuous enhancement in them. Academic and Administrative Audit (AAA) is one such measure globally accepted to ensure quality enhancement and proper execution of policies in higher education. However, implementation and execution of quality initiatives is not a simple job and as such it calls upon diverse elements to join hands and engage them in this herculean task. The various stakeholders of a higher education institution need to be motivated, organized and then actively engaged in various quality measures. So done, they can play a very vital and significant role in materializing the sustainable and result oriented development of the HEIs.

Key words/phrases: Higher Education Institution (HEI), Academic and Administrative Audit (AAA), sustainable development, stakeholders.

Introduction: Higher education institutions (HEIs) in any country are the main centres of human resource development and as such they are also the main vehicle of a country's sustainable and properly directed educational, economic, socio-political change. Therefore, if an education institution

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has to significantly contribute to the overall growth and development of the country, it must prepare itself to adequately cater to the diverse and changing needs of the learners. The students and parents as the direct stakeholders of an educational institution are the beneficiaries of institutional quality whereas the management, teachers, society and the nation too are benefitted with the quality enhancement initiatives and development of their institution. All these stakeholders, external and internal, have to be aware of their significant roles in the development of the higher education institutions and feel called upon to take initiatives and join hands to enhance the academic and administrative quality of the HEIs.

Today the rapidly changing overall global scenario is posing new challenges and newer demands before the higher education system of every country. These are accelerated day by day owing to the rapid technological progress, development of globalization and internationalism and the dwindling of the state and international borders. HEIs are being pressured to switch to the global market conditions and are expected to stand the highly competitive demands of the present era. In such situations they must search for adequate solutions and means of quality enhancement in terms of teaching-learning activities, research as well as execution of academic and administrative policies. This reiterates and underlines the growing need of proper benchmarking on the part of HEI with due focus on knowledge acquisition, capacity building, intellectual skill development, and progression of students to higher education and employment etc. This won't suffice again without a regular and systematic Academic and Administrative Audits (AAA) of the HEI so as to ensure its continuous progress towards excellence.



Defining the Objectives: For a fruitful engagement of its stakeholders, the HEI may design and clearly state its academic and administrative objectives and predefine the expected outcomes in terms of quality and excellence. In its brief advisory note NAAC has stated four major objectives of AAA-

- To understand the existing system and assess the strengths and weaknesses of the Departments and Administrative Units and to suggest the methods for improvement and for overcoming the weaknesses.
- To identify the bottlenecks in the existing administrative mechanisms and to identify the opportunities for academic reforms, administrative reforms and examination reforms etc.
- To evaluate the optimum utilization of financial and other resources.
- To suggest the methods for continuous improvement of quality keeping in mind criteria and reports by NAAC and other bodies. (A Brief Advisory Note, NAAC, Bengaluru)

It has also been made that there has been no specific methodology or guidelines prescribed for conducting AAA, rather HEIs shall study the good practices followed by leading institutions in India and abroad and evolve their own methodology keeping in view the national and institutional objectives. Here the HEIs are called upon to determine their own objectives conforming to the national objectives of higher education and evolve a methodology to serve their purpose.

Systematic Engagement of Stakeholders: Having clearly defined its objectives, the HEI is needs to prepare a blueprint of its plan of action for both short term and long term and



then systematically work on its implementation and execution with the view to achieve the set goals and output. At the same time a due attention is to be paid towards seeking frequent feedbacks from the concerned and reviewed by the experts for appropriate and necessary changes, if needed or suggested. Like any organization a HEI too consists of various interdependent and interrelated elements and sub-units either reciprocating or going contradictory to each other. “The importance attributed to stakeholder issues in contemporary higher education affairs across the globe is a reflection of the changing nature of the social pact between higher education and society”, opines Pinheiro in his article on ‘*The Role of Internal and External Stakeholders*’ (2015).

It comes here how the HEI manages and organizes all these factors synchronizing and directing them towards a common set goal or objectives. A systematic engagement of all its stakeholders is up to the institution and its administration. R. E. Freeman in his seminal book ‘*Strategic Management: A Stakeholder Approach*’ has stated as early as in 1984 that “an organization, which manages stakeholder relationships effectively will survive longer and perform better than an organization that does not” (Freeman, 1984). Different categories of the stakeholders of an educational institution generally consists a) Students, b) Ex-students or Alumni Association, c) Parents, d) Society and other Social organizations working in the vicinity of the institution. All of these groups of stakeholders have their own different capacities and potentials and may contribute to the institutional development by shouldering different responsibilities. Following are a few suggestions drawn from observations and experiences regarding the active role



played by stakeholders in the development of the higher education institution.

i) Financial support: A well organized and strong Association of the prominent Alumni is a great asset for any institution and may extend help in many ways including generous financial support volunteered to raise funds or create facilities for the students of the institution. Parents and other social groups may also share responsibilities by extending their generous hands of help.

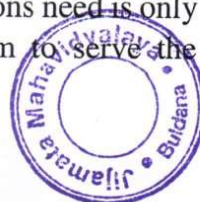
ii) Administrative support: Students, Alumni members and a few parents may be engaged in various administrative activities nominating them on different committees, organization of various academic, researches, extension activities and projects.

iii) Expertise: a well planned and systematic use of the expertise of stakeholders may also be of great benefit for the developmental initiatives of the HEI as such expertise may be made available without or with least financial burden on the institution.

iv) Collaborations and MOUs: It is often seen that alumni and parents are having distinctive positions in various Industries, GOs and NGOs and may help the institution in initiating more result-oriented or job oriented collaborations or MOUs.

v) Extension Activities/Projects: Stakeholder engagement in extension activities is one area where an institution can achieve excellence by satisfactorily discharging its duties as motivators and agents of wider societal change.

Apart from these innovative projects and activities may be designed and undertaken by resourceful and efficient faculties and stakeholders. What the institutions need is only to systematically and tactfully engage them to serve the



purpose of sustainable and more output oriented development of the higher education institutions.

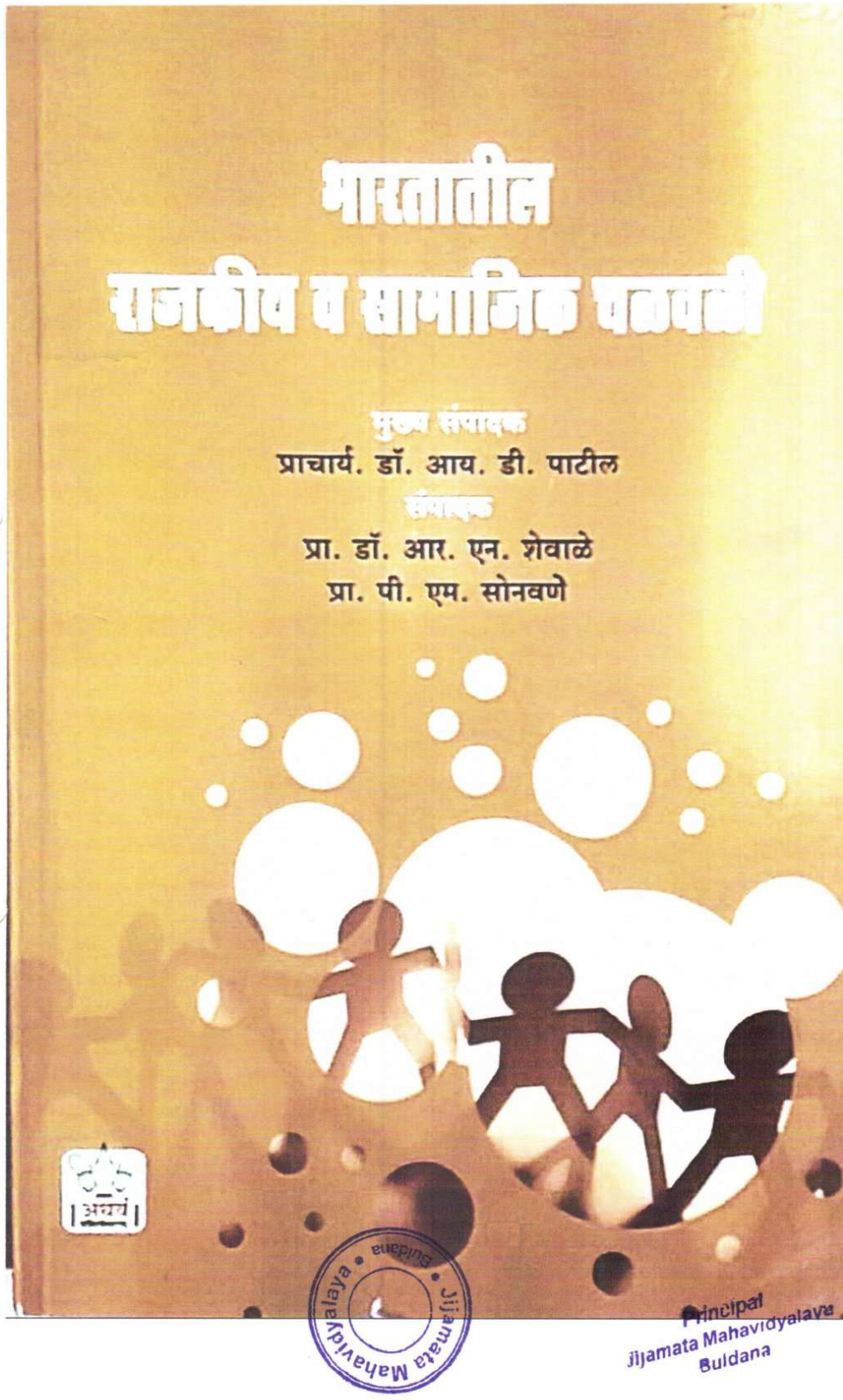
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2019-20

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भारतातील राजकीय व सामाजिक चळवळी



करण्यात आल्या.

दासबंधूच्या मृत्यूनंतर स्वराज्य पक्षाला चंद्रग्रहण लागले. वन्हाडातील बहुतांश नेत्यांनी असंख्य सदस्यत्वाचे राजीनामे देवून स्वराज्य पक्षातून बाहेर पडले. बी.जी. खापर्डे, डि.के.काणे, रा. अ. कानिटकर यांनी असंख्य राजीनामे दिले. डॉ. मुंजे व रा. अं. कानिटकर यांचा राजीनामा स्वीकारण्यात आला. यानंतर राजीनामे दिलेल्या सदस्यांनी दि. १४ फेब्रुवारी १९२६ रोजी अकोला येथे प्रतिसहकार पक्षाची प्रतिष्ठापना केली.

रा. अ. कानिटकर यांची गोलमेज परिषदेतील कामगिरी

वन्हाडाची स्थिती सुधारण्यासाठी आणि त्याला स्वतंत्र दर्जा देण्यासाठी तत्कालीन वन्हाडच्या आमदारानी फार मोठे प्रयत्न चालविले गेले. त्यासाठी 'स्वतंत्र वन्हाड संघ' स्थापन करण्यात आला. याद्वारे गोलमेज परिषदेकडे वन्हाडसंबंधी एक निवेदन पाठविले गेले. या निवेदनावर मध्यप्रांत-वन्हाडातील १८ आमदारांसह रामचंद्र अनंत कानिटकर-एल. एम. सी. वेस्ट बोर, यांच्या सहया होत्या.

वन्हाडच्या जनतेला आपल्या अधिकाराची मागणी करण्याकरीता व आमपत्याप्रती भावना व्यक्त करण्याकरीता वन्हाडातील नेत्यांनी एक वन्हाड सर्वपक्षीय समिती स्थापन केली. या समितीचे अध्यक्ष लोकनायक बापुजी अणे तर सचीव रा. अ. कानिटकर यांची निवड करण्यात आली.

वन्हाडच्या समस्यांचा विचार करण्याकरीता दि. १ व २ जून १९३१ रोजी खामगांव येथे सरदार वल्लभभाई पटेल यांच्या अध्यक्षतेखाली 'वन्हाड प्रांतिक सर्वपक्षीय राजकीय परिषद' भरविण्यात आली. भावी घटनेत वन्हाडला काहीतरी निश्चित स्थान प्राप्त झाले पाहिजे या हेतूने खटपट करण्याकरीता ही परिषद घेण्यात आली होती. वन्हाड प्रांतीचा दर्जा हिंदूस्थानच्या भावी घटनेत इतर प्रांतांच्या बरोबर असावयास पाहिजे, असे मत या परिषदेत व्यक्त करण्यात आले. विदर्भ राज्य स्वतंत्र केल्यास ते स्वतंत्रपणे व स्वातंत्र्योन्मी होवू शकते, हे विदर्भाचे उत्पन्न व खर्च लक्षात घेवून ठरविण्यात आले. विदर्भ जर मध्यप्रांताशी जोडलेला राहिला तर विदर्भाचे राजकीय व आर्थिक दृष्टीने नुकसान आहे, असे ठरावात मांडण्यात आले. या परिषदेत रा. अ. कानिटकर यांची भूमिका अत्यंत महत्त्वपूर्ण ठरली. या परिषदेत त्यांच्या पत्नी सी. माईसाहेब कानिटकर उपस्थित होत्या.

दि. २८ जुलै १९३१ रोजी वन्हाड प्रांतिक सर्वपक्षीय कमिटीने निर्णय घेवून खंड येथे होणाऱ्या दुसऱ्या गोलमेज परिषदेत रा. अ. कानिटकर वकील यांना वन्हाडच्या प्रश्नासंबंधी सर्व कारवाई करण्यासाठी पाठविण्यात यावे असे ठरविण्यात आले. रा. अं. कानिटकर यांनी यासाठी मान्यताही दिली. रा. अ. कानिटकर यांच्या कायदेमंडळातील कार्यकुशल व अभ्यास कामगिरीवरून, त्यांच्या

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पक्षातील विचारी व क्रियावान सभासदांचा विश्वास त्यांनी संपादन केला होता आणि म्हणूनच वन्हाडची कैफियत सरकार आणि संसद यांच्यापुढे मांडण्यासाठी अशा महत्त्वाच्या नाजूक राजकारण्यासाठी रा. अ. कानिटकरांची निवड वन्हाडतील कार्यकर्त्यांनी केली.

जातीय निवाडावरील रा. अ. कानिटकरांचा हल्ला

दि. १७ ऑगस्ट १९३२ रोजी मॅकडोनाल्ड यांनी घोषित केलेल्या जातीय निवाड्यात, हिंदू समाजातील दलीत-अस्पृश्य जातीजमातीसाठी विभक्त मतदार संघ देण्यात येतील, असे नमुद करण्यात आले होते. त्यामुळे या जातीय निवाडाबाबत सर्वत्र कडाडून हल्ला चढविण्यात आला. रा. अ. कानिटकरांनी मध्यप्रांताच्या कायदेमंडळात जातीय निर्णयावरील चर्चाच ठराव दि. २६ ऑगस्ट १९३२ रोजी आणला. परंतु या ठरावाच्या चर्चेस दिलेली मुदत न पुरल्यामुळे अर्धवट राहिली. परंतु पुढे मात्र रा. अ. कानिटकर यांनी आपल्या भाषणाद्वारे या जातीय निवाडाविरुद्ध जागृती करण्यास सुरुवात केली. पुणे येथील टिळक स्मारक मंदीरात भरलेल्या, श्वेतपत्रिकेला व जातीय निर्णयाला विरोधी असणाऱ्या महाराष्ट्रातील सर्व पक्षांच्या परिषदेत कानिटकर यांनी आपल्या भाषणात श्वेतपत्रिकेवर संडोटोड टिका केली. 'पांड्या खलित्यात हिंदूस्थानला जे हक्क देण्यात आले आहेत, त्यांची उभारणी अविश्वासावर झाली आहे. म्हणून ती व्यवहारात उपयोगी पडणार नाही. त्यात हिंदूस्थानचे राजकीय नुकसान झाले आहे. जातीय निर्णय हा पांड्या खलित्याचा पाया आहे' असे रा. अ. कानिटकर यांनी स्पष्ट केले.

१९३५ मध्ये सरकारने आगामी राज्यघटनेसंदर्भात जॉईंट सिलेक्शन कमिटी रिपोर्ट प्रसिद्ध केला. परंतु रिपोर्टचा ठिकठिकाणी घोरोघ करण्यात आला. निषेध सभा घेण्यात आल्या. मध्यप्रांत कायदेमंडळात या रिपोर्ट बाबतीत मते व्यक्त केली गेली. रा. अ. कानिटकर यांनी रिपोर्टवर आपल्या भाषणातून विरोधी व्यक्त केले. त्यांनी आपल्या रंगभूमीतील भाषणशैलीत नामदार रा. अ. कानिटकरांच्या विचारले. नामदार प्रॉस्टिंग करीत होते. अशाप्रकारे वन्हाड-विदर्भातील कौन्सिलरानी मध्यप्रांत कायदेमंडळात जॉईंट सिलेक्शन कमिटी रिपोर्टचा निषेध करीत, बहुमताने हा रिपोर्ट फेटाळून लावला. अशाप्रकारे कायदेमंडळात देखील त्यांनी कामगिरी महत्त्वपूर्ण बजावलेली दिसते.

१९३९ मध्ये दुसरे महायुद्ध सुरू झाले तेव्हा रा. अ. कानिटकरांची भूमिका वेगळी होती. परंतु ती देशहित साधणारी होती. या लढ्यात दोस्त राष्ट्रांच्या बाजूने राहण्यात भारताचे हित आहे असे त्यांचे मत होते. या संधीचा फायदा घेवून भारतातील तरुणांनी सैन्य, आरमार व नाविक दलात प्रवेश करून घेवून

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लष्करी शिक्षण संपादण्याची संधी साधावी असे त्यांना वाट होते. ते वीर सारकरांच्या विचाराचे समर्थक होते. १९४२ ते १९४५ याकाळात रा. अं. कानिटकर हे नॅशनल वॉर फ्रंटचे प्रांतिक संघटक होते. भारतात युद्ध मंदतीस काँग्रेसचा उध्व विरोध असल्याने जनमत युद्धप्रयत्नास पोषक निर्माण करावयाचे होते. त्यांनी हे प्रचारकार्य मध्यप्रदेशाच्या दहा मराठी जिल्ह्यात सातत्याने व निष्ठेने केले होते. यानंतर त्यांनी अखिल भारतीय हिंदूमाहासभेचे कार्य केले. ते नवी दिल्ली कार्यालयाचे सचिव सुध्दा होते. शंकरराव देव यांच्या नेतृत्वाखाली सुरू झालेल्या संयुक्त महाराष्ट्राच्या लढ्यात ते सहभागी झाले. संयुक्त महाराष्ट्रात वन्हाड का घालावा? याबाबत त्यांनी स्वतःचे प्रतिपादन उत्तम रीतीने केले. ते संयुक्त महाराष्ट्राच्या शिष्टमंडळात विदर्भातील सदस्य होते. अशा या वन्हाडतील अग्रगण्य नेता आणि घटनापंडीत दि. १ जून १९६२ रोजी बुलडाणा येथे काळाच्या पडद्याआड गेले.

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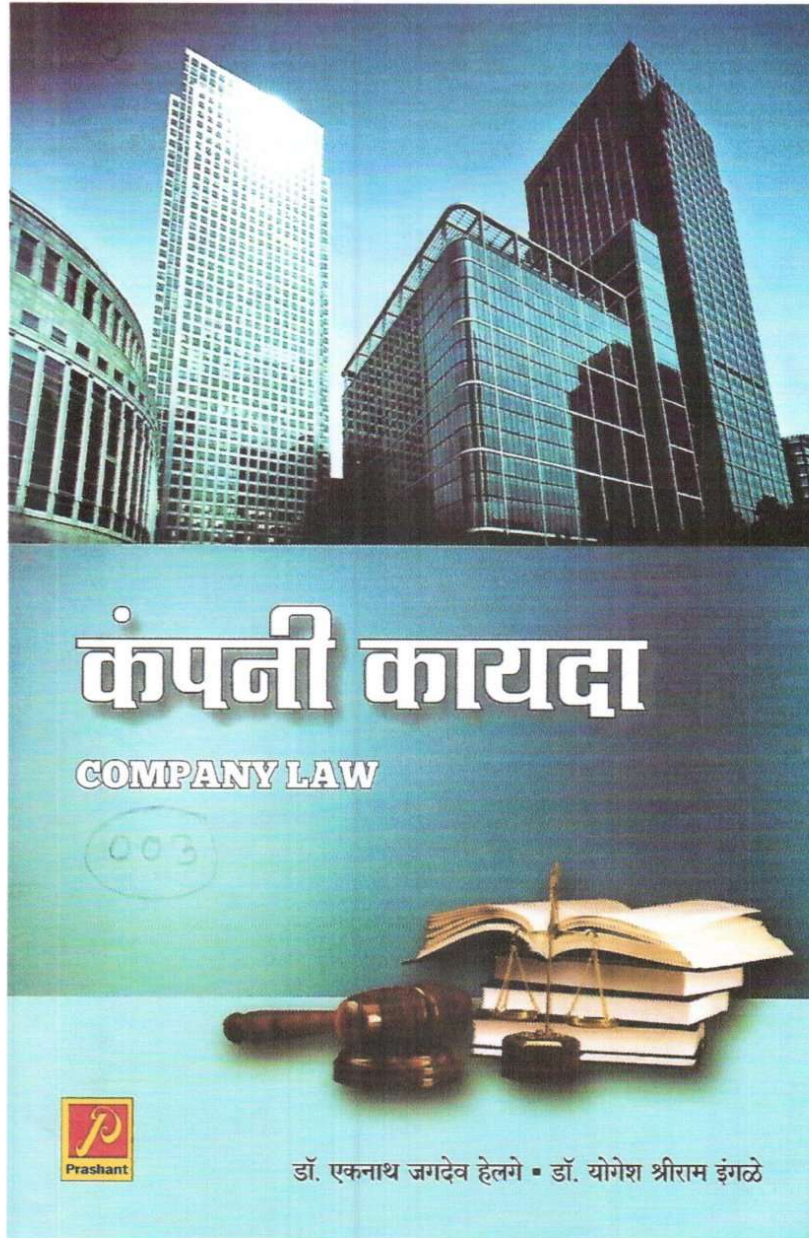
भारतीय स्वातंत्र्य संग्रामामध्ये क्रांतीकारकांनी केलेले कार्य अविस्मरणीय आहे. प्राचीन भारतावर ब्रिटिश राज्यकर्त्यांनी अनेक वर्षे राज्य केल्यामुळे भारतीय जनतेची ब्रिटिश सरकाराविषयी नाराजीची भावना निर्माण झाली होती. भारतीय जनतेवर अन्याय, अत्याचार, लाठीमार, बळजबरीने तुंगामध्ये टाकणे अशा अनेक घटनेमुळे भारतीय जनतेच्या मनामध्ये ब्रिटिश राज्यकर्त्यांविषयी असंतोषाची भावना हळूहळू निर्माण व्हायला सुरुवात झाली. इ.स. १८५७ मध्ये भारतीय जनतेचे ब्रिटिश राजवटीच्या विरोधात सशस्त्र उठाव केला. हाच उठाव भारताचे पहिले स्वातंत्र्ययुद्ध म्हणून ओळखले जाते. हा उठाव ब्रिटिश सरकारने निर्दयीपणे मोडून काढला. त्यामुळे ब्रिटिश सरकारला संघटीतपणे सशस्त्र लढा देण्याशिवाय पर्याय नाही. ही गौट भारतीय लक्षात आली. इ.स. १८५७ च्या उठावातील अपयशाने देशात नैराश्य निर्माण झाले असले, तरी ब्रिटिशांच्या विरोधात सशस्त्र उठाव चालूच राहिले.

भारत ही सुरवीरांची भूमी आहे. संयम, शांतता, सहनशीलता, सहानुभूती या मातृभूमीचे वैशिष्ट्य आहे. परंतु ज्यावेळी भारतभूमीवर अत्याचार, अन्याय, हिंसाचार निर्माण करण्याचा प्रयत्न झाला त्या त्यावेळी इथल्या जनतेनी एकजुतीने, प्रखरतेने त्या परिस्थितीला प्रतिउत्तर देण्याचे एकजुटीचे कार्य केलेले आहे. हा या भारत देशाचा इतिहास आहे. ब्रिटिश अधिकाऱ्यांकडून अनेक वेळा दडपशाहीचा प्रयोग करून बळजबरीने अत्याचार करून लूट करण्याचा चेडोवेडी प्रयत्न केला गेला.

भारतीय जनतेकडून ब्रिटिशांच्या अत्याचाराच्या विरोधात सशस्त्र उठाव चालूच राहिले त्यामध्ये महाराष्ट्रातील वासुदेव बळवंत फडके व पंजाबातील रामसिंह कुका व अनुयायांचे उठाव उल्लेखनीय ठरतात. परंतु हे उठाव एका व्यक्तीने प्रेरित केलेले असल्याने ब्रिटिश सरकारने ते सहजपणे दडपून टाकले. एकोणविसाव्या शतकाच्या शेवटी मात्र व्यक्तिनिष्ठ उठावाची जागा संघटित क्रांतीकारी चळवळीने घेतली. ही क्रांतीकारी चळवळ भारतीय स्वातंत्र्यसंग्रामात एक अविभाज्य अंग बनली क्रांतीकारी चळवळ म्हणजे प्रखर राष्ट्रवादाची किं- उर्मा होती. या चळवळीत अनेक भारतीय तरुणांनी सहभाग घेतला व ब्रिटिश

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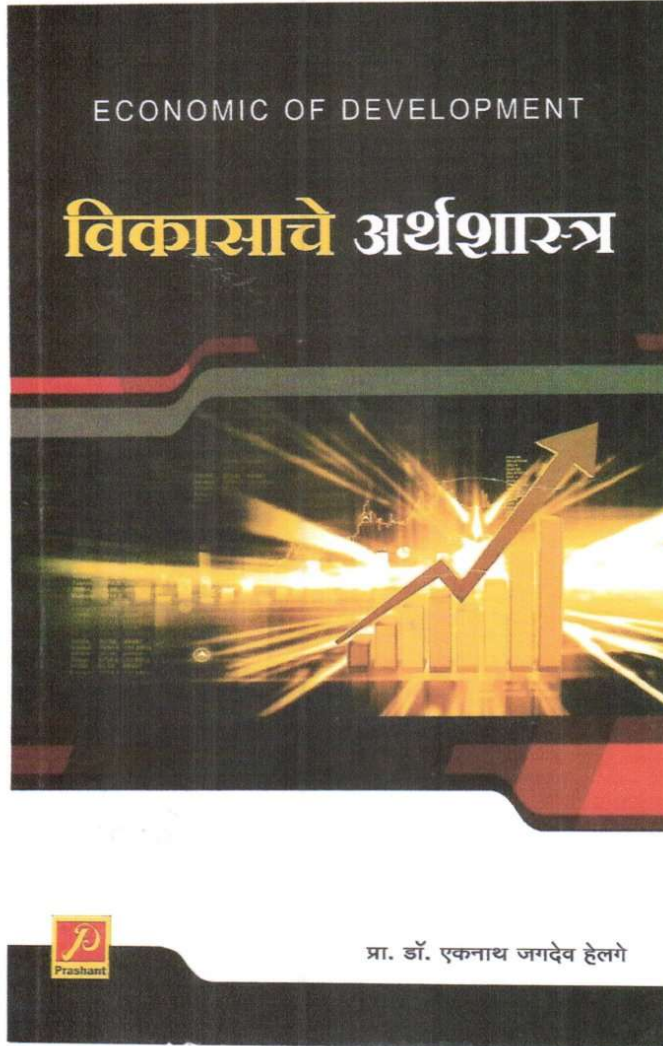
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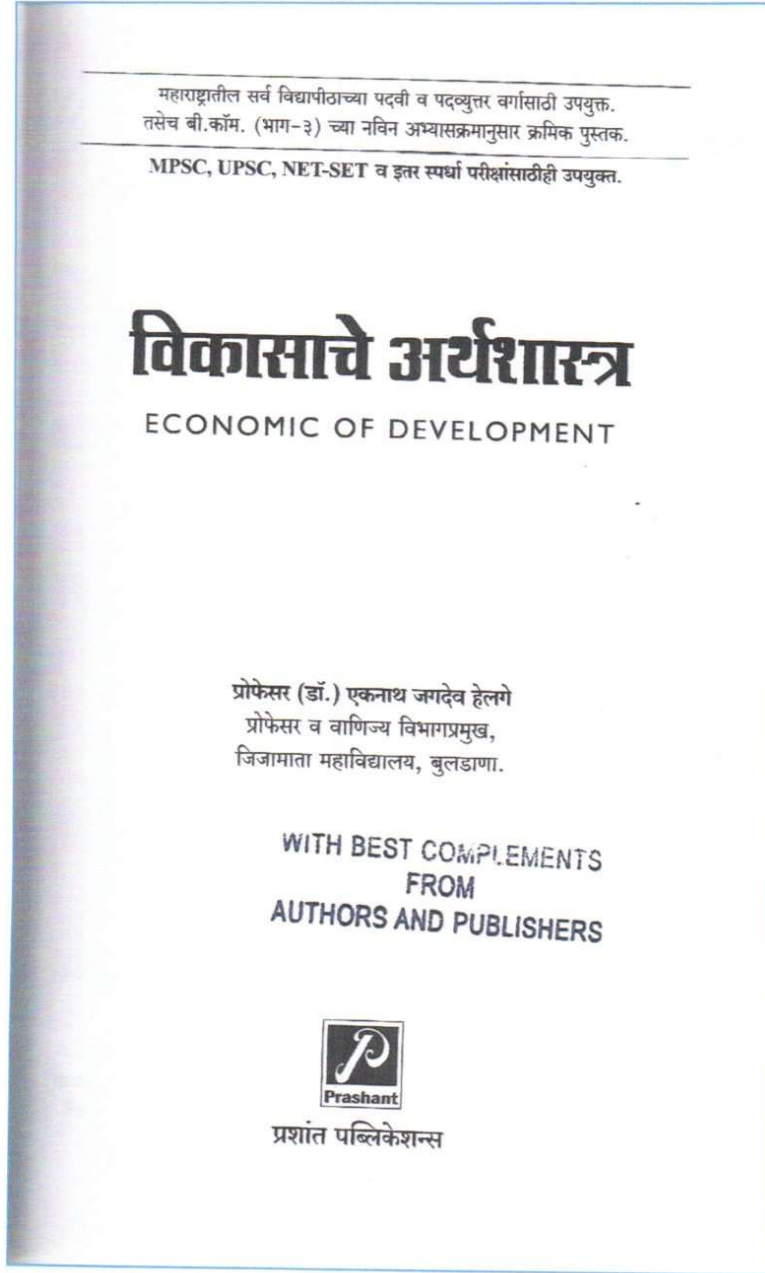
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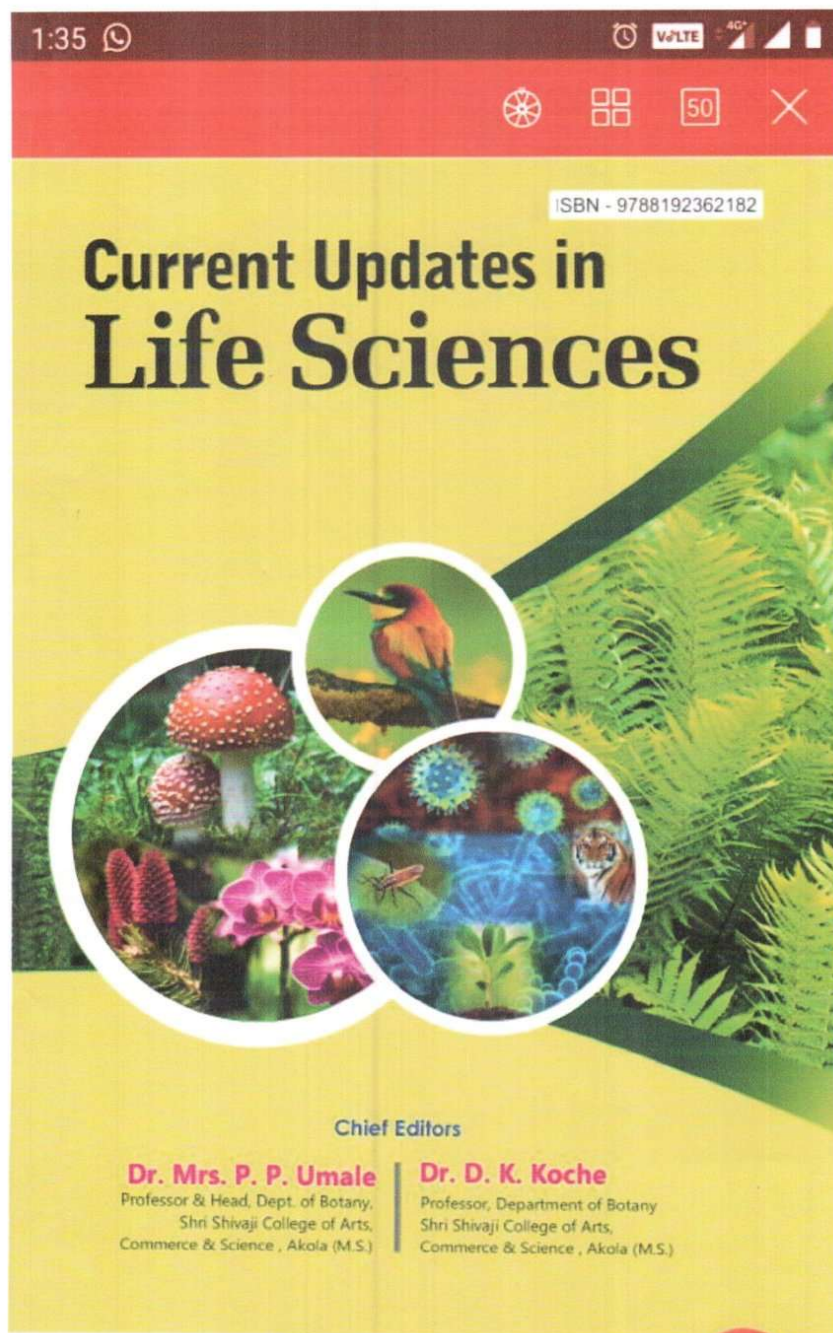
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DIVERSITY OF GEKKONIDAE SPECIES (WALL LIZARDS) IN BULDHANA REGION (MS) INDIA

V. R. Kakde and A. C. Thakur

Department of Zoology, Jijamata Mahavidyalaya, Buldana (M.S.) India
Email- vrkakde@gmail.com

ABSTRACT:

Lizards typically have feet and external ears. Vision, including color vision, is particularly well developed in most lizards, and most communicate with body language or bright colors on their bodies, as well as with pheromones. Buldhana is the westernmost district of Vidarbha region in Maharashtra, situated in the Tapi and Godavari basins Indian reptiles does not provide a basis for direct verification of the information presented. In this paper annotated checklist of wall lizards (Gekkonidae) in Buldana Town (M.S.) is going to report. Wall lizards were abundant and conspicuous where found. Adults and sub adults were seen almost exclusively around large cover objects (piles of logs and rocks, especially the latter) in open areas, but juvenile lizards were seen most of-ten in lightly vegetated areas, particularly tall, thin grassland were found out in the open away from cover much more frequently than adults. We almost never saw wall lizards in forests.

Key words: Checklist, lizards, Reptiles, annotated, juvenile, abundant, conspicuous

Introduction:

This very agile lizard is well named as it can often be seen basking, hanging from walls or rock faces. It is either green or brown with mottled marking along its flanks, and reaches a length of about 8-inches (20cm) with the tail making up to two thirds its overall length. The sexes apart can be difficult; however the male has a larger head and a thick-set neck. Sometimes the banding along the flanks of the female is more noticeable than that of the male. Females are significantly smaller than the male. It needs wall cavities in which to shelter, but also loose stones at ground-level, under which the lizard lays its eggs. Some vegetation is required to support the food chain of invertebrates, but too much vegetation does not suit this lizard as it is a lover of sunshine and requires open bare areas. Old stone garden walls are a particularly

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avourite habitat, although the wall must have a mix of vegetated portions and open basking spots. There should also be good vegetation at ground level to help to support the food chain. The wall lizard is adept at catching all sorts of invertebrates, with particular favorites' being crickets and grasshoppers, spiders caterpillars and woodlice. It will eat flying insects such as flies, moths and butterflies, and can often be seen athletically jumping to attempt to catch a passing meal. The wall lizard will make use of any dry, frost-free refuge, although it has a strong preference for cracks and voids stone: whether this is in an old stone wall, a cliff face or paving slabs. If stone is unavailable, it will readily make use of any hollows found in debris or rubble. It is an accomplished digger, and will readily burrow if no natural shelter is available.

The district is situated partly in Tapi basin and partly in the Godavari basin. Buldana is situated between 19°.51' and 21 °.17' North latitudes and 75°.57' and which 1,558 sq. km. (1984-85) are constituted of forests, which comes to less than 16% (1984-85) of the total area of the district. The monumental works on Indian reptiles are, 'The Reptiles of British India' by Gunther (1860), 'Fauna of British India - 'Reptilia and Batrachia' by Boulenger (1890) and Smith (1931, 1935, 1943). The work of Smith stood the test of time and forms the standard work on the subject. Further contributions were made by Tiwari & Biswas (1973), Murthy (1994, 2010), Das (2003), Tikedar & Sharma (1992), Das & Bauer (2000), Das (2000), Daniel (2002), Sharma (2007), Das and Vijayakumar (2009), Giri (2008), Giri & Bauer (2008), Giri, et al (2009a), Giri et al (2009b) and Venugopal (2010). In Satara District of Maharashtra, the research belonging to lizards like The diversity and distribution of the Six Families of the Order Squamata was studied by Sayyed and Bhagwat (2009), but no considerable work or study was undertaken in Buldhana district of Maharashtra. Species listings or checklists, which contain such primary and compiled species-occurrence data, play a vital role in providing information on the number of species occurring in different regions across different spatial scales (local, regional, national and global).

Validity of the species listed in the earlier checklists of India published in the past two decades has been reviewed. Among the publications pertaining to reptilian taxonomy and species occurrences in India the works of Malcolm Smith (1931, 1935a, 1943), though more than half a century old, still remains the most important contribution (Das 2003). Over the past two decades many checklists of reptiles of India (Murthy 1985; Murthy 1990; Tikader & Sharma 1992; Das

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1997a; Das 2003), sometimes including adjacent countries (Das 1994; Das 1996a; Sharma 2002) have been published. An apparent inadequacy of the above-mentioned checklists of Indian reptiles published over the past 20 years is that species with valid distributional records are not differentiated from those with questionable records.

Materials and Methods:

In the present study, the ecology and behavior of lizard fauna in the Buldhana Town (M.S.) was examined. During the study some of the methods and protocols will be followed to study the ecology and diversity of lizards in Buldhana region (M.S). To study the ecology and diversity of lizard fauna in Buldhana Town (M.S). The study will be done in different regions of Buldhana with reference and on basis of availability of the species. After collection and detection it will be photographed and identified with the help of the different bases like phenotypic characters like body, color, shape and size for the identification and study of collected and observed species keys and methods like Daniel (2002) will be used. The statistical analysis of diversity will be made by computer program PAST (Hammer et al. 2001).

Observations and Results:

Presented study was carried out during 2016-17. It reveals 06 species of wall lizards from the study area. Based on the distributional records available, validity of the species listed in the earlier checklists of India published in the past two decades has been reviewed.

Table :1 Annotated Checklists of Lizards observed from Buldana District (MS)

S. N	Family / Species	Common name	IUCN*	Status
	Gekkonidae			
1	<i>Hemidactylus brooki</i>	Brook's house gecko	LC	Rare
2	<i>Hemidactylus flaviviridis</i>	Yellow-green House Gecko	LC	Common
3	<i>Hemidactylus frenatus</i>	Asian house gecko	LC	Frequent
4	<i>Hemidactylus giganteus</i>	Common giant gecko	NE	Rare
5	<i>Hemidactylus leschenaultia</i>	Common bark gecko	LC	Abundant
6	<i>Hemidactylus triernis</i>	Termite hill gecko	NT	Rare



Discussion:

Gehyra mutilata, *Gekko gekko* and *Gekko smithi* are very adaptable to its surroundings, although it usually prefers woodlands, rocky areas, and human dwellings. *Hemidactylus* are commonly found in Gardens and rocky areas also in agricultural fields. The common wall lizard is a thing of great beauty when seen like this. The ecological impacts of having perhaps one-quarter million introduced lizards running about can't be good, but it is difficult to ascertain with certainty exactly what damage they have done. Wall lizards, given their success, must have had a role in reducing native lizards such as eastern fence lizard and five-lined skink, which are rare or absent where the wall lizard occurs although both used to occur in this area. Brown (1992) made a plea for standardizing the distributional records of Indian reptiles almost two decades ago. However, drawing a standardized format for publishing species checklists is an important task to be undertaken, in order to verify and validate the species occurrence data and also to prevent perpetuation of mistakes. The Conservation Assessment and Management Plan (CAMP) for Indian reptiles (Molur & Walker 1998) which formed the IUCN red list of Indian reptiles used the checklist list provided by Das (1997a) as the starting reference point for the number of reptiles in India. However, Das (1997a) contained many erroneous inclusions and omissions and the standard of reporting does not provide means to directly verify the quality of information presented.

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इंदिरा गांधीच्या काळातील भारताचे रशिया व अमेरिकेशी असलेले संबंध

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सहयोगी प्राध्यापक व इतिहास विभाग प्रमुख

जिजामाता महाविद्यालय, बुलडाणा

कोणत्याही देशाच्या सर्वांगीण विकासासाठी इतर राष्ट्रांशी मैत्रीपूर्ण संबंध ठेवणे महत्त्वाचे असतात. प्राचीन काळापासून दृष्टीक्षेप टाकला असता भारताचे जगातील इतर देशांशी बऱ्याच प्रमाणात सौहार्दाचे संबंध होते. मात्र भारत जेव्हा ब्रिटिश राजवटीखाली आला तेव्हापासून भारताचे अंतर्गत धोरण असो किंवा परराष्ट्र धोरण हे ब्रिटिश सरकारच ठरवित असे. त्यांच्या वसाहतवादी हेतूने प्रेरित परराष्ट्र धोरणामुळे भारताच्या जगातील इतर देशांशी असणा-या संबंधांमध्ये बदल होत गेला. ब्रिटिश सत्ता आपल्या स्वार्थी भूमिकेतून इतर राष्ट्रांशी संबंध ठेवित असे. त्यामुळे राष्ट्रीय चळवळीतील भारतीय नेत्यांनी देशाचे सर्वस्वभोमत्त्व, अखंडत्व आणि शांततापूर्ण सहअस्तित्त्व या तत्त्वांवर आधारित त्यांनी परराष्ट्र धोरणाचा पुरस्कार केला आणि भारतासंबंधी असणाऱ्या ब्रिटिशांच्या धोकादायक परराष्ट्र धोरणावर वारंवार विरोध दर्शविला. भारतीय स्वातंत्र्य लढा सुरु असतांना भारतीय नेते आंतरराष्ट्रीय देशांच्या घडामोडींचा अभ्यास करीत असत. तसेच त्यांचे अनेक देशांशी संबंध प्रस्थापित झाले. आंतरराष्ट्रीय परिघट्टांमध्ये सुध्दा काँग्रेसचे प्रतिनिधी उपस्थित राहत असत. त्यामुळे निरनिराळ्या देशातील परिस्थिती, त्यांच्या समस्या यांची माहिती भारतीय नेत्यांना मिळत होती. त्यामुळे परराष्ट्रीय धोरणबाबतचा भारतीय नेत्यांचा दृष्टिकोन व्यापक बनला आणि जागतिक राजकारणात स्वतंत्र भारताची भूमिका कशी राहिल याविषयी कल्पना स्पष्ट होत गेल्या.

स्वातंत्र्यानंतर भारतीय नेत्यांनी ब्रिटिशांच्या धोरणाचा त्याग केला आणि आपल्या देशाच्या स्वहिताच्या दृष्टीने आपले स्वतंत्र धोरण राबविण्यास सुरुवात केली. तत्कालिन भारताचे पहिले पंतप्रधान व परराष्ट्र धोरणाचे शिल्पकार पंडीत जवाहरलाल नेहरू यांनी ब्रिटिश राजवटीच्या परराष्ट्र धोरणातील कटू अनुभव लक्षात घेवून भारताचे परराष्ट्र धोरण अखले प्रादेशिक अखंडत्वाचे संरक्षण, जागतिक शांतता

राखणे, परराष्ट्रीय धोरण ठरविण्याचे स्वातंत्र्य टिकविणे, भारताचा आर्थिक विकास साध्य करणे, वंशभेदाचे निमूलन करणे, अलिप्तवादाचा स्वीकार करणे, शेजारी असलेल्या राष्ट्रांशी मित्रत्वाचे संबंध ठेवून सहकार्य करणे, साम्राज्यवाद व वसाहतवादाला विरोध करणे, साम्राज्यवादी युद्धांचा धिक्कार करून जागतिक शांतता टिकविण्याचा प्रयत्न करणे ही तत्त्वे भारताच्या परराष्ट्रीय धोरणाला आधारभूत ठरतील, हे काँग्रेसने वेळोवेळी पास केलेल्या उरावावरून स्पष्ट झाले होते. 1 अशाच प्रकारच्या परराष्ट्रीय धोरणाचा पुरस्कार श्रीमती इंदिरा गांधी यांनी आपल्या कारकिर्दीत केल्याचे निर्दर्शनास येते.

लाल बहादूर शास्त्री यांच्या आकस्मिक निधनानंतर श्रीमती इंदिरा गांधी हया दिनांक 24 जानेवारी 1966 रोजी भारताच्या पंतप्रधानपदी विराजमान झाल्या तेव्हा त्यांच्यासमोर अनेक होत्या. त्या एक स्त्री पंतप्रधान असल्यामुळे तर त्यांना विरोधकांचा मोठा सामना करावा लागला. सत्तेवर आल्यावर देशाच्या अंतर्गत समस्यांबरोबरच आंतरराष्ट्रीय संबंध जोपासणे हा सुध्दा महत्त्वाचा प्रश्न होता. परंतु श्रीमती इंदिरा गांधी हया पं. जवाहरलाल यांच्या कन्या होत्या. त्यांना आपल्या वडीलांकडून देश आणि आंतरराष्ट्रीय पातळीवरील राजकारणाचा अभ्यास झालेला होता. म्हणूनच परराष्ट्र धोरणाच्या क्षेत्रात श्रीमती इंदिरा गांधींनी आपल्या पित्याचे असंलग्नतेचे आणि शांततामय सहजीवनाचे ध्येय कधीही दृष्टीआड होऊ दिले नाही. जवाहरलालांप्रमाणे त्या जागतिक शांतीच्या कट्टर पुरस्कर्त्या होत्या. तसेच परकीय अंमलाखाली असलेल्या राष्ट्रांच्या स्वातंत्र्यप्राप्तीच्या प्रयत्नांना त्यांचा पूर्ण पाठिंबा होता. कोणत्याही प्रकारचे शोषण गर्हणीय आहे, आणि राजकीय व लष्करी गटांमुळे जागतिक शांततेला धोका निर्माण होतो अशीच इंदिरा गांधींची धारणा होती. 2

अमेरिका-रशिया या दोन बड्या राष्ट्रांच्या शीतयुद्धात भारतासमोर आंतरराष्ट्रीय राजनैतिक क्षेत्रात मोठा पेंचप्रसंग निर्माण होत होता. साम्यवादाच्या गोटात भारत जाणार की काय अशी सतत भीती अमेरिकेला वाटत होती. त्याच कारणाने जगातील सर्व आर्थिक दुबल राष्ट्रांना अमेरिका आर्थिक पुरवठा करीत असे. मात्र भारत कधीही कोणत्याही एका गोटात सहभागी झाला नाही. पं. नेहरूंच्या काळापासून भारताने स्वीकारलेले अलिप्ततावादी धोरण श्रीमती इंदिरा गांधी यांनीही पुढे अमलात आणले.

तटस्थ धोरणाच्या पुरस्कर्त्या श्रीमती इंदिरा गांधी :

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आंतरराष्ट्रीय जागतिक राजकारणात कोणत्याही दोन महासत्तांच्या एका गटात सामील न होता तटस्थ्याची भूमिका स्विकारणे इंदिरा गांधींना योग्य वाटले. आणि म्हणूनच सत्तेवर आल्या आल्याच सोव्हिएत रशियाला भेट देण्यापूर्वी त्यांनी भारत, युगोस्लाव्हिया आणि युनाटेड अरब गणराज्य या तीन राष्ट्रांची एक शिखर परिषद नवी दिल्ली येथे जुलै 1966 मध्ये भरविली. तटस्थ धोरण हे सध्याच्या स्थितीमध्ये भारताला उपकारक आहे हे दाखविण्याचा श्रीमती इंदिरा गांधींचा त्यात हेतू होता. 3 इंदिरा गांधींनी तटस्थेचा पुरस्कार करीत इतर देशांशी स्नेहाचे आणि मैत्रीपूर्ण संबंध ठेवण्याचा प्रयत्न केलेला निदर्शनास येतो.

भारत-रशिया संबंध :

1966 च्या जुलै महिन्यात इंदिरा गांधी हया मास्को येथे गेल्या त्यावेळी सोव्हियत नेते त्यांच्याशी अत्यंत सांभाळून वागले. त्यांनी एकदाही आपल्या चर्चेत काश्मीर किंवा रुपयाच्या अवमुल्यानाचा विषय किंवा वॉशिंग्टन हे इंदिरा गांधींवर कसे दडपण आणित आहे याचा चुकूनही उच्चार केला नाही. उलट इंदिरा गांधींनी जी आश्वासने दिली ती जगाच्या कल्याणाच्या दृष्टीने किती आवश्यक आहेत हे पंतप्रधान कोसिजीन यांनी वारंवार सांगितले. भारत तटस्थ धोरणाचा कधीही त्याग करणार नाही आणि व्हिएतनाममधील प्रतिक्रियावादी अमेरिकन सैन्याचा आम्ही निषेध करतो असेच त्या दिलेल्या वचनात आले होते. यावर अमेरिकेच्या स्टेट डिपार्टमेंटची त्वरित प्रतिक्रिया आणि त्यांनी आपली निराशा व दुःख इंदिरा गांधींना कळविले. 4

देशाच्या उन्नतीसाठी किंवा युद्धपेचप्रसंगाच्या काळात रशिया भारताच्या बाजूने सक्षमपणे वारंवार उभा राहिलेला दिसतो. स्वातंत्र्यानंतर अनेक अडीचणीत सापडलेल्या भारताला रशियाने मदत केली होती. भारत-रशिया सलोख्याला उपकारक ठरलेली बाब म्हणजे, जागतिक शांतता, वंशवर्णभेद, साम्राज्यवाद व वसाहतवाद विरोध याबाबतची दोन्ही राष्ट्रांची नीती समान होती. 1955 मध्ये पं.नेहरुंनी रशियाला दिलेली भेट तर दोन्ही राष्ट्रांत सामंजस्य व जवळीक निर्माण होण्याच्या दृष्टीने अत्यंत महत्त्वपूर्ण ठरली. त्यांच्या 15 दिवसांच्या मुकामात भारताच्या असंलग्नता नीतीबद्दल स्पष्ट कल्पना नेहरुंनी रशियाला दिली होती. पुढेही या दोन राष्ट्रांची मैत्री कायम राहिली.

1970 मध्ये पाकिस्तानमधून आलेले लोकांचे लोंढेच्या लोंढे भारत सरकारपुढे मोठेच राजकीय व आर्थिक समस्या निर्माण करणारे ठरले. भारतापुढे उभ्या ठाकलेल्या गंधीर समस्येबाबत खरी परिस्थिती बडया राष्ट्रांपुढे ठेवण्याच्या हेतूने श्रीमती इंदिरा गांधी यांनी

स्वतः परदेशाचे दौरे केले. पण बडया राष्ट्रांनी कोणतीही हालचाल केली नाही. भारत-पाक युद्ध भडकलेच तर त्यात अमेरिका व चीन यांची गुंतागुंत होईल की काय या धास्तीने जुलै 1971 मध्ये इंदिरा गांधी यांनी आपले परराष्ट्र मंत्री स्वर्णसिंग यांना सोव्हिएत सरकारशी बोलणी करण्याकरिता मास्को येथे पाठविले. या परिस्थितीतून भारत-रशिया करार जन्माला आला. 5 यानंतर ऑगस्ट 1971 मध्ये रशियन परराष्ट्र मंत्री ग्रेमिको नवी दिल्ली येथे आले. 9 ऑगस्ट 1971 रोजी स्वतः श्रीमती इंदिरा गांधींनी जी भेट सोव्हिएत रशियाला दिली त्याचा परिणाम म्हणून भारत व रशिया यांच्यात 20 वर्षांकरिता एक मैत्रीचा करार झाला.

चीनने पाकिस्तानातील अंतर्गत कारभारात हस्तक्षेप केला म्हणून रशियाशी हा करार भारताला करावा लागला. भारताने तटस्थ धोरणाचा त्यामुळे त्याग केला असा याचा अर्थ नव्हता. इंदिरा गांधींच्या वस्तुनिष्ठ धोरणाचा तो विजय होता. 6 या करारामुळे भारतावर बरीच टिका झाली. हा लष्करी करार आहे, भारताच्या असंलग्नता नीतीला हरताळ फासला गेला आहे, भारत रशियाच्या गोटात सामील होत आहे असे आरोप करण्यात आले. परंतु या करारात लष्करी मदत देण्याची कोणतेही तरतूद नव्हती. तसेच या करारात रशियाने भारताच्या असंलग्नता धोरणाला मान्यता दिलेली होती. राजनैतिक पेचप्रसंगाचेवेळी विचारविनिमय करण्याची तरतूद केवळ प्रादेशिक शांतता टिकविण्याकरीता करण्यात आली आहे, असा तर्कवाद करून श्रीमती इंदिरा गांधींनी विरोधकांचे सर्व आक्षेप खोडून काढले. हा करार म्हणजे वर्षानुवर्षांच्या भारत-रशिया मैत्रीचा परिपाक असून तो भारत-रशिया यांच्याच केवळ नव्हे तर जागतिक शांततेला हितावह ठरणारा आहे असे इंदिरा गांधी म्हणाल्या होत्या. एका फार मोठ्या संकटाला तोंड देण्याकरिता या कराराने भारताला पाठबळ व शक्ती मिळाली. युद्ध भडकलेच तर करारांतर्गत सर्व सहाय्य रशिया भारताला करेल असे आश्वासन रशियन सरकारने भारताला दिले.

1971 च्या भारत-रशिया मैत्री कराराचे चांगले फलित लवकरच दिसून आले. पाकिस्तानने 3 डिसेंबर 1971 रोजी भारतावर आक्रमण केले. याचवेळी अमेरिकेने पाकिस्तानला मदत करण्यासाठी बंगालच्या उपसागरात 'युरसएस' या विमानवाहू नौकेसह 'सातवे आरमार' पाठविले. अशारितीने अमेरिकेने भारतावर दडपण आणण्याचा प्रयत्न केला. तेव्हा याचा पहिला निषेध रशियाने केला. 'पूर्व बंगालमधल्या पाकिस्तानी सैनिकांचे मनोधैर्य वाढावे आणि भारत सरकारवर जास्तीत जास्त दडपण यावे यामागे अमेरिकन सरकारचा हेतू आहे' असे सोव्हिएत रशियाने जाहीर केले. यावेळी खबरदारी म्हणून भारताने अमेरिकेच्या नौदल हालचालींवर नजर ठेवावी अशा



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प्रियदर्शिनी इंदिरा गांधी : जीवन आणि कार्य

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प्रकारची रशियाला विनंती केली. तेव्हा ताबडतोब रशियाच्या पाणबुड्या आणि अणुशक्तीयुक्त जहाजे 'व्हॅलेंटिया व्हास्क' येथून निघाली आणि त्यांनी अमेरिकेच्या सातव्या नौदलावर निगराणी ठेवण्याचे कार्य उत्तम प्रकारे केले. रशियाच्या या दबावतंत्रामुळे अमेरिकेने भारताविरुद्ध कोणतेही नाविक कार्यवाही केली नाही. रशियामुळेच चीन व अमेरिका ही राष्ट्रे युद्धात हस्तक्षेप करण्यापासून परावृत्त झाली व बांगला देशाची निर्मिती व पाकिस्तानविरुद्धची मोहिम याची सांगता भारताला करता आली. संयुक्त राष्ट्रसंघाने याबाबत भारताविरुद्ध चीन व अमेरिका यांनी आणलेले सर्व प्रस्ताव रशियाने फेटाळून लावले. 1971 च्या या अग्निदिव्यातून यशस्वीरित्या बाहेर पडण्यात रशियाच्या मैत्रीचे महत्त्व भारताला विशेष तीव्रतेने जाणवले. पाकिस्तान व चीनला हाताशी धरून भारताला नमविणे सहज शक्य नाही हे अमेरिकेलाही कळून चुकले. 7

1980 मध्ये पुन्हा पंतप्रधान पदाची सूत्रे श्रीमती इंदिरा गांधींनी हाती घेतली. रशिया-अफगाणिस्तानच्या पेचप्रसंगावरून रशियासोबतचे संबंध बिघडण्याच्या स्थितीत असतांना मात्र इंदिरा गांधींनी हे संबंध दुरु दिते नव्हते आणि त्याचबरोबर आपले परंपरागत घोरणही सोडले नव्हते. डिसेंबर 1980 मध्ये रशियाचे राष्ट्रप्रमुख लिओनोव्ह ब्रेझेनेव हे भारताच्या दौज्यावर आले. तेव्हा इंदिरा गांधी आणि लिओनोव्ह ब्रेझेनेव यांच्यात आंतरराष्ट्रीय समस्यांवर चर्चा झाली. तसेच दोन राष्ट्रांत पाच नवे करार झाले. इंदिरा गांधींच्या करकिर्दीत भारत-रशिया सहकार्याच्या कक्षा विस्तारित गेल्या. हया वदल्या रूढकार्यांचे प्रतीक म्हणजे रशियन अवकाशयानातून रशियन अवकाशयत्री बरोबर राकेश शर्मा यांनी केलेला अवकाश प्रवास होय. इंदिरा गांधींच्या आंतरराष्ट्रीय शांतता टिकविण्याच्या मौलिक कार्याबद्दल रशियनांना वाटणाऱ्या आदराचे प्रतिक म्हणून त्यांना 'आंतरराष्ट्रीय लॅनिन पुरस्कार' हा रशियातील सर्वोच्च पुरस्कार देण्यात आला. ही भारतवासियांसाठी गौरवाची बाब होती.

भारत-अमेरिका संबंध :

जागतिक राजकारणाबाबत भारताने स्वीकारलेले अलिप्ततावादी धोरण व त्या धोरणाच्या आधारावर आशिया व आफ्रिका खंडात नव्या राष्ट्रांना संघटित करण्याचा भारताचा प्रयत्न याविषयी अमेरिकेच्या मनात तीव्र नाराजी होती. 1947 पासून पाकिस्तानविरुद्धच्या प्रत्येक युद्धाच्यावेळी पाकिस्तानलाच अमेरिकेचा पाठिंबा होता. संयुक्त राष्ट्रसंघाच्या देखरेखीखाली काश्मीरमध्ये सार्वमत घेण्याचा अट्टहास देखील अमेरिकेने धरला होता. गोवा मुक्ती वेळचे अमेरिकेचे धोरणही भारताला प्रतिकूल व जाचक ठरणारेच होते. हे सर्व अमेरिकेच्या बाबतीतील उदाहरणे म्हणजे अमेरिकेच्या

भारताविरुद्धी नीतीचाच एक भाग होता असे निदर्शनास येते. परंतु तरीही भारताच्या दुर्बल अर्थव्यवस्थेला सावरून धरणे व बळकटी आणणे या हेतूने थोड्या प्रमाणात का होईना, अनुदान, कर्जे, तांत्रिक मदत या स्वरूपात भारताला अमेरिकेने आर्थिक मदत देणे सुरुच ठेवले. ही आर्थिक मदत देत असतांना भारताचे परराष्ट्रीय धोरण अमेरिकेच्या मर्जीनुसार साकार व्हावे असा प्रयत्न अमेरिका सतत करीत होती त्यासाठी कर्ज देतांना काही अटी अमेरिका घालत होतीच. अमेरिकेचा हा राजनैतिक दबाव भारताला बऱ्याच वेळा फार मोठा अडथळा ठरत होता. 8

1964 मध्ये अमेरिकेचे अध्यक्ष जॉनसन यांनी तत्कालिन पंतप्रधान लाल बहादूर शास्त्री यांची अमेरिका भेट ऐनवेळी रद्द केली होती. त्यामुळे ते इंदिरा गांधींना भेटण्याकरिता उत्सुक होते. श्रीमती इंदिरा गांधी यांची स्वतंत्र जगाविषयी काय भूमिका आहे आणि त्या कशा प्रकारच्या संबंध ठेवू इच्छितात हे जाणून घेण्याची जॉनसन यांना उत्कंठा होती. तसेच शास्त्रीबाबत झालेल्या दुर्व्यवहाराबाबत त्यांना स्पष्टीकरण द्यावयाचे होते आणि दिलगिरी सुद्धा व्यक्त करावयाची होती. अशा पार्श्वभूमीवर श्रीमती इंदिरा गांधी आणि अमेरिकेचे अध्यक्ष जॉनसन यांची भेट घडून आली. प्रत्यक्ष भेट अतिशय सौहार्दपूर्ण वातावरणात झाली आणि अमेरिका व भारत यांच्यात असलेले अनेक गैरसमज दूर झाले. 9

एवढेच नव्हे तर या भेटीतून भारताला आर्थिक संकटातून बाहेर पडण्याचा मार्ग मिळाला. तो म्हणजे अमेरिकेची सर्व द्वार मदतीसाठी उघडण्यात आली होती. आर्थिक मदतीसाठी श्रीमती इंदिरा गांधी स्वतः मार्च 1966 मध्ये अमेरिकेला गेल्या. तेथे त्यांचे जोरदार स्वागत झाले. त्यांचे देखणेपण, सद्भिर्भूची दर्शविणारा त्यांचा पोशाख, त्यांचे सुसंस्कृत व प्रतिष्ठित वागणे बोलणे व भारतासारख्या विशाल देशाची पहिली स्त्री-प्रधानमंत्री या सर्व गोष्टींमुळे वृत्तपत्रांनी त्यांच्या भेटीला चांगलीच प्रसिध्दी दिली. काही अटींवर अमेरिका-भारत यांच्यात रुपयाच्या अवमूल्यनाबाबत करार झाला. 5 जून 1966 रोजी 35 टक्यांनी रुपयाचे अवमूल्यन करण्यात आले. तसेच 3.5 टन धान्य, प्रकल्पासाठी मदत, उद्योगधंद्यासाठी भांडवल, कच्चा माल, अमेरिकन उद्योपतींची मदत यासंदर्भात मदतीची विनंती अमेरिकेला करण्यात आली. अमेरिकेने ही विनंती उत्सुकतेने मान्य केली. याबाबत श्रीमती इंदिरा गांधींवर सर्वच राजकीय पक्षांनी व शिक्षणतज्ञांनी टिकेचे काहूर उठविले. नेहरूंच्या नीतीपासून इंदिरा गांधी दूर जात आहेत अशी टिका त्यांच्यावर होऊ लागली. परंतु इंदिरा गांधींचा हा दौरा भारताच्या दृष्टिकोणातून फायद्याचा ठरला. भारत आणि अमेरिका यांचे असलेले अनेक गैरसमज दूर झाले. यावेळी अमेरिकेकडून



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भारताला बरीच मदत मिळाली होती. अमेरिकेच्या मदतीबिंबत विरोधकांनी आक्षेप घेतला तेव्हा परकीयांची मदत घेऊन येणारा समाजवादसुद्धा आपण स्वीकारला पाहिजे इंदिरा गांधींनी असे विरोधकांना स्पष्टीकरण दिले. आपण जर परकीयांची मदत घेतली नाही तर सामान्य माणसांच्या हाल-अपेष्टांना सीमा राहणार नाही असा श्रीमती इंदिरा गांधींच्या म्हणण्याचा अर्थ होता.10

श्रीमती इंदिरा गांधींच्या काळात शस्त्रात्र निर्मितीच्या क्षेत्रात भारताने वेगवान प्रगती केली. विस्कटलेल्या आर्थिक घडीवर सुद्धा जोमाने मात केली. त्यामुळे असंलग्न राष्ट्रगटात भारताची प्रतिष्ठा चांगलीच उंचावली. या सर्वच गोष्टी अमेरिकेला अस्वस्थ करणाऱ्या होत्या. पण भारताविरुद्ध अमेरिकन सरकार अत्यंत संतप्त झाले ते 1971 च्या भारत-पाक युद्धानंतर. या युद्धाच्यावेळी अमेरिकेने उघडपणे पाकिस्तानची बाजू घेतली. भारत अमेरिकन गटात सामील न झाल्याबद्दल अमेरिकेचा भारतावर रोष होताच. तसेच यावेळी चीनकडूनही भारताविरुद्ध चांगलाच प्रतिसाद मिळत गेला. अशाप्रकारे रशिया व भारत यांच्या विरोधात पाकिस्तानला अमेरिकेने खंबीरपणे उचलून धरले. अमेरिका-चीन सलोखा या भारत-पाक युद्धाच्या काळात स्पष्ट झाला. 1971 च्या युद्धात भारताला विजय मिळाल्यामुळे तर अमेरिका अगूनच संतप्त झाला.11

भारताच्या संदर्भात अमेरिकेला खूपणाऱ्या आणखीही काही घटना श्रीमती इंदिरा गांधींच्या कारकिर्दीत घडल्या होत्या. 1971 च्या युद्धात पाकिस्तानला अनुकूल भूमिका घेतलेल्या इराणशी, इंदिरा गांधींच्या राजकीय चातुर्यामुळे भारताचे मित्रत्वाचे संबंध प्रस्थापित झाले होते. तिसऱ्या जगात असंलग्न राष्ट्रात एक अजबल दर्जाचे राष्ट्र म्हणून भारताची प्रतिष्ठा उंचावली होती. इंदिरा गांधींच्या या यशात 1974 मध्ये आणखी एक मोलाची भर पडली आणि तोपर्यंत भारताकडे काहीशा अवहेलनेने बघणारे जग एकदम खडबडून जागे होऊन भारताकडे आश्चर्याने पाहू लागले. ही घटना म्हणजे राजस्थानच्या वाळवंटी भूभागात भारताने केलेली अणुचाचणी. भारताने केलेल्या या पहिल्याच यशस्वी अण्वस्त्र चाचणीमुळे अमेरिकन राष्ट्र रुष्ट झाले. भारताने अणुशक्ती चाचणी यशस्वीपणे केल्यापासून अमेरिका, इंग्लंड व पश्चिम जर्मनी या राष्ट्रांची हेरखाती सक्रिय झाली आहेत व भारताच्या आर्थिक अडचणींचा फायदा घेऊन ती देशात असंतोष व अराजक पसरवित आहेत, जनतेला सरकारविरोधी उदावाला उद्युक्त करीत आहेत असे इंदिरा गांधींनी खाजगी संभाषणातून बोलूनही दाखविले होते. 1975 च्या आणिबाणी परिस्थितीतही लोकशाहीची गळचेपीचा मुद्दा धरून अमेरिकेने भारताविरुद्ध प्रचार केला.12 1980 साली पुन्हा श्रीमती इंदिरा गांधी पंतप्रधान झ

ाल्यानंतर त्यांनी अमेरिकेसोबत सलोखा राखण्याचा प्रयत्न केला पण अमेरिकेचा राग मात्र कमी झालेला नव्हता. दोन्ही राष्ट्रांतील तणाव किंचित शिथिल झाला असला तरी सलोखा मात्र प्रस्थापित होऊ शकला नाही.

सारांश:

एकंदरीत, भारत-रशिया संबंधाचा आढावा घेतल्यास असे लक्षात येईल की, दोन्ही देशांमध्ये पं. नेहरूपासून रशियाशी असलेले स्नेहाचे आणि मैत्रीचे संबंध श्रीमती इंदिरा गांधी यांनी पुढेही वृद्धिंगत केल्याचे निर्दर्शनास येते. राजनैतिक, आर्थिक, सांस्कृतिक अशा सर्वच क्षेत्रात दोन्ही राष्ट्रांमधील सहकार्य उभयपक्षी लाभदायक ठरले. दोन भिन्न विचारप्रणालीच्या राष्ट्रांमध्ये मैत्री व सहकार्य टिकू शकते आणि ते दोहोंना लाभदायक ठरू शकते हे भारत-रशिया मैत्रीने सिद्ध केले आहे. याउलट अमेरिका-भारत यांच्या जागतिक राजकारणातील अनेक मुद्द्यांबाबत मतभिन्नता मात्र नाहीशी झालीच नाही व पाकिस्तानला उचलून धरण्याचा अमेरिकेच्या नीतीत बदल झाला नाही.

श्रीमती इंदिरा गांधींच्या विविध क्षेत्रातील यशांपैकी महत्त्वाचे यश म्हणजे त्यांनी परराष्ट्र धोरणाला दिलेला आकार. आंतरराष्ट्रीय धोरणाचे विश्लेषक व्ही. पी. दत्त यांनी इंदिरा गांधी यांच्या परराष्ट्र धोरणाचा उल्लेख आपल्या 'असेटनरी हिस्ट्री ऑफ द कॉंग्रेस' या ग्रंथात 'अत्यंत परिपक्व आणि भारताचे कमीत कमी नुकसान करणारे' असा केले आहे.

इंदिरा गांधी हया शांततेच्या कट्टर पुरस्कर्त्या होत्या. सर्व राष्ट्रांशी संबंधात सलोखा असावा असेच त्यांचे धोरण होते. एकंदरीत त्यांचे परराष्ट्र धोरण पूर्णपणे स्वतंत्र, वास्तववादी व भारताचा ध्वज आंतरराष्ट्रीय क्षेत्रात सन्मानाने उंच फडकत राहावा या दृष्टीने यशस्वी ठरले.

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इंदिरा गांधीचे परराष्ट्र धोरण

गणेश विश्वनाथ घोडके
शिक्षकडॉ. बाबासाहेब आंबेडकर
मराठवाडा विद्यापीठ औरंगाबाद

गीता गंगाधर उगले

संशोधक विद्यार्थिनी

डॉ. बाबासाहेब आंबेडकर
मराठवाडा विद्यापीठ औरंगाबाद

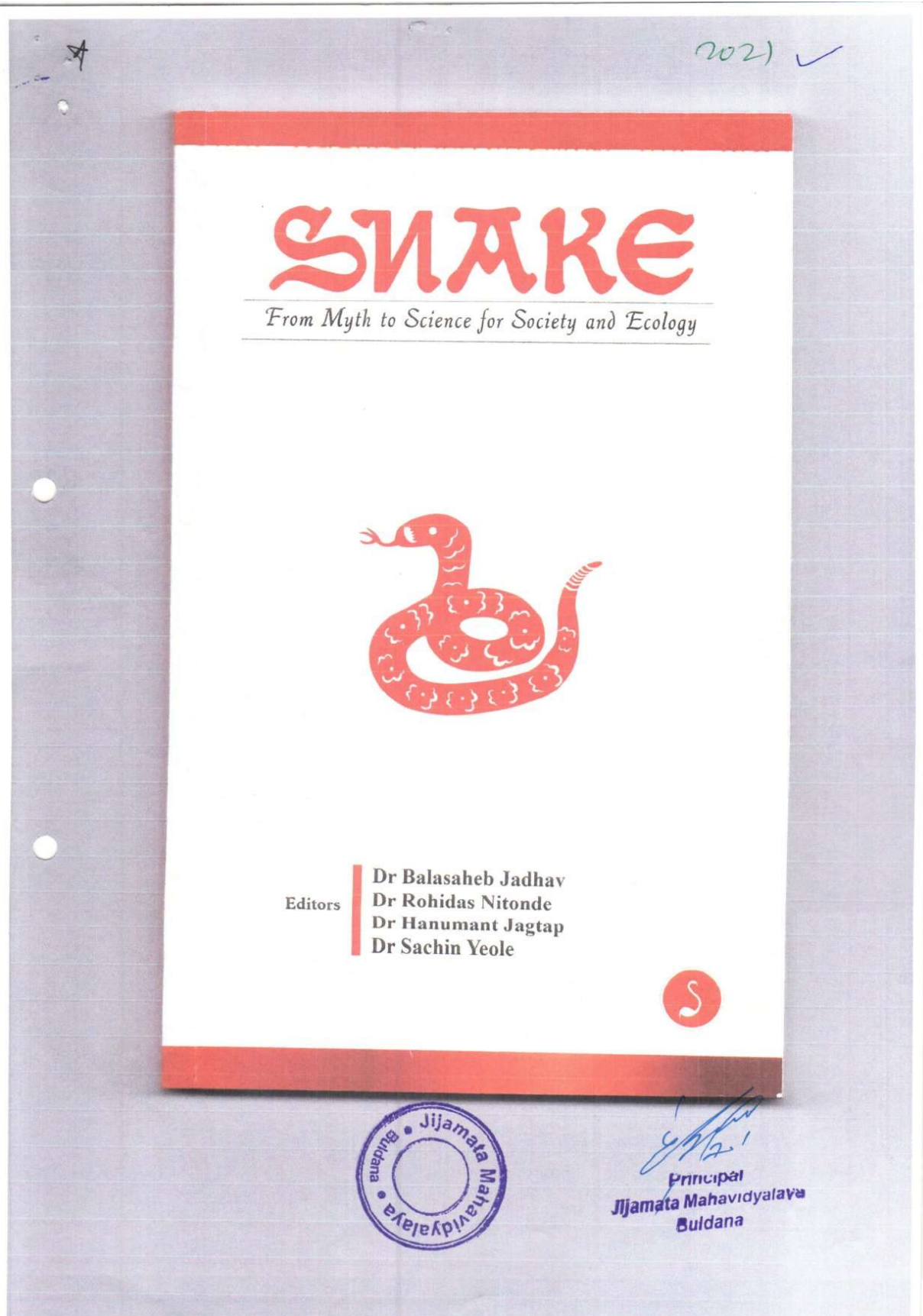
परराष्ट्र संबंध हा अतिशय महत्वाचा विषय असून प्राचीन कालखंडापासूनच परराष्ट्र धोरणाविषयी माहिती मिळते. कौटिल्याने अर्थशास्त्र ग्रंथांमध्ये परराष्ट्र धोरणाविषयी माहिती दिलेली आहे.

भारताला स्वातंत्र्य मिळाल्या नंतर पाहिले पंतप्रधान पंडित जवाहरलाल नेहरू यांनी अल्पतावादी नीतीचा अवलंब करून आदर्शवादी परराष्ट्र धोरणाचा स्वीकार केला. इंदिरा गांधींनी मात्र भारताच्या परराष्ट्र धोरणाला आदर्शवादा बरोबर व्यावहारिक पातळीवर आणण्याचं काम केले. त्यांनी राष्ट्रीय हीताला अनुसरून निर्णय घेतले. जागतिक महासत्ता बरोबरच शेजारी राष्ट्रांसोबत त्यांनी संबंध प्रस्थापित करतांनी वेळोवेळी स्वतंत्र निर्णयाचा परिचय करून दिला.

पंतप्रधान झाल्यानंतर प्रथमच मार्च १९६६ मध्ये इंदिरा गांधी यांनी अमेरिकेचा दौरा केला. या दौऱ्यामध्ये त्यांनी भारत आणि अमेरिकेचा दौरा केला. या दौऱ्यामध्ये त्यांनी भारत आणि अमेरिका सारख्या आदर्शांच्या आणि ध्येयासंबंधी न्यूयार्क आशिया सोसायटीच्या परिषदेत भाषण देताना सांगितले होते.

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Editors: Dr Balasaheb Jadhav
Dr Rohidas Nitonde
Dr Hanumant Jagtap
Dr Sachin Yeole

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13.

SEA SNAKES: BIOLOGY, ECOLOGY AND DIVERSITY

Dr Rajshree M Yewale

Jijamata Mahavidyalaya, Buldhana (MS)

Introduction

Sea snakes, or coral reef snakes, are a subfamily of elapid snakes, the Hydrophiinae, that inhabit marine environments for most or all of their lives. All sea snakes have paddle-like tails and many have laterally compressed bodies that give them an eel-like appearance. Unlike fish, they do not have gills and must surface regularly to breathe. Along with whales, they are among the most completely aquatic of all air-breathing vertebrates.

Most are venomous, except the genus *Emydocephalus*, which feeds almost exclusively on fish eggs. Sea snakes are extensively adapted to a fully aquatic life and are unable to move on land, except for the genus *Laticauda*, which has limited land movement. They are found in warm coastal waters from the Indian Ocean to the Pacific and are closely related to venomous terrestrial snakes in Australia.

Among this group are species with some of the most potent venoms of all snakes. Some have gentle dispositions and bite only when provoked, while others are much more aggressive. Currently, 17 genera are described as sea snakes, comprising 69 species.

Evolving from Land to Sea

Sea snakes also could become established by making evolutionary transitions from terrestrial or freshwater habitats to marine habitats in the island systems of the Caribbean. We know that elapid snakes – a family of venomous snakes with short, fixed-front fangs, such as cobras – have done this in the Coral Triangle region.

Indeed, most of today's sea snakes originated and evolved into different species in this part of the globe between 2 to 16 million years ago. At that time, this region was a vast wetland complex associated with Southeast Asia and the Australasian archipelago.



Land and sea are interlaced throughout the Coral Triangle, and have been so for several million years. This region is also characterized by high rainfall, low and variable water salinity, and relatively stable tropical warm temperatures. Throughout much of its geological past, sea levels rose and fell many times, opening and closing marine corridors and causing mangrove fringes and mud flats to form and disappear. All of these conditions are favorable for evolutionary transitions from land to sea, and stable, shallow marine habitats have persisted for the past 3 million years.

Similar changes occurred in the Caribbean, but the Coral Triangle is a much larger and more complex system. Multiple ancestral lineages of snakes occur in Southeast Asia, and there are four to five times more viviparous (live-bearing), estuarine species within the Coral Triangle than occur in the Caribbean.

Indeed, the Coral Triangle, broadly defined, appears to be the only region where viviparity is characteristic of the majority of estuarine snakes. These snakes live in coastal waters contacting freshwater habitats, and they were most likely to undergo an evolutionary transition from terrestrial or freshwater to marine habitats and give rise to sea snakes.

Description

The majority of adult sea snakes species grow to between 120 and 150 cm (4 and 5 ft) in length, with the largest, *Hydrophis spiralis*, reaching a maximum of 3 m (10 ft). Their eyes are relatively small with a round pupil and most have nostrils located dorsally. The skulls do not differ significantly from those of terrestrial elapids, although their dentition is relatively primitive with short fangs and (with the exception of *Emydocephalus*) as many as 18 smaller teeth behind them on the maxilla.

Most sea snakes are completely aquatic and have adapted to sea environments in many ways, the most characteristic of which is a paddle-like tail that has improved their swimming ability. To a varying degree, the bodies of many species are laterally compressed, especially in the pelagic species. This has often caused the ventral scales to become reduced in size, even difficult to distinguish from the adjoining scales. Their lack of ventral scales means they have become virtually helpless on land, but as they live out their entire lifecycles at sea, they have no need to leave the water.



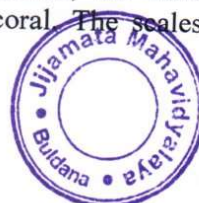
The only genus that has retained the enlarged ventral scales is the sea kraits, *Laticauda*, with only five species. These snakes are considered to be more primitive, as they still spend much of their time on land, where their ventral scales afford them the necessary grip. *Laticauda* species are also the only sea snakes with internasal scales; that is, their nostrils are not located dorsally.

Since a snake's tongue can fulfill its olfactory function more easily under water, its action is short compared to that of terrestrial snake species. Only the forked tips protrude from the mouth through a divided notch in the middle of the rostral scale. The nostrils have valves consisting of a specialized spongy tissue to exclude water, and the windpipe can be drawn up to where the short nasal passage opens into the roof of the mouth. This is an important adaptation for an animal that must surface to breathe, but may have its head partially submerged when doing so.

The lung has become very large and extends almost the entire length of the body, although the rear portion is thought to have developed to aid buoyancy rather than to exchange gases. The extended lung possibly also serves to store air for dives. Most species of sea snakes are able to respire through the top of their skin. This is unusual for reptiles, because their skin is thick and scaly, but experiments with the black-and-yellow sea snake, *Pelamis platura* (a pelagic species), have shown this species can satisfy about 25% of its oxygen requirements in this manner, which allows for prolonged dives.

Like other land animals that have adapted to life in a marine environment, sea snakes ingest considerably more salt than their terrestrial relatives through their diets, and when seawater is inadvertently swallowed. Because of this, a more effective means of regulating the salt concentration of their blood is required. In sea snakes, the posterior sublingual glands, located under and around the tongue sheath, allow them to expel salt with their tongue action.

* Scalation among sea snakes is highly variable. As opposed to terrestrial snake species that have imbricate scales to protect against abrasion, the scales of most pelagic sea snakes do not overlap. Reef-dwelling species, such as *Aipysurus*, do have imbricate scales to protect against the sharp coral. The scales



genera together in the Elapidae, with no taxonomic subdivisions, to reflect the work that remains to be done.

Conservation Status

Sea snakes are exploited for their skin, organs, and meat. Although some species are taken in great numbers, they are not protected by CITES (A Washington convention). Since 1934, meat and skin of sea snakes have been used commercially in the Philippines and local protection of sea snakes became necessary to avoid overexploitation.

Sea snakes are also exploited in Australia, Japan, Taiwan Province of China, Thailand, and Vietnam. The local government in Queensland, Australia has introduced a special license to collect sea snakes. However, most sea-snake fisheries in the Indian and Pacific oceans have not been reported in the literature and are not controlled by local governments. With the exception of the Philippines, the impact of exploitation on populations of sea snakes is almost unknown and some populations may already be in danger of extinction. Monitoring and control of the commercial catch is the only way to maintain a sustainable yield, giving local governments a chance to intervene before a catastrophic collapse of local populations occurs.

However, management of sea-snake fisheries and protection of the endangered species is not possible without a basic knowledge of the group and the ability to identify to the species level.

Most sea snakes are not on the CITES protection lists, however, one species, *Laticauda crockeri*, is classified as vulnerable. Several species of *Aipysurus* are listed with conservation status of greater concern, the Timor species *A. fuscus* is known to be endangered, and two others found in seas north of Australia, the leaf-scaled *A. foliosquama* and short-nosed *A. apraefrontalis*, are classified as critically endangered according to the IUCN Red List of Threatened Species.



snakes, but scientific studies have yet to be performed to test these senses.

Distribution and Habitat

Sea snakes are mostly confined to the warm tropical waters of the Indian Ocean and the western Pacific Ocean, with a few species found well out into Oceania. The geographic range of one species, *Pelamis platurus*, is wider than that of any other reptile species, except for a few species of sea turtles. It extends from the east coast of Africa, from Djibouti in the north to Cape Town in the south, across the Indian Ocean, the Pacific, south as far as the northern coast of New Zealand, all the way to the western coast of the Americas, where it occurs from northern Peru in the south (including the Galápagos Islands) to the Gulf of California in the north. Isolated specimens have been found as far north as San Diego and Oxnard in the United States.

Sea snakes do not occur in the Atlantic Ocean. *Pelamis* possibly would be found there were it not for the cold currents off Namibia and western South Africa that keep it from crossing into the eastern South Atlantic, or south of 5°S latitude along the South American west coast. Sea snakes do not occur in the Red Sea, believed to be due to its increased salinity, so no danger exists of them crossing through the Suez Canal. A lack of salinity is also thought to be the reason why *Pelamis* has not crossed into the Caribbean via the Panama Canal.

Despite their marine adaptations, most sea snakes prefer shallow waters near land, around islands, and especially somewhat sheltered waters, as well as near estuaries. They may swim up rivers and have been reported as far as 160 km (100 mi) from the sea. Others, such as *P. platurus*, are pelagic and are found in drift lines, slicks of floating debris brought together by surface currents. Some sea snakes inhabit mangrove swamps and similar brackish water habitats, and two landlocked freshwater forms are found: *Hydrophis semperi* occurs in Lake Taal in the Philippines, and *Laticauda crockeri* in Lake Te Nggano on Rennell Island in the Solomon Islands.

Behavior

Sea snakes are generally reluctant to bite, and are usually considered to be mild-tempered, although variation is seen among



species and individuals. Some species, such as *P. platurus*, which feed by simply gulping down their prey, are more likely to bite when provoked because they seem to use their venom more for defense. Others, such as *Laticauda* spp., use their venom for prey immobilization. Sea snakes are often handled without concern by local fishermen who unravel and toss them back into the water barehanded, usually without getting bitten, when the snakes frequently become entangled in fishing nets. Species reported as much more aggressive include *Aipysurus laevis*, *Astrotia stokesii*, *Enhydrina schistosa*, *Enhydrina zweifeli*, and *Hydrophis ornatus*.

On land, their movements become very erratic. They crawl awkwardly in these situations and can become quite aggressive, striking wildly at anything that moves, although they are unable to coil and strike in the manner of terrestrial snakes.

Sea snakes appear to be active both day and night. In the morning, and sometimes late in the afternoon, they can be seen at the surface basking in the sunlight, and they dive when disturbed. They have been reported swimming at depths over 90 m (300 ft), and can remain submerged for as long as a few hours, possibly depending on temperature and degree of activity.

Ecology

They feed on small fish and occasionally young octopus. They are often associated with the sea snake barnacle (*Platylepas ophiophila*), which attaches to their skin.

Reproduction

Except for a single genus, all sea snakes are ovoviviparous; the young are born alive in the water where they live their entire lives. In some species, the young are quite large, up to half as long as the mother. The one exception is the genus *Laticauda*, which is oviparous; its five species all lay their eggs on land.

Venom

Like their relatives in the family Elapidae, the majority of the sea snakes are highly venomous; however, when bites occur, venom injection is rare, so envenomation symptoms usually seem nonexistent or trivial. For example, *Hydrophis platurus* has venom more potent than any terrestrial snake species in Costa



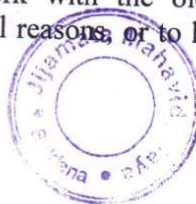
Rica based on LD₅₀, but despite its abundance in the waters off its western coast, few human fatalities have been reported. The death of a trawler fisherman in Australian waters during 2018 was reported to be the region's first sea snake fatality since a pearl diver was killed in 1935.

Bites in which envenomation does occur are usually painless and may not even be noticed when contact is made. Teeth may remain in the wound. Usually, little or no swelling occurs, and rarely are any nearby lymph nodes affected. The most important symptoms are rhabdomyolysis (rapid breakdown of skeletal muscle tissue) and paralysis. Early symptoms include headache, a thick-feeling tongue, thirst, sweating, and vomiting. The venom is very slow acting and symptoms that happen from little as 30 minutes to several hours after the bite include generalized aching, stiffness, and tenderness of muscles all over the body. Passive stretching of the muscles is also painful, and trismus, which is similar to tetanus, is common. This is followed later on by symptoms typical of other elapid envenomations, a progressive flaccid paralysis, starting with ptosis and paralysis of voluntary muscles. Paralysis of muscles involved in swallowing and respiration can be fatal.

Taxonomy and Diversity

Sea snakes were at first regarded as a unified and separate family, the Hydrophiidae, that later came to comprise two subfamilies: the Hydrophiinae, or true/aquatic sea snakes (now 16 genera with 57 species), and the more primitive Laticaudinae, or sea kraits (one genus, *Laticauda*, with five species).

Eventually, as just how closely related the sea snakes are to the elapids became clear, the taxonomic situation became less well-defined. Some taxonomists responded by moving the sea snakes to the Elapidae, thereby creating the subfamilies Elapinae, Hydrophiinae, and Laticaudinae, although the latter may be omitted if *Laticauda* is included in the Hydrophiinae. No one has yet been able to convincingly work out the phylogenetic relationships between the various elapid subgroups, and the situation is still unclear. Therefore, others opted to either continue to work with the older traditional arrangements, if only for practical reasons, or to lump all of the



themselves may be smooth, keeled, spiny, or granular, the latter often looking like warts. *Pelamis* has body scales that are "peg-like", while those on its tail are juxtaposed hexagonal plates.

Sensory Abilities

Vision, chemoreception (tongue-flicking), and hearing are important senses for terrestrial snakes, but these stimuli become distorted in water. The poor visibility, chemical dilution, and limitation of ground-borne vibrations under water suggest that sea snakes and sea kraits may have unique sensory abilities to compensate for the relative lack of other sensory cues.

Very little is known about sea snake vision. A study of retinal photoreceptors of spine-bellied, *Lapemis curtus*, and horned, *Acalyptophis peronii*, sea snakes found three classes of visual pigments all from cone cells. Despite the absence of rod cells in sea snake eyes, Simeos *et al.* found genes from rod-cells (*rh1*) were still being expressed suggesting that in sea snakes some cones may be transmuted rods. However, behavioral observations indicate that vision has a limited role for catching prey and mate selection, but sound vibrations and chemoreception may be important. One study identified small sensory organs on the head of *Lapemis curtus* similar to the mechanoreceptors in alligators and aquatic snake *Acrochodus* that are used to sense the movement of fish prey. Similarly, vision appears to be of limited importance for finding mates. Shine experimented with applying skin secretions (pheromones) to snake-like objects to see if male turtle-headed sea snakes, *Emydocephalus annulatus*, are attracted to female pheromones. Shine found that although vision may be useful over short distances (less than 1 m [3 ft]), pheromones are more important once the male comes in physical contact with an object.

The olive sea snake, *Aipysurus laevis*, has been found to have photoreceptors in the skin of its tail, allowing it to detect light and presumably ensuring it is completely hidden, including its tail, inside coral holes during the day. While other species have not been tested, *A. laevis* possibly is not unique among sea snakes in this respect.

Other unique senses, such as electromagnetic reception and pressure detection, have been proposed for sea



Fun Facts

Sea snakes are front-fanged and highly venomous. A fold in the gums of a sea snake hides the fangs, and the fangs quickly emerge when biting. Sea snake fangs are fragile and may break off and remain in the wounds of their victims. To counter the problem of having weak fangs, sea snakes have potent venom that can easily paralyze, kill, and begin the digestive process of the fish they target.

Sea Snake Facts

Sea snakes evolved from two different snakes (the cobra in Asia and Australian terrestrial elapids). Marine sea snakes are viviparous: They give birth to fully-formed young at sea, without laying eggs. Sea snakes require fresh water for drinking and will dehydrate at sea without it.

They are restricted to coastal areas of the Indian and Western Pacific oceans, from the east coast of Africa to the Gulf of Panama. Except for the yellow-bellied sea snake, which is found in the open ocean from Africa eastward across the Pacific to the west coast of the Americas. All other species live mainly in waters less than 30 meters (about 100 feet) deep, as they must dive to the seafloor to find their food among coral reefs, among mangroves, or on the ocean bottom. Some species prefer hard bottoms (corals), while others prefer soft bottoms (mud or sand) in which to hunt their prey. Most sea snakes feed upon fishes of various sizes and shapes, including eels. Two primitive groups (genera *Aipysurus* and *Emydocephalus*) eat only fish eggs whereas, *Hydrophis* specialize in burrowing eels.

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2020-21
2021



INTELLECTUAL PROPERTY RIGHTS, START-UP INDIA AND INNOVATIONS IN INDIAN HIGHER EDUCATION



Editors

- Dr. Balasaheb Jadhav
- Dr. Rohidas Nitonde
- Dr. Ramdas Tekale
- Dr. Sachin Yeole



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38.46%, while in the year 2019, India was ranked 36th in the list of 50 countries with a score of 36.04%.

The scores of the two new countries included in the index, Greece and the Dominican Republic, are better than India. Significantly, countries like Philippines and Ukraine are also ahead of India.

However, at a slower pace, India has registered an overall increase in its ranking as compared to any other country.

The way forward :-

To sustain this growth of India, India needs to do more to bring about a transformative change in its overall intellectual property structure. Not only this, serious steps need to be taken to continuously implement strong intellectual property standards.

The United Nations Industrial Development Organization (UNIDO) has proved through a study that countries with well-organized intellectual property rights have seen rapid economic growth. Therefore, there is an urgent need for improvement.

India needs to streamline the 'Comptroller General of Patents, Designs, Trademarks and Geographical Indications'.

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17.
Basic concept of Intellectual Property Rights (IPR)

Rajshree Manikrao Yewale
 Dept. Zoology, Jijamata Mahavidyalaya, Buldhana

Related Rights or Neighboring Rights are rights that during sure respects resemble copyright. The motive of associated rights is to shield the prison pursuits of sure individuals, particularly performers, manufacturers and broadcasters and to assist them supply their message to the public.

What is imply through IPR

Intellectual belongings is an concept, the fabricated from the human mind inclusive of creativity concepts, innovations, commercial models, emblems, songs, literature, symbols, names, brands, etc. which could in the end provide to a beneficial product and software. Intellectual Property Rights do now no longer fluctuate from different belongings rights. They permit their proprietor to absolutely gain from his/her product which changed into first of all an concept that evolved and crystallized. They additionally entitle him/her to save you others from the usage of, dealing or tampering with his/her product with out previous permission from him/her.

Intellectual Property Right

Right of an inventor to derive monetary blessings from highbrow belongings, proper is referred to as as Intellectual Property Right (IPR).



History of IPR

IPR is an antique concept. It is thought that IPR first of all commenced in North Italy at some point of the Renaissance era. In 1474, Venice issued a regulation regulating patents safety that granted an different proper for the proprietor. The copyright dates lower back to 1440 A.D. whilst Johannes Gutenberg invented the printing press with replaceable/transportable timber or metallic letters. Late withinside the nineteenth century, some of international locations felt the need of laying down legal guidelines regulating IPR. Globally, conventions constituting the premise for IPR device international were signed; Paris Convention for the Protection of Industrial Property (1883) Berne Convention for the Protection of Literary and Artistic Works (1886).

Introduction

Intellectual Property (IP) offers with any fundamental creation of human intelligence inclusive of artistic, literary, technical or clinical constructions. Intellectual Property Rights (IPR) refers back to the prison rights granted to the VVVinventor or producer to shield their invention or manufacture product. These prison rights confer an different proper at the inventor/producer or its operator who makes complete use of it's his invention/product for a constrained time frame.

In different words, we will say that the prison rights limit all others from the usage of the Intellectual Property for business functions with out the previous consent of the IP right holder. IP rights encompass alternate secrets, application models, patents, emblems, geographical indications, commercial layout, format layout of incorporated circuits, copyright and associated rights, and



new kinds of plants. It may be very nicely settled that IP performs an essential position withinside the cutting-edge economy.

There are many styles of highbrow belongings safety. A patent is a popularity for an invention that satisfies the standards of world innovation, and commercial software. IPR is crucial for higher identification, planning, commercialization, rendering, and therefore the upkeep of innovations or creativity. Each enterprise must broaden its speciality primarily based totally on its IPR policies, control style, strategies, and so on. Currently, the pharmaceutical enterprise has an rising IPR strategy, which desires higher consciousness and outlook with inside the coming era.

IPR is a robust tool, to shield the investment, time, money, and attempt invested through the inventor/writer of the IP, because it offers the inventor/writer an different proper for a sure time frame for using its invention/introduction. Thus, IPR impacts the monetary improvement of a rustic through selling wholesome opposition and inspiring commercial boom and monetary boom. The gift assessment provides a quick description of IPR with specific emphasis on pharmaceuticals.

Kinds of highbrow Property

IPR commonly divided into foremost categories :

Industrial Property and copyright:- commercial belongings includes rights regarding innovations emblems commercial designs and appellation of foundation copyright protects rights associated with introduction of human thoughts withinside the fields of literature song artwork and audio visible works the TRIPS Agreements of the WTO acknowledges.

The problem of highbrow belongings may be very broad. There are many distinctive kinds of rights that collectively make up highbrow belongings. IP may be essentially divided into categories, that is, commercial Property and highbrow belongings. Traditionally, many IPRs have been together called commercial assets.

It specially consisted of patents, emblems, and designs. Now, the safety of commercial belongings extends to application models, provider marks, alternate names, passes, symptoms and symptoms of supply or foundation, inclusive of geographical indications, and the suppression of unfair opposition. It may be stated that the term 'commercial belongings' is the predecessor of 'highbrow belongings'.

Types of highbrow belongings rights

Copyright and associated rights for literary works ,Trade marks, Trade secrets , alternate names and provider marks ,Geographical indication,Patents for invention ,Industrial layout, Plant variety, Layout Designs of Integrated Circuits

Copyright

Copyright regulation offers with the safety and exploitation of the expression of thoughts in a tangible shape. Copyright has developed over many centuries with appreciate to converting thoughts approximately creativity and new approach of conversation and media. In the cutting-edge world, the regulation of copyright affords now no longer simplest a prison framework for the safety of the conventional beneficiaries of copyright, the character writer, composer or artist, however additionally the guide required for the introduction of labor through important cultural industries, film; Broadcast and recording enterprise; And pc and software program industries.

It is living in literary, dramatic, musical and inventive works in "authentic' cinematic films, and in sound recordings set in a concrete medium. To be covered because the copyright, the concept ought to be expressed in authentic shape. Copyright recognizes each the monetary and ethical rights of the proprietor. The proper to copyright is, through the precept of honest use, a privilege for others, without the copyright proprietor's permission to apply copyrighted material. By the software of the doctrine of honest use, the regulation of copyright balances non-public and public pursuits.

Patent

Patent regulation acknowledges the different proper of a patent holder to derive business blessings from his invention. A patent is a unique proper granted to the proprietor of an invention to the manufacture, use, and marketplace the discovery, furnished that the discovery meets sure situations laid down in regulation. Exclusive proper approach that no man or woman can manufacture, use, or marketplace an invention with out the consent of the patent holder. This different proper to patent is for a constrained time simplest.

To qualify for patent safety, an invention ought to fall in the scope of the patentable problem and fulfill the 3 statutory necessities of innovation, resourceful step, and commercial software. As lengthy because the patent applicant is the primary to invent the claimed invention, the newness and necessity are through and huge satisfied. Novelty may be inferred through previous guide or previous use. Mere discovery 'can't be judged into consideration as an invention. Patents aren't allowed for any concept or precept.



The motive of patent regulation is to inspire clinical research, new technology, and commercial progress. The monetary cost of patent statistics is that it affords technical statistics to the enterprise that may be used for business functions. If there's no safety, then there can be sufficient incentive to take a loose experience at any other man or woman's investment. This cappotential of loose-driving reduces the inducement to invent some thing new due to the fact the inventor might not sense inspired to invent because of loss of incentives.

Trademark or Trade Secret

A trademark is a signal of foundation. It is a particular signal used to make the supply of products and offerings public on the subject of items and offerings and to differentiate items and offerings from different entities. This establishes a hyperlink among the owner and the product. It portrays the character and first-class of a product. The crucial feature of a hallmark is to signify the foundation of the products to which it's miles connected or on the subject of which it's miles used. It identifies the product, ensures first-class and facilitates promote it the product. The trademark is likewise the goal image of goodwill that a commercial enterprise has created.

Any signal or any aggregate thereof, able to distinguishing the products or offerings of any other undertaking, is able to developing a hallmark. It may be a aggregate of a call, word, phrase, logo, image, layout, image, form, colour, private call, letter, number, figurative detail and colour, in addition to any aggregate representing a graph. Trademark registration can be indefinitely renewable.



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Geographical indication

It is a call or signal used on sure merchandise which corresponds to a geographic region or foundation of the product, using geographical region might also additionally act as a certification that the product possesses sure traits as in keeping with the conventional method. Darjeeling tea and basmati rice are a not unusualplace instance of geographical indication. The dating among items and region turns into so widely known that any connection with that region is harking back to items originating there and vice versa.

It plays 3 functions. First, they pick out the products as foundation of a specific area or that area or locality; Secondly, they recommend to customers that items come from a area in which a given first-class, recognition, or different traits of the products are basically attributed to their geographic foundation, and third, they sell the products of manufacturers of a specific area. They recommend the patron that the products come from this region in which a given first-class, recognition or different traits of products are basically because of the geographic area.

It is important that the product obtains its traits and recognition from that region. Since the ones houses depend upon the geographic region of production, a particular hyperlink exists among the goods and the region of foundation. Geographical Indications are covered beneathneath the Geographical Indication of Goods (Registration and Protection) Act, 1999.

Industrial layout

It is one of the kinds of IPR that protects the visible layout of the item which isn't always simply utilized. It includes

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the introduction of capabilities of fom, configuration, pattern, ornamentation or composition of traces or colors implemented to any article in or 3-dimensional shape or aggregate of 1 or greater capabilities. Design safety offers with the outer look of an editorial, inclusive of decoration, traces, colors, form, texture and materials. It might also additionally encompass 3-dimensional capabilities inclusive of colors, shapes and form of an editorial or -dimensional capabilities inclusive of shapes or floor textures or different combinations.

Plant variety

A new sort of plant breeder is covered through the State. To be eligible for plant variety safety, variety ought to be novel, awesome and much like present types and its crucial traits beneathneath the Plant Protection and Protection Act, 2001 must be uniform and stable. A plant breeder is given a license or unique proper to do the subsequent on the subject of distinctive styles of promotional material

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18.

Importance of the Intellectual Property Right

Dr. Sutawane Parimal Arvind

Head, Department of History, Shri Shivaji College, Parbhani

It is necessary to protect the Intellectual property of every one. It is a property of nation also. The sustainable development of society is depend upon the technical development and scientific development Scientific and Technical development took place with the Intellectual property. Now it is possible to protect the intellectual property. Intellectual property is a base of future development. To prevent the copying of the research work the Intellectual Property right is must. The economic development of a country is essential for the societal development. The efforts to protect the Intellectual property regarding the trade are implemented worldwide.

Intellectual Property Right :

This right gives wide protection for the intellectual activities within the country and worldwide. In India the copyright Act was passed and enforced. This Right also protects the individual property Rights. The IPR also gives the healthy atmosphere to do the research work. The innovations discoveries and explorations are the areas where this Right works effectively. To establish and protect one's ownership on his own achievements in the field of research and innovations is the main objective of Intellectual Property Right.

Importance of the Intellectual Property Right

The significance of the Intellectual Property Right is explained as follows.



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Dr. Balasaheb Jadhav has been leading MSP Mandal's Shri Shivaji College, Parbhani as Principal since 2010. Before that, he has taught Physics at the same institution for twenty years. He has many research papers on Physics and Higher Education to his credit. He is a Recognised Research Supervisor. He is known for his academic integrity and commitment to excellence in higher education. He has received several awards including Best Principal Award by SRTM University and Maharashtra State Government. He is also associated with NAAC as a trained Assessor.

Dr. Rohidas Nitonde is Associate Professor at the Post Graduate Department of English, MSP Mandal's Shri Shivaji College, Parbhani. He is known for his a monograph on Manju Kapur In Search of a Feminist Writer. He is a Recognised Research Supervisor. He has two Minor Research Projects to his credit. He is a practising translator and prolific public speaker. Also, he is working as a Co-ordinator, Internal Quality Assurance Cell (IQAC) since 2011. He has addressed several national and international conferences as a keynote / invited speaker. He is a recipient of many awards including "Bharatiya Shiksha Ratan Award". He is Project Co-ordinator for UGC-STRIDE (Component 1).

Dr. Ramdas Tekale is Librarian of MSP Mandal's Shri Shivaji College, Parbhani. His research area is library and Information Science. He has many research publications to his credit. He is the institutional Co-ordinator for e-learning activities through LMS. He is connected with many IITs in the country through NPTEL initiatives. He has played a vital role in popularising e-learning through MOOCs in the region.

Dr. Sachin Yeole is Assistant Professor at the Post Graduate Department of Zoology, MSP Mandal's Shri Shivaji College, Parbhani. He is a university recognised Research Supervisor. He has several research publications to his credit.

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सुमेध

वाणिज्य आणि व्यवस्थापन विषयांतर्गत "Indian Agriculture and New Agriculture Acts" या विषयक अंतर्गत संघटित केल्या जाणाऱ्या यंश्यामध्ये आपले योगदान देणाऱ्या संपूर्ण पाठ्यापक संपु आणि प्रतिनिधी व सहोपकारिता सादर नमस्कार.

श्री वसंतराव नाईक कला व श्री अमरसिंग नाईक वाणिज्य महाविद्यालय मंगरूपी जिल्हा वाशिम ट्या सुमेध पुस्तकातून तंत माझे बाबा अमरावती विद्यापीठ अमरावती अंतर्गत वेगळ्या पाच महाविद्यालयांशी एकत्रित येऊन हा संपादन केलेला आहे. त्याबद्दल कोलेजचे सन्माननीय प्राचार्य आणि संपादक मंडळसह आपल्या सहकार्याचे मनपूर्वक अभिनंदन! संपादनाच्या मोठ्यामोठ्या आकारात आलेला हा संप वसंतराव कळानीस अनेक प्रवृत्त पत्रा वरील शेती विषयांमधील नवीन कायद्यांची विस्तृत उकल जाणवताठी निरिधत्त सहाम आहे याची मनात ठावी आहे.

भारतीय अर्थव्यवस्थेच्या 21व्या शतकात देखील शेती हा एक महत्त्वपूर्ण कायदा आहे. शेती क्षेत्र संदर्भात अनेक महत्त्वपूर्ण बदल वेगळ्या मंडळीकडून होत आहेत. त्या बदलाची माती म्हणजेच केंद्र सरकारने संदर्भात घेतलेले पत्रित केलेले तीन महत्त्वपूर्ण विधेयक आहेत.

या तीन महत्त्वपूर्ण कायद्यांच्या संदर्भात भारतीय जनमानस आणि शेतीकरी वरील सनातनाचे संभाव्ये जाणवत आहे. या संभाव्येच्या आणि अविश्वकायदा बाबत जाणवता ठीक देण्यासाठी या यंश्याचे प्रयोजन करण्यात आलेले आहे.


शेती क्षेत्र 21 व्या शतकात घेणे अनेक महत्त्वपूर्ण आव्हानांना सामोरे जात आहे. या आव्हानांमध्ये जगातिका जाणवत आहेत. त्याबद्दल जाणवता घेतलेले होणारे बदल, अत्यांत-प्रिचल संदर्भातील नवीन नियमावली आणि यासारख्या अनेक बाबी यंश्यामध्ये समाविष्ट करत येतील.

या आव्हानांमध्ये शेती क्षेत्रात कठीण परिस्थितीचा सामना करावा लागत आहे. हमी भाव, कृषी मालाचे विपणन, कृषी मालाची वास्तुक, तातडणूक, वाढता उड्यातून छपे, अनिश्चित पडस, बदलत जाणारे हवामान, जमिनीचा दिवसेंदिवस घटत जाणारा पोत या सर्वामुळे कृषी क्षेत्र अत्यंत कठीण होत आहे. या सर्व बाबींचा सर्वसमावेशकपणे अड्यात कायदाकारिता या यंश्याचे प्रयोजन करण्यात आलेले आहे.

श्री संत मांडोबाबा अमरावती विद्यापीठ अंतर्गत वेगळ्या पाच कोलेज आणि संशोधन मित्रांच्या संयुक्त आणि अडड प्रयत्नातून साकारलेला हा संपादन संपु शेती क्षेत्रात महत्त्वपूर्ण उपलब्धी आहे.


शेती क्षेत्रात होणारे बदल आणि अड्यात आणून देणाऱ्या एकेकल्याने अड्यातून त्याविषयी एक विवेकानुस विचार आणि विचार देण्याचे कावे हा संपादन संपु कोलेज आणि कोलेज आहे.

हा संपु म्हणे स्वतःचा वेगळ्यासाठी अड्यात कायदा संपु संशोधन व जाणवत मंडळी सह संपादक मंडळाचे मी अभिनंदन करता आणि या क्षेत्रात अड्यात कावे अनेक कोलेजस एकर येऊन त्यांनी एक विशिष्ट विषयकार समजाता दिशा दाखवण्याचे कावे आणि यंश्यामध्ये निर्मिती करावी अशी अपेक्षा करून या संप निमित्तीच्या कायदास भरमान पुस्तका देते.



श्री. एम. के. कायाने

श्री. एम. के. कायाने कला व अमरसिंग नाईक वाणिज्य महाविद्यालय मंगरूपी, जिल्हा - वाशिम



Jijamata Mahavidyalaya
Buldhana

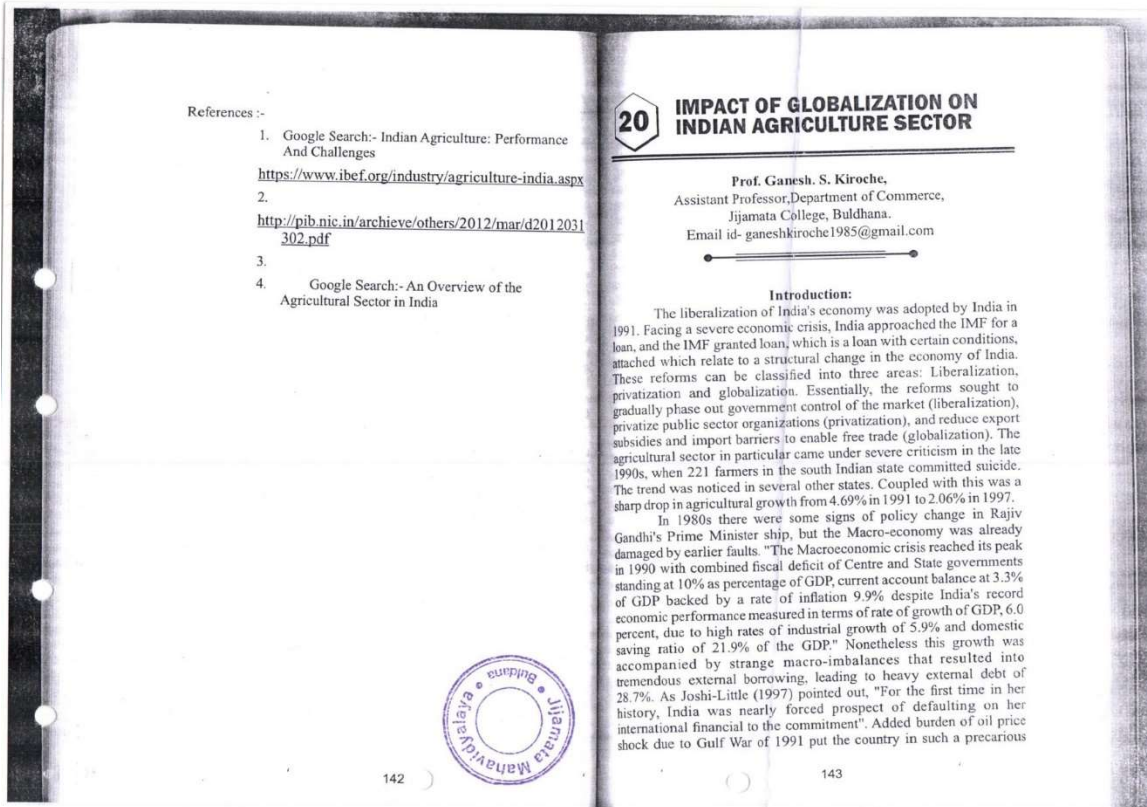
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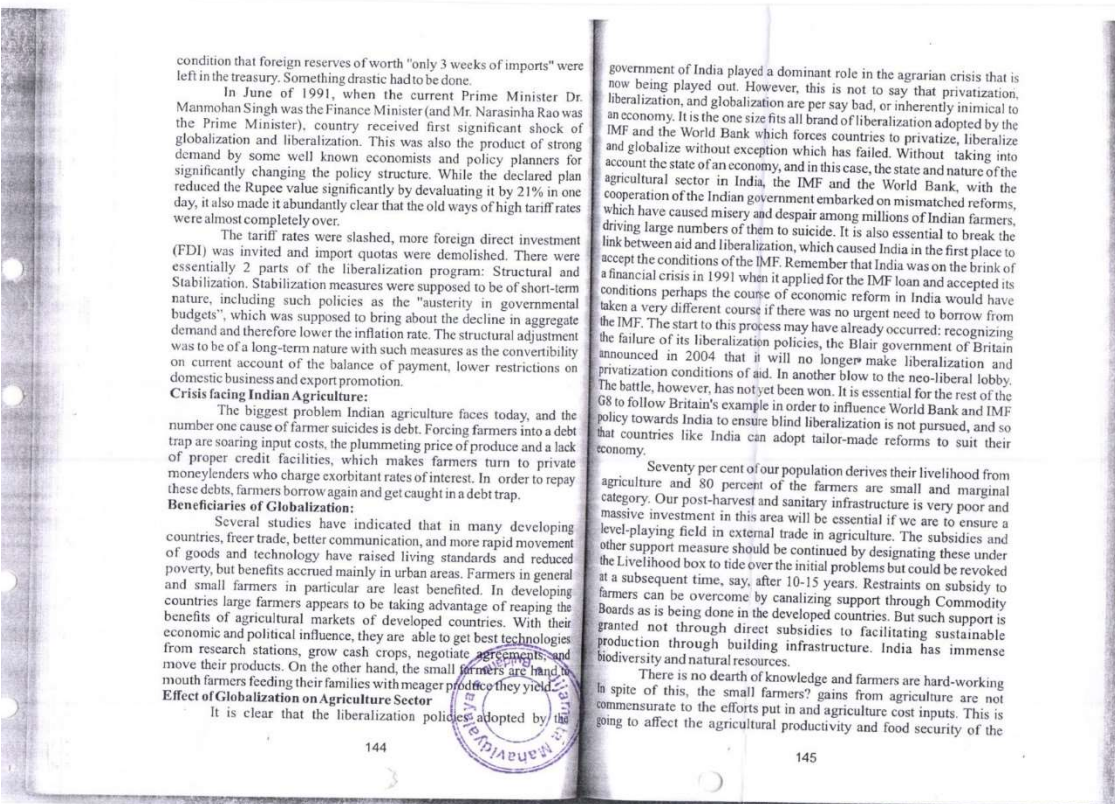


20 IMPACT OF GLOBALIZATION ON INDIAN AGRICULTURE SECTOR

Prof. Ganesh. S. Kiroche,
Assistant Professor, Department of Commerce,
Jijamata College, Buldhana.
Email id- ganeshkiroche1985@gmail.com

Introduction:

The liberalization of India's economy was adopted by India in 1991. Facing a severe economic crisis, India approached the IMF for a loan, and the IMF granted loan, which is a loan with certain conditions, attached which relate to a structural change in the economy of India. These reforms can be classified into three areas: Liberalization, privatization and globalization. Essentially, the reforms sought to gradually phase out government control of the market (liberalization), privatize public sector organizations (privatization), and reduce export subsidies and import barriers to enable free trade (globalization). The agricultural sector in particular came under severe criticism in the late 1990s, when 221 farmers in the south Indian state committed suicide. The trend was noticed in several other states. Coupled with this was a sharp drop in agricultural growth from 4.69% in 1991 to 2.06% in 1997. In 1980s there were some signs of policy change in Rajiv Gandhi's Prime Minister ship, but the Macro-economy was already damaged by earlier faults. "The Macroeconomic crisis reached its peak in 1990 with combined fiscal deficit of Centre and State governments standing at 10% as percentage of GDP, current account balance at 3.3% of GDP backed by a rate of inflation 9.9% despite India's record economic performance measured in terms of rate of growth of GDP, 6.0 percent, due to high rates of industrial growth of 5.9% and domestic saving ratio of 21.9% of the GDP." Nonetheless this growth was accompanied by strange macro-imbalances that resulted into tremendous external borrowing, leading to heavy external debt of 28.7%. As Joshi-Little (1997) pointed out, "For the first time in her history, India was nearly forced prospect of defaulting on her international financial to the commitment". Added burden of oil price shock due to Gulf War of 1991 put the country in such a precarious



condition that foreign reserves of worth "only 3 weeks of imports" were left in the treasury. Something drastic had to be done.

In June of 1991, when the current Prime Minister Dr. Manmohan Singh was the Finance Minister (and Mr. Narasinha Rao was the Prime Minister), country received first significant shock of globalization and liberalization. This was also the product of strong demand by some well known economists and policy planners for significantly changing the policy structure. While the declared plan reduced the Rupee value significantly by devaluating it by 21% in one day, it also made it abundantly clear that the old ways of high tariff rates were almost completely over.

The tariff rates were slashed, more foreign direct investment (FDI) was invited and import quotas were demolished. There were essentially 2 parts of the liberalization program: Structural and Stabilization. Stabilization measures were supposed to be of short-term nature, including such policies as the "austerity in governmental budgets", which was supposed to bring about the decline in aggregate demand and therefore lower the inflation rate. The structural adjustment was to be of a long-term nature with such measures as the convertibility on current account of the balance of payment, lower restrictions on domestic business and export promotion.

Crisis facing Indian Agriculture:

The biggest problem Indian agriculture faces today, and the number one cause of farmer suicides is debt. Forcing farmers into a debt trap are soaring input costs, the plummeting price of produce and a lack of proper credit facilities, which makes farmers turn to private moneylenders who charge exorbitant rates of interest. In order to repay these debts, farmers borrow again and get caught in a debt trap.

Beneficiaries of Globalization:

Several studies have indicated that in many developing countries, freer trade, better communication, and more rapid movement of goods and technology have raised living standards and reduced poverty, but benefits accrued mainly in urban areas. Farmers in general and small farmers in particular are least benefited. In developing countries large farmers appears to be taking advantage of reaping the benefits of agricultural markets of developed countries. With their economic and political influence, they are able to get best technologies from research stations, grow cash crops, negotiate agreements, and move their products. On the other hand, the small farmers are hard-mouth farmers feeding their families with meager produce they yield.

Effect of Globalization on Agriculture Sector

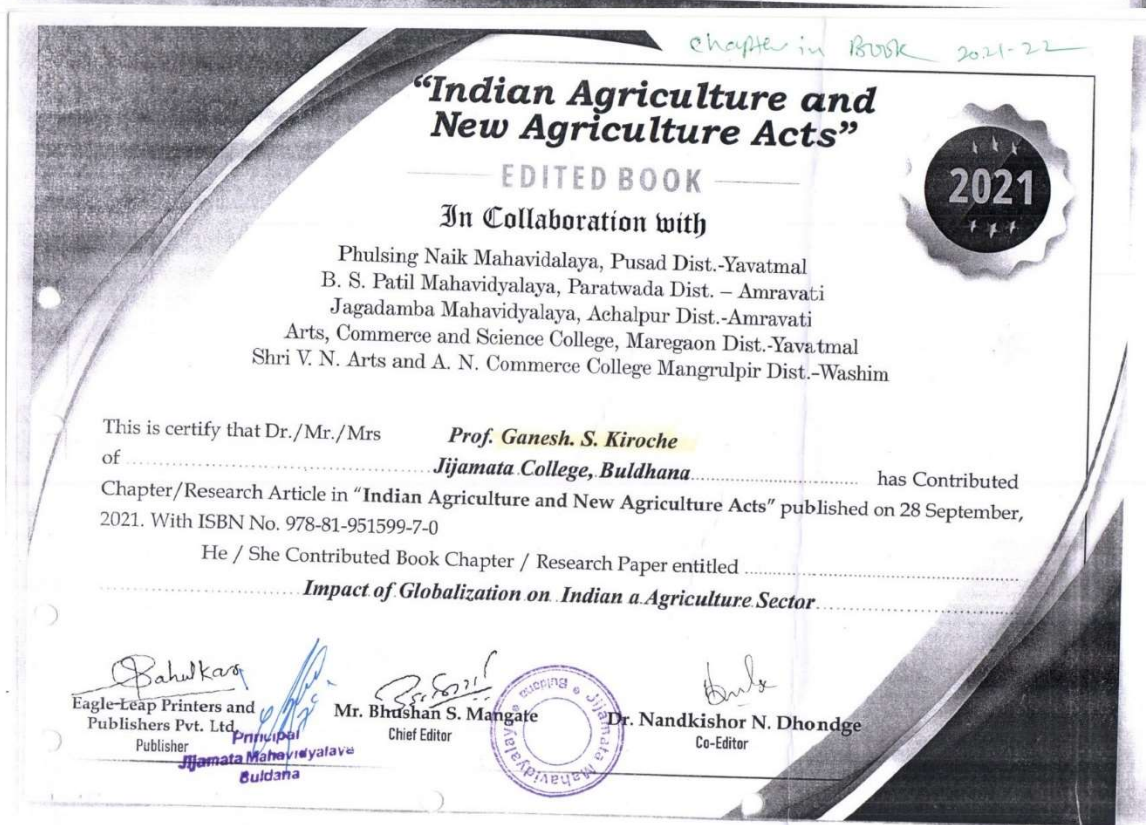
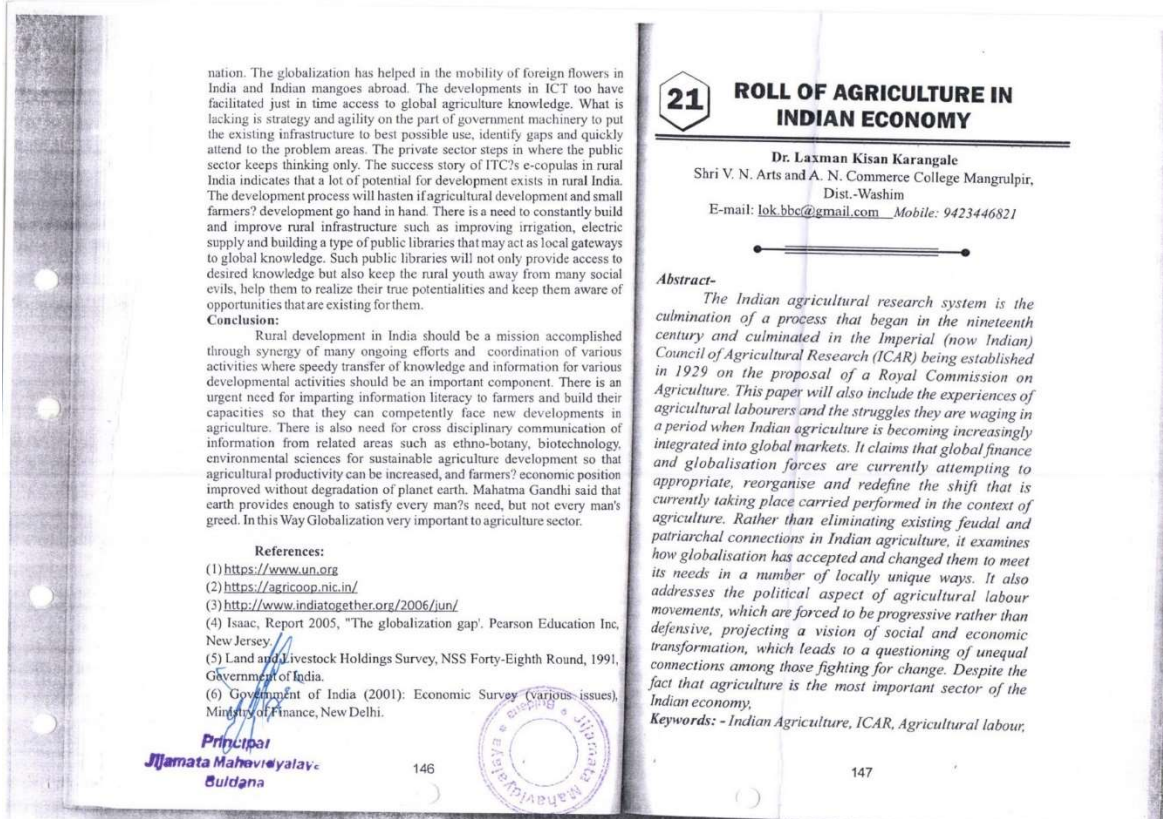
It is clear that the liberalization policies adopted by the

government of India played a dominant role in the agrarian crisis that is now being played out. However, this is not to say that privatization, liberalization, and globalization are per say bad, or inherently inimical to an economy. It is the one size fits all brand of liberalization adopted by the IMF and the World Bank which forces countries to privatize, liberalize and globalize without exception which has failed. Without taking into account the state of an economy, and in this case, the state and nature of the agricultural sector in India, the IMF and the World Bank, with the cooperation of the Indian government embarked on mismatched reforms, which have caused misery and despair among millions of Indian farmers, driving large numbers of them to suicide. It is also essential to break the link between aid and liberalization, which caused India in the first place to accept the conditions of the IMF. Remember that India was on the brink of a financial crisis in 1991 when it applied for the IMF loan and accepted its conditions perhaps the course of economic reform in India would have taken a very different course if there was no urgent need to borrow from the IMF. The start to this process may have already occurred: recognizing the failure of its liberalization policies, the Blair government of Britain announced in 2004 that it will no longer make liberalization and privatization conditions of aid. In another blow to the neo-liberal lobby. The battle, however, has not yet been won. It is essential for the rest of the G8 to follow Britain's example in order to influence World Bank and IMF policy towards India to ensure blind liberalization is not pursued, and so that countries like India can adopt tailor-made reforms to suit their economy.

Seventy per cent of our population derives their livelihood from agriculture and 80 percent of the farmers are small and marginal category. Our post-harvest and sanitary infrastructure is very poor and massive investment in this area will be essential if we are to ensure a level-playing field in external trade in agriculture. The subsidies and other support measure should be continued by designating these under the Livelihood box to tide over the initial problems but could be revoked at a subsequent time, say, after 10-15 years. Restraints on subsidy to farmers can be overcome by canalizing support through Commodity Boards as is being done in the developed countries. But such support is granted not through direct subsidies to facilitating sustainable production through building infrastructure. India has immense biodiversity and natural resources.

There is no dearth of knowledge and farmers are hard-working in spite of this, the small farmers' gains from agriculture are not commensurate to the efforts put in and agriculture cost inputs. This is going to affect the agricultural productivity and food security of the





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Early Detection of Cancer using Nano-Fabrication Technology MEMS Cantilever Sensor

Lakshman K^a, Siddharth B. Dabhade^b, Y.S. Rode^c, Avinash Patwar^d, S.Deshmukh^e, Ranjan Maheshwari^f

^{a,d}NIELIT Aurangabad, Dr. B. A. M. U. Campus, Aurangabad (MS), India

^bMGM's, Dr. G. Y. Pathrikar College of Computer Science and IT, MGM Univrity, Aurangabad (MS)

^cJijamata Mahavidyalaya, Buldhana, MS, India

^eRTU, Kota (R.J), India

lakshman.korra@gmail.com, dabhade.siddharth@gmail.com, ys.rode@gmail.com

ABSTRACT

Lots of available biosensor are not portable for the detection of disease for that bulky instruments are required. To overcome these problems, we can use microstructure based biosensor. The sensor is Micro electro Mechanical Sensor (MEMS) based cantilever. Here, in this article simulating cantilever by changing chemical materials and parameters. For the different cancer diseases like Brest cancer cu(copper) and for heart cancer gold material were used to simulate cantilever. Laser beam and photo detector technology are bulky and costly also. Instated of that cantilever having dimension are width 1 micro meter, length 4 micrometer and height of cantilever is varies in between 25 to 50 nm which gives huge sensitivity. In this paper simulation of the cantilever based on various materials as per the changes in resistance and capacitance effect analysis, cancer tissues behaviour, and identify the exact state of cancer.

Keywords: Micro electro Mechanical Sensor (MEMS), Cancer, Cantilever Sensor, Nanofabrication, Copper

1. Introduction

Oral cancer is spreading worldwide with heighten serious troubles. Out of 135 cr. People's more than 1.1 million people get affected by the cancer and 0.7 million peoples are deaths due to the cancer. As per the IARC report cancer is one of the widely spread disease [1]. Most common cancer type in India is breast cancer in women and oral cancer in men. In India all ages' females who suffering from breast cancer is 27.2 % and men's who suffering from oral cancer is 16.1 %. Breast and Oral cancer rank is 1 and 2 in India. Due to more utilization of tobacco in various Indian states the oral cancer is cases are comes under observation [2]. India has 33.33% active oral cancer cases as compare to world and men's having 50 ages is generally affected by the oral cancer [3][4]. Incident and morality rates for breast cancer is 24.1% and 13.4% similarly lip and oral cavity Incident and morality rates are 9.1% and 5.6% are shown in the Figure 1 and 2[1]. Due to small in size, low cost, fast growing with highly precision MEMS devices provides measuring tissues density and temperature and improves the surgical outcomes [5]. In 1900's peoples uses microscope and electron microscope to see small thing but facing problems to see very small things.

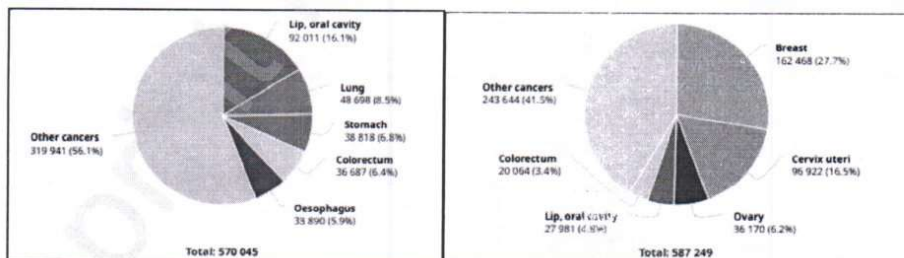


Fig. 1:- In India Total number of cancer new cases in males all age groups [1].

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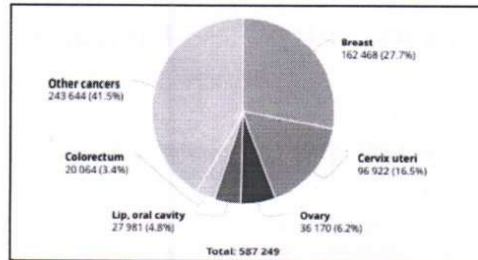


Fig. 2:- In India Total number of cancer new cases in women's all age groups [1]

If people's wants very advanced technology they use MRI Machine and obtain huge sensitivity detection of various types of anomalies. But MRI Machine is not a biosensor. Biosensors are newly called as nano biosensor. These nano biosensors are even smaller, can detect lower concentration things also. Human body hierarchy of structure is start with DNA, intercellular process running within cell then there is various collection of organ. Various cancer diseases has already manifested in the organs. Due to less sensitivity devices and losses which can identify very late exact stage of diseases (cancer). Nano biosensor allows us to indentify exact stage of early cancer development. By selecting 25 to 50 nm cantilever height we can obtain extra ordinary sensitivity which detects early stage of cancer detection.

2. Biopsy

Biopsy is typically indicated for obtaining a final diagnosis on the basis of histopathological features [6] with the assistance of this final diagnosis, treatment planning is completed. Biopsy also plays a very important role in establishing prognosis of malignant and premalignant lesions and conditions. Also knowing the prognosis helps in determining the morbidity and mortality of a patient also as efficacy of the treatment. [7]

Working of Biopsy

Doctor recommends biopsy when he find suspicious while physical exam or test. Biopsy is main way to diagnosis the cancer treatment. To perform biopsy doctor need small tissues from human body to remove tissues doctor requires surgery sometime.

Image-Guided Biopsy: When the affected area is deeper inside the body at that time doctor uses Images-Guided biopsy method. With help of imaging techniques using needle doctor guides affected area location in human body. This depends on the amount of tissues needed, possible diagnosis and other factors. Doctor uses one of the following types of imaging techniques to find the affected area from body

A. Ultrasound:

It helps doctor to look the tumors when not visible in the X ray. For biopsy method doctor often uses needle. Ultrasound is usually used for the quick and most don't require special preparation.

B. CT scan:

Using CT scan we can identify the exact state of cancer but it is bulky and costly instrument.

MEMS: These devices used to identify the early stage of cancer. Due to more sensitive materials

3. Working and Selection of Material for Micro cantilevers:

To obtain extra ordinary sensitivity we used cantilever based sensor generally it detects these nano gram to pico gram level material related easily. When we deal with such very low level concentration it requires amplification before the molecule can be detected. Using this sensor technology in vacuum we should able to measure 100s of zepto-gram level masses. Human cells are larger as nano gram as compare to virus and bacteria.

Why cantilever based Biosensor:

The key point is MEMS don't need reference electrode and MEMS gives huge sensitivity and it is very popular in different nanofabrication technology.

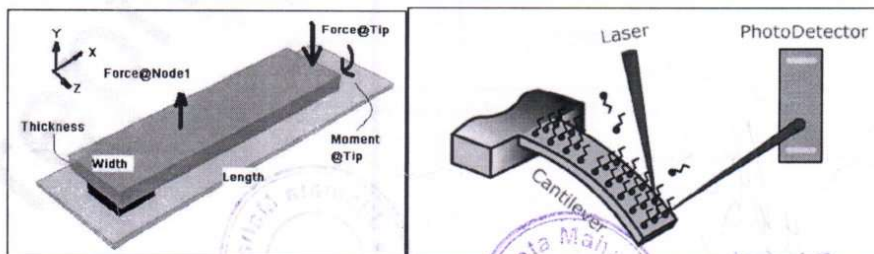


Fig. 3: - Cantilever based Biosensor.

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Dimension of cantilever are width is 1 micro meter and length is 4 micro meters to obtain huge sensitivity cantilever height is in between 25 to 50 nano meter. Once bio modules have landed on cantilever surface bounce off a laser beam and use a photo detector to measure the location. By comparing flat cantilever and bended cantilever the position of photo detector changes. After biomolecules reached on the surface of cantilever oscillation starts in the cantilever then photo detector observes the changes in the laser beam and calculate how much deflection takes place. To measure the deflection we should calculate change in the resonant frequency. The assembly of laser and photo detector are bulky in nature so it is difficult to miniaturize. By observing cantilever sensor change in resistance we can identify whether biomolecule landed or not. As we know that capacitor is inversely proportional to distance between two parallel plate using same formulas we can observe the deflection in cantilevers.

How Does cantilever works:

1. Change in deflection before landing biomolecule Mathematical model

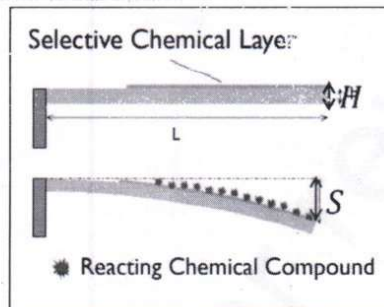


Fig. 4 - Cantilever Reacting Chemical Compound Works

Originally it's undeflected and green layer is that the selective layer which recognizes the molecule a bit like DNA layer was present and target DNA came and sure to it or an antibody could be present so as to catch that focus on bacteria. that's the green which is that the receptor layer then once the red biomolecules have are available , the mass has changed and therefore the whole is deflected in engineering so as to know what proportion deflection takes place. Calculate the external force associated with it using formula given below.

$$\frac{d^2y}{dt^2} + \gamma \frac{dy}{dt} + k(y - y_0) = F_{ext}$$

2. Readings of cantilever:

All readings taken under sugar cantilever simulation tool this tool can do statics and parameter sweep analysis for cantilever with customized geometry and load distribution. Algorithm sugar is based on the nodal analysis which is faster than finite element analysis with comparable accuracy within linear region.

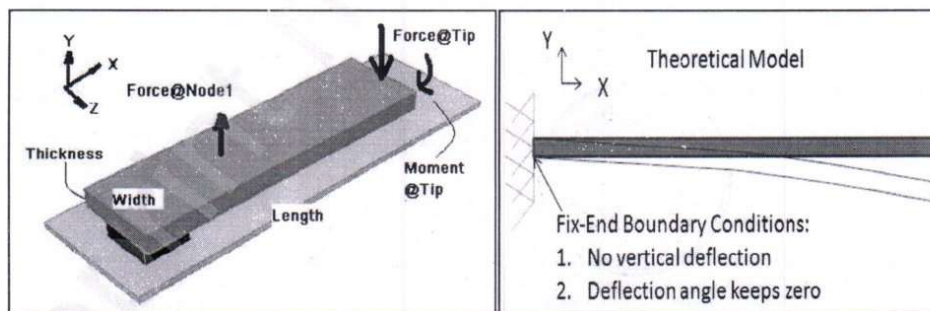


Fig. 5 - Experimental Model.



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Table 1 Design Cantilever with mention parameters

Material Name: Au (Gold)		Material Name: Cu(Copper)	
Material Property			
Poisson Ratio	0.415		0.34
Youngs Modulus	7.9e+10		121x 10 ⁹
Geometric Property			
Length	100e-6		100e-6
Width	2e-6		2e-6
Thickness	2e-6		2e-6
Statics Analysis			
Azimuth	37.5		37.5
Elevation	30		30

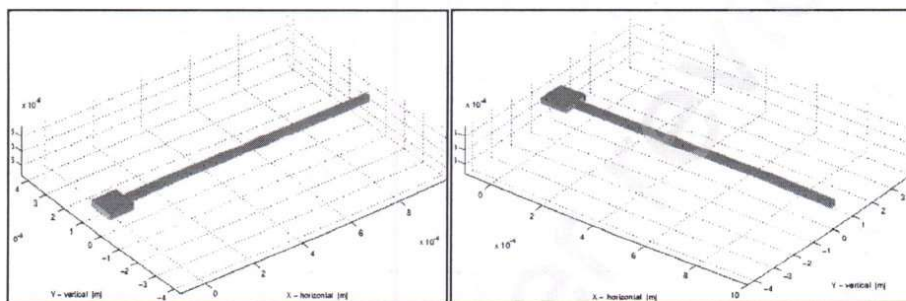


Fig. 6 – Reading of Cantilever.

Conclusion:

The tissues taken from the body is observing under microscope and after analysis of result doctor can able to understand the origin of the cancer and defines the cancer grade in between 1 to 4 scales. Low-grade (grade 1) cancers are generally the least aggressive and high-grade (grade 4) cancers are generally the most aggressive. Here we use MEMS cantilever having dimension width is 1 micro meter, length is 4 micro meter and height is 25 to 50 nm. Which show extra ordinary sensitivity and detects nano gram to pico gram level material easily. MEMS cantilever are identify very early stage of the cancer using gold and copper material and dimension. Here we observe that cantilever sensor measure changes in mass and stiffness of the beam flowing the capture biomolecules. Due to nanofabrication technology we can deal with very small concentration of masses and diagnose the patient properly. This is very difficult in the conventional cancer detection instruments. Due to early detection of cancer stage doctor can diagnoses the patient and provides suitable medicine at very stage.



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Comparative Analysis of Breast Cancer Detection through Thermal Images Using K-Nearest Neighbour, Adaboost, Logistic Regression

¹Lakshman K, ²Siddharth B Dabhade, ³Dr. Yogesh S. Rode, ⁴Pawan Alhat, ⁵Sachin Deshmukh, ⁶Ranjan Maheshwari

^{1,4} NIELIT Aurangabad, Dr. B.A.M.U. CAMPUS, Aurangabad, MS

² MGM's, Dr. G.Y. Pathrikar College of Computer Science and IT, Aurangabad, MS

³ Jijamata Mahavidyalaya, Buldana, MS

⁵ Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, MS

⁶ Rajasthan Technical University Kota, RJ, India

lakshman.korra@gmail.com

Abstract—Breast cancer can be found in both men and women. Though it's rare in men, breast cancer in women has increased significantly and as per WHO cancer statics 2018 report of Breast Cancer recorded approximately 1.6 to 2 lakhs registered cases and around 90 thousand reported deaths. The detection of this cancer at higher stages (i.e. stages 3 and 4) makes it difficult for the patient to survive and thus is a reason that 50% of Indian women suffer from stages 3 and 4 of breast cancer. One more reason for less survivability is that people have less awareness on such a topic. The objective of this research paper is to present results obtained on breast cancer on basis of a comparison of K-Nearest neighbor, Adaboost, Logistic regression using 5 folds 10 folds, 20 folds on data sets. These techniques achieved an accuracy of 96.3%, 91%, and 86.3%. in that, we found KNN is better than the Adaboost and Logistic regression.

Keyword: Breast Cancer, Mammography, preprocessing, Segmentation, KNN, Adaboost, Logistic regression, Malignant.

*Corresponding Author

E-mail Address: lakshman.korra@gmail.com



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Breast Cancer Identification via Thermography Image with Naïve Bayes & Neural Network classifier

¹Lakshman K, ²Siddharth B. Dabhade, ³Y. S. Rode, ⁴Yogesh Shejwal, ⁵S. Deshmukh,
⁶Ranjan Maheshwari,
^{1,4}NIELIT Aurangabad, Dr. B. A. M. U. Campus, Aurangabad (MS), India
²MGM's, Dr. G. Y. Pathrikar College of Computer Science and IT, MGM Univirity,
Aurangabad
³Jijamata Mahavidyalaya, Buldhana, MS, India
⁴UDCSIT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS), India
⁵RTU, Kota (RJ), India
¹lakshman.korra@gmail.com, ²dabhade.siddharth@gmail.com, ³ys.rode@gmail.com

Abstract— Breast cancer is known as the most common offensive cancer type between women and men. Programmed breast cancer discovery classifications are in demand for that, various machine learning techniques have been proposed to detect breast cancer. In this paper we are performing with two different operations. One of these techniques is the Bayes classifier Naïve Bayesian (NB) which is based on the Bayes theorem and the second one is the methodology and techniques used are based on a deep Convolution Neural Network model to predict breast cancer from thermal images. Thermal images are pre-processed, segmented and classified using a deep neural network. The research mainly concludes with to get 95.8% accuracy of prediction achieved for breast cancer based on the output spectrum using training data of 680 thermo grams. We are taking the different readings of both samples by using 5,10,20 folds dataset & also compare in between the two classifiers which will be more relent or efficient to detect breast cancer in an early stage by using thermal images.

Keywords: Naïve Bayesian, Thermal Images, Neural Network, Breast Cancer, Classifiers.

*Corresponding Author
E-mail Address: lakshman.korra@gmail.com



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Identification of Breast Cancer from Thermal Imaging using SVM and Random Forest Method

Lakshman K¹, Siddharth B. Dabhade², Y. S. Rode³, Karan Dabhade⁴, S. Deshmukh⁵, Ranjan Maheshwari⁶

^{1,4} NIELIT Aurangabad, Dr. B. A. M. U. Campus, Aurangabad (MS), India

² Dr. G. Y. Pathrikar College of Computer Science and IT, MGM University, Aurangabad (MS)

³ Jijamata Mahavidyalaya, Buldhana, MS, India

⁵UDCSIT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS), India

⁶RTU, Kota (RJ), India

¹lakshman.korra@gmail.com, ²dabhade.siddharth@gmail.com, ³ys.rode@gmail.com

Abstract—In the recent years, the carcinoma disease in women has significantly observed and it has also caused deaths as per WHO 2018 report of carcinoma statistics recorded approximately 2 lakhs registered cases and around 90000 reported deaths. The speed of survival has become very difficult at higher stages of growth and quite 45% of women's in India suffer from stage 3 and 4 of carcinoma. The target of this research is to deliver a report on carcinoma on the basis of the performance of Support Vector Machine [SVM] methodology and random forest using 5 folds, 10 folds, 20 folds with a training set size 50, 60, 70, 80 and 90 respectively. These techniques have achieved an accuracy of 94.5% and 98.40% through the cross validation of Support Vector Machine [SVM] and Random Forest [RF] method.

Keywords—Thermography, preprocessing, SVM classifier, Random Forest, Breast, Cancer, Malignancy

I. INTRODUCTION

The X-ray diagnosis approach is known as Mammography which is of low powered was used for early stage detection and diagnosis of cancer using Support vector machine (SVM) there are two main approaches initially to detect tumors having suspicious regions & weak contrast in background and how to extract features which will categorize tumors[1]. Hence SVM is meant for classification and a good method of statistical learning has made significant achievement in various fields. This method describes the way to detect of tumour in mammogram images with than 85% of accuracy using SVM. Objective of this paper is to identify differentiate benign breast tumour from malignant by computer aided diagnostic system two stages involved in RF initial step is backward elimination which is used for feature selection and next step is using random forest are hybridized and in first stage data reduction process leads to reduction in which gives fast results. Our proposed method has averagely obtained 98.4% so, here, both SVM and Random forest techniques are compared to show the result obtained and shown the results, which are compared among SVM methods and Random Forest methodology, where the graphs and values are covered in this paper.

II. LITERATURE SURVEY

This analysis created at terribly early son detection of growth of port cancer. S. Thamarai detection & work focuses on 2 things: characteristic region of growth with minimum distinction conjointly methodology to get the options from these regions to reason tumors Jawad conifer, X-ray photograph segmentation supported automatic technique. The analysis of SVM classifier has been thought-about. First of all, tumors are detected from mammograms with the assistance of morphological process of breast pictures. The G-RLM associated distinction of Gaussian (DoG) options that are extracted from the chosen region, where these options are utilized by SVM; the rule has achieved an accuracy of eighty nine.11% mistreatment SVM classifier. The Y. Ireaneus Pakistani monetary unit Rejani et. al. had planned system that focuses on the solution[3]. Hence to find tumors with a weak distinction at background as a suspicious region and another could be a thanks to extract options that reason tumors. The growth detection methodology follows the theme of (I) sweetening of X-ray photograph (II) The growth space segmentation (III) The extraction of options from the metameric growth space. (IV) Use of SVM classifier could also be outlined as conversion of the image quality to a stronger and additional perceivable level [4][5]. SVM i.e. Support Vector Machine was introduced by Vapnik & his colleagues in 1990's that well-tried to effective & promising techniques for process (Peng et al. 2008 Yang, Wu 2006).

III. PROPOSED METHODOLOGY

To obtain good accuracy in results, research work has been done in SVM or random forest algorithm.

A. Random forest

The random forest belongs to family of classification methods. The following main steps describe construction of RF.

1. From obtained raw or natural data we draw a n tree bootstrap samples.
2. Second step is to grow tree and for each data set and node, a select m-try variables randomly used for



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- splitting the tree in order that every single terminal should have no fewer than node size cases.
3. Third step is for brand spanning new data prediction the combination information of n tree is completed.
 4. Fourth step is to use data which isn't in bootstrap sample to calculate OOB error rate. With such a lot of missing values RF can handle no of variables.

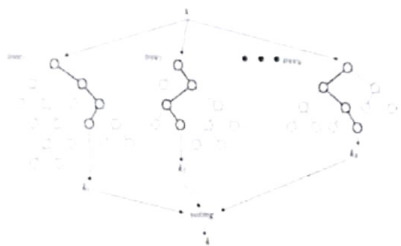


Fig. 1 Random Forest Architecture

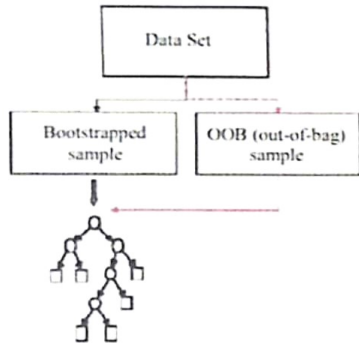


Fig. 2 Random forest sample and out of bag n

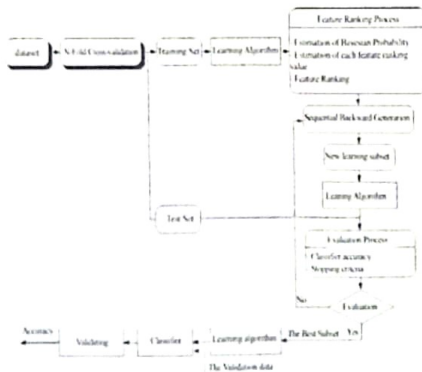


Fig. 3 Existing RF methods

The OOB data is used as test set, test set error estimate by RF and also for importance of variables these two estimates are useful elements for RF out of four the two variable measures

which are of node impurity and classification accuracy for OOB data on GINI index [15].

$$G(t) = 1 - \sum_{k=1}^Q p^2(k | t) \quad (1)$$

Where, 't' is node

P is estimated class probabilities

This can be 2 phase method within which the phase one is of learning algorithm RF were trained & so as to urge the simplest features

To evaluate contribution for features to classifier backward elimination were applied. So on improve the classification accuracy

The Four-step classification algorithm as following:

- 1: Employment of n-fold crosses validation
 - 2: The Feature ranking value estimate and rank the features.
 - 3 Begin with tiniest feature within the feature ranking list and eliminate features use backward elimination approach
 - 4: Verify the stop criteria;
- And jump to Step 1 if not else stop the strategy.

B. Support Vector Machine

The three essential elements of svm like the principle of maximal margin, dual theory, and kernel trick makes SVM successful

Neural Networks having the underside in (SLT) and also the optimization methods are considered as powerful tools to resolve the problems of machine learning.

(n-1) dimension is hyper plane. In higher dimension hyper plane isn't visualized but the notion of an (n-1).

To maximum-margin hyper planes to get nonlinear classifier P-dimensions a kernel trick need to be applied, a hyper plane is described as follows.

The hypothetical values are $\beta_0, \beta_1, \beta_2$ and X_p are the Data points in sample space.

Feature Selection via SVM:

It's important in machine learning is features of subset which contribute to classification The two fold is benefits of feature selection can leads expensive models which are usually used in many scientific problems and provides classification accuracy. Tuning of several parameters is key success of Support vector machine which may affect the generalization error which is considered as effective approach.

As estimator is reduces choosing these parameters is to estimate the generalization error and then search for parameters. While which will generalize well SVMs have been successfully applied economics, finance and management and various fields. In financial forecasting problems there are applications of SVM which have been reported. Some applications in the field of economics including environmental risk assessment e-banking website quality assessment can also be explored by SVM.



IV. EXPERIMENTAL WORK

The Wisconsin Diagnosis carcinoma is dataset obtained from (UCI) an repository of Machine Learning Repository which is usually employed by researchers for purpose of assorted methods in field of machine learning methods for carcinoma Wisconsin carcinoma (WBC) and name of Breast cancer whose data obtained by UCI dataset [11]. Around 1000 instances were available during this dataset where the cases are labelled as either benign or malignant and 458 (65.50%) of the cases are benign and 241 (34.50%) which are found malignant & hence the partition of dataset is done into two parts referred as classes here 2 denotes the benign class and 4 denotes the malignant class [17]. Performed cross-validation method on 5, 10 and 20 fold on 50,60,70,90,training set we've got compared the results of both SVM classifier and RF algorithm to indicate the most effective approach with accuracy stance here an odd number is chosen as datum if the amount of classes is 2.

TABLE I
 COMPARISON BETWEEN SVM AND RF CLASSIFIER

Classifier	5 Fold Cross validation				
	50	60	70	80	90
Support Vector Machine	0.878	0.889	0.915	0.939	0.944
Random Forest	0.956	0.952	0.973	0.974	0.979
10 Fold Cross validation					
Support Vector Machine	0.879	0.884	0.912	0.944	0.937
Random Forest	0.951	0.947	0.971	0.979	0.984
20 Fold Cross validation					
Support Vector Machine	0.879	0.89	0.906	0.945	0.94
Random Forest	0.962	0.950	0.974	0.972	0.974

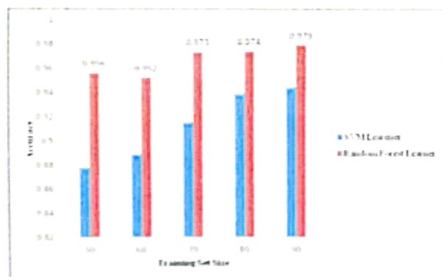


Fig. 4 Comparison SVM and RF with 5 Fold

Then compared the results of Support vector Machine Classifier and Random forest Classifier in proposed model we found that Precision and Recall columns shown below of SVM is lowered value on compared with the RF. In Table I we compared Support vector Machine Classifier & Random Forest Classifier with 5,10 and 20 fold dataset to show result in SVM results on compared with RF, is Low in each of 5 fold 10 & 20 fold table as seen.

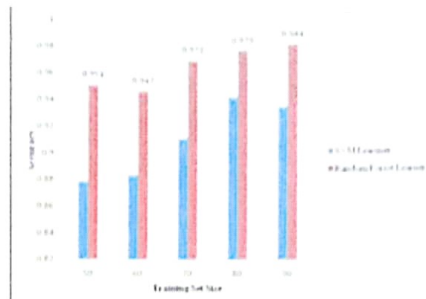


Fig. 5 Random graph on 10 fold Comparison SVM and RF

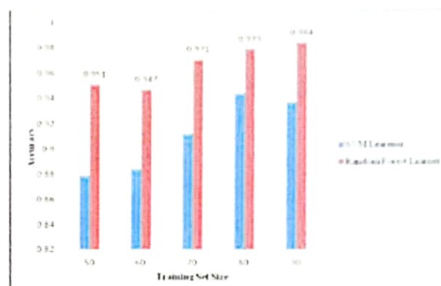


Fig. 6 Random Graph on 20 fold Comparison SVM and RF

Comparison of both methods results are shown in the Table 1. Our proposed paper focus on performance of the SVM learner and Random forest Learner methods among 5 fold, 10 fold and 20 folds each with 50, 60, 70, 80 & 90 training dataset size. As shown in the tables above it is observed and analyzed that the random forest learner method gives 98.4% highest accuracy.

V. CONCLUSION

The proposed paper predicts most severe cancer as Breast cancer, which causes many deaths of girls/women's in the world. Hence early detection of disease will save plenty of lives. The proposed system identifies breast cancer by SVM Random forest methods. This paper concentrates on comparison of the 2 SVM and RF methods. By use of Python, SVM classifies the dataset on implementation gives accuracy of 96.68% in training phase. RF has accuracy 98.4% on the average. This research work has compared the Random graph values, which was obtained on 5,10 and 20 folds dataset also the graph shown states the accuracy level of the RF method over the SVM. Researchers and engineers in data processing can have the benefit of this survey. Hence, this research work has concluded by comparing the graph and results obtained that, random forest is way superior to SVM methodology for the detection of carcinoma.



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PROFILE OF AUTHORS



Lakshman(lakshman.kona@gmail.com) Received M.Tech Degree in Computer Science from Jawaharlal Ndru Technological University Anantapur (2007) and BTech (2005) from JNTU Hyderabad. Currently working as a Scientist" D" in NIELIT Aurangabad. Current research interest areas are in, Image Processing.



Siddharth B. Dabhadre, he has completed M.Sc. Information Technology (2009), M.Phil. Computer Science (2012), Ph.D. Computer Science (2018). He has published more than 30 research articles in reputed national, international conferences and journals. He is member of various learn bodies like IEEE, ISCA, CSTA, AITP, IACSIT, IAENG, IAPR, European Association for Signal Processing, etc. On the basis of his research work he has got 16 distinct awards like Young Scientist Award, Best Paper presentation, excellent paper, etc. Financially he has funded by UGC, DST-SERB I.T.S. International Association for Pattern Recognition (IAPR), Morpho and Eurasip, therefore, he has visited Italy, Japan, Malaysia countries to represent his research work.



Y S Rode is currently working as a Assistant Professor and Head, Department of Computer Science and IT, Jijamata Mahavidyalaya, Buldhana, MS, India



Karan dabhadre, Received M.E. in CSE, presently working as Junior Faculty at NIELIT, Aurangabad



Dr. Sachin N. Deshmukh is currently working as a Professor and Head, Department of Computer Science and IT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, (MS), India. He is also working as a Director, IQAC and Director, Bajaj Incubation Center. He has worked as Director, University Network & Information Center (UNIC), Director, Center for Vocational Education and Training, Chief Coordinator of Spoken Tutorial Project of IITB and PET-2014 Coordinator, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, (MS), India



Dr. Ranjan Maheshwari, (ranjan@rtu.ac.in) Ph.D, Professor at RTU, Kota, India. He is also worked as Director of NIELIT Aurangabad and principal of Government Engineering college Ajmer

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महाराष्ट्रातील सर्व विद्यापीठांच्या पदवी व पदव्युत्तर वर्गासाठी तसेच संत गाडगे बाबा अमरावती विद्यापीठाच्या बी.ए. भाग १ (सत्र १ व २) च्या नविन CBCS अभ्यासक्रमानुसार क्रमिक पुस्तक. MPSC, UPSC, NET-SET व इतर स्पर्धा परीक्षासाठीही उपयुक्त.

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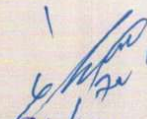
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Buldana



डॉ. श्रीराम येरणकर

प्रत्येक देशाला स्वतःचे संविधान असणे आवश्यक आहे. या संविधानात त्या देशाच्या शासनकारभारविषयक बाबींची तरतूद असते. पण त्याबरोबरच त्या देशातील जनतेच्या आशाआकांक्षेचे व त्या देशाने स्वीकारलेल्या ध्येयाचे निदर्शनही असते. स्वतंत्र राष्ट्रातील नागरिकांना स्वतःचे संविधान निर्माण करण्याचा अधिकार असतो व ते, तो अधिकार संविधानसभा नेमून बजावतात. संविधानसभेत जनतेचे प्रतिनिधी चर्चा करून संविधान तयार करतात व अशा संविधानानुसार त्या देशाचा शासनकारभार चालतो. जनतेच्या प्रतिनिधींनी संविधानसभेत एकत्र तयार केलेले संविधान म्हणजे त्या राष्ट्राच्या राज्यकारभाराविषयीचा वेदग्रंथ होय. त्याचे प्रामाण्य सर्वश्रेष्ठ असते. संविधान हा मूलभूत कायदा असतो. त्याचे मांगल्य व पावित्र्य कायम राखण्याची जबाबदारी त्या देशातील सर्व नागरिकांवर असते.

सदर ग्रंथात भारतीय संविधान निर्मितीची संक्षिप्त माहिती, नागरिकांचे मूलभूत अधिकार व कर्तव्ये, संविधानाचा सरनामा, कार्यकारी मंडळ, विधिमंडळ आणि न्यायमंडळ, निर्वाचन आयोग या संदर्भातील संविधानात्मक तरतुदींची अभ्यासपूर्ण माहिती देण्याचा प्रयत्न केलेला आहे.



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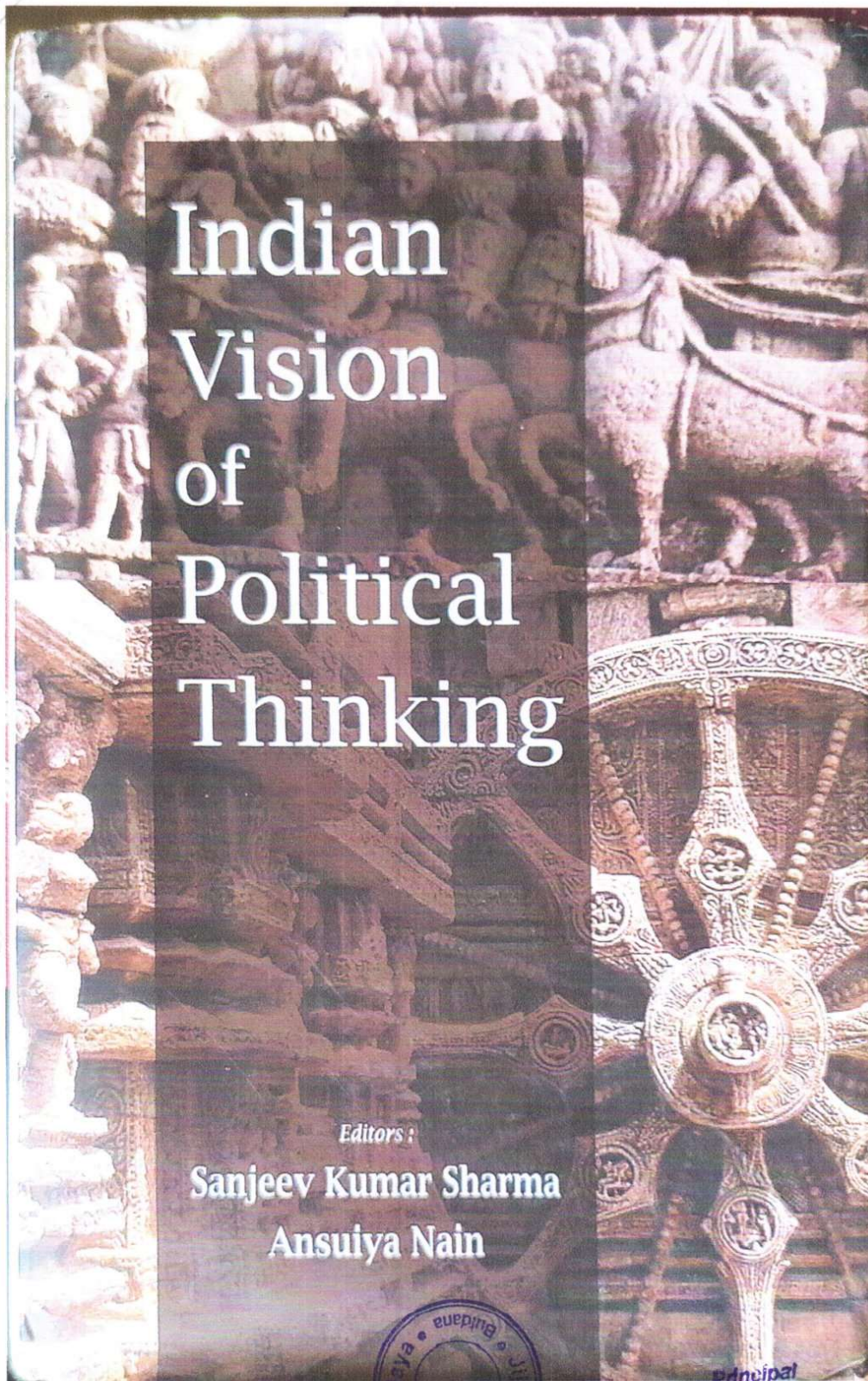
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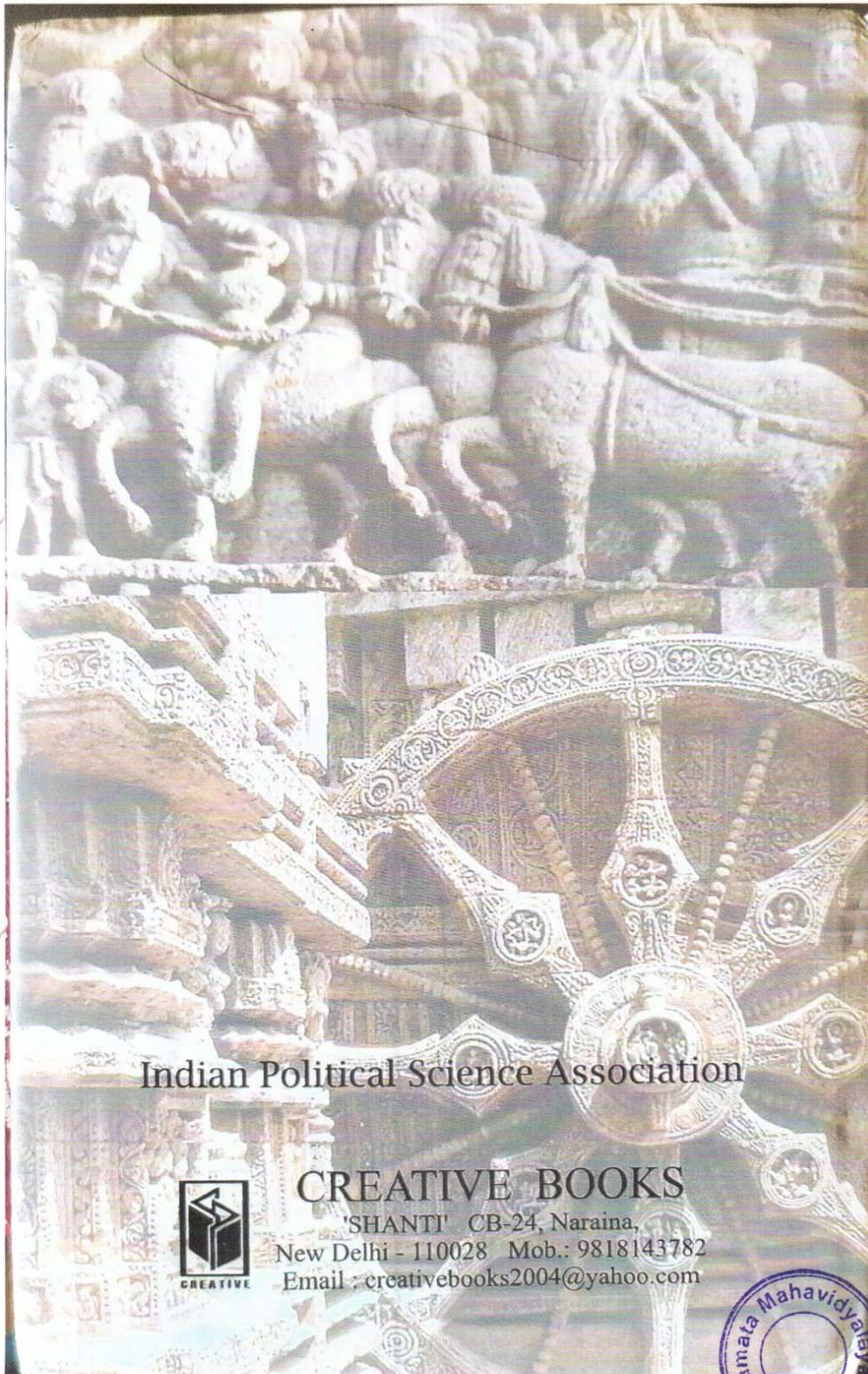
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10

Village Administration in Ancient India

Shriram Yerankar

The Village Headman

The village government was usually carried under the supervision and direction of the village headman. He is called gramani in the Vedic literature and figures frequently in the Jatakas. The Arthashastra attests to his important part in the administration and inscription of almost all the provinces' refer to him during the first millennium of the Christian era. He was called gramika or grameyaka in northern India,² and mununda in the eastern Deccan³ in the early centuries of Christian era and gramukuta or pattakila in Maharashtra, gavunda in Karnataka and mahattaka or mahattaka in U. P.⁴ between c. 600 and 1200 A.D.⁵

Normally speaking there was only one headman for each village.⁶ His post was usually hereditary, government having the right to nominate another scion of the family if the succession of the son was not approved. By caste, he was usually a non-Brahmana. He was the leader of the village militia, and therefore he may have often belonged to the Kshatriya caste. Sometimes Vaisyas too aspired for and obtained the office.⁷ The headman was the most important officer of the village administration. His order was represented on the council of ratins in the Vedic period and he appears almost like a village king in the Jatakas. He figures at the head of the village officers mentioned in the inscriptions of the first millennium of the Christian era. Gahadawala rulers are often seen and consulting the village headman when making land grants.⁸

Duties of the Headman

Defense of the village was the most important duty of the village headman; he was the officer in charge of its militia⁹ and watch and

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ward. Life was much more unsettled in ancient times and owing to show communication the help of the Central Government could not be always expected at the nick of time when there were sudden raids of bandits and robbers. The villagers therefore had to be self-reliant in defense.¹⁰ We often come across the headman and members of the village militia laying down their lives while defending their village.¹¹ The collection of the government revenue was the next important duty of the village headman. He was the custodian of the necessary records and used to carry out the work of collection in consultation which the village council. The headman was also the ex-officio president of this body used to guide its deliberations and activities in the various spheres of the village government and life. He was usually remunerated by rent-free land and could also get a number of petty dues in kind, which the village had to pay to the government. The village headman was the most influential person in the village. The sukranti's observation that he was like the father and the mother to the villagers is substantially true.¹² Though responsible to the central government, he was generally a man of the people and keen to protect their interests. He was as much indispensable to the people also the government. The village office had to keep records of rights and transfers of the village lands, as also papers connected which the government dues and realization. Correspondence had to be carried on with the district authorities and central government and the decisions and resolution of the village council had to be duly recorded. All this work was entrusted to another village officer, known as village accountant. His post also was hereditary in most provinces, and he also was paid rent-free land. In Tamil country, however, he was appointed by the village assembly.¹³

The village headman and the accountant were the two usual officers of the village government. The Sukranti refers to four more, sahasadhipati or magistrate, bhagahara or revenue collector, sulkaagraha or toll collector and pratihara or the gatekeeper. They are not however referred to in other Smritis or mentioned in inscriptions. Possibly they may have existed in big village, their functions being performed by the headman and the accountant in smaller ones.

Primary Village Assembly

Probably all respectable householders were entitled to become the members of the Primary Assembly of the village. We have rather vague evidence on this point about early times and about northern India. There

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are, however, some indications showing that in Maharashtra, the Primary Village Assembly consisted of all the householders.¹⁴ There can no doubt that such was the case in Karnataka and Tamil country. Numerous inscriptions from Karnataka show that the number of the Mahajanas (Great Men of the village) was very large, sometimes 200, sometimes 420, sometimes 500, and sometimes even 1002.¹⁵ There is clear evidence to show that they included all the village householders.¹⁶ All villagers were invited by the beat of the drum for the meeting of the Village Assemblies in Tamil country.

All respectable householders of the village had thus an inherent to become the members of the Primary Village Assembly. It is interesting to note that the different terms by which they were known, mahattamas in U.P., mahattaras in Maharashtra, mahajanas in Karnataka and perumakkal in Tamil country, all mean the same thing, Great Men of the Village. Great Men of the Village, being so large a body, could obviously have carried in the administration only through an executive committee or council, which was known as Village Panchayat in latter times. Let us now see what its constitution was.

Village Council

Jatakas inform us that neither the village headman nor the village accountant ruled over the village community according to their sweet will. They were both of them guided in the administration by the opinion of the village public, which made it felt through the village elders, who formed a kind of informal council since very early times. The sabha of the Vedic period was both a village social club as well as a village council,¹⁸ at its meetings, the members discussed social topics, played indoor games and also transacted the business of the village government. Is Jatakas informing us that village transacted their business themselves?¹⁹ They do not attest to the existence of any regular council or standing committee evolved for this purpose. Initiative was usually left with the headman, but if he acted unreasonably or against the established customs of the locality or realm, the village elders could set the matter right by pointing out his mistake to the headman.²⁰ In the Mauryan period village used to organize works of public utility and recreation, settle the disputes between their residents and act as trustees for property of minors.²¹ But they had not yet evolved regular councils; for the Arthashastra refers to village elders acting as trustees, and not to any village council²² or its sub-committee.

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The village councils appear to have evolved into regular bodies in the Gupta period at least in some parts of India. They were known as panchamadali in Central India and gramajanapadas in Bihar. A large number of the sealing of the different village councils (Ganapadas) have been discovered at Nalanda, which doubtless sealed the letters sent by them to the administrators of the Nalanda University.²³ It seems almost certain that the village councils in Bihar had developed into formal bodies, meeting regularly to transact administrative business and communicating their decisions to outsiders in formal and sealed communications. Village elders known as mahattaras functioned in the Pallava²⁴ and Vakataka²⁵ kingdoms (c. 250-550 A.O.), but we do not know whether they had developed a regular council. Inscriptions from Gujarat and Ocean,²⁶ however, show that from c. 600 A.O. the village elders used to appoint a formal executive committee of their own, variously known as mahattaradhikarins or adhikarimhattaras, either expression meaning 'village elders in office or power'. Inscription show a similar development in contemporary Rajputana also, where the executive of the Village Assembly was known as panchakula; it worked under the guidance of a headman known as mahanta.²⁷ It was undoubtedly a very important body, for donations made even by royal personages were announced in its formal meetings. Gahadawala records often refer to the village elders, described as mahattaras or mahattamas;²⁸ but we do not know whether they had developed a regular executive council of their own.

Inscription of the Chola dynasty (c. 900-1300 A.O.) enable us to present a more details picture of the constitution and functions of the Village Assemblies and their executive committees in Tamil country.²⁹ The primary assembly of the village was known as Ur in the case of ordinary village and sabha in the case of aghahara villages, mostly tenanted by learned Brahmanas. Sometime both these Assemblies are seen functioning in the same village; this probably happened when the new Brahman colony was a small one. As observed already, the primary Village Assembly of the Tamil country consisted of all the village residents. Its meeting was usually summoned by the beating of drum.³⁰ One of the most important work of the Assembly was to elect the village executive; it was chosen after obtaining the consent of all village assembled at the Ur,³¹ but how exactly this was done we do not know. The consent was probably given in an informal manner by the village expressing their approval of the proposals made by the influential of the village community.



The executive body was known as alungnam, the ruling group, but its numerical strength is not known. The information which we get about the constitution and functions of the Village Assemblies (sabhas) and their executive is much more detailed and complete in the case of the agrahara village, mostly consisting of Brahmana residents. These constituted the most cultured and educated section of the community and residents of some of these agraharas have immensely helped the historian of ancient India by describing in detail the constitution of the executive of their Assemblies. The most detailed picture of the working of the executive committees of the Village Assemblies (sabhas) is to be obtained from the famous inscriptions at Uttaramerur, a village still flourishing in Chingleput district with only a slightly changed name, Uttaramallur.³²

The Government of this village was carried on by five sub-committees of the sabha. All members worked in the honorary capacity and held office for one year. They could, however, be removed earlier, if found guilty of misconduct. It was felt that all experienced and qualified residents of the village should get an opportunity to serve on the various sub-committees; one of the rules, therefore, provided that a member who had served once on a sub-committee was not to re-appoint to it during the next three years. Persons whose character was loose, or who had been found guilty of misappropriation of public funds, were debarred from membership as also their near relatives. The bar against the latter was obviously intended for increasing the volume of public opinion against those who were guilty of defalcation of public funds. Members were to be neither too young nor too old; their age was to be above 35 but below 70. These negative qualifications, however, were not sufficient. Candidates were required to own a house and at least ¼ veli (about two acres) of tax-paying land. It was felt that those who deal with public funds should be persons above need. But the property qualifications were halved in the case of those who were good scholars either of the Vedic learning, or of Smritis, or of bhashyas (Philosophy). It was but natural that an agrahara community should be anxious that its representatives on the different village committees should be, as far as possible, well-to-do scholars, of good character and known rectitude. It is worth noting that no government officers were included in these committees. Mahaaradhikarins, who formed the village council in the Deccan, are also sharply distinguished from regular government officers in the

inscriptions hailing from that province. It is not to be supposed that these rules about the qualifications of members were of rigid and universal application even in the case of the agrahara village. The village sabhas had gradually evolved out of popular gatherings of the earlier periods which discussed social, religious, and political matters indiscriminately at their meetings, as there was hardly any distinction made in such matters at that time. In the light of experience gained, rules were gradually framed in the course of time. Inscriptions were being to refer to them only from about the end of the 8th century A. D. Each sabha had as a rule its own constitution, though of course, it did not very widely differ from the normal type. Thus, for instance, in some cases the minimum age qualification for members was 35, in others 40. In some cases, members become re-eligible for election after thirty years, in others after five or even ten years. Some assemblies held that even the near relatives of persons once elected should not be permitted to seek re-election for the next five years.³³ The number and functions of the sub-committees also differed according to the needs of the situation and the locality. Each sabha was usually the architect of its own constitution. The earliest known constitution that of the mahasabha of Mananlalainlur was framed by that body itself at a special meeting of village convened by a beat of drums.³⁴ When amendments become necessary in the constitution, they also were usually considered and passed by the sabha itself. Sometimes we find the sabhas amending their rules in less than two months' time.³⁵

Different Sub - Committees

At Uttaramerur members of the different sub-committees were selected by drawing lots. Several nominations were made for each of the thirty wards of the village, the name of each nominee being put on a separate ticket. All the tickets for each ward were put in a young child, who quite innocent of what it was called upon to do, was asked to pick up one ticket. That person was declared elected for each ward whose name was on the ticket so taken out. There was no room for canvassing or party politics. Thirty persons who were thus selected were later assigned to different sub-committees. The first sub-committee was in charge of village gardens and orchards; the second supervised the village tank and the distribution of its water; the third discharged the important function of settling disputes. The fourth committee was known as the gold committee; its function was to assay gold for all people impartially.

This sub-committee naturally consisted of experts in the art. There was no standard state coinage and so gold that was offered for taxes or prices had to be certified about its fineness. A special procedure was laid down for the selection of the expert members of this committee. The fifth sub-committee was known as panchavara committee; its functions are not clear.

When members, who had once served on a sub-committee, become eligible for re-election after the lapse of the prescribed number of years, they were usually transferred to a different sub-committee. This was intended to ensure a wide administrative experience in the different members. In addition to these five sub-committees, there was a general committee of supervision known as Annual Committee (samatsara-variyaam). Only experienced elders, who had previously served on other sub-committees, were eligible for the membership of this body. The number and functions of the sub-committees naturally varied according to the needs and circumstances of each village. A land survey committee is disclosed by one record; its function must have been to survey and classify lands and see to it that the government assessment was fair and equitable. A temple committee is referred to in another.³⁶ Some agrahara village had their own colleges; they probably had an education committee. We have shown already how the village assemblies had developed a regular council in Bihar, Rajputana, Central India, Maharashtra and Karnataka at least in the Gupta and the post-Gupta periods. Neither Smritis nor inscriptions, however, enlighten us as to the manner in which it was constituted. The committee was reconstituted annually in Tamil country, as shown above; in an inscription from Bhinmal in Rajputana, (dated 1277 A.O.), we find the members of the local committee making a religious grant and observing that though they have made the donation, its merit will belong to all those who may happen to be become members of the council in future. This suggests that the members of the village councils used to be periodically changed in the north as well. We, however, have no information about the duration of the tenure of their office. At Uttaramerur, the selection was by lots. It does not seem that election of the modern type giving rise to party jealousies and rivalries was prevailing anywhere. Persons were periodically elevated to the council by the consensus of public as expressed in a general meeting of all the respectable householders of the village. Caste consideration did not sway in the selection of the council members.

Many non-Brahmanas worked on it in the Gupta age; on the judgments of many village Panchayats in the Maratha period appear the signatures of not only non-Brahmanas but also of untouchables.

The division of the village council into sub-committees, which prevailed in Tamil country, was unknown to Karnataka. Numerous inscriptions from this province show that the Great Men of the village (mahajanas) used to manage schools, construct tanks, build rest houses, raise subscriptions for public purposes and act as trustees and bankers, guaranteeing for all time to come the proper utilisation of the trust funds entrusted to their care. One naturally expects that the Great Men should have appointed sub-committees to supervise these different activities, but the inscription never refers to them.³⁷ It would appear that the village mahajanas of Karnataka used to make only informal arrangements for the discharge of these various duties and responsibilities through their executive council, which is seen to consist to sometimes of three and sometimes of five members.³⁸ The members of the council may have taken the help of other influential citizens of the village community according to the need of the situation. Sub-committees of the Chola type did not probably function in northern India as well. Here the village council consisted of five members only; it is expressly called a panchamndali in a Gupta inscription³⁹ and panchakuli, in several medieval records.⁴⁰ Sub-committees of a small body of five members were obviously impracticable.

Functions of the Village Council

Let us now briefly survey the functions of the village council. Several records from south Indian make it quite clear that the ultimate responsibility for collecting the land revenue was fixed upon the village council. It was this body which negotiated with government for concessions in the usual demand in the case of famine and similar calamities. But when the account was once settled, the village council had to collect the dues from the landowners and even proceed to auction their land, if they were default for a long time. The council had even the power to exempt a piece of land from the taxation of the central government, if its owner deposited with it the capitalized value of the annual tax. The tax was of course paid by the council itself out of the interest of the capitalized fund. It is doubtful whether the village council in Karnataka, Maharashtra and northern India enjoyed such considerable power concerning the



collection and remission of land revenue, as were possessed by the Chola councils. At any inscription are silent upon the point. The ownership of the village waste lands was vested in the village councils. In the Gupta period the Central Government could dispose of them only with the sanction of the local bodies.⁴¹ Numerous Chola epigraphs record the sale of land by the village council; probably in many cases these were pieces of waste land brought under cultivations.⁴²

The settlement of the village disputes was one of the most important functions of the village councils. In the first instance, family elders or the guild to which the disputants belonged tried to settle the case; but if they failed, the village council used to decide the dispute. Serious crimes were naturally excluded from the jurisdiction of the village council; sometimes capital punishment had to be imposed upon the criminals and it was naturally felt that the highest court of the state should be called upon to decide the momentous issue. Cases of accidental homicides not amounting to murder were, however, often settled by the Tehsil council in the Chola period.⁴³ There was, however, no limit to the jurisdiction of the village council as far civil cases were concerned; disputes involving rights to properties worth several thousand could be settled by them. In many cases temples had their own separate management committees. When, however, such was not the case, the village councils or one of its sub-committees would supervise the temple administration with a view to see that duly arranged, funds properly utilized and repairs to the temple diligently carried out.⁴⁴

Procedure of Business

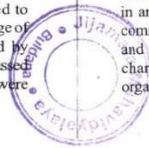
A few words are necessary about the procedure followed at the meetings of the Primary Village Assemblies and their Executive Councils or Panchayats and their sub-committees. The meeting place of the Primary Assemblies varied according to local conditions; sometimes it was the hall of the Assembly, sometimes the pavilion of the local temple, sometimes even a tamarind or a banyan tree. All respectable householders were entitled to attend; in actual practice about 200 or 300 persons generally participated in the meetings. The Primary Assemblies used to meet when the Village Council had constituted. In the Agrahara village of Tamil country the executive committees were usually constituted by drawing lots; in other places probably, names were previously discussed informally by the leading residents, and when it was felt that they were

generally acceptable, they were formally proposed in the Primary Assemblies and accepted by them. It is very unlikely that there was any regular voting as in modern times. Meeting of the Primary Assemblies were also probably convened when matters of unusual importance like the sale of public land to mitigate the miseries of famine were to be considered. Elderly members alone must normally have taken part in the discussion as in ancient Greece. Occasionally, however, persistent opposition was raised by mischievous persons; for we have a rule made by one Tamil assembly prescribing a fine five kassu for persons guilty of this mischief.⁴⁵

It was also customary to convene a meeting of the whole Village Assembly, when donations were to be accepted on behalf of the community. In Karnataka in particular, it was customary for the assembly to assure the donor on such occasions that the donation would be used for the purpose intended. The convening of the Primary Assembly on such occasions was no doubt a suitable way showing the community's grateful appreciation of the donor's action. Very little is known about the procedure of the meetings of the Village Council or the Panchayat. Probably the village headman in Northern India and Deccan and the madhyastha in Tamil country presided over the meetings, which were usually held in the village office (chavadi). The village accountant must have kept a record of the proceedings in the village office, especially when grants were accepted or tax exemptions granted. Sometimes the important resolutions on such matters were got engraved on the walls of the village temple; that is how we happen to know about them after the lapse of ten centuries.

Central - Village Relations

We shall now consider the relations between Central Government and the Village Council. No doubt some Smritis occasionally state that the Village Councils derive their power from the king or the Central Government.⁴⁶ This statement, however, indicates the greater power of the Central Government, but is not historically true. Most of the dynasties in ancient India used to flourish for about two centuries. The village communities and council were, on the other hand, of hoary antiquity and derived their power from immemorial custom and not from any charter or delegation from the Central Government became more organized and developed, it often sought to control and curtail the power



of the Village Councils. Sometimes king's officers are seen to be present when the Primary Assemblies met to change their constitution;⁴⁷ sometimes the rules are stated to have received the approval of the king himself. These, however, were rather exceptional cases; it is not unlikely that king's officers might have been occasionally present because they happened to be in the village, and that the king may have accorded approval to proposals formally submitted to him by the Primary Assembly. A perusal of the evidence, however, clearly suggests that usually the village Primary Assemblies themselves determined the constitution of their committees and not the Central Government. The same probably was the case in northern India as well. There the Village Council consisted of only about five persons, who were raised to that body by the general approval of the whole community. There was hardly any scope for the Central Government to dictate any constitution.

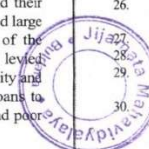
Numerous inscriptions from northern and southern India, giving king's orders issued to the village headman and the Village Council, show that the Central Government used to have a general power of supervision and control over the village government. This control was exercised by the occasional summoning of the village headman to the district headquarters to explain and clarify matters, as also by the periodical dispatch of inspection officers to village to supervise their accounts and general administration. Periodical auditing of the village accounts by the inspecting staff of the Central Government is frequently referred to in Chola records, and it must have been done in all other administration as well. Members of the council were removed for misconduct by the Assembly itself; but sometimes they were also fined by the Central Government.⁴⁸ If there was a dispute between two Village Assemblies, the case must have been normally referred to the Central Government; we have, however, an instance on record when such a case was referred to the arbitration of a third Village Assembly.⁴⁹

It will be thus seen that the Central Government exercised only a general supervision and control over the Village Assembly and their Council. It left the initiative to the Village Council, which enjoyed large powers. They made effective arrangement for the defense of the community, collected the taxes of the Central Government and levied their own, settled village disputes, organized works of public utility and recreation functioned as trustees and bankers, raised public loans to mitigate the miseries of famines, organized schools, colleges and

house and arranged for their funds, and supervised the manifold religious and cultural activities of the temples. There can be no doubt that they exercised greater powers than those that are at present enjoyed by the local bodies in most countries, both of the east and of the west. They played an important and creditable part in defending the interests of the villagers and in promoting their material, moral and intellectual progress.

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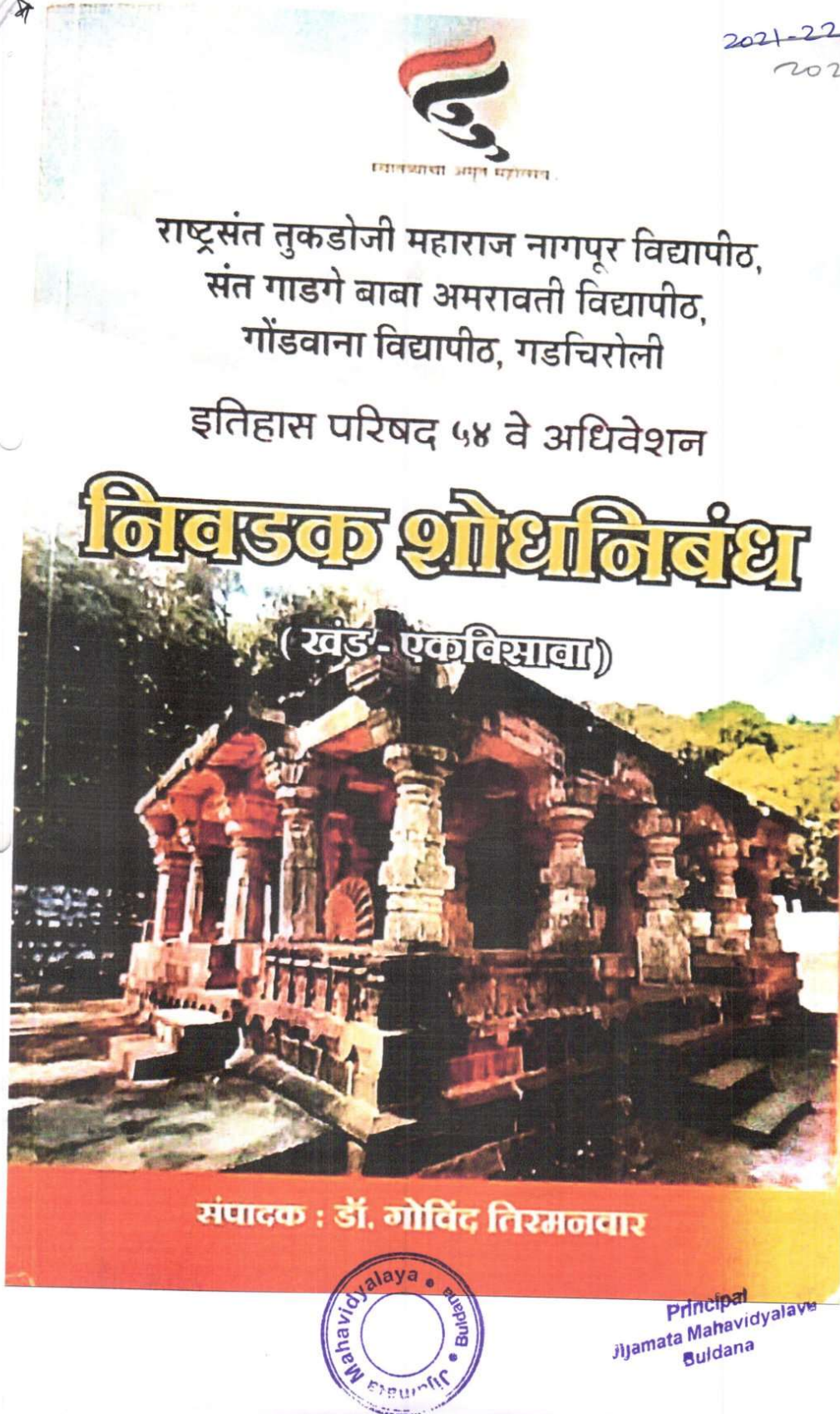
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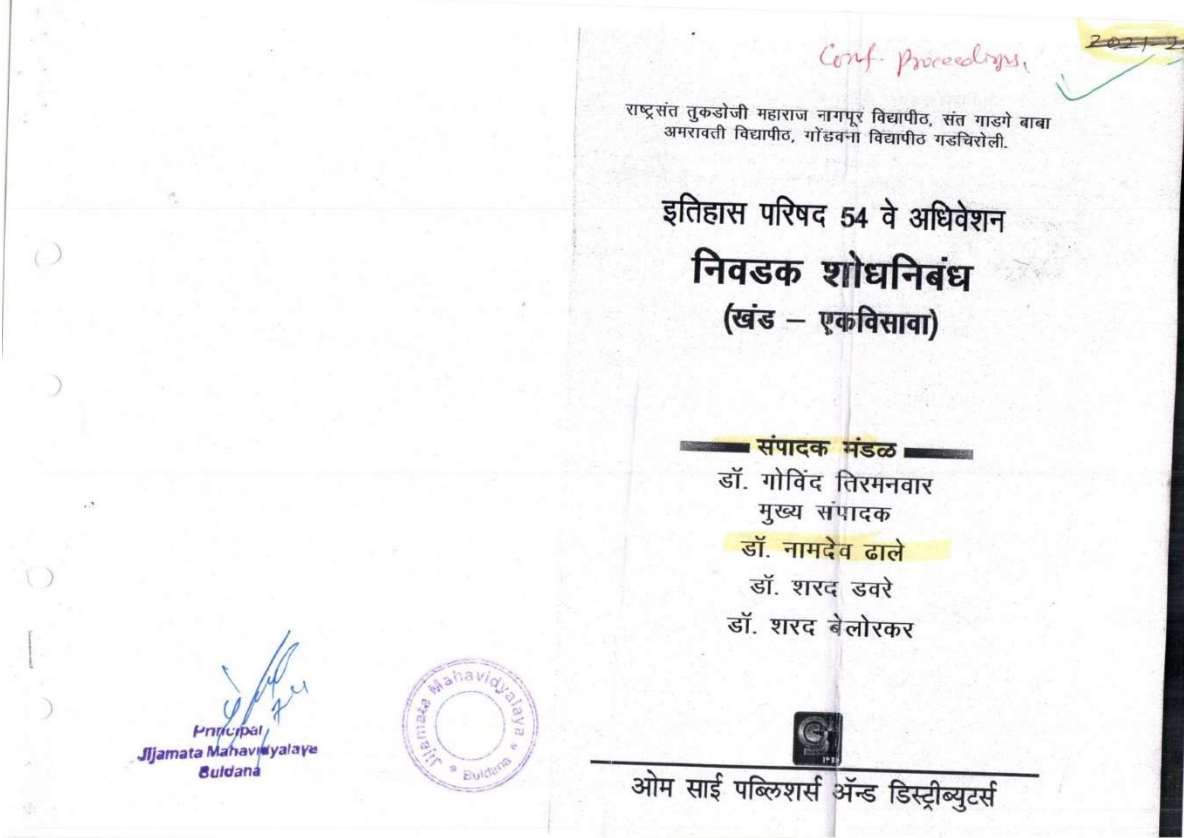

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Section-B
Evolution of Indian Vision







निवडक शोधनिबंध (खंड-एकविसावा)

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प्रकाशक :

श्री. गणेश राऊत
ओम साई पब्लिशर्स अँड डिस्ट्रीब्युटर्स
29, इंदिरानगर, टी.बी. वार्डच्या मागे, नागपूर
मो.नं.: 9923693506, ई-मेल: ospdnagpur@yahoo.com

मुद्रक व डिस्ट्रीब्युटर्स

साई ज्योती पब्लिकेशन
मो.नं.: 9764673503
ई-मेल: sjp10ng@gmail.com, वेब साईट: www.saijyoti.in

सेल्स ऑफिस :

बुक्स एन बुक्स
65, शॉप नं. 2, राधिका पॅलेस, हनुमान नगर रोड, मेडिकल चौक,
नागपूर मो.नं.: 9923593503

शाखा :

पुणे शाखा : न्यु दिल्ली शाखा :
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अंबामाता मंदीर रोड, अंसारी रोड, दरियागंज,
अंबाई दरा, धायरी, न्यु दिल्ली-110002,
पुणे-411041. मो.नं.: 8888828026,
मो.नं.: 9420318884 9325656602

अक्षर रचना :

श्री गणेश ग्राफिक्स, मो.: 9890803277.

प्रकाशित सर्व शोधनिबंधातील विचार, मते व निष्कर्ष शोधनिबंध
लेखकांची आहेत, त्यांच्याशी संपादक मंडळ किंवा इतिहास परिषद
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अध्यक्ष

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अमरावतीडॉ. दिगांबर कापसे
नागपूरडॉ. शरद बेलोरकर
गडचिरोली

सहसचिव

डॉ. संदीप राऊत
अमरावतीडॉ. राजू खरडे
नागपूरडॉ. श्रीकांत पानघाटे
गडचिरोली

कोषाध्यक्ष

डॉ. नामदेव ढाले

विभागप्रमुख

डॉ. अनिल ठाकरे
अमरावतीडॉ. शरद डवरे
नागपूरडॉ. नंदकिशोर माने
गडचिरोली

सदस्य

डॉ. तुभास मुरे, डॉ. राजेंद्रसिंह देवरे
अमरावती शहर व ग्रामीण
डॉ. कैलास फुलमाळी, डॉ. वंदना तागडे
नागपूर शहर व ग्रामीण
डॉ. दीपक लोणकर, डॉ. मिलींद भगत
गडचिरोली शहर व ग्रामीण



परिषदेद्वारे प्रकाशित करण्यात यावे असा मानस सर्व प्राध्यापकांनी व्यक्त केला. परिषदेचे संस्थापक सदस्य प्रा. पी. एन. देशमुख यांच्या पुढाकाराने शोधनिबंध प्रकाशन जगदंबा महाविद्यालय, अचलपूर येथील अधिवेशनापासून हाती घेण्यात आले व समर्थ महाविद्यालय, लाखनी, जि. भंडारा येथील 35 व्या अधिवेशनात परिषदेचा पहिला निवडक शोधनिबंध संग्रह प्रकाशित करण्यात आला. त्यानंतर सातत्याने शोधनिबंध संग्रहाचे प्रकाशन करण्यात येत आहे.

प्रस्तुत 54 व्या इतिहास परिषदेमध्ये प्रकाशित होणाऱ्या या शोधनिबंध संग्रहामध्ये 52 व 53 व्या इतिहास परिषदेमध्ये वाचलेल्या शोधनिबंधाचा समावेश आहे. शोधनिबंध सादर करणाऱ्यांची संख्या वाढविणे सोबतच दर्जेदार शोधनिबंध सादर व्हावेत या दृष्टीने परिषदेच्या माध्यमातून अणखी प्रयत्न होणे गरजेचे आहे.

इतिहास परिषदेचे 53 वे अधिवेशन स्व. छगनलाल मुलजीभाई कळी कला महाविद्यालय, अचलपूर, कॅम्प, जि. अमरावती या महाविद्यालयाने यशस्वीरित्या आयोजन केले. त्याबद्दल मा. प्राचार्य डॉ. काशीनाथ बऱ्हाटे व स्थानिक सचिव डॉ. गौतम खोब्रागडे यांचे इतिहास परिषदेच्या वतीने आभार मानतो. इतिहास परिषदेचे 54 वे अधिवेशन आयोजित करण्याची जबाबदारी श्री शिवाजी कला, वाणिज्य व विज्ञान महाविद्यालय, राजपूर, जि. चंद्रपूर या महाविद्यालयाने स्वीकारली आहे त्याकरिता महाविद्यालयाचे प्राचार्य डॉ. एस. एम. वारकड व स्थानिक सचिव प्रा. गुरुदास बल्की यांचेही परिषदेच्या वतीने आभार मानतो.

सदर शोधनिबंध संग्रहासाठी शोधनिबंध पाठविणाऱ्या सर्व प्राध्यापक, संशोधक व विद्यार्थी यांचे विशेष आभार. शोधनिबंध संग्रह तयार करण्यासाठी सहकार्य लाभलेल्या संपादक मंडळातील सर्व सदस्यांचे मनःपूर्वक आभार. अल्पकाळात शोधनिबंध संग्रह तयार करून दिल्याबद्दल प्रकाशक, ओम साई पब्लिशर्स अॅन्ड डिस्ट्रीब्युटर्स यांचे मनापासून आभार.

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आधुनिक संत व्यक्तिमत्व मारुती महाराज माकनेरकर

डॉ. नामदेव वा. ढाले

सहयोगी प्राध्यापक व इतिहास विभागप्रमुख
जिजामाता महाविद्यालय, बुलडाणा.

महाराष्ट्राच्या ऐतिहासिक पार्श्वभूमीचा विचार करता 1206 ते 1518 पर्यंत देवगिरीचे यादव व बहामनी सुलतान निजामशाही व आदिलशाही लंल वर्धस्वाखली महाराष्ट्राची राजकीय स्थिती होती. देवगिरीच्या यादवांची राजवट सोडता इतर राजवटीत महाराष्ट्रातील सांस्कृतिक जीवनाला अन्यायकारक वागणूक मिळाल्याची दिसून येते. यादवस्थान महत्त्वाची कामगिरी करणारा एक पंथ म्हणजे वारकरी संप्रदाय होय. सामाजिक व धार्मिक एकत्मता साधण्याचे कार्य वारकरी पंथाच्या वतीने करण्यात आले. याच काळात निर्माण झालेल्या अनेक संतांची विचार त्यांनी रचलेले साहित्य यामुळे महाराष्ट्राच्या समाजाला एक वेगळी ओळख निर्माण झाली. संत विचारसरणीतून फार मोठा सांस्कृतिक वारसा जोपासला गेला हे श्रेय वारकरी संप्रदाय ला दिले जाते. समाजातल्या शेवटच्या घटकपर्यंत समतेची ध्वजा पोचण्याचे कार्य वारकरी संप्रदायाने केले. 1818 मध्ये पेशवाईचा अंत झाला इंग्रजी राजसत्ता प्रबळ बनली. यादवस्थान महाराष्ट्राच्या अस्तित्वाला उतरती कळा लागली होती. परंतु वारकरी संप्रदायाने वैचारिक पार्श्वभूमी चा पाया महाराष्ट्रामध्ये रचला होता. आणि या विचारला मानगारा व त्याचा प्रचार करणारा महाराष्ट्र मध्ये अस्तित्वात होता. महाराष्ट्रामध्ये होऊन गेलेली जुनी संत परंपरा त्याचे पुनरुज्जीवन करण्याचे कार्य सुद्धा आधुनिक काळात हा समाज सुधारकांनी केले. आणि त्या समाजसुधारकांना सुद्धा संतत्व प्राप्त झाले. या धर्मातील वर्णव्यवस्था जातीव्यवस्था रूढी-परंपरा यातील मर्यादा ओळखून समाजामध्ये सुधारणावादी विचार मांडण्याचे कार्य आधुनिक संतानी केले. महाराष्ट्रातील विदर्भ भूमीला अध्यात्मिक व धार्मिक महत्त्व आहे. अनेक ग्रंथांमध्ये विदर्भ भूमीचे वर्णन केलेले आहे. विदर्भातील अनेक संतांची नावे व त्यांचे कार्य जग प्रसिद्ध आहे. त्यामध्ये संत गाडगेबाबा संत तुकडोजी महाराज संत गजानन महाराज यांचे नाव अग्रणी आहे. या



2 : निवडक शोधनिबंध (खंड-एकविसावा)

नावबरोबरच एक महत्त्वाचे नाव सुद्धा होते ते म्हणजे सुधारणावादी संत श्री मारुती महाराज माकनेकर हे होय. संत मारुती महाराज यांचे बुलढाणा जिल्ह्यातील मलकापूर तालुक्यातील लहान लोकवस्तीचे माकनेर या गावचे होते. या लहानशा गावात २२ ऑक्टोबर १८६६ रोजी जन्म झाला. १८६६ ते १८४८ असा संत मारुती महाराज यांचा कार्यकाल होता. त्यांना ८२ वर्षांचे दीर्घायु लाभले.

श्रीक्षेत्र माकनेर हे संत वृत्तीच्या लोकांनी पावन झालेले गाव. जिल्ह्यातील मलकापूर तालुक्यापासून फक्त १० किलोमीटर अंतरावर आहे. मारुती महाराजांनी आपल्या कीर्तनातून शंकर-पार्वतीच्या संवादाच्या रूपकातून या क्षेत्राचा महिमा सांगितलेला आहे. अनेक साधू संतांच्या पदस्पर्शाने ही भूमी पावन झालेली आहे. विविध प्रकारचे धार्मिक महोत्सव नामसंकीर्तन सोहळे या ठिकाणी आयोजित केले जातात. त्यामुळे परिसरात या क्षेत्राचा जय जयकार व प्रसिद्धी फार मोठ्या प्रमाणात झालेली आहे. एक संतभूमी म्हणून माकनेर या गावाला बघितले जाते. मारुती महाराजांनी जीवन कार्यामध्ये अनेक सामाजिक धार्मिक साहित्यिक कार्य केले या सर्व गोष्टींचा या संशोधन लेखांमध्ये विचार करण्यात आला आहे.

संत मारुती महाराज यांचा जन्म

संत मारुती महाराजांच्या मातेचे नाव वालंबा हे होते. ह्यामुळे जळगाव तालुक्यातील येरळी गावच्या इनामदार घराण्यातील पुर्णजी यांच्या कन्या होत्या. वारकरी संप्रदायाचे संस्कार वालंबा यांच्यावर पडलेले होते. मारुती महाराजांच्या वडिलांचे नाव लक्ष्मण बाबा होते. लक्ष्मण बाबा सुद्धा राम भक्तीमध्ये तल्लीन झालेले व्यक्तिमत्त्व होते. आणि भक्तिमय उमयताच्या पोटी मारुती महाराजांचा जन्म झाला. वालंबा ह्या जेव्हा गर्भवती होत्या तेव्हा त्यांना मारुती महाराजांच्या जन्माआधीच जन्म घेणाऱ्या मुलांच्या अध्यात्मिक शक्तीची जाणीव स्वप्नामध्ये हनुमंताचे दृष्टांत देऊन करून दिली.

“वालंबा माता भाग्यवंत! गर्भ राहिला उदरात
डोहाळे होते तीजप्रत! वदे काय बाबासी १५८
काल रात्री निद्रित! स्वप्नी आले हनुमंत
म्हणे बाई भगवंत! कुस तुझी उजळेल”



4 : निवडक शोधनिबंध (खंड-एकविसावा)

शरीर वाणकाम करी! परी नाम अंतरी!!
चित्तवृत्ती तदाकारी! मनशांती लाभत!!१२७!!

मारुती महाराजांनी उदरनिर्वाहाचे साधन म्हणून वाण दुकान टाकले होते. आणि दुकानदारी करता करता ते राम नामात सुद्धा सहज तल्लीन होत असत. आणि आपल्या कृतीतूनच कर्म वादावर विश्वास दर्शवलेला आहे हे दिसून येते.

समाजातील अनिष्ट रूढींना विरोध

!!जादू टोणा मंत्र! असे धोतांड सर्वत्र!
मंत्रून देइ ताईत! यंत्रयुगात अज्ञान!!५४!!

संत मारुती महाराज माकनेर कर यांनी समाजातील अनिष्ट रूढी परंपरा यांना विरोध केला. तत्कालीन समाजामध्ये या रोगराई येत असत. तेव्हा तत्कालीन समाजातील लोकांचे पाहण्याचा दृष्टिकोण हा अंधश्रद्धाळू वृत्तीचा होता. रोगराई आली म्हणजे कोणत्या तरी देवी-देवतांचा कोप झाला अशी लोकांची मानसिकता बनत असे. या मानसिकतेवर सुद्धा संत मारुती महाराज माकनेर कर यांनी आपल्या कीर्तनातून प्रबोधनातून टीका केलेली आहे. यंत्रयुगाच्या काळामध्ये मंत्र ताईत इत्यादी गोष्टींवर विश्वास ठेवणे म्हणजे अज्ञान आहे. अज्ञान दूर करण्यासाठी संत मारुती महाराज सदैव प्रयत्नशील असत.

संत मारुती महाराज यांनी समाजातील अनिष्ट रूढी परंपरा या गोष्टींवर आपल्या कीर्तनाच्या माध्यमातून टीका केलेली आहे. तसेच माकनेर या गावांमध्ये दसऱ्याच्या वेळी रेडा किंवा, बकरा याचचे शीर कापून बळी देण्याची जी प्रथा होती. त्या प्रथेविरुद्ध आपल्या कीर्तन व अर्भगातून विरोध प्रकट केला. जनसामान्यांच्या मनात पशुहत्या विरोधी जागृती मान करण्याचे कार्य त्या वेळी संत मारुती महाराज माकनेरकर यांनी केले. अंधश्रद्धेला खतपाणी घालणाऱ्या विचार नष्ट करून खऱ्या अर्थाने मानव धर्माची शिकवण संत मारुती महाराज माकनेर यांनी कीर्तनाच्या व साहित्याच्या माध्यमातून केलेली आहे.

साधी राहणी व उच्च विचारसरणी

!!किर्तन जाती समर्थ! बुक्का न भाळी लावत!
कंठी माला न घालत! पैसा तबकात न घेती!!१७५!
घेऊ न देती दर्शन निरपेक्ष व्रते कीर्तन!



आधुनिक संत व्यक्तिमत्त्व मारुती महाराज माकनेरकर : 3

मारुती महाराजांचा विवाह व कौटुंबिक पार्श्वभूमी

संत मारुती महाराज यांचा विवाह वयाच्या बाराव्या वर्षी शंलापुर गावातील बापू पाटील बावस्कर यांची मुलगी कौतुका यांच्याशी झाला. संत मारुती महाराज यांना गोविंद आनंद तुळशीराम मुरलीधर अशी चार मुले आणि तुळसा व शकुंतला ह्या दोन मुली होत्या.

“द्वादश वर्षीय मारुती! विवाह सुयोग्य समजती!

बघू केली निश्चित! लक्ष्मण दाबांनी!!४४!!

उ वैष्णवी भक्त वतनदार! बापू पाटील बावस्कार!

ग्रामतयांचे शंलापुर! नळगंगा किनारी!!४५!!

तया कन्या सुलक्षणी! कौतुका नामे गौरवर्णी!!

सद्गुण सुवर्ण खानी! चालूते ये अवधित!!४६!!”

ज्या प्रमाणे संत तुकाराम महाराजांना कोणत्याही प्रकारचे गुरु नव्हते त्याप्रमाणे संत मारुती महाराज यांना कोणतेही गुरु नव्हते. संत साहित्यात सद्गुरूंना महत्त्वाचे स्थान आहे. संत तुकाराम आणि माकनेर कर महाराज यांच्यात काही प्रमाणात साम्य दिसून येते. संत मारुती महाराज माकनेरकर यांनी कोणालाही शिष्यत्व सुद्धा दिलेले.

मारुती महाराजांची कर्मवादी वृत्ती

निःस्वार्थ कर्म हिच ईश्वर भक्ती हा संदेश महाराष्ट्रातील संतानी दिला आहे. संत सावता माळीगोरा कुंभार चोखानेळा नरहरी सोनार यांच्या कर्मवादाचा वारसा संत मारुती महाराज माकनेरकर यांनी चालविला. मारुती महाराज हे एक वैचारिक संत होते. अध्यात्मवादासोबतच त्यांनी आपल्या जीवनात कर्मवादा ला सुद्धा महत्त्वाचे स्थान दिले.

या संदर्भात संत मारुती महाराज म्हणतात

!!“विळा चाले सपा सप! मुखी राम नाम जप!
दिसे शेत रामरूप! कष्ट तयात भासेना!!११३!!”

संत मारुती महाराज यांची अध्यात्मिक साधना ची महती सर्वदूर होती परंतु आध्यात्मिक ते बरोबरच कर्म वादावर सुद्धा त्यांचा विश्वास होता. निरपेक्ष वृत्तीने संसार करून हातापायाने कष्ट करून मनाने गीता भागवताची चिंतन करावे. शेतामध्ये सुद्धा ते नांगरणी वखरणी पेरणी राखणी कापणी इत्यादी कामे करत असत.

आधुनिक संत व्यक्तिमत्त्व मारुती महाराज माकनेरकर : 5

सत्य मार्गी दर्शन! भीड नसे कुणाची!!१७६!!

कीर्तन स्थळी न भोजन! रात्रीच करती गमन!

स्वयामी येऊन! करती भोजन आनंदे!!१७७!!

संत मारुती महाराज यांचे राहणीमान अत्यंत साधे होते. संतत्व म्हणजे वैराग्याचे दर्शन व्हावे यासाठी पोषाख परिधान करून बाह्य रूपाने संतत्व प्रगट करणे हे संत मारुती महाराज यांना मान्य नव्हते. त्यांनी संत तत्त्वाचे साधूत्वाचे दर्शन अंतरंगातून दिलेले आहे. सर्वसामान्यप्रमाणेच राहणीमान ठेवून कीर्तनाद्वारे समाजप्रबोधन करून अनेक गावांमध्ये कीर्तन कोणत्याही प्रकारची अपेक्षा न ठेवता त्यांनी केले. त्यांच्या कीर्तनाचा एकच उद्देश होता. समाजातील अनिष्ट प्रथा संपविणे आणि अध्यात्मिक मूल्यांचा प्रसार-प्रचार समाजामध्ये करणे. कीर्तनाच्या दरम्यान त्यांनी कधीही प्रवासाचा खर्च, बिदागी इत्यादी गोष्टी स्वीकारल्या नाही. संत मारुती महाराज माकनेरकर त्यांनी आपली अपरिग्रह वृत्ती कधी सोडली नाही. बाह्य वस्तूची अपेक्षा कधीही त्यांनी केली नाही. त्यांनी आपल्या ह्यातच जमीनजुमला घर याची वाटणी करून दिली होती. आणि सर्व घरदार सोडून मंदिरात राहण्यास आले होते. अनेक वरिष्ठ मंडळींनी त्यांना भेटवस्तू देण्याचा प्रयत्न केला परंतु त्यांनी कधीही स्वीकारले नाही. समाज प्रबोधन करणे हेच त्यांच्या जीवनाचे एकमेव ध्येय होते.

!!“श्री समर्थ मारुती! वाद-विवाद नसे मती!

परी प्रसंगोपती व्हावे लागे सादर!!९!!

बादाचा श्रीगुर प्रत! येती शास्त्री पंडित!

दर्प धरोनी मनात! मी अजिंक्य या जगी!!१०!!

कुणी येथे भाविक! शंक खोर कित्येक!

प्ररन पुसती अनेक! जाती निरुशंक होऊनी!!११!!

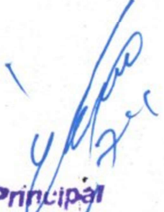
संत मारुती महाराज हे विविध विषयांचे जाणकार होते. संत मारुती महाराज यांच्या समकालीन जीवनामध्ये विविध संप्रदाय अस्तित्वात होते. आणि या विविध संप्रदायांचे पंडित व विद्वान वर्ग यांच्याशी संत मारुती महाराज यांचा संवाद, वाद-विवाद, वैचारिक देवाण-घेवाण होत असे. आत्मनुभव आणि ज्ञानाने संत मारुती महाराज हे संपन्न होते. अनेक वैचारिक मतभेद संवादाच्या दरम्यान संत मारुती महाराज वाद-विवाद करण्यासाठी किंवा रांका उपस्थित करण्यासाठी आलेल्या लोकांच्या मनात आदराचे स्थान प्राप्त करून जातात.

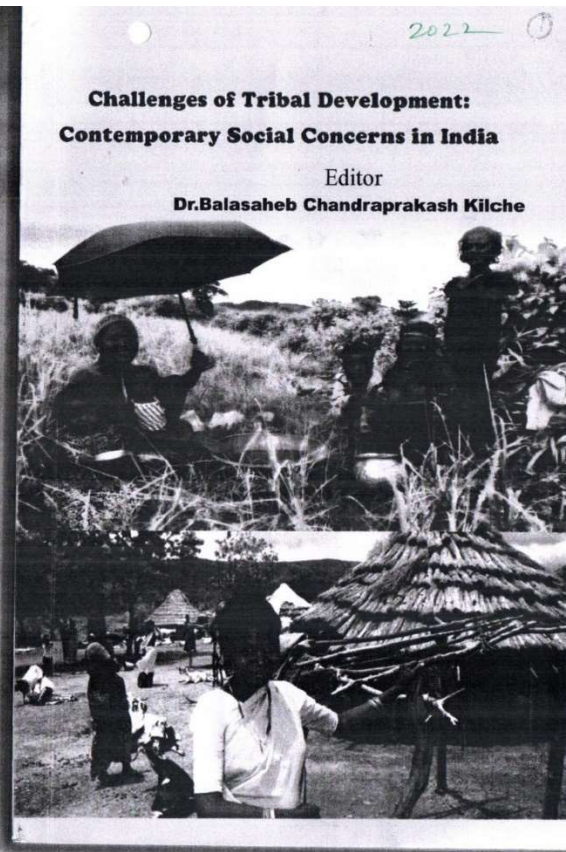


8 : निवडक शोधनिबंध (खंड-एकविसावा)

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Dr. Balasaheb Kilche
Assistant professor
Shri Nath College of Education,
Paithan Di. Aurangabad Maharashtra.



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Editorial.....

Tribal Development: Contemporary Social Concerns in India
It is a great pleasure to present this edited Book to the readers.

Looking at the progress of contemporary India, in the year of the Amrit Mahotav of Indian Independence, we have to discuss the challenge of tribal development. That is the fact that even in 75 years we have not been able to reach the development to the tribal community. Governments that came into existence in India after independence did not implement schemes for tribal development? Why are tribal communities still lagging behind other social groups in the country in terms of social, political and economic indicators? Considering this, every government has implemented different schemes for tribal development, but they have not been implemented properly, so tribals are still far from development.

Actually, the tribals of India are rich in terms of culture of natural resources according to their respective regions. However, the tribal community is considered as an underdeveloped community today. When discussing about tribal development in India, different issues of tribal development in different regions come to the fore. It is clear from various reports that the given funds are utilized for the development of other parts of the country. This is a major challenge facing tribal development in India.

The authors of this edited book feel that in relation to tribal development, education, health, displacement, forest, governance, livelihood promotion, poverty etc. are the biggest challenges facing tribal development. To face the challenges of tribal development, the strong will of the state, leadership, civil society and all these Coordination between groups is essential. Also, some of the articles in this book discuss the issues of agriculture, decentralization, displacement, education, forest rights, governance, health and livelihood in relation to Scheduled Tribes in India and suggest some policy solutions in the present time. Overall, this book is helpful in

understanding the major challenges facing tribal development in present-day India.

First of all, I am grateful Thanks to the all authors give their valuable time and contributed their Chapter/articles for this edited book.

I am thankful to Mr. Akshay Bhau Shisode (Chairman), Mr. Amar Bhau Shisode (Vice President), Shri Shrimantrao Tatya Shisode (Secretary), Shri Tushar Bhau Shisode (Treasurer), Dr. Yashod Bhau Shisode (Joint Secretary) and all the honorable office bearers of the Vivekanand Shikshan Sanstha Aurangabad.

Thanks to inspired me to write my mentor Guruvarya Dr. Prashant Amrutkar sir, Dean, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Dr. Shuja Shakir Sir, Head of Department of Political Science, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Sonia Kilche, as well as the Principal of Shri Nath College of Education and the cooperation of all the colleagues in the college for the completion of this project.

Thanks to Prof. Virag Gawande sir, Director of Aadhaar publication, Amravati, accepted the responsibility of Publishing for the this edited book.

Thanks to all the friends and my family have directly and indirectly helped for this activity.....

Thank you...

Dr. Balasaheb Kilche
Assistant professor
Shri Nath College of Education,
Paithan Di. Aurangabad Maharashtra.
Mob. No. 9404021375

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**Challenges of Tribal Development: Contemporary Social Concerns in India
Tribal Identity, Spatial Distribution And Growth Of Tribal
Population In Maharashtra**

Dr. D. J. Kande
Assistant Professor & Head, Department of Economics, Jijamata
Mahavidyalaya Buldana

I. Introduction:

The Indian Constitution has been committed to introduce socio-economic and political transformation. The initiatives of empowering tribal and the marginalized sections are the reflection of its democratic spirit that can be noticed from a number of amendments in these fields. Especially, the 73rd and 74th Constitutional Amendment Acts provide for an opportunity for tribal's entry into political spheres especially Tribal Women. These Amendment Acts provide for a 33 percent reservation of seats for Tribal women in the governance of local bodies both rural and urban with target of good governance and fair representation in the development process at grassroots level. The 73rd Constitutional Amendment Act is an important landmark in the history of Indian women's participation in the formation of democratic institutions a grassroots level. The Scheduled Tribes are tribes notified under Article 342 of the Constitution, which makes special provision for 'tribes, tribal communities, parts of, or groups within which the President may so notify'. There is no definition of a tribe in the Constitution but one may distinguish some characteristics that are generally accepted: self-identification, language, distinctive social and cultural organization, economic under development, geographic location and initially, isolation, which has been steadily, and in some cases, traumatically, eroded. Many tribes still live in hilly and/or forested areas, somewhat remote from settlements.

A number of studies on development of tribal communities have been carried out by researchers from various disciplines. The problems of tribal development have long baffled the policy makers, administrators and social scientists in India, and the debate on the meaning, character and direction of their socio-economic transformation continues. Earlier studies carried out by Anthropologists and other Social Scientists among various tribal communities have constantly pointed out various problems of tribal development and offered suggestions for bringing better results. Based on various committees' reports and studies on tribal development, efforts have been subsequently made to improve the tribal situation by

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Challenges of Tribal Development: Contemporary Social Concerns in India providing various kinds of provisions and schemes. However, unfortunately, the tribal's have not been able to derive sufficient benefit from this process of planned development. It is true that tribal development problem in the country cannot be considered as stereotyped phenomenon. It varies from one region to another.

Development is usually conceived as an aspect of change that is desirable, broadly predicted or planned and administered, or at least influenced, by governmental action. Thus, the concept of development consists of (a) an aspect of change; (b) a plan or prediction; and (c) involvement of the government for the achievement of that planned or predicted goal. The term "development" is also used for the process of allowing and encouraging people to meet their own aspirations. It, therefore, must relate to transforming the entire society enmeshing together its economic, social, political and administrative aspects on allround balanced upward change (Basu A.R., 1985)

II. TRIBES:

Article - 342: Provides for specification of tribes or tribal communities or parts of or groups within tribes or tribal communities which are deemed to be for the purposes of the Constitution the Scheduled Tribes in relation to that State or Union Territory.

- In pursuance of these provisions, the list of Scheduled Tribes are notified for each State or Union Territory and are valid only within the jurisdiction of that State or Union Territory and not outside.
- Scheduled Tribes are notified in 30 States/UTs
- Number of individual ethnic groups, etc. Notified as Scheduled Tribes is 705
- There has been some changes in the List of Scheduled Tribes in States/UTs during the last decade are notified in 30 States/UTs
- Number of individual ethnic groups, etc. Notified as Scheduled Tribes is 705
- There has been some changes in the List of Scheduled Tribes in States/UTs during the last decade

III. Meaning of Tribe :

The tribal's constitute nearly 7% of the population of India. The tribal's live in forest areas, hilly regions, mountainous places and deep valleys. They are known by various names for example primitives, animists jungle people, advises and aboriginals. Bardhan A.B. (1973) defines the tribe as a "course of a Socio-cultural entity at a definite historical stage of development. It is a single endogamous community with a cultural and psycho-logical make-up going back into a distant

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Challenges of Tribal Development: Contemporary Social Concerns in India historical past." In this definition the emphasis is on the cultural and psychological make-up. George Jose and Shreekumar S.S.(1994:2) State that: "The tribe is a social group of a simple kind, the members of which speaks a common dialect, have a single government, act together for common purposes and have a common name a contiguous territory. Relatively of common descent. Here the tribe is considered as a social group with common dialect, purpose, name and culture." According to Gillian and Gillian: "A tribe is a group of local community which lives in a common area, speaks a common dialect and follows a common culture." "A tribe" according to Risibly is a collection of families or groups of families bearing a common name which as a rule does not denote any specific occupation, generally claiming common descent from a mythical of a historical ancestor. Occasionally the name is derived from an animal only by the obligation of kinship, members speak the same language and occupy (of profess to occupy) a definite tract of country.

IV. Geographical Location of Tribes:

Tribal's in India originate from five language families, i.e. Andaman's, Austro-Asiatic, Dravidian, and Tibeto-Burman. It is also important to point out that those tribals who belong to different language families live in distinct geographic settings. For example, in South Orissa there are languages that originate from the Central Dravidian family, Austro-Asiatic (Munds) family and the Indo-Aryan. In the Jharkhand area, languages are from the Indo-Aryan, North Dravidian and Austro-Asiatic. Tribals in India live in the following five territories. 1. The Himalayan belt: (Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, hills of Uttar Pradesh and Himachal Pradesh) 2. Central India: Bihar, West Bengal, Orissa, and Madhya Pradesh. 55% of the total tribal population of India lives in this belt. 3. Western India: Rajasthan, Maharashtra, Gujarat, Goa, Dadra and Nagar Haveli. 4. The Dravidian region: Karnataka, Andhra Pradesh, Kerala and Tamil Nadu. 5. Andaman, Nicobar and Lakshadweep island

V. Tribal population & Growth in Maharashtra:

Spatial distribution of population is one of the most important topics of human geography. Population distribution denotes the spatial pattern due to dispersal of population, formation of agglomeration, linear spread etc. The term distribution refers to the way the locations of a population (Chandana and Sidhu, 1980)

The constitution of Indian Union (Article 366) has defined the Scheduled Tribe as such tribes or tribal communities or parts or groups within such tribes or tribal communities as or deemed under article 342

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Challenges of Tribal Development: Contemporary Social Concerns in India to be Scheduled Tribe for the purpose of Constitution. Constitution to point out that no single criterion has been adopted to distinguish tribal from the non-tribal population.

Population and the natural resources are the most important aspects of regional development. In this context distribution of tribal population is an important aspect. India is having second largest concentration of tribal population in the world. There are number of tribal communities in India, known by different names such as the Adivasis- the original inhabitants, Vanya Jati (live in forest), Adim Jati-primitive people, etc. Tribal community is very primitive and backward in India. The Indian tribes display a very high degree of ethnic diversity both in their racial composition and dialectal and linguistic affinity. There are 285 different tribal communities, which show an important index of their ethnic diversity. No less impressive is the pattern of their spatial distribution, it has been commonly observed that the tribes reveal strong tendencies of clustering and concentration in the hilly, forested and the geographically inaccessible tracts of the country (Ahmad, 2001). The tribal population of Maharashtra State is largely concentrated in the western hilly districts viz. Dhule, Nandurbar, Jalgaon, Nashik, Thane, Palghar (Sahyadri region) and in the eastern forest districts viz. Chandrapur, Gadchiroli, Bhandara, Gondia, Nagpur, Amravati and Yavatmal (Gondwana region).

Understanding of tribal population is needed to study distribution and population size at a fixed point in time, but also how this changes over time. Spatial variation in tribal population trends across other communities can potentially affect how tribal people respond to global changes. Only long-term studies can give reasonable answer.

VI. Study Area:

For the present study Maharashtra was selected to look into spatial distribution of population. The state of Maharashtra is located in the middle west of the country, lies between 72°36'E to 80°54'E longitude and 15°45' N to 22°6' N latitude. The state is surrounded by Gujarat to the northwest, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the south east, Karnataka to the south and Goa to the south west

VII. Objective:

The objectives of the study are as follows:

- 1) To look into the spatial distribution of tribal population.
- 2) To examine the growth of tribal population in Maharashtra

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high growth of ST population has been observed in between 31.65 % to 48.40% in districts i.e. Nandurbar, Dhule, Jalgaon, Nashik, Aurangabad, Jalna, Beed, Pune Satara, Kolhapur, Sindhudurg and Mumbai Surbaban.

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Challenges of Tribal Development: Contemporary Social Concerns in India

**Panchayats Extension To Scheduled Areas Act, 1996:
Objectives And Challenges - An Analytical Study**

B.Ravi Kumar

Ph.D Research Scholar, Dept. of Political Science & Public Admn.
S.K.University, Anantapur, Andhra Pradesh.

Email:venkatalakshmi4290@gmail.com ,Cell: 9381142700

ABSTRACT

The provisions of the Panchayats Extension to Scheduled Areas) act 1996 of PESA is a law enacted by the Government of India for ensuring self governance through traditional Grama Sabhas for people living in the Scheduled areas of India. It was enacted by parliament in 1996 and came into force on 24th December 1996. The objective of PESA Act 1996 is. To safeguard and preserve the traditions and customs of tribal communities. To empower panchayats at the appropriate levels with specific powers conducive to tribal requirements. To prevent panchayats at the higher level from assuming the powers and authority of panchayats at the lower level of the Grama Sabha. The fifth schedule of the constitution deals with the administration and control of scheduled areas as well as of scheduled tribal residing in any state other than the states of Assam, Meghalaya, Tripura and Mizoram the fifth schedule under article 244(1) of constitution differs "Scheduled Areas as such areas as the president may by order declare to be scheduled areas after consultation with Governor of State. This paper examines the possibilities of implementation and objectives and challenges of PESA Act 1996.

Key words:

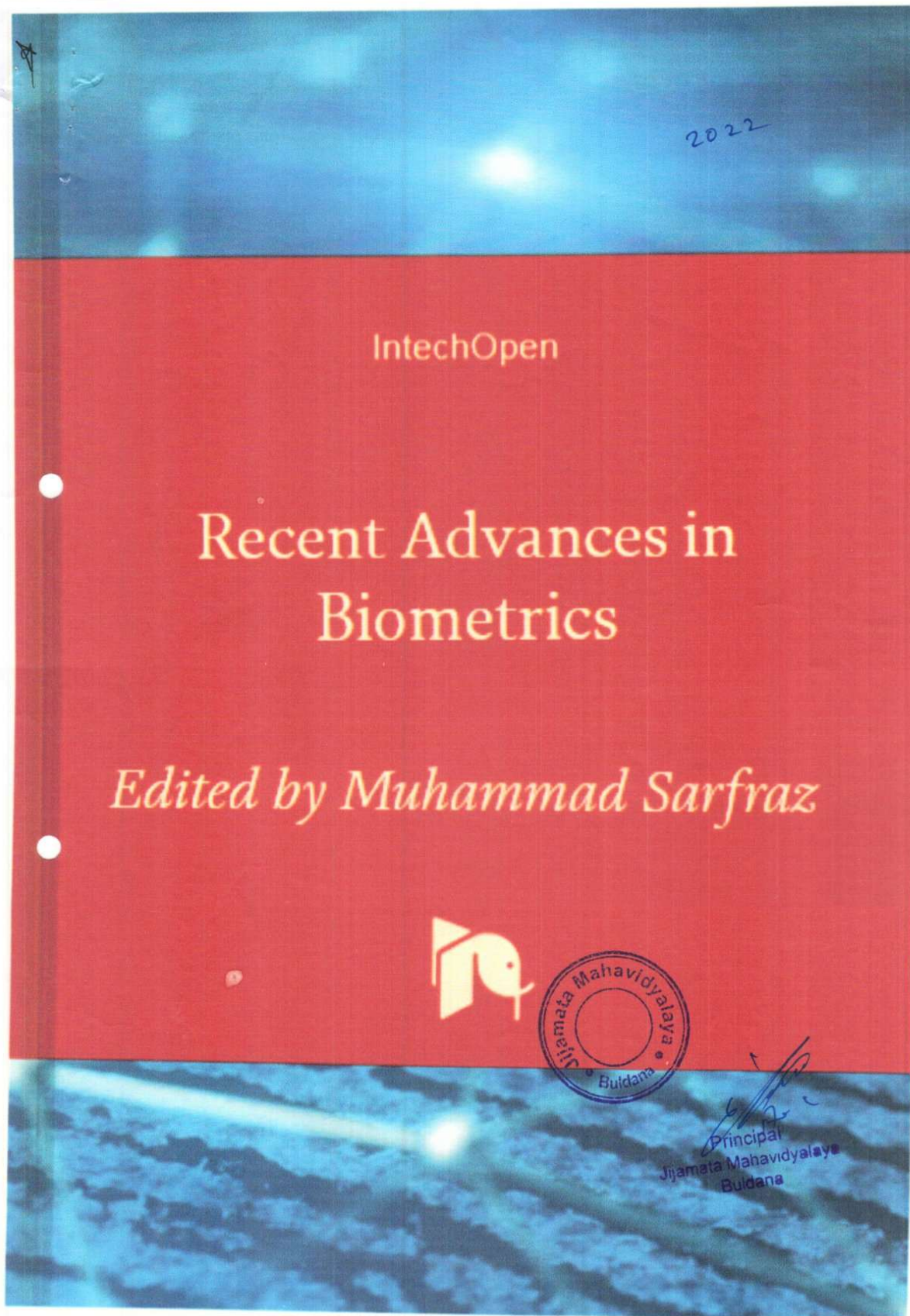
PRIs, Dilip Singh Bhuma Committee, Article 243M, Ministry of Panchayat Raj, Scheduled Area, Grama Sabha, 73rd Amendment.

Introduction:

The scheduled areas are areas identified by the fifth scheduled Areas are found in ten states of India which have predominant population of tribal communities. The scheduled areas, were not covered by the 73rd constitutions amendment or Panchayati Raj Act of the Indian constitution as provided in the part IX of the constitution. PESA was enacted on 24 December 1996 to extend the provision of part IX of the constitution to scheduled areas, with certain exceptions and modifications. PESA sought to enable the panchayats at appropriate levels and Grama Sabha to

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Chapter

Image Acquisition for Biometric: Face Recognition

*Siddharth B. Dabhade, Nagsen S. Bansod, Yogesh S. Rode,
Narayan P. Bhosale, Prapti D. Deshmukh and Karbhari V. Kale*

Abstract

Biometrics is mostly used for authentication purposes in security. Due to the covid-19 pandemic situation, nowadays distance-based authentication systems are more focused. Face recognition is one of the best approaches which can use for authentication at distance. Face recognition is a challenging task in various environments. For that taking input from the camera is very important for real-time applications. In this chapter, we are more focusing on how to acquire the face image using MATLAB. The complete chapter is divided into five sections introduction, definition of biometrics, image acquisition devices, image acquisition process in MATLAB.

Keywords: face recognition, biometric, image acquisition, image processing, imtool

1. Introduction

Biometrics is the science of establishing the identity of an individual based on the physical, chemical or behavioral attributes of the person [1, 2]. Those attributes or properties of an individual are unique on the earth called as biometrics identifiers. Physical properties of the person do not vary as per time such as the face, fingerprint, retina, iris, etc. Behavioral biometrics such as voice, signature, and keystroke dynamics identification and measurement of performance of the person while the certain actions of the human through its body parts such as voice-scan and signature-scan. The element of time is essential to behavioral biometrics because it may change with time [3].

In the internet world, there are so many business companies doing their business through client-server basis in which they are authenticating the client's request through the username and password. It may be chances of making an illegal entry in demand and request or access the private and confidential data.

When an end-user uses some additional materials or information for the authentication such as smart card, username, and passwords, some tokens or ids, passport, driving license, etc. then there is a chance of lost, stolen the things you are belonging or passwords, ids may be guessed or forget [4]. Therefore, we required a type of system in which there is no need to use such type of external resources for authentication. Fortunately, a biometric authentication system provides an alternative and robust identification system for these problems. In this system, the user should be present personally at the time of identification or verification. As per security is concerned, it

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uses three approaches for authentication of the person. The first approach is small text information you know such as password or pin or security questions, etc. The second approach is you are belonging with something such as key, RFID, ATM Card or Smart Card, etc. and the third one is some information is always with you it cannot forget, stolen. Your presence is mandatory for this type of authentication i.e. biometric. Apart from these approaches biometrics is a more suitable system because it is always with the person, therefore, biometrics never borrowed, stolen or forgotten [5].

Biometric is a process of identification of unique patterns from the physical, behavioral or chemical properties of the person for authentication. Face, fingerprint, iris, palm, retina, hand geometry, etc. are physical biometric traits whereas voice, gait, dynamic keystrokes are behavioral and DNA, saliva, body odor, etc. are chemical biometrics traits [6, 7].

The process of how biometric works (shown in **Figure 1**) is as follows:

1. Capture the biometric data from the appropriate sensor;
2. Extract the features from the captured image and stored it as a template;
3. The template of biometrics can be stored in smart cards, local machines or on a server for future use;
4. Scan the current biometric traits data;
5. For processing, from the image extract the features and from template;
6. For matching, take the input processed features with the existing biometric template;
7. On the basis of matching ranking score decide the business-level application and
8. Make the security evaluation of the system for proper use.

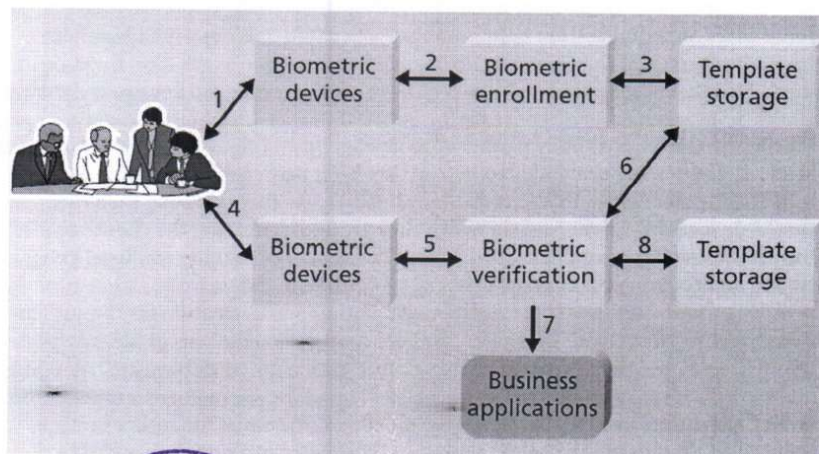


Figure 1.
How biometric system works.

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2. Definitions of biometric

Biometrics is a way of automatic identification or verification of the person on their physical, chemical or behavioral properties. It is a scientific way to analyze the biological unique patterns of the individual person through the use of advanced technology. Biometrics is a scientific approach to understand and find the unique representation of the person. Biometrics is purely depending on the physical, behavioral or chemical properties of the human being for secure access or in identification and verification otherwise biometric devices have no use in authentication. Biometrics is a science of identification or verification of a person through the face, fingerprint or voice, etc. measurement of unique patterns. These unique patterns of the person called as features stored in embedded devices, smart cards are known as templates or bio-prints. They are used to verify the identity of the person by comparing them to the previously stored bio-prints [8].

3. Biometrics model

In general, the biometric model (Figure 2) is divided into five parts are as follows.

3.1 Data collection

The first part is a data collection which consists of biometric presentation and sensor. In this part, biometric modality is captured through the biometric sensor and it represents in its equivalent format for user understandable level. The biometric data sample is collected through various biometric traits either physical or behavioral. The biometric samples were taken from an instance, it should be unique at multiple impressions, iteration or frequent timely. At the time of data acquisition through the

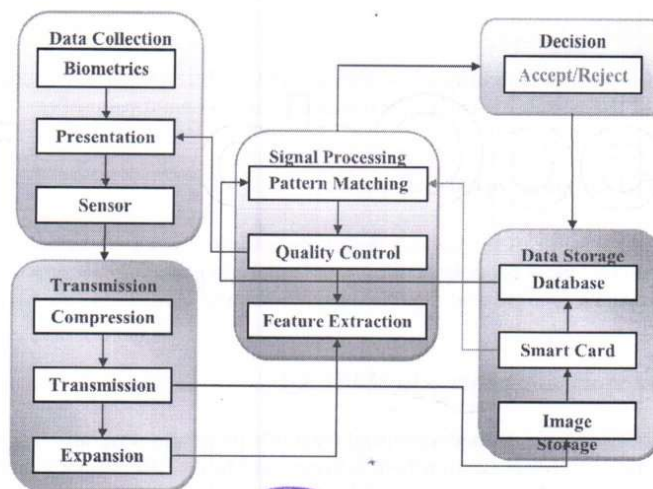


Figure 2.
 The block diagram of biometric model.



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sensor, some technical issues may arise such as noise generated in the background while taking the samples of speech or sensor sensing capacity fault. The user does not support while collecting the samples through the sensors. Sometimes more pressure is applied to the fingerprint device then noisy data will be captured.

3.2 Transmission & Data Storage

Sometimes at the time of storage, data are in large volume, we need to store it into the compressed format for fast transmission. At the time of compression technique, we need to be careful while selecting the algorithm otherwise there may be chances of adding more artifacts in original data samples.

It is not mandatory to store the data on the device, it might be stored on the local machine or the server as per the application requirement and cost-effectiveness. Sometimes, there is no need to store the data on the server or the application may be taken care of it to store it into the secure format on the same application device.

3.3 Signal processing

The main core component of any biometric system is signal processing, in which we can check the quality of the image, feature extraction or pattern matching. Sometimes due to distortion in input image, there is a chance of noisy image or bad quality data then there is a need to recapture the image or biometric samples once again. After ensuring the good quality data then proceed for the feature extraction through an appropriate technique that will be suitable for the application. Pattern matching is a key role player in which stored data template is matched with the given input samples. The pattern matcher will compare the matching results and send them to the decision module for the final decision.

3.4 Decision

After the pattern matching score, the decision module decides the acceptance or rejection of the person by using predefined certain threshold values [9].

4. Types of image acquisition devices

The camera is one of the famous image acquisition devices. Cameras are mainly divided into two main types i.e. analog and digital cameras. Digital cameras can be further classified into parallel digital, Camera Link and IEEE 1394 [10, 11].

5. Image acquisition process in MATLAB

MathWorks has developed a proprietary multi-paradigm programming language and numeric computing environment is known as Matrix Laboratory. From this matrix laboratory, MATLAB word is abbreviated. In MATLAB, we can perform matrix operations, plot the various graphs, develop the functions, interfaces and make the interfacing for the other programming languages programs.



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MATLAB provides the programming and numeric computing platform for the analysis of data, algorithm development, creation of models, hence, it is widely used by scientists, engineers, researchers. If you wish to get more knowledge about the image acquisition process and capabilities (Image Acquisition Toolbox), MATLAB documentation is the best source.

Image Acquisition Toolbox (ImATool) provides the ability to handle the numeric calculation by using the predefined available functions. Under the IMATool, wide functions are defined which supports the following image acquisition operations:

- Acquiring images through many types of image acquisition devices
- Acquiring images through many types of image acquisition devices
- From professional-grade frame grabbers to USB-based Webcams
- Viewing a preview of the live video stream
- Triggering acquisitions (includes external hardware triggers)
- Configuring callback functions that execute when certain events occur
- Bringing the image data into the MATLAB workspace

MATLAB has capabilities to extend the imtool in your own code or combination with other toolboxes, such as the Image Processing Toolbox and the Data Acquisition Toolbox. It also provides the Image Acquisition Blockset i.e. Simulink interface. This block set extends Simulink with a block that lets you bring live video data into a model. To get the live image data from the acquisition boards after plug-in for that Matlab provides the Data Acquisition Toolbox through which we can able to communicate with the acquisition boards.

For image processing, analysis and algorithm development related functions are defined under the Image Processing Toolbox. For control and communication with the test and measurement of various equipment's related functions are defined under the Instrument Control Toolbox. You can also perform the Video and Image Processing Blockset by using the Simulink model.

5.1 Basic image acquisition procedure

To develop a motion detection application, certain basic steps are required, which are shown in Figure 3. Pixel-to-Pixel variations in the scene show the difference in acquired image data frames in developed motion detection application. Sometimes frame will be constant, which means there is no change in incoming frame pixel values. Suppose, variation is found in the incoming image frame pixel values, it means, a change in the scene which is also capable to display in the application. Very few lines of coding are required for image frame data acquisition with the help of the toolbox, which is described in Section 5.2 examples. For the execution of the given code in the example, the image acquisition device should be connected to your system. Image acquisition devices can be professional so that the acquired image data frame will be quality image data for the high level of assumptions. Examples of professional devices

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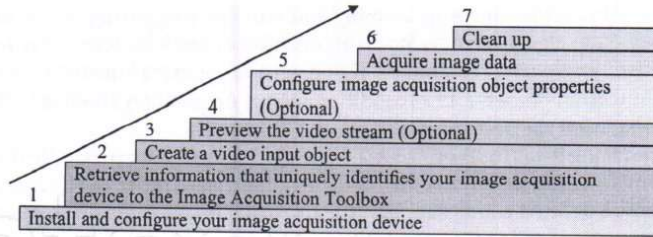


Figure 3. Image acquisition basic steps.

are frame grabber, generic windows, webcam, etc. This sample code will be able to capture the image from different types of image acquisition devices by doing simply minor changes sometimes. Figure 3 shows how to acquire image data with the help of Image Acquisition Toolbox and Figure 4 shows Image Acquisition Toolbox Components.

5.2 Example: acquiring 10 seconds of image data

In this example, you can configure time-based acquisition using the number of frames per trigger.

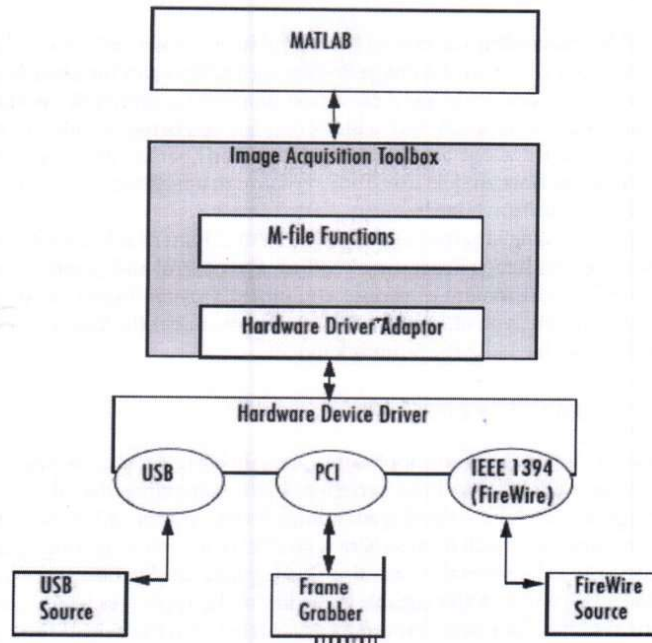


Figure 4. Image acquisition toolbox components.



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5.2.1 Create an image acquisition object

Before taking the input from the connected camera on your current system, you need to first create an object. The camera gives synchronous data, it is continuous information in the form of bits. To convert this information in the form of a visual display unit by using windowing techniques, therefore, it becomes video. From this video input, you want to capture the image. Hence, you need to create the video input object of your camera device for accessing the device property. You can check the list of image acquisition devices by using *imacqhwinfo* function. Also, you will get syntax and formats available for the respective devices in the form of structured data. By selecting the appropriate information from image acquisition devices, you can generate the windows-based output of your camera in the form of video. For the creation of video input object *videoinput()* function is available. You can pass two parameters while calling this function. The first parameter is the type of camera and the second is the camera ID. The syntax for the creation of camera object is:

```
vid = videoinput('winvideo',1);
```

In this case, the vid is the camera object, video input is the function, win video is a type of image acquisition device category and 1 is the camera id number.

5.2.2 Configure properties

Once the camera object has been created, you can acquire the image information at a specific time. If you wish to acquire the 10 or 20 seconds of data from your camera, then it has to be set the property as FramesPerTrigger. For the calculation of FramesPerTrigger first, check the frame rate of the camera per second and multiply it by the number of seconds. Then it can be considered for the camera configuration property.

Example. If the frame rate of the camera is 20 frames per second and you want to acquire the 10 seconds data then it will become $20 * 10 = 200$. To set this configuration there is set() function available in MATLAB. This function will receive three arguments: the first argument is video object i.e. vid, the second argument is configuration property i.e. FramesPerTrigger and the third one is the value of FramesPerTrigger i.e. as per example 200.

```
set(vid,'FramesPerTrigger', 200).
```

5.2.3 Start the image acquisition object

To acquire the image from the camera to our system, we have to start grabber of camera object in MATLAB as start() function available in MATLAB.

Ex. *start(vid)*.

After calling the start() function video object is started and tries to store the temporary data into the memory buffer. It will acquire the image data continuously till the specific number of frames as in example 200. This process executes as a trigger when the start() function is called in our program and stops when the specific number of frames is received in the memory buffer.

Figure 5 shows the image preview when you start the video object.

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Figure 5.
Image preview.

5.2.4 Bring the acquired data into the workspace

Load your data for verification that all data contains are accurate which we have planned to acquire the image as per our resolution and configuration. In MATLAB, there is a `getdata()` function that returns number of frames acquired within the specific time slot with a timestamp. We can verify the amount of acquired data according to timestamp and the difference between the first frame and the last frame.

Start Camera Code:

```
global vid;
vid = videoinput('winvideo',1);
vidRes = get(vid, 'VideoResolution');
nBands = get(vid, 'NumberOfBands');
set(gcf, 'CurrentAxes', handles.axes1);
hImage = image(zeros(vidRes(2), vidRes(1), nBands));
preview(vid, hImage);
```

Once you have started the video object and set the bands, you can preview live camera acquisition data into the windows as shown in **Figure 6**. Then you can fix the face position into the camera preview and then follow the next steps to capture the preview image as shown in **Figure 7**.

Capture Image Code:

```
global vid;
%% Image Capture through the Current Video Preview
global im;
im = getsnapshot(vid);
set(gcf, 'CurrentAxes', handles.axes2);
imshow(im);
```

In this way, we have successfully captured images using MATLAB code. Now, we have to develop the face database for your face recognition application [12–15]. Then



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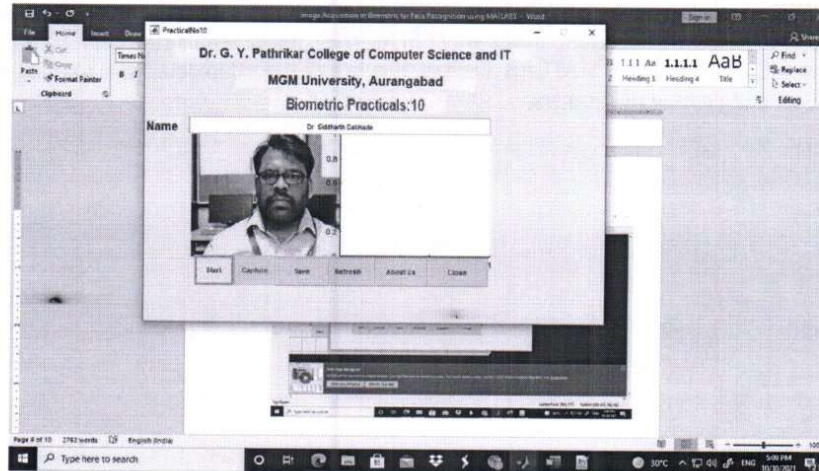


Figure 6.
Image preview in GUI.



Figure 7.
Image preview in GUI after capture the image.

go for the feature extraction, classification and recognition level as per your preferred suitable techniques [16–18].

6. Conclusion

Biometrics is mostly used for authentication purposes in security. Face recognition in real-time itself is a challenging task. For that taking input from the camera is very important for real-time application. In this chapter, we have mainly focused on

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how to acquire the face image using MATLAB. The complete chapter is divided into five sections introduction, definition of biometrics, image acquisition devices, image acquisition process in MATLAB. Each section has explained in detailed steps for the upcoming young researchers.

Author details

Siddharth B. Dabhade^{1*}, Nagsen S. Bansod², Yogesh S. Rode^{3*}, Narayan P. Bhosale⁴, Prapti D. Deshmukh² and Karbhari V. Kale⁵

1 School of Management Studies, National Forensic Sciences University, Gandhinagar, Gujarat, India

2 Dr. G. Y. Pathrikar College of Computer Science and IT, MGM University, Aurangabad, MS, India

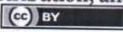
3 Jijamata Mahavidyalaya, Buldhana, MS, India

4 Department of Computer Science, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India

5 UDCSIT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, MS, India

*Address all correspondence to: dabhade.siddharth@gmail.com and ys.rode@gmail.com

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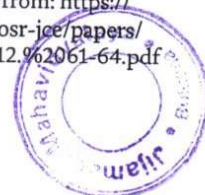
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भारतीय स्वातंत्र्य लढ्यात महाराष्ट्राचे योगदान

संपादक

डॉ. संदीप नामदेव मिर्रे, प्रा. गहिनीनाथ लिंबराज शेळके



निशा पब्लिकेशन एण्ड डिस्ट्रीब्यूटर्स
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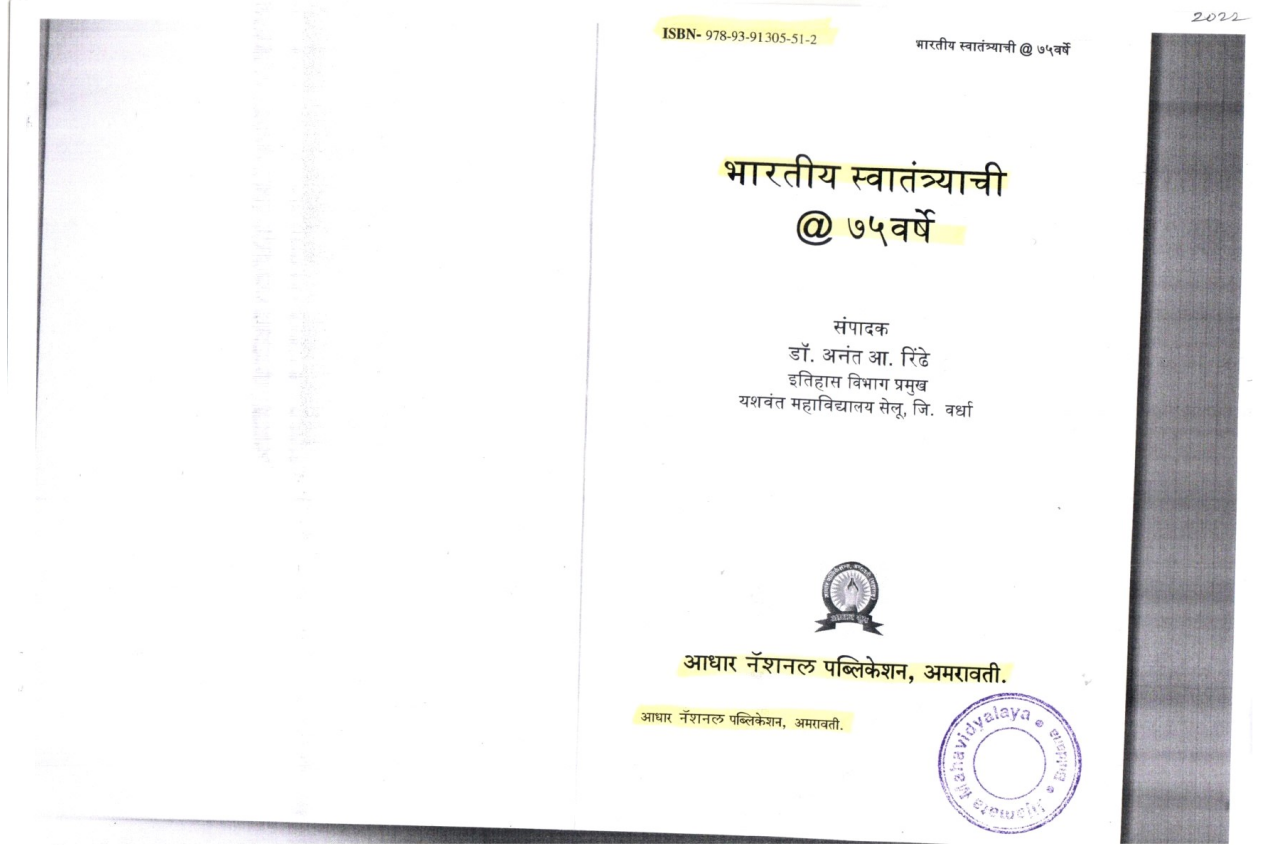


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संपादकीय

भारतीय स्वातंत्र्याचा अमृत महोत्सव आज संपूर्ण भारतभर उत्साहात साजरा होत आहे. भारतीय स्वातंत्र्याच्या अमृत महोत्सवी वर्षानिमित्त 'भारतीय स्वातंत्र्याची @ ७५ वर्षे' या थीर्षकावरील प्रस्तुत संपादकीय ग्रंथाचे संपादन करताना आज १५ ऑगस्ट, २०२२ रोजी मला मनःपूर्वक आनंद होत आहे. भारताला स्वातंत्र्य मिळवून देण्यासाठी ज्या स्वातंत्र्य सेनानींनी, समाजसुधारकांनी कार्य केले, त्यांच्या कार्याचा नव्याने गुणगौरव व्हावा, त्यांच्या कार्याची स्मृती कायम राहावी या उद्देशासाठी प्रस्तुत संपादकीय ग्रंथाचे संपादन भारतीय स्वातंत्र्याच्या अमृत महोत्सवी वर्षाच्या पर्वोत्सवात आले आहे.

'भारतीय स्वातंत्र्याची @ ७५ वर्षे' या संपादित ग्रंथाकरिता शोधलेख पाठविणाऱ्या प्राध्यापक, संशोधक व लेखकांचे सहकार्य अत्यंत अतुलनीय ठरले. त्यांच्याप्रती कृतज्ञता व्यक्त करणे माझे कर्तव्य समजतो. आमचे मार्गदर्शक तथा माजी आमदार मा. प्रा. सुरेशभाऊ बापुरावजी देशमुख आणि यशवंत ग्रामीण शिक्षण संस्थेचे सन्माननीय अध्यक्ष श्री समीरभाऊ देशमुख यांचे प्रोत्साहन अतिशय बहुमूल्य ठरले. आमच्या महाविद्यालयाच्या प्रभारी प्राचार्य डॉ. अर्चना डाहाणे, डॉ. संदीप काळे व इतर प्राध्यापक तथा शिष्यकेतर कर्मचारी यांनी वेळोवेळी सहकार्य केले. प्रस्तुत संपादकीय ग्रंथाचे प्रकाशन करण्यासाठी आमचे मित्र प्रा. विराम एस. गावंडे, संचालक आधार पब्लिकेशन, अमरावती यांचे सहकार्य अनन्यसाधारण ठरले. प्रस्तुत संपादकीय ग्रंथाच्या संपादन प्रक्रियेत सहकार्य करणाऱ्या सर्व संशोधक, प्राध्यापक व मान्यवरांचे पुनश्च मनःपूर्वक आभार व्यक्त करतो.

वर्धा

दि. १५ ऑगस्ट, २०२२

संपादक

डॉ. अनंत आ. रिडे

आधार नॅशनल पब्लिकेशन, अमरावती.



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स्वातंत्र्य आंदोलनातील क्रांतिकारी नेतृत्व पं.कानडे शास्त्री

डॉ.नामदेव वामनराव ढाले

इतिहास विभाग प्रमुख, जिजामाता महाविद्यालय, बुलडाणा

प्रस्तावना:

भारतीय स्वातंत्र्य चळवळीच्या प्रत्येक टप्प्यात प्रत्येक जिल्ह्याचे योगदान आहे. स्वातंत्र्य मिळविण्यासाठी भारतीय जनतेने विविध प्रकारचे आंदोलने केलीत. राष्ट्रीय नेत्यांच्या दौऱ्यांमुळे ही आंदोलने यशस्वी झालीत. राष्ट्रीय पुढाऱ्यांच्या दौऱ्यांमुळेच विदर्भातील प्रत्येक जिल्ह्यात राजकीय व सामाजिक जागृती घडून आली. राष्ट्रीय सभेचे संस्थापक जॅनरल हयुम (1888), सुरेंद्रनाथ बॅनर्जी (1897), लो. टिळक (1902-03, 1908, 1908), अलीबंभू (1920-1921), म. गांधी (1920, 1927, 1933, 1940-1942), बॅ. चित्तरंजनदास (1922), लाला लजपतराय (1927), राजगुरु (1929-1930), सरदार वल्लभभाई पटेल (1931), कमलादेवी चंटापोथ्याय (1933), खान अब्दुल गफारखान (1934), डॉ. राजेंद्रप्रसाद (1935), आचार्य कृपलानी (1935), श्रीमती सुचितादेवी कृपलानी (1936), व्ही. आर. पंतलू (1937), सेनापती बापट (1938), डॉ. एम. एन. रॉय (1938), सुभाषचंद्र बोस (1939), बा. ग. खेर (1940), वि. दा. सावरकर (1941), राष्ट्रसंत तुकडोजी महाराज (1941), डॉ. हसन (1946), मेजर जनरल शहानवाज खान (1946), इ. राष्ट्रीय स्तरावरील नेत्यांनी विदर्भा-वहाडच्या भूमिंत दारे केल. नेत्यांच्या या दौऱ्यांमुळे बुलडाणा जिल्ह्यात सुद्धा राजकीय व सामाजिक क्षेत्रात जागृती घडून आली. यातून राजकीय व सामाजिक क्षेत्रात काम करणाऱ्या तडफदार नेतृत्वाचा उदय झाला. वहाडचा इतिहास व नागपुर प्रांताचा इतिहास लिहिणारे इतिहास यादव माधव काळे, रा अं कानिटकर, पं. कानडे शास्त्री, दलितमित्र समाजभूषण पंढरीनाथ पाटील, डॉ. म. ना. पारसनीस, वीर जगदेवराव भालेराव पाटील, इ. बुलडाणा जिल्ह्यातील पुढाऱ्यांनी विदर्भाबरोबरच महाराष्ट्र व भारतात देखील प्रचार-प्रसार करून आपली कर्तबदारी सिद्ध केली. परंतु बुलडाणा जिल्ह्यातील या प्रमुख पुढाऱ्यांचे कार्य फारसे उजेडात आलेले नाही.

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त्यांचे सामाजिक व राजकाय वातावरण काय होते हे असेच कार्य करणारे यातीलच एक क्रांतिकारी नेतृत्व म्हणजे पंडीत कानडे शास्त्री होय.

पं. कानडे शास्त्री

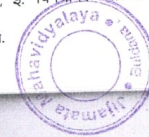
क्रांतिकारी विचारांचे पं. दिनकर लक्ष्मण कानडे शास्त्री यांनी भारतीय स्वातंत्र्य आंदोलनात महत्त्वाची कामगिरी बजावली. इतकेच नव्हे तर बुलडाणा येथे सामाजिक क्षेत्रात त्यांनी नावलौकीक मिळविला. शास्त्री हे मुळातले कोंकणामधले होते. त्यांचा जन्म रत्नागिरी जिल्ह्यातील खिपळूण तालुक्यातील नरवण येथे 1886 मध्ये झाला. पुणे येथील न्यू प्रिपरेटरी क्लासेस मध्ये त्यांचे शिक्षण झाले. श्री लडाटे, भोपटकर बंधू सारख्या देशभिमानी शिक्षकांकडून त्यांना जहाल राजकीय विचारांचे धडे मिळाले. वासुदेव बळवंत फडके चाफेकर बंधू सारख्या क्रांतिकारक मंडळींशी त्यांचा संपर्क आला. त्यांना त्यांच्यापासूनच दांडपट्ट्याचे व शस्त्र चालविण्याचे शिक्षण मिळाले. 'मी माझ्या देशाची सेवा प्राण देवून करीन' अशी शपथ घेतली होती. श्री. भालचंद्र बळवंत आगाशे, पिंगळे, भोसेकर इ. प्रसिद्ध क्रांतिकारकांच्या शास्त्री समुहात होते. लो. टिळकांच्या व सावरकरांसारख्या जहाल विचारांच्या नेत्यांचा प्रभाव पं. शास्त्रीवर होता. 1906 ते 1921 या काळात कानडे शास्त्री यांनी टिळकांच्या निवडणुकीचा प्रचारक म्हणून काम केले. कानडे शास्त्रींनी तळेगांव येथील समर्थ विद्यालय आपलेच म्हणून काम केले. कानडे शास्त्रींनी तळेगांव येथील समर्थ विद्यालयात शिक्षक व बोर्डींग चालविण्याचे काम करून विद्यार्थ्यांना चौविस तास आपल्या नजरेखाली ठेवून देशभक्तीचे वळण लावले. या कामाबद्दल त्यांनी टिळकांची शाबासकीही मिळविली होती.

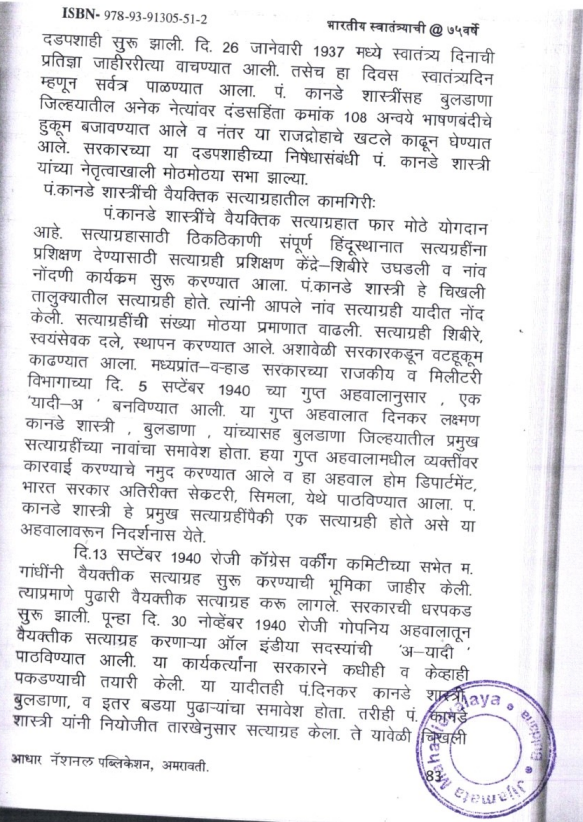
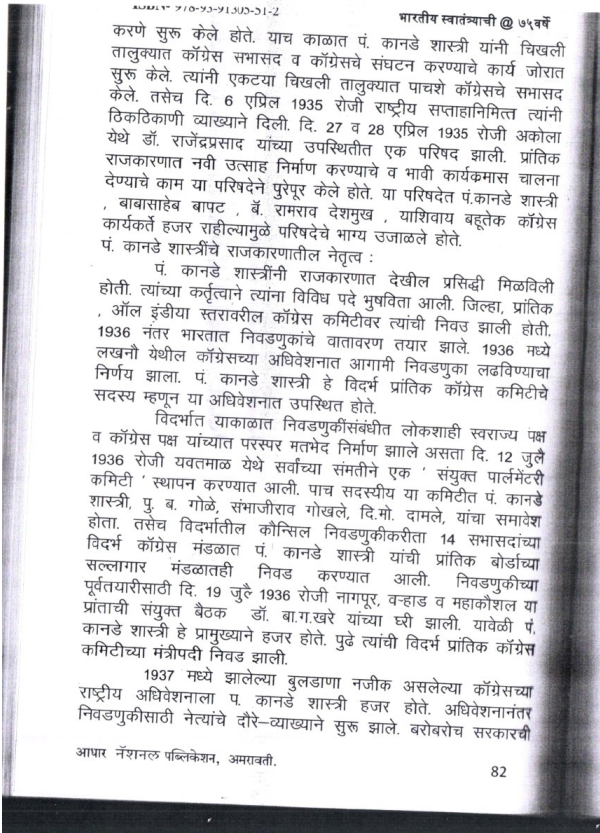
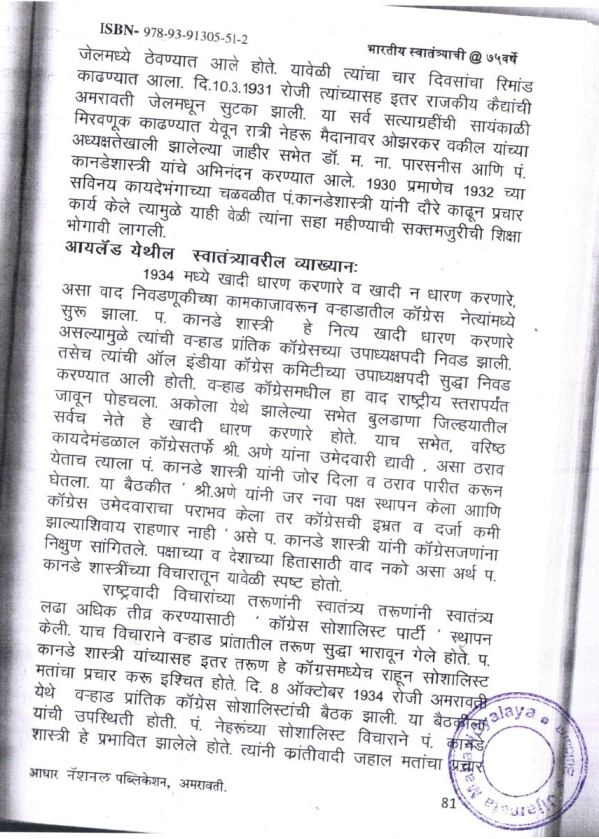
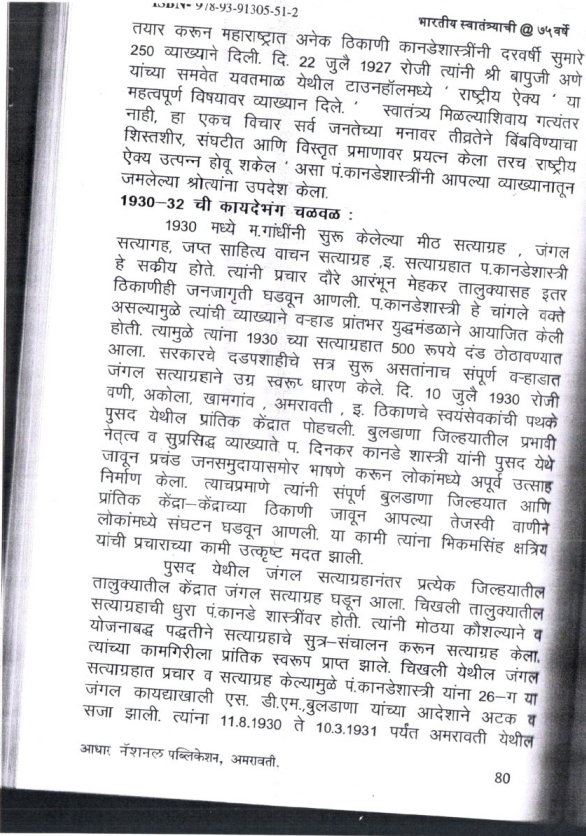
म. गांधींनी सुरु केलेल्या राष्ट्रीय हिताच्या कार्याचा प्रभाव शास्त्रींवर 1926 च्या काळात पडला आणि त्यांनी म. गांधींनी सुरु केलेल्या चळवळीत उडी घेतली. म. गांधींची कॉंग्रेस संघटना, एकमुखी मागणी, व पॅरलल गव्हर्नमेंट बनाविण्याचा घाट, या म. गांधींच्या गोष्टी कानडे शास्त्रींना फार पसंत पडल्या. याचबरोबर कॉंग्रेसचा सच्चा सेवक म्हणूनच देशसेवा करावी, असे शास्त्री यांनी ठरविले.

पं. कानडे शास्त्रींची जहाल राष्ट्रीय वृत्तीचे व्याख्याते म्हणून ख्याती हरोती. शाळेत असतानाच ते व्याख्याने देत होते. 1926 ते 1931 या काळात त्यांनी 'रशियन राज्यक्रांतीचा इतिहास', 'मुसोलिनी केमालपाशा, स्टॅलिन, म. गांधी, इ. विषयांवर व्याख्याने- व्याख्यानमाला

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तालुका कॉंग्रेस कमिटीचे अध्यक्ष व बुलडाणा येथील म्युनिसिपल कमिटीचे अध्यक्ष होते. पं. कानडे शास्त्री यांना डि.19 डिसेंबर 1940 रोजी अटक होवून त्यांना सहा महीण्यांचा सश्रम कारावास भोगावा लागला. दि. 25 ऑगस्ट 1941 रोजी त्यांची नागपूर येथील जेलमधून सुटका झाली. सुटका झाल्यावर नागपूर येथील वार्ड क्रमांक 5 मध्ये त्यांच्या हस्ते ध्वजारोहणाचा कार्यक्रम झाला. यावेळी त्यांनी आपल्या भाषणातून, जनतेला कॉंग्रेसच्या झेंड्याखाली जमण्याची कळकळीची विनंती केली. नागपूर येथून आल्यावर पं. कानडे शास्त्रींच्या अभिनंदनाची समा बुलडाणा येथे घेण्यात येवून त्यांचा सत्कार करण्यात आला.

बाडोली ठरावावरून इंग्रज सरकार भयभित झाले. आपल्या देशाच्या संरक्षणाची तयारी आपणच करावी असा बाडोलीच्या ठरावाचा मतितार्थ होता. भारतीय जनतेमध्ये बाडोली ठरावाने व वर्कॉम कमिटीच्या सभासदात युद्धविषयक भूमिकेबाबत असलेले मतभेद त्यामुळे भारतीय जनतेत संभ्रम निर्माण होवू नये म्हणून हे सर्व पटवून देण्याकरीता पं. कानडे शास्त्री यांनी जाहीर व्याख्यान केले. प्रांताध्यक्ष कानडेशास्त्री यांचे ब्रिजलाल बियाणी यांच्या अध्यक्षतेखाली 'जपान चढाई व हिंदुस्तान' या विषयावर जाहीर व्याख्यान झाले. त्यांनी सांगोपांग इतिहास सांगून भाषणातील विषयावर विस्तृत माहिती सांगितली. दुसऱ्या एका व्याख्यात त्यांनी 'बाडोली ठराव व जागतिक परिस्थिती' चे वर्णन करून 'बाडोली ठरावाचे महत्त्व' पटवून दिले. अकोला येथील राष्ट्रीय शाळेत झालेल्या हिंदू सेवा दलाच्या शिबीरातही त्यांनी आपल्या भाषणाद्वारे स्वयंसेवक-स्वयंसेविका यांना मार्गदर्शन केले. पं. कानडे शास्त्री हे प्रसिद्ध व्याख्याते, जागतिक घडामोडींचा अभ्यास असणारे व्यक्तीमत्त्व होते. त्यांचे व्याख्यान दूर-दूरच्या भागात होत होते.

मध्यप्रान्त- वहाड प्रांताचे डेप्युटी स्पिकर म्हणून पं.कानडे शास्त्री यांची निवड :

चले जाव 'चळवळीनंतर प्रांतिक निवडणुकीचे वारे वाहू लागले. प्रचार-सभा, दौरे, सुरू झाले. पं.कानडे शास्त्री यांनी याकाळात टिकटिकाणी दौरे केले. जोशपूर्ण भाषणे दिलीत. त्यांच्यासमवेत ब्रिजलाल बियाणी, वीर वामनराव जोशी, डॉ. गोपाळराव खेडकर, बाबासाहेब खापर्डे, डॉ.मुंजे, इ. मातब्बर पुढारी एकमेकांवर आरोप-प्रत्यारोप करीत होते. या देशभक्तांनी प्रत्येक तालुक्याच्या मोठ्या गावापासून तर अगदी लहानगावात लहान गावात समा घेतल्या. जणूकाही स्वातंत्र्याचा मार्ग

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मोकळा होण्याचा रंग दिसत होता. ही सर्व मंडळी निवडणुकीच्या प्रचाराबरोबरच स्वातंत्र्याचा प्रचार देखील करीत होती. आरोप-प्रत्यारोप करीत प्रांतिक असेंब्लीच्या निवडणुका झाल्या. त्यात वहाड प्रांतात कॉंग्रेसला बहुमत मिळाले. पश्चिम-वहाड शहर विभागातून कॉंग्रेसचे पं. कानडे शास्त्री यांना 13670 तर हिंदू महासभेचे वि.घ.देशपांडे यांना 4191 मते पडली. कॉंग्रेसचे पं.कानडे शास्त्री हे पश्चिम-वहाड शहर मतदार संघातून विजयी झाले.

प्रांतिक असेंब्लीच्या निवडणुकीत, मध्यप्रान्त- वहाड प्रांतात कॉंग्रेसला स्पष्ट बहुमत मिळाले. दि.27 एप्रिल रोजी पंडीत रविशंकर शुक्ला यांच्या नेतृत्वाखाली डी.पी. भिन्ना, डी.के. मेहता, रा.सं. गोखले, रा. कृ.पाटील, यांच्यासह मंत्रीमंडळ पदारूढ झाले. पंडीत रविशंकर शुक्ला हे मध्यप्रान्त- वहाड प्रांताचे प्रधानमंत्री झाले. महाविदर्भ व महाकोशल यांनी डेप्युटी स्पीकरच्या जागेसाठी दावेदारी केली. कॉंग्रेसच्या असेंब्ली पक्षाच्या समेत ही जागा वहाड प्रांतात देण्याचे एकमत झाले. संपूर्ण मध्यप्रान्त- वहाड प्रांतात डेप्युटी स्पीकरसाठी पं.कानडे शास्त्रींसारखे लायक व्यक्ती होते. त्यामुळे त्यांची डेप्युटी स्पीकर पदावर निवड झाली. अशाप्रकारे पं. कानडे शास्त्रींचा बहुमान ठरला. पं. कानडे शास्त्रींनी या पदाचा वापर योग्यच केला. त्यांनी याकाळात असेंब्लीमध्ये विविध सामाजिक प्रश्नांची उकल केली. सार्वजनिक आरोपावरील चर्चेत भाग घेतला. डॉ.हसन यांच्या 19 लाख 25 हजारचा वैद्यक खात्याची मागणी मंजूर करण्याच्या चर्चेत श्री. कोचर, श्री. मुखरे, पं. कानडे शास्त्री, डॉ. मोरे, इ. नी भाग घेतला.

स्वतंत्र वहाडसाठी कानडे शास्त्रींचे प्रयत्न:

निजामाच्या दाडीतून 'वहाड स्वतंत्र हावा' यासाठी वहाडच्या पुढाऱ्यांनी कमालीचे प्रयत्न केले. वहाडातील नेत्यांनी वहाड व निजाम प्रश्नाबाबत गृहमंत्री सरदार पटेल, डॉ.राजेंद्रप्रसाद, पं.नेहरु, देव राष्ट्रपती आचार्य कृपलाणी, म. गांधींशी चर्चा घडून आणल्या. दि.29 मे 1947 रोजी 'स्वतंत्र वहाड दिन' साजरा करण्यात आला. बुलडाणा येथे कॉंग्रेसच्या पटांगणात स्वतंत्र वहाड दिनानिमित्त पं. कानडे शास्त्री यांच्या अध्यक्षतेखाली एक जाहीर सभा झाली. या सभेत, स्वतंत्र वहाडसाठी लढा तीव्र करण्यात आला. ब्रिजलाल बियाणी यांनी वहाडच्या स्वातंत्र्य लढ्याचे बिगुल अकोला येथील प्रचंड समितीतील जनसमुदायासमोर वाजविले. तसेच स्वतंत्र वहाड समितीने

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आला. या सभेत श्रीमती कमलादेवी चटोपाध्याय, वीर वामनराव जोशी, पं. कानडे शास्त्री, डॉ.पंजाबराव देशमुख, असे अनेक विदर्भातील प्रमुख व्यक्ती हजर होत्या. या सभेत, पं. कानडे शास्त्री आपल्या भाषणात म्हणाले, '15 ऑगस्ट ला हिंदुस्थान आणि पाकिस्थान या दोन्ही विभागात स्वातंत्र्य महासत्त्व साजरा होणार आहे. अशावेळी आम्ही कोणता उत्सव करावा, असा प्रश्न पुढे निर्माण झाला आहे आणि म्हणूनच 15 ऑगस्टला वहाड संघाराज्याच्या झेंड्याबरोबर जर निजाम झेंडा फडकविणार असेल तर वहाड हा अन्याय सहन करणार नाही. लढा पुकारील मग तो लढा कुणाच्याही विरुद्ध करावा लागला तरी हरकत नाही' देशाच्या स्वातंत्र्याबरोबरच वहाड स्वातंत्र्याविषयीची तळमळ पं. कानडे शास्त्रींची होती. त्यांनी स्वतंत्र वहाडसाठी मोठे प्रयत्न केले होते, असे या त्यांच्या आकमक भाषणातून स्पष्ट होते.

स्वातंत्र्य मिळाले:

दि. 15 ऑगस्ट 1947 रोजी भारत स्वतंत्र झाला. स्वातंत्र्य मिळेपर्यंत व नंतरही पं. कानडे शास्त्री व इतर देशभक्तांनी देशाची सेवा केली. त्यांच्या त्यागाने व बलीदानाने भारतीय स्वातंत्र्याची पहाट उगवली हे विसरता कामा नये.

गांधी नेतृत्वाच्या काळात देशाला विदर्भाने अनेक नेत्यांचे नेतृत्व दिले. त्यात जमनालाल बजाज, वें.अभ्यंकर, श्री. पुनमचंद रांका, श्रीकृष्ण जाजू, वीर वामनराव जोशी, एम.एस. अणे, म.भगवानदिन, मंजरशा आवारी, ब्रिजलाल बियाणी, डॉ. गोपाळराव खेडकर, आर.के. पाटील, आचार्य धर्माधिकारी, पं. दिनकर कानडे शास्त्री बुलडाणा, कन्नमवार, इ. अनेक पुढारी देशाला स्वातंत्र्य मिळेपर्यंत व पुढेही अविरत कार्यरत होती. पं.कानडे शास्त्री यांनी शेवटपर्यंत कॉंग्रेसचे कार्य एकनिष्ठपणे, घडाडीने, व निःस्पृहपणे केले. त्यामुळे मध्यप्रान्त-वहाडात एक निःस्पृह व वजनदार पुढारी म्हणून त्यांना मोठी प्रतिष्ठा प्राप्त झाली होती. बुलडाणा येथे त्यांनी 'गांधी भवन', टी.बी. सॅनिटोरीयम, टिळक नाट्य क्रीडा मंदीर उभारले. या माध्यमातून त्यांनी लोकोपयोगी कार्य केले. तसेच बुलडाणा येथे सुंदर बागवगीचेही तयार केले.

पं. कानडे शास्त्री यांचे चरित्र अद्भुतरत्न, उदात्त, व विविध गुणांनी संपन्न होते. आपली मायभूमी स्वतंत्र करण्यासाठी प्राणाचे मोल देवून तीची सेवा करू, अ'हा प्रतिज्ञेने त्यांनी आपल्या जीवनास आरंभ

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केला. ते स्वातंत्र्याचे साक्षिदार बनले. त्यांना प्रतिज्ञापूर्तिचा व मायभू स्वतंत्र झाल्याचा सुखसोहळा पहावयास मिळाला, हे त्यांचे भाग्य होते.

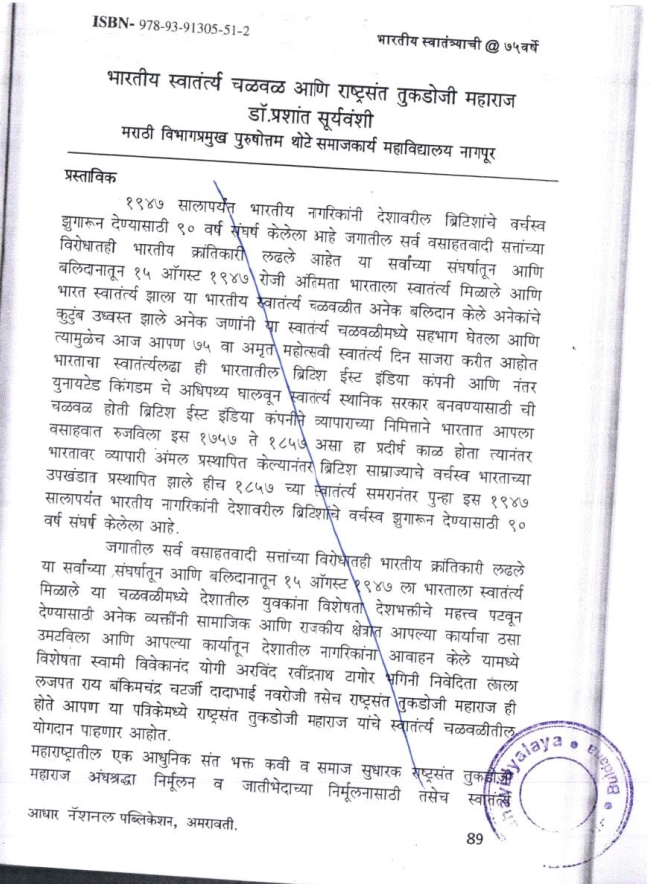
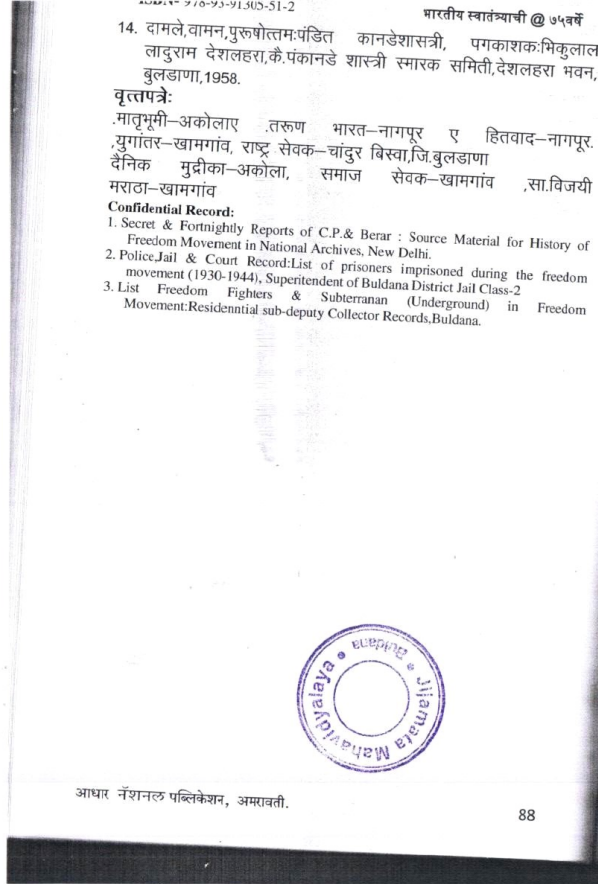
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अमृत महोत्सवी वर्षात सर्व स्वातंत्र्य विराना विमल अभिवादन!

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संपादकीय

भारताला स्वातंत्र्य मिळून ऑगस्ट २०२२ मध्ये पंच्याहत्तर वर्षे पूर्ण झाली आहेत. भारतीय स्वातंत्र्याचा अमृत महोत्सव साजरा करताना प्रत्येक भारतीयाना प्रचंड आनंद झालेला आहे. हैदराबाद मुक्ती आंदोलनाच्या यशस्वीतेलाही पंच्याहत्तर वर्षे पूर्ण झालेली आहेत. हैदराबाद मुक्ती आंदोलन हा भारतीय स्वातंत्र्य संग्रामाचाच एक भाग मानला जातो. म्हणून भारतीय स्वातंत्र्याच्या अमृत महोत्सवानिमित्त हा ग्रंथ प्रकाशित करताना आम्हास मनस्वी आनंद होत आहे.

भारतात ब्रिटिश सत्ता स्थापन झाल्यापासून भारतीयानी इंग्रजांच्या अन्यायास वेळोवेळी विविध माध्यमातून प्रतिकार केलेला आहे. भारतात ब्रिटिश सत्ता स्थापन झाल्यापासून ते इ.स. १८५७ चा उठाव या काळात हा प्रतिकार हवा तसा यशस्वी ठरला नसला तरी पुढील काळात भारतात दृढमूल झालेल्या ब्रिटिश सत्तेविरुद्ध प्रभावी लढा देण्याची दिशा यातून भारतीयाना मिळालेली आहे. साम्राज्यवादी ब्रिटिश सत्तेची मूठ भारताभोवती आवळत गेली असली तरी दुसरीकडे भारतात नवी आधुनिक मूल्ये रूजू लागली होती. भारतात प्रबोधनाला गती येत होती. सर्वच क्षेत्रात प्रगतीचे बारे वाहत होते. भारतीयाना पाश्चात्य आधुनिकवादाशी संपर्क आल्याने भारतीयानी स्वातंत्र्य चळवळ उदयास आणून ती अधिक व्यापक बनविली. त्यातून भारतात नवजागृती निर्माण होत गेली. भारतीयानी अस्मिता जागृत झाल्याने स्वातंत्र्याच्या अनेक अमूर्त कल्पना मूर्त स्वरूपात येऊ लागल्या होत्या. इ.स.१८५७ च्या उठावात अनेक भारतीय स्त्री-पुरुषांचा सहभाग होता. भारतीय राष्ट्रीय काँग्रेसची स्थापना झाल्यापासून मवाळ चळवळ, जहाल चळवळ, क्रांतिकारी चळवळ, गांधीवादी चळवळ व आझाद हिंद फौज या सर्वांमध्ये टिकटिकाणी भारतीयानी योगदान दिले आहे. इ.स. १९२० पासून म्हणजे असहकार चळवळीपासून भारतीय स्वातंत्र्य आंदोलनास जनआंदोलनाचे स्वरूप प्राप्त झाले होते. त्यामुळे भारतात अभूतपूर्व असे स्वातंत्र्य चळवळीचे पर्व अंमलात आले होते. सविनय कायदेभंग चळवळ, चलेजाव चळवळ यात भारतीयानी विशेषतः तळागाळातील लोकांचा मोठा सहभाग होता. अर्थात भारतीय स्वातंत्र्य चळवळीला सर्वसामान्यांपासून ते वरिष्ठ नेत्यांपर्यंत असे जनआंदोलनाचे स्वरूप प्राप्त झालेले होते. मात्र अनेक भारतीय जणांनी स्वातंत्र्य चळवळीत घेतलेला सहभाग लिखित स्वरूपात नोंदविला गेल्याचे, दिसून येत नाही. अनेक देशभक्तांचा सहभाग किंवा योगदान अनिर्णयित उजडत

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या पुस्तकातील कोणताही मजकूर, कोणत्याही स्वरूपात वा माध्यमात पुनर्प्रकाशित अथवा संग्रहित करण्यासाठी संपादक/प्रकाशक दोघांचीही लेखी पूर्वपरवानगी घेणे बंधनकारक आहे. या पुस्तकात वाडण्यात आलेली मते आणि दृष्टिकोन लेखकांचे स्वतःचे आहेत. लेखकांच्या मतांशी विद्यापीठ प्रशासन, प्रकाशक, संपादक व कार्यकारी संपादक हे घटक अनतिवचन असे नाही.

२ | प्राईम पब्लिशिंग हाऊस

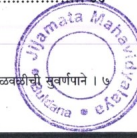


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लोकशाहीच्या कालखंडात विविध साहित्य आणि वृत्तपत्रांची भूमिका अत्यंत महत्त्वाची असते. राष्ट्रवाद असो वा राष्ट्रविकास निर्मितीत भारतीय साहित्य आणि वृत्तपत्रांची भूमिका अत्यंत साधारण आहे. ब्रिटिश काळात विविध बंधने असून सुध्दा भारतीय साहित्य आणि वृत्तपत्रांनी राष्ट्रवादाच्या प्रसारात व त्यासाठी जनमत तयार करण्यात महत्त्वाची कामगिरी बजाविली होती. प्रथमतः भारतात १७८० मध्ये 'हिंकी' याने 'बंगाल गॅझेट' सुरू केले. त्यानंतर इंडियन मिरर, बंगाली, अमृत बाझार पत्रिका, बॉम्बे क्रॉनिकल, हिंदू पॅट्रिएट, मराठा, केसरी, आंध्र प्रकाशिका, हिंदू, इंदू प्रकाश, कोहिनूर ह्यासारख्या अनेक इंग्रजी व भारतीय वृत्तपत्रांनी बहुमोल कार्य केले व ब्रिटिश शासकांच्या अत्याचारांना प्रसिध्दी दिली. स्वातंत्र्य, प्रातिनिधीक शासन, लोकशाही संस्था ह्या विचारांना जनमानसात लोकप्रिय करण्याचे कार्य भारतीय वृत्तपत्रांनी केले. त्याकाळात भारतीय वृत्तपत्र म्हणजे भारतीय राष्ट्रवादाचा आरसा बनली होती. तसेच जनतेला मार्गदर्शन करण्याचे माध्यम बनले होते असे म्हटले तर त्यात कोणतेही अतिशयोक्ती होणार नाही.^१ भारतीय राष्ट्रीयत्वाची भावना ज्याप्रमाणे वृत्तपत्रांनी भारतीय जनमानसात वाढविली. त्याचप्रमाणे साहित्याच्या माध्यमातून साहित्यिकांनी राष्ट्रवादी प्रचार व प्रसार केला आणि भारतीय साहित्यिक हे स्वातंत्र्यपूर्वकाळात राष्ट्रवादी प्रचाराचे अग्रदूत ठरले.^२

राष्ट्रीय स्तरावरील साहित्य आणि वृत्तपत्रे राष्ट्रवादाच्या प्रसाराचे मौलिक कार्य करीत असतांना यातून प्रेरणा घेऊन महाराष्ट्र-विदर्भातील लेखक आणि साहित्यिकांनी राष्ट्रवादाच्या उभारणीत उडी घेतली आणि ते समर्थपणे कार्य करू लागले. विदर्भात साधारणतः इतर राज्यांप्रमाणेच वृत्तव्यवसाय सुरू झाला. महाराष्ट्रात समाजाला सामाजिक व राजकीयदृष्ट्या जागृत करण्याचे प्रयत्न महाराष्ट्रातील प्रबोधनकार पत्रकारिता, बुद्धिमान वकील वर्ग यांनी केले. लोकहितवादींनी आपल्या शतपत्राद्वारे जनजागृतीचे कार्य केले. महाराष्ट्रात नवविचारांच्या प्रचाराचे व प्रसाराचे तत्कालिन वृत्तपत्रे व साहित्य साधने बनली. त्याकाळातील दर्पण, दिदर्शन, प्रभाकर, ज्ञानप्रसारक, ज्ञानप्रकाश इत्यादी नियतकालिकांनी महत्त्वपूर्ण कामगिरी बजाविली.^३

१९ व्या शतकाच्या उत्तरार्धात मध्यप्रांत व वऱ्हाडात पत्रकारितेने राष्ट्रवाद

निर्मितीसाठी महत्त्वाचे कार्य केले. वऱ्हाड समाचार (१८६७), वैदर्भ (१८७५), ज्ञानप्रकाश (१८७२), खनिद्राप्र मनी प्रस (नागपूर-१८७६), लाहिरी (वर्धा १८८१-८२), बेरार स्कूल पेपर (१८७६), सुबोधसिंधू (१८७९-८०), शेतकरी (अमरावती-१८८३), नागपूर समाचार (१८८४), न्यायसुधा, न्यायदर्पण, (१८८६), आर्यभैरव (१८८७-१८८८), व्हीटोरीया, सेवक शुभचिंतक (१८८७-१८८९), सरस्वती विकास (१८८९), इंडिपेंडंट भोसला पत्रिका (१८९०-९१), नागपूर आणि बेरार टाईम (१८९०), इत्यादी वर्तमान पत्रे सामाहिक, नियतकालिके मध्यप्रांत-वऱ्हाडात प्रकाशित होऊ लागली.

वरील सर्व वृत्तपत्रांनी विदर्भ वऱ्हाडात राष्ट्रीयत्वाचे बिजारोपण केले. तत्कालिन निजाम व ब्रिटिशांच्या घोरणाविषयी, स्वदेशी, बहिष्कार, राजकीय पुढाऱ्यांचे दारे सभा इत्यादी महत्त्वपूर्ण बाबी माहिती जनतेसमोर या प्रसारमाध्यमांनी मांडली. टीकाकार या नागपूरवरून प्रकाशित होणाऱ्या वृत्तपत्राने तर राजकीय घडामोडींचे चित्रण व्यंगचित्राद्वारे जनतेसमोर मांडले. टीकाकार हे पहिले आणि शेवटचे मराठी पत्र ज्याने मध्यप्रांत-वऱ्हाडचे मानणारे स्वाभाविक दर्शनचित्रण घडविले होते. मध्यप्रांत-वऱ्हाडातील या वृत्तपत्रांनी याकाळात तरुणांच्या मनात देशभक्तीची, राष्ट्रवादाची प्रेरणा जागृत केली.^४

प्रांभीच्या काळात विदर्भात मराठा, केसरी इत्यादी वृत्तपत्रे येत होती. यातून जहाल राष्ट्रवादाचा प्रचार व प्रसार विदर्भातील शहरी भागाबरोबरच ग्रामीण भागापर्यंत जावून पोहचला होता. तसे पाहता यापूर्वीच विदर्भात १८६७ मध्ये अकोला येथून वऱ्हाड समाचार हे सामाहिक वृत्तपत्र सुरू झाले होते. याचे संपादन खंडेराव बाळाजी फडके हे सुशिक्षित देशभक्त करीत होते. वऱ्हाड समाचार हे वृत्तपत्र विदर्भात राष्ट्रीय चळवळीचा प्रचार व प्रसार तसेच देशभिमानी वृत्ती निर्माण करीत होते. पुढील काळात या वृत्तपत्रांचे काम बापूसाहेब फडके यांनी सुरू ठेवले. लोकमान्य टिळकांनी सुरू केलेल्या स्वदेशी व देशभक्तीचे व्रत चालू ठेवले. त्यांच्या मुली व जावई यांनीही स्वातंत्र्य संग्रामाचे नेतृत्व केले होते.^५ १८७५ मध्ये उर्दू समाचार पत्र व वैदर्भ नावाचे सामाहिक देवराव बाबा दिगंबर या सुशिक्षित देशभक्त वकिलांने प्रकाशित करणे सुरू केले.^६

विसाव्या शतकाच्या प्रारंभिक काळात स्वातंत्र्य चळवळीला वेगळी गती प्राप्त झाली. विदर्भातील नेतृत्वाने कधी दारू तर सभाद्वाराक राष्ट्रवादी भावना जनतेच्या मनात रुजविली. लोकमान्य टिळक व इतर राष्ट्रीय नेते विदर्भ-वऱ्हाडात आले. तेव्हा तर जहाल राष्ट्रवादाचा प्रसार मोठा उद्रेक झाला. लोकमान्य टिळकांनी सुरू केलेल्या मराठा, केसरी वृत्तपत्रांनी वाचक वर्ग विदर्भात वाढू लागला. त्यांचे

भारतीय स्वातंत्र्य चळवळीची सुवर्णपाने । ६३

६२। प्राईम पब्लिशिंग हाऊस



2022



ICHR Sponsored One Day National Seminar on the Occasion of
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Contribution of Women in Indian Independence Movement

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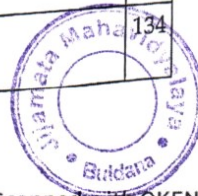
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जिजामाता महाविद्यालय

बुलडाणा.

‘चुल आणि मुल’ यातच आपल्या जीवनाची इतिकर्तव्यता न मानता, आपल्या घराचा उंबरठा ओलांडून अनेक महिला बाहेर पडल्या आणि त्यांनी भारतीय स्वातंत्र्य लढयात पुरूशांच्या खांद्याला खांद्या लावून हिरीरिने भाग घेतला. त्यामुळे भारताच्या अपूर्व स्वातंत्र्य संग्रामात भारतीय महिलांचा सहभाग हा उत्स्फूर्त व उत्साहपूर्ण राहिलेला आहे. हे भारतीय स्वातंत्र्य संग्रामाचे वैशिष्ट्य ठरले.

बुलडाणा जिल्हा हा राजमाता जिजाबाईंच्या जन्माने पुनीत झालेला जिल्हा आहे. स्वराज्य कल्पनेची प्रेरणा देणाऱ्या राजमाता जिजाबाई व स्वराज्य संस्थापक छत्रपती शिवाजी महाराजांच्या सहवास बुलडाणा जिल्हयाला लाभलेला आहे. राजमाता जिजाबाई व स्वराज्य संस्थापक छत्रपती शिवाजी महाराजांच्या प्रेरणेतून बुलडाणा जिल्हयात पुढील काळात आपसुकच स्वातंत्र्याची ज्योत पेटल्याशिवाय राहिली नाही.

भारताच्या निरनिराळ्या भागाप्रमाणेच बुलडाणा जिल्हयातील महिलांनी देखील भारतीय स्वातंत्र्य लढयात पुरूषांच्या खांद्याला खांद्या लावून सक्रीय सहभाग दर्शविला. स्वातंत्र्य लढयाच्या प्रत्येक टप्प्यातील सत्याग्रहात बुलडाणा जिल्हयातील महिला अग्रेसर होत्या. त्यांचे भारतीय स्वातंत्र्य लढयात महत्वपूर्ण योगदान राहिलेले आहे.

१८८५ मध्ये राष्ट्रीय सभा थापन झाल्यानंतर बुलडाणा जिल्हयात विविध राष्ट्रीय पुढाऱ्यांचे दौरे झाले. त्यामध्ये ए.ओ. हयुम १८८९, लोकमान्य टिळक (१९०८ व १९१८), न.चिं. केळकर (१९१६), राजे छाहू छत्रपती महाराज (१९१७), बॅ. चित्तरंजन दास (१९२३), दामोदर बळवंत भडजी गुरुजी (१९२३), डॉ. शंकराचार्य कुर्तकोटी (१९२६), महात्मा गांधी (१९२७ व १९३३), विनोबा भावे (१९२७), आचार्य कृपलानी (१९२७), एन.डी. सावरकर (१९२९), सरदार वल्लभभाई पटेल (१९३१), डॉ.राजेंद्र प्रसाद (१९३५), प्रसिध्द क्रांतिकारक एम.एन. रॉय (१९२९) सुभाषचंद्र बोस (१९३९), वि.दा. सावरकर (१९४१), राष्ट्रसंत तुकडोजी महाराज (१९४३), मेजर जनरल शहानवाज खॉन (१९४६) इत्यादी अनेक राष्ट्रीय पुढारी बुलडाणा जिल्हयात येवून गेले. या पुढाऱ्यांच्या झंझावती दौऱ्यांमुळे बुलडाणा जिल्हातील स्वातंत्र्य लढयाला प्रेरणा मिळाली व त्यामुळे स्वातंत्र्य चळवळीला गती प्राप्त झाली.

विसाव्या शतकाच्या पहिल्या व दुसऱ्या दशकात लो. टिळकांचे बुलडाणा जिल्हयात महत्वपूर्ण दौरे झाले. त्यांच्या जहालवादी विचारांचा प्रभाव बुलडाणा जिल्हयातील महिलांवर पडला आणि तेव्हापासूनच त्या स्वातंत्र्य लढयात सक्रीय झाल्याचे दिसून येते. याकाळात पार्वतीबाई पारसनीस यांचे महत्वपूर्ण योगदान होते. खामगाव येथे काँग्रेस कमिटीतर्फे तसेच भगिनी मंडळाच्या वतीने सौ. पार्वतीबाई पारसनीस यांनी, परदेशी मालावर पूर्ण बहिष्कार टाकण्यास, उपस्थित महिलांना आवाहन केले. सौ. पार्वतीबाई पारसनीस यांच्या सारख्या महिला नेतृत्व गांधी युगाच्या सुरुवातीच्या काळापासून बुलडाणा व वऱ्हाड भागात चमकत होते.

भारताच्या अपूर्व स्वातंत्र्य संग्रामात भारतीय महिलांचा सहभाग हा उत्स्फूर्त व उत्साहपूर्ण होता हे भारतीय स्वातंत्र्य संग्रामाचे वैशिष्ट्य ठरले आहे. ‘चुल आणि मुल’ यातच आपल्या जीवनाची

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इतिकर्तव्यता न मानता, आपल्या घराचा उंबरठा ओलांडून अनेक महिला बाहेर पडल्या आणि त्यांनी भारतीय स्वातंत्र्य लढयात पुरूषांच्या खांद्याला खांद्या लावून हिरीरिने भाग घेतला. भारताच्या विरनिराळ्या भागाप्रमाणेच बुलडाणा जिल्हयातील महिलांनी देखील या लढयात, विशेषतः गांधी युगातील प्रत्येक टप्प्यातील सत्याग्रहात महिला अग्रेसर होत्या.

१९२० नंतर म.गांधींच्या प्रेरणेने महिला राजकारणात पडू लागल्या. मं गांधींचे सत्य व अहिंसा हे दोनही तत्वे स्त्रियांच्या दृष्टीने प्रेरक, उत्साही ठरत गेली. म. गांधींनी स्त्रियांना देशप्रेमाची प्रेरणा देवून त्यांच्यातील सुप्तशक्ती जागृत केल्या होत्या. विनोबा भावे, जमनालाल बजाज, यांनी महिलांना चळवळीत आणण्यासाठी आश्रमांची निर्मिती केली. त्यामुळे नागपूर, वर्धा, या आसपासच्या व संपूर्ण विदर्भातच विविध कार्यक्रम पूर्ण करणारे स्त्री-पुरूष सहभागी होवू लागले. अशाच प्रकारची धारणा महात्मा गांधींचीही असल्याने या लढयात स्त्री शक्तीला विशेष महत्व आले. म. गांधींच्या या अभिनव उपक्रमांमुळे स्त्रियांच्या स्वातंत्र्य कक्षला वाव मिळाला.

१९२० च्या असहकार चळवळीत बुलडाणा जिल्हयातील महिलांचा सहभाग

१९२१ पासूनच वऱ्हाडातील अकोला, अमरावती, बुलडाणा, यवतमाळ या जिल्हयांतून स्त्रियांनी प्रचार कार्यात भाग घेणे सुरू केले. म. गांधी व कस्तुरबा गांधी हे दोघेही दि. २९ मार्च १९२१ रोजी नागपूरहून अमरावती येथे आले असता, महिलांमध्ये नवचैतन्य निर्माण झाले. म. गांधींनी अमरावती येथील सभेत स्त्रियांना, "आपल्याजवळ जे असेल ते द्या" असे कळकळीचे आवाहन केले. या सभेला विदर्भ वऱ्हाडातील ३००० स्त्रियांचा समुदाय हजर होता. या नंतर येथील प्रमुख स्त्रियांनी इतर स्त्रियांना सहभागी करून घेण्याकरीता संपूर्ण वऱ्हाडात प्रचार दौरे केले. सौ. पार्वतीबाई पटवर्धन यांनी प्रांतिक काँग्रेस कमिटी तर्फे बुलडाणा जिल्हयातील शेगाव, खामगाव इ. शहरात व गावात असहकार चळवळ यशस्वी करण्याकरीता व्याख्यान दौरे काढले.

सौ. पार्वतीबाई पटवर्धन यांनी बुलडाणा जिल्हयातील महिलांना असहकाराची प्रेरणा दिली. ऑगस्ट १९२१ मध्ये खामगाव येथे काँग्रेस कमिटीतर्फे तसेच भगिनी मंडळाच्या वतीने एक सभा झाली. या सभेत सौ. पार्वतीबाई पारसनीस यांनी, परदेशी मालावर पूर्ण बहिष्कार टाकण्यास, उपस्थित महिलांना आवाहन केले. तसेच प्रत्येकाने आपले कर्तव्य बजाविले पाहिजे तरच आपल्या देशाचे व आपले हित साध्य होईल, असेही उपस्थितांना संबोधित केले. त्या पुढे म्हणाल्या, "तुमच्या तुम्ही म्हणाल, आम्ही चळवळीला काय मदत करणार, आमच्या हातात काय आहेत, तुमच्या हातात बांगड्या आहेत, त्या कुठल्या आहेतबरं, विलायती, मग त्याच जर आपण देशी वापरल्या तर काय थोडा फायदा होणार आहे. आपल्या देशातून आज बांगड्यांतून परदेशी कोटयावधी पैसा जातो, आता तरी स्वदेशीचे व्रत घेवून परदेशी मालावर पूर्ण बहिष्कार घाला "सौ. पार्वतीबाई पारसनीस यांच्या या भाषणामुळे महिलांना मोठी प्रेरणा मिळाली आणि मोठया प्रमाणात महिला स्वदेशी चळवळीत सहभागी झाल्या. सौ. पार्वतीबाई पारसनीस यांना आपल्या पतीपासून म्हणजे चळवळीतील गांधीवादी पुढारी डॉ. म.ना. पारसनीस यांच्याकडून प्रेरणा मिळाली होती. त्यामुळे सौ. पार्वतीबाई पारसनीस यांच्या पासून बुलडाणा जिल्हयातील अनेक महिलांनी प्रेरणा घेतली व त्यांनी भारतीय स्वातंत्र्य चळवळीत स्वतःला झोकून दिले.

१९३०-३२ च्या सविनय कायदेभंग लढयात बुलडाणा जिल्हयातील महिलांचा सहभाग

१९३० सालच्या स्वातंत्र्य आंदोलनात भारतीय महिलांनी अलौकिक कामगिरी करून दाखविली. महात्मा गांधींच्या आदेशाप्रमाणे स्त्रियांनी दारूच्या दुकानावर निरोधने करण्यात विशेष पुढाकार घेतला. म. गांधींचा हा आदेश बुलडाणा जिल्हयातही येवून पोहचला. अकोला येथे भगिनी वर्गाने विशेषतः दुर्गाताई जोशी, सौ राधाबाई ओक, ताराबेन मश्रुवाला इत्यादींनी बुलडाणा जिल्हयातील मलकापूर, शेगाव, जळगांव, इत्यादी भागात दौरे व व्याख्यानांद्वारे मोठी जागृती घडवून



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आणली. महिलांनी यावेळी दारूच्या गुत्यावरील व परदेशी कापडाच्या दुकानावरील शांततामय निरोधने करून ब्रिटीश सरकारला धारेवर पकडले. बुलडाणा जिल्हयातील सौ. जिजीबाई देशपांडे व माई साहेब कानिटकर यांनी बुलडाणा जिल्हयात संघटन केले व प्रचारकार्यास जिल्हा युद्धमंडळस्य विशेष सहकार्य केले.

जिजीबाई देशपांडे यांच्या अध्यक्षतेखाली अनेक सभा झाल्या. त्या सभेत त्यांनी दारू निरोधने, विदेशी कापडावरील निरोधने हयावर भाषणे दिले व महिलांमध्ये राजकीय जागृती घडवून आणली. जंगल सत्याग्रहास जिजीबाई देशपांडे यांनी आपल्या पथकासह खामगाव येथील केंद्रात सत्याग्रह केला होता. यावेळी बुलडाणा जिल्हयातील जिजीबाई देशपांडे, रूक्मिणीबाई कोरडे व पावर्तीबाई पत्की या महिलांनी सहा-सहा महिन्यांचा कारावास भोगला.

ब्रिटीश सत्तेविरूद्ध ज्यांचे वादांकीत भाषणे खुप गाजले असे- पाचलेगांवकर महाराज यांच्यावर बुलडाणा जिल्हयातील महिलांची नितांत श्रद्धा होती. महाराजांच्या मागे याकाळात सरकारचा ससेमिग लागला असतांना ते भूमिगत झाले. हया कालखंडात खामगाव परिसरातील महिलांनी त्यांना सहाय केले. त्यामुळे महाराजांना शेवटपर्यंत अटक होवू शकली नाही. पाचलेगांवकर महाराजांनी खामगाव येथे 'मुक्तेश्वर आश्रम-दल' स्थापन केले होते. आजही हा आश्रम सुस्थितीत आहे. या दलातून राजकीय व धार्मिक जागृतीचे धडे दिले जात होते. तेव्हा सरकारने त्यांच्यावर पकड बारंट काढून अटक केली. तेव्हा डॉ. मुंजे व बापुजी अणे यांनी पोलिस कस्टडीतून त्यांना सोडविण्यासाठी प्रयत्न केले होते.

नोव्हेंबर १९३० च्या काळात अमरावती, अकोला, बुलडाणा, यवतमाळ या वऱ्हाड प्रांतातील चारही जिल्हयातील महिला स्वयंसेवक एकत्र येवून त्यांनी दारूच्या हर्साच्यावेळी मोठया प्रमाणात दारू गुत्यावर व कापड दुकानांवर पिकेटींगचे नेतृत्व केले. पिकेटींगच्या ठिकाणी या महिला व्याख्याने देत व राष्ट्रीय गाणी व रामनामाचा गजर करीत असत. विशेषतः बुलडाणा जिल्हयातील महिलांनी जळगांव तालुक्यातील आसलगांव, खामगांव, बुलडाणा येथे बरेच दिवसपर्यंत जोरात पिकेटींग केले होते. मेहकर तालुक्यातील सौ. रमाबाई रंगनाथ केळकर यांनी लिलाव निरोधनात व्याख्याने देवून अंत्यत धिटाईने काम केले होते. त्यामुळे त्यांना अकोला व नागपूर येथील जेलमध्ये कारावास भोगावा लागला होता. त्यांनी जंगल सत्याग्रहात सुद्धा भाग घेतला होता. त्यांचे पती रंगनाथ परशराम केळकर यांनीही तुरूंगवास झाला होता. चिखली येथील प्रभावती मारोतीराव चंवडके यांनी दारू दुकानावर व परदेशी कापड दुकानावर पिकेटींग केले. तसेच गावोगावी जावून प्रभातफेऱ्या, सभा, व्याख्यानांद्वारे स्वातंत्र्याचा प्रचार केला व जनजागृती घडवून आणली. हे कार्य त्यांनी भूमिगत राहून केले होते. १९३० च्या जंगल सत्याग्रहात मलकापूर येथील उमाबाई गुलाबराव देशमुख यांनी भाग घेतल्यामुळे एक महिना त्यांनी अकोला येथील तुरूंगात सक्त मजुरीची शिक्षा भोगली. पिंपळगाव काळे येथील मयुराबाई ज. षालीराम यांनी १९३९ च्या जंगल सत्याग्रहात भाग घेतल्यामुळे सरकारने त्यांना अटक करून पोलिस कस्टडीत ठेवले होते. सौ. विमलाबाई अच्युतराव देशपांडे यांनी याकाळात प्रभातफेऱ्या व जाहिरसभांद्वारे स्वातंत्र्याचा प्रचार केला. त्यांनी त्यांचे पती अच्युतराव केशवराव देशपांडे यांच्याबरोबर १९३० च्या कायदेभंग चळवळीत खामगांव व जळगांव क्षेत्रात कार्य केले होते.

बुलडाणा जिल्ल्यातील महिलांचे नाटकांद्वारे जनजागृतीचे कार्य

बुलडाणा जिल्हयातील महिलांनी सभा व भाषणे या व्यतिरीक्त नाटके बसवून ती रंगमंचावर आणली. या नाटकांच्या माध्यमांद्वारे त्यांनी महिला राष्ट्रीय जागृती करण्याचे कार्य केले. मेहकर येथील महिलांनी आपल्या महिला मंडळातर्फे राजकीय जागृतीकरीता १० नाटके बसविली होती. त्याद्वारे ते महिला मंडळ प्रचारकार्य करीत असे.



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बुलडाणा जिल्ह्यातील भगिनी मंडळाची कार्ये

खामगांव येथे वऱ्हाड प्रांत युद्धमंडळाचे पदाधिकारी डॉ. म. ना. पारसनीस यांच्या पत्नी सौ. पार्वतीबाई पारसनीस यांनी त्यांच्या घरी 'चरखा संघ' स्थापन केला. या चरखा संघातील भगिनींनी स्वदेशीचे व्रत घेतलेले होते. त्यांनी परदेशी मालावर पूर्ण बहिष्कार टाकला होता. जिजीबाई देशपांडे यांच्या नेतृत्वाखाली सायंकाळी फेरी काढण्यात येत असत व राष्ट्रीय गाणी म्हटल्या जात असत. तसेच दारूच्या दुकानांवर पिकेटींग करण्यात येत असत. खामगांवातील दुसरे नेतृत्व सत्यभामाबाई पुराणिक यांच्याकडे होते. त्यांनी लोकजागृतीचे कार्य खंड पडू न देता शेवट पर्यंत चालू होते. १९३० च्या काळात भगिनी मंडळाने चरखा सप्ताह सुरू केले. सौ. पारसनीस यांच्या घरी असलेल्या चरखा संघातील भगिनींनी एका सप्ताहात तीन शेर सुत कातले. तर दुसऱ्या सप्ताह लक्ष्मीबाई जोशी यांच्याकडे घरी सुरू करण्यात आला होता. निघालेले सुत हे काँग्रेस कमिटीला देण्यात येत असे.

भगिनी मंडळाच्या २० स्त्रीयांच्या मदतीने सौ. पार्वतीबाई पारसनीस यांनी विलायती कापडाच्या दुकानावर पिकेटींग कार्य केले. त्याचा परिणाम याकाळात व्यापारावर झाला. व्यापाऱ्यांनी एक महिना विलायती कापड विकणार नाही म्हणून त्यांनी सहयांसह कबूल केले. सौ. पार्वतीबाई पारसनीस यांनी स्वतः चांगलेच स्वदेशाचे व्रत अंगिकारलेले होते. काहींचा विरोध असतांनाही नवरात्रात देवीच्या दर्शनाला विलायती कापड व ईरकली लुगडी नेसून कोणी जावू नये म्हणून स्वतः त्यांनी पहारा केला होता. खामगाव येथील देवी समोरील पटांगणात राधाबाई ओक यांच्या नेतृत्वाखाली विशाल सभा घेण्यात आली. या सभेला देशी कापडाची लुगडी घालून बऱ्याच भगिनी व्याख्यान ऐकाला आल्या होत्या.

ऑक्टोबर-नोव्हेंबर १९३० मध्ये बुलडाणा जिल्ह्याच्यावतीने बुलडाणा दारू दुकानांचे लिलाव झाले. त्यावेळी निरोधनाला उग्र स्वरूप प्राप्त झाले होते. लिलाव बोलण्यास जाणाऱ्या दारू गुल्लेदारसमोर आडवे होवून महिला त्यांना अडवित होत्या. विशेष म्हणजे याचवेळी गर्दीत जावून एका दारू गुल्लेदाराने स्त्री वेश धारण करून यात प्रवेश मिळविला होता. या दारू गुल्लेदाराने लिलावाच्या काळात बुलडाणा येथे खामगांव येथील जिजीबाई देशपांडे, रूक्मिणीबाई कोरडे, गंगाबाई आगरवाले, सत्यभामाबाई पुराणिक इत्यादी महिलांनी कार्य केले होते.

खामगांव येथील स्त्रियांची प्रचंड सभा (१९३०)

दि. १८ ऑगस्ट १९३० रोजी 'परदेशी मालावर बहिष्कार' या विषयावर खामगाव येथील परावत थियटरमध्ये सौ. पार्वतीबाई पारसनीस यांच्या अध्यक्षतेखाला प्रचंड सभा झाली. या सभेला ५०० च्या वर स्त्रिया हजर होत्या. सभेचे मुख्य वक्ते धर्मभास्कर पाचलेगावकर महाराज यांनी चहाचे दुरपरिणाम व परदेशी मापडे वापरणे धर्मबाहय आहे असे समजावून सांगितले. जिजीबाई देशपांडे यांनी 'परदेशी मालावर पूर्ण बहिष्कार घाला व चालू स्थितीत स्त्रियांना कर्तव्याची जाणीव करून देऊ राणी लक्ष्मीबाई सारख्या पुढे या 'असे आपल्या भाषणातून स्त्रियांना आव्हान केले. सभेच्या अध्यक्ष सौ. पार्वतीबाई पारसनीस यांनी सांगितले की, 'महाराज पिशाच्च बाधा काढणारे आहेत तरी त्यांनी या हिंदी मातेच्या बोकांडी बसलेले गोरे पिशाच्च लवकर काढून टाकून तिला त्या पिशाच्याच्या तावडीतून मुक्त करावे' अशी विनंती महाराजांना केली. सर्व भगिनीतर्फे महाराजांना पुगाचा हार अर्पण करण्यात आला व महात्मा गांधींचा जयजयकारात सभा संपविण्यात आली. त्यानंतर झेंडावंदन करून स्त्रियांची मिरवणूक जलालपूर्यापर्यंत जिजीबाई देशपांडे यांच्या घराजवळ संपविली.



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१९३० च्या कायदेभंग लढयात महिलांनी आगळेवेगळे कार्यक्रम राबविले. खामगाव येथे स्थापन झालेल्या भगिनी मंडळाच्या महिलांनी स्वदेशीचे व्रत धारण करून महात्मा गांधींचा आदर्श व कार्यक्रमांची अंमलबजावणी केली होती. 'दर मंगळवारी ५०० वार सुत काँग्रेसला द्यावे' असा एक अत्यंत सोपा व महत्वाचा कार्यक्रम भगिनी वगाने सुरू केला. हा कार्यक्रम सर्वांना पटविण्यात येवून त्या कार्यक्रमाचे महत्त्व सांगण्यात आले. सौ. पार्वतीबाई पारसनीस यांनी यावेळी आपल्या स्वहस्ताक्षरात एक पत्रक काढून खामगाव येथील महिलांना कार्यक्रमाचे स्वरूप व फायदे कळविण्यात आले होते. ह्या भगिनी मंडळात सौ. रूक्मिणीबाई कोरडे, सौ. पार्वतीबाई पारसनीस, सौ. सीताबाई महरजन, सौ. सुंदराबाई सोनारे, सौ. गंगुबाई धारव, सौ.द्वारकाबाई भटजी, सौ. गंगुबाई महाजन, इत्यादी महिला होत्या.

ब्रिटीश सत्तेविरुद्ध स्त्रियांची टोलेजंग सभा : 'महिला संघ' स्थापन

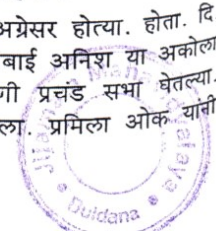
बुलडाणा जिल्हयातील चिखली या गावी 'स्त्रियांची टोलेजंग सभा' या काळात झाली. या सभेत 'महिला संघ' स्थापन करण्यात आला. या महिला सभांच्या कार्यकारी मंडळात अध्यक्ष म्हणून सौ. भगिनीबाई सोमण, उपाध्यक्ष सौ. मयुराबाई देशपांडे, चिटणीस विमलाबाई गुप्ते, जोडचिटीस श्रीमती अन्नपूर्णाबाई दंशपांडे, तर सभासद म्हणून सौ. जानकीबाई देशपांडे, कु. इंदीराबाई शिंदे, सौ. लक्ष्मीबाई तेलंग ह्या महिला होत्या. ही सभा सौ. जानकाबाई कानिटकर यांच्या अध्यक्षतेखाली झाली होती. याचवेळी महिलांनी राष्ट्रीय ध्वजारोहण केले. या संघामुळे महिला संघटीत झाल्या होत्या.

१९३० प्रमाणेच १९३२ च्या कायदेभंग आंदोलनात सुद्धा बुलडाणा जिल्हयातील महिलांनी महत्त्वपूर्ण कामगिरी बजाविली होती. या चळवळीत अनेक महिलांनी प्रत्यक्ष ऑर्डिनन्स मोडला होता. प्रभातफेऱ्या काढल्या. सभा गाजविल्या. युद्धमंडळास मुष्टीफंड गोळा करून देण्यास महिलांनी सहाय्य केले होते. चिखली येथील सौ. प्रभावती मारोतीराव चवडंके या महिलेने दारू दुकानावर व परदेशी कापड दुकानावर पिकेटींग केले होते. त्याचबरोबर त्यांनी प्रभातफेऱ्या, सभा, गावोगावी जावून स्वातंत्र्याचा प्रचार केला व जनजागृती केली होती.

दि. ११ फेब्रुवारी १९३२ रोजी खामगाव येथील ३०० लोकांच्या उपस्थितीत सभा झाली. या सभेत जिजीबाई देशपांडे आणि रूक्मिणीबाई कोरडे यांची व्याख्याने झाली. सौ. जिजीबाई देशपांडे, सौ. पावताबाई पारसनीस, सौ. पार्वतीबाई पत्की, सौ. रूक्मिणीबाई कोरडे या महिलांनी संपूर्ण बुलडाणा जिल्हयात प्रचार सभा घेवून मोठ्या प्रमाणात ब्रिटीश सत्तेविरुद्ध जनजागृती घडवून आणली होती. या महिलांनी पिकेटींग करून अनेकांना दारूच्या जवड्यातून बाहेर काढले. एवढेच नव्हे तर ती दारूचे दुकानेही बंद करण्यास भाग पाडले. दारू दुकानांवरील निरोधने व विदेशी मालावरील बहिष्कार प्रचार मोहिम सुरू असतांनाच जिजीबाई देशपांडे, रूक्मिणीबाई कोरडे, पार्वताबाई पत्की यांना अटक होवून सहा-सहा महिन्यांची शिक्षा झाली. स्वातंत्र्य चळवळीतील प्रमुख पुढारी पुरूशोत्तम झुंझुनवाला यांच्या पत्नी व जमनालाल बजाज यांच्या पुतणी सौ. सीताबाई झुंझुनवाला यानी १९३२ च्या कायदेभंग आंदोलनात दारू व विदेशी कापडावर बहिष्कार घालण्याच्या चळवळीत भाग घेतला होता.

१९४० च्या वैयक्तिक सत्याग्रहात बुलडाणा जिल्हयातील महिलांचा सहभाग

१९४० च्या वैयक्तिक सत्याग्रहात बुलडाणा जिल्हयातील महिला अग्रेसर होत्या. होता. दि. १७ ते २१ मार्च १९४१ याकाळात प्रमिलाताई ओक, राधबाई ओक व प्रेमाबाई अनिश या अकोला जिल्हयातील सत्याग्रही महिलांनी बुलडाणा जिल्हयात निरनिराळ्या ठिकाणी प्रचंड सभा घेतल्या. त्यांच्या भाषणामुळे बुलडाणा जिल्हयातील महिलांवर चांगलाच प्रभाव पडला. प्रमिला ओक यांनी



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दि. १९ मार्च १९४१ च्या सभेत 'आपसातील मतभेद व जातीय भांडणे नाहीशी करून सद्याच्या आणिवणीच्या प्रसंगी राष्ट्रीय स्वरूपाची एकी निर्माण करण्याविषयी 'आवाहन केले. तसेच स्वातंत्र्य लढ्यात कार्यप्रवण होण्याविषयी विनंती केली. त्यांच्या भाषणांमुळे बुलडाणा जिल्ह्यातील महिलांवर चांगलाच प्रभाव पडला. यावेळी मलकापूर तालुका काँग्रेस कमिटीच्या कार्यकर्त्या सौ. रूक्मिणीबाई विठ्ठल कोरडे यांनी रोहिणखेड येथे युद्धविरोधी भाषण करून सत्याग्रहास प्रारंभ केला. परंतु सरकारने त्यांना भारत संरक्षण कायद्यान्वये अटक करून खटला भरला. पुढे त्यांनी वैयक्तिक सत्याग्रह केला. त्यामुळे सौ. रूक्मिणीबाई विठ्ठल कोरडे यांना तीन महिन्यांची शिक्षा भोगावी लागली. त्यांची बुलडाणा जेलमधून सुटका करण्यात आल्यानंतर संपूर्ण जिल्ह्यातील सत्याग्रहींमध्ये स्वातंत्र्याचा संचार शिरला व त्यांच्यापासून चेतना निर्माण झाली होती.

१९४२ च्या 'चले जाव' चळवळीत बुलडाणा जिल्ह्यातील महिलांची उल्लेखनीय कामगिरी

१९४२ च्या 'चले जाव' चळवळीत बुलडाणा जिल्ह्यातील महिलांनी उल्लेखनीय कामगिरी बजाविली होती. खामगांव येथील सौ. कौसल्या काशिनाथ आवटे यांनी विध्वंसक कृत्यांना मदत केली. त्यामुळे या आरोपाखाली त्यांना चार महिने स्थानबद्ध केले होते. देउळगाव राजा येथील प्रसिद्ध कार्यकर्ते चंपालालजी मेवाडे यांना अटक झाल्यानंतर त्यांच्या प्रचाराचे काम त्यांच्या पत्नी सौ. शांताबाई चंपालाल मेवाडे यांनी १९४२ चळवळीत सक्रीय भाग घेवून प्रभातफेऱ्या काढल्या. त्यातून त्यांनी प्रचाराचे कार्य केले. त्यांनी ठिकठिकाणी सभा घेतल्यामुळे सरकारने त्यांना अटक केली. अडीच महिने कच्चा कैदेत ठेवल्यानंतर त्यांना सहा महिन्यांची सक्त मजुरीची शिक्षा झाली. सौ. शांताबाई चंपालाल मेवाडे यांना एस. डी.एम. बुलडाणा यांच्या आदेशाने ३५ व ३९-६, आर डब्ल्यु ३८-१ अ व सी-अे बी या कलमाखाली अटक करण्यात आली. सौ. शांताबाई चंपालाल मेवाडे यांनी महात्मा गांधींच्या रचनात्मक कार्याचा देखील प्रचार व प्रसार केला.

अशाप्रकारे भारतीय स्वातंत्र्य चळवळीच्या प्रत्येक टप्प्यात बुलडाणा जिल्ह्यातील महिलांचा सहभाग उत्स्फूर्त व उत्साहपूर्ण राहिलेला आहे. त्यामुळे बुलडाणा जिल्ह्यातील महिलांचे स्वातंत्र्य लढ्यातील योगदान हे महत्वपूर्ण वाटते. तसेच ते वर्तमान व भावी पीढीला प्रेरणादायी उरणारे आहे.

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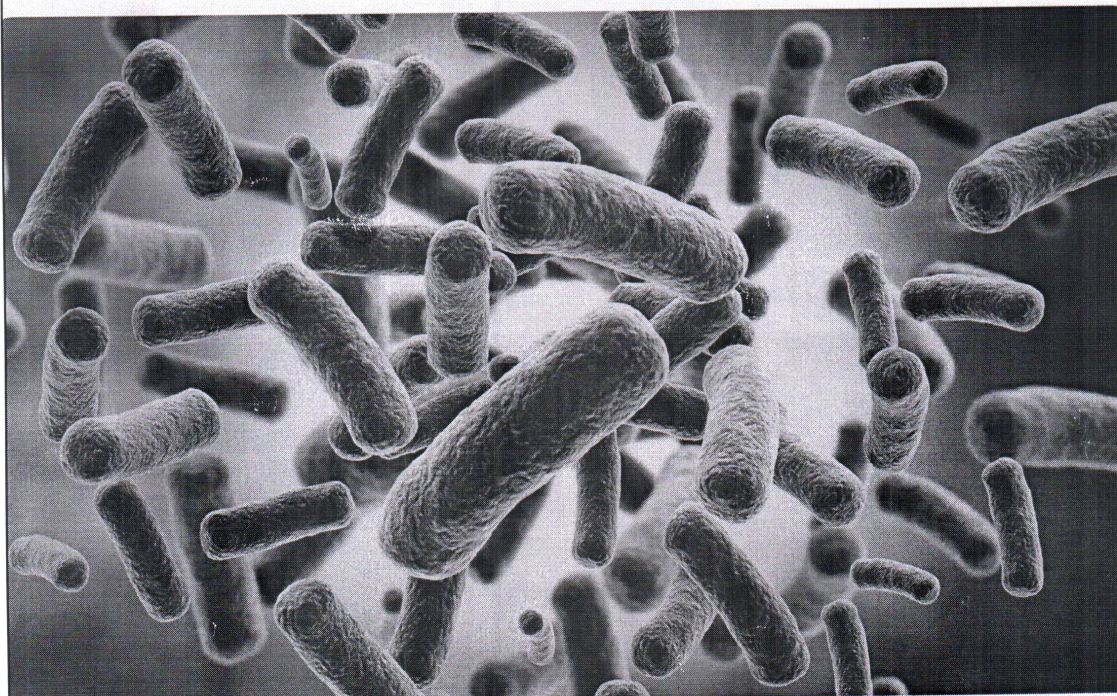


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ROLE OF SOIL MICROORGANISMS IN PLANTS GROWTH

Anant T. More*¹, Vinod R. Jogdand² and Sumia Fatima³

¹Department of Botany, Jijamata Mahavidyalaya, Buldana (Maharashtra) India

²Department of Botany, RFNS, Senior Science College, Akkalkuwa, Dist. Nandurbar

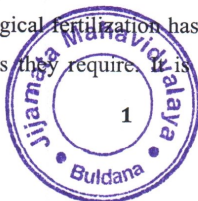
³Department of Botany, Dr. Rafiq Zakaria College for Women, Aurangabad 431 001

*Corresponding author E-mail: atmore555@gmail.com

Nutrients are present in everything we eat. They are required for strong teeth and bones, a healthy heart and blood vessels, and the proper functioning of your brain and nerves. These nutrients are obtained from the foods we consume. These come from the plants that grow, as well as the animals that devour the vegetation. Most soils contain a considerable amount of nutrients, which are absorbed by plants when they absorb water. To grow huge quantities of plants, soils must be healthy, and animals require plants to grow robust. Nutrients enter the soil through a variety of routes, including decomposing animal feces and dead plants, the atmosphere, rock weathering, and bacterial conversions. When soils are used to grow food, they must be kept healthy since plants take up a lot of nutrients that are not supplied. To restore what has been taken away, nutrients must be given, and the best method to do so is to test the soil. Too many nutrients pollute streams and groundwater, whereas too few nutrients cause plants to die.

Soil organisms which range in size from microscopic cells that decompose decaying organic matter to small mammals that eat other soil species play a significant role in soil fertility, structure, drainage, and aeration. Plant growth is aided by microorganisms invading plant roots and activating mechanisms that boost plant growth (1). One of the most important functions of soil organisms is to break down the complex chemicals found in decaying plants and animals so that they can be utilized by living plants again. Soil organisms act as catalysts in a variety of natural cycles, the most well-known of which are the carbon, nitrogen, and sulphur cycles.

Plants are part of a varied ecosystem in their natural habitat, which includes numerous and different microorganisms in the soil. Some of these microbes, such as mycorrhizal fungi and nitrogen-fixing symbiotic bacteria, have long been known to improve plant performance through enhancing mineral nutrition. However, only recently has the complete diversity of microorganisms associated with plants been discovered, as well as their potential to replace synthetic agricultural inputs. Biological fertilization has been shown to be an effective means of providing plants with the nutrients they require. It is both economically and environmentally

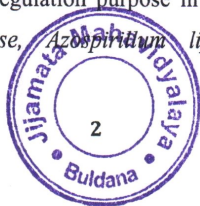


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beneficial since it ensures long-term viability (2). The understanding of the composition and behaviour of rhizospheric microbiomes has advanced dramatically in recent years. Plants shape microbiome structures, most likely through root exudates, and bacteria have evolved numerous adaptations to flourish in the rhizospheric niche, according to research. The mechanisms underlying these interactions, as well as the processes that cause changes in microbiomes, are, nevertheless, largely unexplored.

Plant growth is influenced by four fundamental factors: light, water, temperature, and nutrients. These four factors impact the plant's growth regulators in plant body, causing it to grow faster or slower. Changing any of the four can induce stress in the plant, which can stunt, modify, or boost growth. To increase plant's growth factors for healthy plants, we need to understand as much as we can about each of the four aspects and our particular plant's unique needs. Microbial populations play an important role in the underlying processes that govern agro-ecosystem stability and productivity (3). In this chapter we are focusing mainly on the soil microorganisms which help plant to grow properly by providing required nutrients as well as favorable environment. These soil Microbes are mainly from four different groups Bacteria (Monerans), Fungi, Protozoa (Protists), algae (Plantae) and Nematodes (Animalia).

Bacteria are an important part of the soil's workforce. They are the last stage in the process of breaking down nutrients and releasing them to the plant's root zone. Bacteria, fungus, actinomycetes, protozoa, and algae are among the microscopic life forms that live in soil. Bacteria are by far the most prevalent of these diverse microbes (i. e. , 95 %). For a long time, scientists have known that soil contains a huge number of bacteria (about 10^8 to 10^9 cells per gram of soil) and that the amount of bacterial cells in soil is only around 1% of the total number of cells present (4). However, the quantity of bacteria in environmentally challenged soils might be as low as 10^4 cells per gram of soil (5). Temperature, humidity, the presence of salt and other chemicals, as well as the number and types of plants found in such soils, all influence the number and type of bacteria found there. Bacteria can effect plants in one of three ways, regardless of the number of bacteria in a soil sample. The relationship between soil bacteria and plants can be beneficial, detrimental, or neutral from the plant's perspective (6). Some soil bacteria could either directly support plant growth by simplifying resource acquisition or modifying plant hormone levels, or indirectly by reducing the inhibitory effects of various pathogenic agents on plant growth and development, i. e. by serving as biocontrol bacteria (7). Some bacteria are commercially used in plant growth regulation purpose in agricultures that are *Agrobacterium radiobacter*, *Azospirillum brasilense*, *Azospirillum lipoferum*, *Azotobacterchroococcum*,



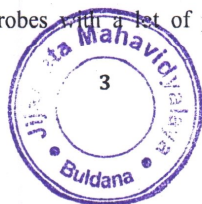
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Bacillus, *Bacillus licheniformis*, *Agrobacterium radiobacter*, *Azospirillum brasilense*, *Azospirillum lipoferum*, *Azotobacter chroococcum*, *Bacillus*, *Bacillus licheniformi*etc.

Providing plants with nutrients that they lack, such as nitrogen, iron, and phosphorus, is part of bacterial plant growth promotion. A number of free-living bacteria, including as *Azospirillum spp.*, may also absorb nitrogen and deliver it to plants, in addition to *Rhizobia spp.* (8). By producing low-molecular mass siderophores facilitating iron uptake by microorganisms (9). Various soil bacteria regulate the synthesis or inhibition of plant growth regulator by plant body Eg. IAA, Cytokinin and Ethylene etc. and indirectly regulate the growth of plants at different environments, at various developmental stages.

Fungi like bacteria, dwells in the rootzone and aids in the delivery of nutrients to plants. Mycorrhizae, for example, are fungi that help roots and plants absorb water and nutrients, providing sugars, amino acids, and other nutrients. Under most situations, arbuscular mycorrhizal (AM) fungi boost plant growth directly by giving better and more efficient access to minerals, particularly P, via fungal hyphae and delivery of these nutrients to the plant. The AM symbiosis also improves disease resistance in host plants and inhibits non-mycorrhizal weed growth (10). Most terrestrial plants form symbiotic relationships with arbuscular mycorrhizal (AM) fungus. By increasing the root absorption area, these soil microbes help the plant absorb more nutrients. The symbiont receives plant carbohydrates in exchange for completing its life cycle. AM fungi also assist plants in dealing with biotic and abiotic challenges such as salinity, drought, severe heat, heavy metals, illnesses, and pathogens (11). Phosphorus is abundant in soils in both organic and inorganic forms; yet, it is unavailable to plants. As a result, phosphorus (P) deficiency develops in the soil, making P one of the most essential nutrient elements limiting crop productivity. Phosphate-solubilizing bacteria could help plants overcome their P deficit by dissolving insoluble P and making it available to them. Though inorganic P dissolution by microbial communities, including fungi, is frequent in vitro, the effectiveness of phosphate-solubilizing microorganisms in situ has been inconsistent. Mineral solubilization, biological control, and the generation of secondary metabolites are all characteristics of fungi. As a result, their ability to boost plant development when present in conjunction with the roots is undeniable (12).

Some actinomycetes, on the other hand, are predators and will harm the plant, while others found in the soil might work as antibiotics. Actinomycetes, as well as commercial biofertilizers, play an important function in the soil as plant growth-promoting rhizobacteria (13). Soil actinomycetes are diverse microbes with a lot of potential for producing



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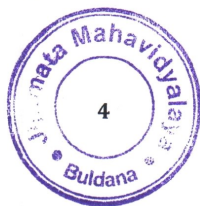
enzymes including cellulases, chitinases, proteases, and other agro-biochemical, all of which are important for soil reclamation and long-term soil health.

Protozoa are bigger germs that enjoy consuming bacteria and being surrounded by them. In fact, nutrients that bacteria consume are released when protozoa consume bacteria. Protozoa encouraged the recovery of nitrifying bacteria and enhanced nitrogen losses as nitrate in leachate. Protozoa and nematodes, on the other hand, reduced phosphate leaching, an effect attributed to the promotion of microbial development early in the experiment (14).

Nematodes are small worms that dwell in or around plants. Some nematodes are predators, while others are useful to the plant, feeding on pathogenic nematodes and secreting nutrients. Nematodes reduced phosphate leaching (14).

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