21वीं सदी में भारत में सामाजिक–आर्थिक और तकनीकी प्रगति

Socio-Economic and Technological Advancements in 21st Century India

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सामाजिक, आर्थिक और तकनीकी प्रगति पारस्परिक विकास पर निर्भर है और एक दूसरे पर सापेक्षित प्रभाव डालते हैं। किसी एक क्षेत्र की उन्नति दूसरे क्षेत्र के विकास को न केवल प्रभावित करती है, वरन् उसके विकास का कारण भी बनती है। बीसवीं सदी के प्रारम्भ में सामाजिक, आर्थिक विचारों में हुए परिवर्तनों ने दुनिया में बहुत तीव्रता से बदलाव किए, लेकिन नब्बे का दशक आते आते वह विचारधाराएं, परिवर्तन की दिशाएं सभी में बदलाव आया। नब्बे के दशक में समाजवादी और साम्यवादी ढांचा बदला और भूमंडलीकरण, बाजारीकरण, उपभोक्तावाद और सूचना प्रौद्योगिकी के विकास ने समस्त पूर्व संकल्पनाओं और प्रतिबद्धताओं को समाप्त कर अपना आधिपत्य स्थापित कर लिया।

इक्कीसवीं सदी के प्रारम्भिक वर्ष बीसवीं सदी के अन्तिम दशकों में जीवन के विभिन्न पहलुओं पर हो रहे महत्वपूर्ण और तीव्र परिवर्तनों का प्रतिफल हैं, जो सकारात्मक भी हैं तो नकारात्मक भी। जहाँ एक तरफ तकनीक का अभूतपूर्व विकास हुआ, सामाजिकता में वृद्धि हुयी, सामाजिक न्याय, आर्थिक विषमता और पर्यावरण संरक्षण आदि मुद्दों पर विचार किया जाने लगा, समाज के बहुत बड़े उपेक्षित वर्ग को अपमानबोध हुआ और अपनी अस्मिता को पहचानने लगे। वहीं गरीबी, बेरोजगारी, सामाजिक अन्याय, पारिवारिक विघटन, पर्यावरण असंतुलन, मानसिक तनाव आदि समस्याओं में वृद्धि होती गयी। तकनीक पर निर्भरता बढ़ी, समस्त संसार मोबाइल के एक स्क्रीन पर सिमट गया, परन्तु सम्बन्धों का व्यवसायीकरण हो गया, मनुष्य का अकेलापन भी बढ़ा। 21वीं सदी के दो दशक व्यतीत होने के बाद भविष्य के लिए उचित दिशा तय करने का यह उचित समय है। संगोष्ठियों, कार्यशालाओं, विचारगोष्ठियों और परिचर्चाओं का मकसद ऐसे विचारों को जन्म देना है, जो सतत् विकास, प्रगति को प्रभावकारी ढंग से समाज और पर्यावरण के हित में एवं बदलते वैश्विक परिदृश्य में सकारात्मक और सृजनात्मक भूमिका निर्वहन कर सकें। हमें यह बताते हुए अत्यन्त प्रसन्नता हो रही है कि महाविद्यालय द्वारा दिनांक 17 एवं 18 जनवरी, 2020 में '21वीं सदी में सामाजिक, आर्थिक एवं तकनीकी प्रगति' विषय पर आयोजित राष्ट्रीय संगोष्ठी अत्यन्त सफल रही। संगोष्ठी में लगभग

150 शोधपत्र प्रस्तुत किए गए। संगोष्ठी में सामाजिक विकास के दृष्टिकोण से महिला विकास, भाषायी उन्नयन हेतु किए गए प्रयोगों, गांधी जी के विचारों की वर्तमान सन्दर्भ में व्याख्या, मीडिया की भूमिका, भारत की विदेश नीति, विभिन्न भाषायी साहित्य को जानने के लिए अनुवाद के बढ़ते महत्व, शिक्षा के निजीकरण पर शोधपत्र प्राप्त हुए हैं। आर्थिक क्षेत्र में जी.एस.टी., बैंकिंग गतिविधियों, ई—कामर्स, उद्यमिता, ग्राहक सेवाओं में सुधार आदि पर विचार किया गया। तकनीक और विज्ञान के क्षेत्र में पर्यावरणीय परिवर्तन, जैव विविधता, सूचना प्रौद्योगिकी, वन्य जीवन, इलैक्ट्रानिक कचरे के खतरे और प्रबन्धन, चिकित्सा जगत में सुधार, जीवन दर्शन में योग एवं शारीरिक फिटनेस पर भी शोधपत्र प्राप्त हुए हैं। संगोष्ठी में प्रस्तुत किए गए शोधपत्रों में से चयनित शोधपत्रों को इस ग्रन्थ में प्रस्तुत किया जा रहा है। इस शोधग्रन्थ का प्रारम्भ प्राचार्य प्रो0 रविन्द्र कुमार के अध्यक्षीय वक्तव्य तथा डा0 महेश आलोक के मुख्य व्याख्यान से किया गया है। सन्दर्भरहित एवं मानकों को पूर्ण नहीं कर पाने वाले शोधपत्रों को इस ग्रन्थ में सम्मिलित नहीं किया गया है।

हम यहां उन सभी का आभार करना चाहते हैं, जिनके सहयोग से संगोष्ठी सफल रही। सर्वप्रथम निदेशक, उच्च शिक्षा निदेशालय को इस संगोष्ठी हेतु अनुदान स्वीकृत करने के लिए आभार व्यक्त करते हैं। संगोष्ठी की संकल्पना महाविद्यालय की पूर्व प्राचार्य डॉ0 नलिनी श्रोतिय द्वारा की गयी थी, इसके लिए हम उनका आभार व्यक्त करते हैं। संगोष्ठी को प्रत्यक्ष और अप्रत्यक्ष रूप से सफल बनाने में सहयोग करने और उत्साहवर्द्धन करने हेतु समस्त विद्वतजनों और प्रतिभागियों के भी हम आभारी हैं। संस्था के प्राचार्य प्रो0 रवीन्द्र कुमार के प्रति हृदय से आभारी हैं, जिनके मार्गदर्शन और अमूल्य सहयोग ने इस शोधग्रन्थ को पूर्ण करने में महत्वपूर्ण योगदान दिया। महाविद्यालय के शिक्षकों, कर्मचारियों एवं विद्यार्थियों का भी आभार व्यक्त करते हैं, जिन्होंने आपेक्षित सहयोग प्रदान किया। शोधग्रन्थ के प्रकाशन हेतु प्रकाशक श्री राजकुमार वर्मा एवं प्रकाशन के जुड़े समस्त व्यक्तियों का धन्यवाद करते हैं।

<div align="right">डॉ. ज्योति साह</div>

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जब मुझे इस सेमिनार का विषय बताया गया तो मुझे ऐसा लगा कि यह एक बृहत कलेवर वाला विषय है। जिसकी छतरी के नीचे बहुत सारे आयाम आ जाएंगे। वैसे तो मुझसे पूर्व के प्रमुख वक्तागण–डॉ0 महेश आलोक एवं डॉ0 अनिल जोशी सरीखे विद्वानों ने इस बृहत विषय पर काफी प्रकाश डाला, परन्तु मुझे यह महसूस हुआ कि विद्वानों को इस विषय पर अपने अपने दृष्टिकोण रखने की हालांकि छूट है, फिर भी इस चर्चा की एक दिशा तय अवश्य होना चाहिए। मेरा वक्तव्य इसी सिलसिले में एक प्रयास है।

ऐतिहासिक रुप से देखें तो पाएंगे कि मानव सभ्यता का विकास प्रोद्यौगिकी अथवा तकनीकी की प्रगति के साथ–साथ ही हुआ है। जो विज्ञान मानव के लिए लाभदायक हो, अथवा जो मानव की परेशानियों को दूर या कम करने में सहायक हो उसे तकनीकी कहते हैं। सम्भवतः पहली प्रौद्यौगिकी थी अग्नि का आविष्कार और उसका प्रयोग और दूसरी थी पहिया। प्रसिद्ध विद्वान दार्शनिक कार्ल मार्क्स ने अपने ऐतिहासिक भौतिकवाद के सिद्धान्त का विश्लेषण करते हुए यह बताया कि एक कम विकसित समाज के अपेक्षाकृत नये और अधिक विकसित समाज में परिवर्तन के पीछे अगर संसाधनयुक्त और संसाधनहीन (Haves and Havenots) के बीच का द्वंद्वात्मक संघर्ष उनके बीच के उत्पादन सम्बन्धों (Relations of Production) का परिचायक था, तो इस उत्पादन प्रणाली (Mode of Production) के पीछे प्रत्येक युग की बदलती प्रौद्योगिकी भी मुख्य रुप से जिम्मेवार थी। अतः Hand-mill जहाँ की तकनीकी में सामन्तवाद प्रस्फुटित हुआ, वहीं प्रोद्यौगिकी बदलते ही Steam-mill के दौर में पूँजीवाद ने अपने कदम बढ़ाने शुरु कर दिये। अतः यह बात तो तय है कि अगर आवश्यकता आविष्कार की जननी है, तो वहीं यह भी सत्य है कि तकनीकी के आविष्कार से सामाजिक, आर्थिक और राजनीतिक परिवर्तनों ने नये युग का सूत्रपात भी किया है।

तकनीकी का विकास संवर्धन अथवा नई तकनीकी की खोज जहाँ

समाज की आवश्यकता होती है, वहीं यही तकनीकी समाजिक आर्थिक और राजनीतिक क्षेत्रों में बदलाव भी लाती है। यह प्रक्रिया उभयगामी है।

समूचे विश्व और भारत के समग्र विकास के इतिहास पर अगर नजर डालें तो प्रतीत होता है कि तकनीकी का विकास सामाजिक आर्थिक एवं राजनीतिक विकास से जुडा हुआ है। प्राथमिक रुप से एक कृषि आधारित अर्थव्यवस्था को आज विकासशील अथवा विकसित समाज में परिवर्तित होने के पीछे अगर कोई कारण है तो वह मशीनीकरण की तकनीकी व्यवस्था का आगमन जो पहले तो भाप या स्टीम पर आधारित थी और बाद में विद्युत पर। यही परिवर्तन पूंजीवादी उदारवादी जनतन्त्र की व्यवस्था के आगमन का कारक भी था और ऐसे तकनीकी पर आधारित समाज की आवश्यकता भी 19वीं शताब्दी के यूरोप और 20वीं शताब्दी के छठे दशक तक यूरोप, अमरीका और शेष विश्व के विकास को मोटे तौर पर हम इसी तरह आँक सकते हैं।

शीत–युद्ध की समाप्ति और सोवियत संघ के विखराव के साथ–साथ पूरे विश्व में Globalisation (वैश्वीकरण या खगोलीकरण) और बाजार आधारित विश्व व्यवस्था की शुरुआत 20वीं शताब्दी के आठवें और नौवें दशक से शुरु हो गई। आर्थिक क्षेत्र में राज्यों (देशों) की सीमाएं खोलने से देशों का विकास तेजी से होने लगा और संचार तकनीकी के बेरोकटोक आवागमन ने ज्ञान विज्ञान को दूर दराज के क्षेत्रों तक पहुंचाया। कम्प्यूटर और फाइबर ऑप्टिक्स की तकनीकों ने विश्व पटल पर एक नये युग की शुरुआत कर दी। भारत का भी इस तकनीकी में विश्व के अग्रणी देशों में अब शुमार है।

आज अमेरिका का साइबार जोन भारतीय इंजीनियरों से भरा पड़ा है। यहाँ तक कि NASA में भी लगभग 20% वैज्ञानिक भारतीय मूल के हैं। कम्प्यूटर और इंटरनेट तकनीकी ने भारतीय समाज में एक उल्लेखनीय परिवर्तन कर दिया है।

कहने का तात्पर्य यह कि जब जब कोई बड़ा तकनीकी परिवर्तन अथवा आविष्कार होता है, इसका युगान्तकारी असर न सिर्फ समाज पर पड़ता है, वरन् आर्थिकी, सिनेमा, साहित्य, संस्कृति, राजनीति और कानून तक इससे प्रभावित होते हैं। उदाहरण के तौर पर हम देखते हैं कि नील आर्मस्ट्रांग के चन्द्रविजय के पहले लोगों (कवियों और साहित्यकारों) की चाँद के सम्बन्ध में जो समझ थी, वह बदल गई। चाँद को अब चन्दा मामा की तरह नहीं, एक पहुँचे जा सकने

वाले और बसे जा सकने वाले ग्रह की तरह देखा जाने लगा। साहित्य में हंस कुमार तिवारी ने लिखा –

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चाँद सी मुँह वाली

गोरी का क्या होगा।

यूरोप में औद्योगिक क्रान्ति के बाद जैसे जैसे नये आविष्कार होने लगे, पूंजीवादी व्यवस्था में भी कई परिवर्तन देखने को मिले। उपनिवेशवाद और साम्राज्यवाद के प्रयास बढ़े भी और बाद में पूंजीवादी व्यवस्था ने स्वयं को बर्बाद होने से बचाने के लिए अपने स्वरुप में परिवर्तन करना भी शुरु किया। उदारवादी जनतंत्र की नई व्यवस्था ने जहाँ एक ओर समाजवादी आन्दोलन के खतरे से स्वयं को बचाया, वहीं अविकसित और विकासशील देशों को भी विकसित देशों ने अपनी समृद्धि में से कुछ भाग देना स्वीकार किया। इस तरह विकसित अर्थव्यवस्थाओं की पूंजी और कुछ ऐसी तकनीकी जो उन्होंने साझा करना चाहा, अविकसित और विकासशील अर्थव्यवस्थाओं तक भी पहुँची। तभी एक नई अंतराष्ट्रीय अर्थव्यवस्था (NIEO) की मांग भी उठी।

बीसवीं सदी के आखिरी कुछ वर्ष और 19वीं सदी का प्रारम्भ संचार और गणना (Communication and Computing) की एकदम नयी तकनीकी के साथ हुआ। संचार उपग्रहों के प्रक्षेपण एवं अति तीव्र गति के कम्प्यूटरों और तत्सम्बन्धी सॉफ्टवेयर के आविष्कारों ने तो मानव समाज में जीने का तरीका ही

बदल दिया। अब हम ने केवल टी0वी0 पर मनोरंजक कार्यक्रम देख सकते हैं, वरन दुनिया में कहीं भी हो रही किसी घटना, खेल, भाषण या प्रतियोगिता का आनन्द वास्तविक समय (Real Time) में उसी वक्त अपने घर के सोफे पर बैठे ले सकते हैं। फाइबर आप्टिक्स के जाल ने तो संचार में 2G, 3G, 4G के बाद अब 5G कम्प्यूटर और मोबाइल फोन सुलभ कर दिया है जिससे संचार की गति अत्यन्त तीव्र हो गयी है। जैसे कोई जादू हो रहा हो। आर्थर सी क्लार्क ने 21वीं सदी में बदलती तकनीकी की तुलना जादू (magic) से की है—"A sufficiently advanced technology is indistinguishable from magic" हम 2020 के आगमन के साथ नई प्रोद्योगिकी की छलांग निम्नलिखित क्षेत्रों में देख सकते हैं —

        1-Artificial Intelligence ¼vkÏVhHkhl ;k —f=e cqf) ½ & कृत्रिम बुद्धि मशीनों के अन्दर डालकर उससे उसी तरह का प्रदर्शन कराने की चेष्टा की जाती है जैसे मानव अथवा जीव जन्तु अपनी प्राकृतिक बुद्धि के आधार पर करते हैं। बोलचाल की भाषा में कह सकते है कि A.I. (कृत्रिम बुद्धि) के द्वारा मशीनें इंसानों की संज्ञानात्मक कार्यों की नकल करती हैं। तरह तरह के रोबोटों में इसका प्रयोग किया जाता है। अब तो रोबोटों में भावना अथवा Feeling भी डालने की कोशिश की जा रही है। अगर ऐसा हो जाए तो हमें सामाजिक परिक्षेत्र (Social Space) के अनेक अधिरचनात्मक आयामों में परिवर्तन करने पड़ेंगे।

        2- 5G MkVk usVod& अब तो संचार कम्पनियाँ डेटा नेटवर्क की 5वीं पीढ़ी को ला रही हैं। जिससे डाउनलोडिंग और अपलोडिंग की गति अति तीव्र (Superfast) हो जाएगी। इससे बढ़ी हुई बैंडविथ (Bandwith) द्वारा मशीनों, रोबोटों, सुरक्षा व्यवस्था, इलेक्ट्रानिक उपकरणों, घर और कार्यालयों की लाइटिंग व्यवस्था, स्वायत्त वाहनों, वैंडिंग मशीनों आदि में ऑकडों का संचरण लगभग वास्तविक समय में हो पाएगा और जिसे Internet of things (IOT) कहते हैं, उसकी दिशा में अत्यन्त तीव्र परिवर्तन होंगे। आटोनोमस ड्राइविंग अथवा बिना ड्राइवर के चलने वाले वाहनों का प्रयोग कैलिफोर्निया और हाल में हांग कांग में भी किया गया। लेकिन इस नई और तीव्र प्रौद्योगिकी से निश्चित ही जो परिवर्तन होंगे उससे निपटने और सामाजिक आर्थिक और वैधानिक व्यवस्थाएं सुचारु रुप से चलाने के लिए हमें अपने कानूनों में, लोक व्यवहार में

और आर्थिक क्षेत्र के अनेक उपादानों में परिवर्तन करने पड़ेंगे।

3- os§ fDr—r vk§ Hkfo"; crkus okyh nok ¼Personalised and Predictive Medicine½& स्वास्थ्य सुविधाओं में नई प्रौद्योगिकी के प्रयोग ने एक क्रान्ति सी ला दी है। कोई भी रोग आनुवांशिक रुप से समान नहीं है। हाल के तकनीकी विकास ने अनिवार्य रुप से हमें जीन के आणविक स्नैप शॉट लेने की सुविधा प्रदान की हैं। इससे हम जान सकते हैं कि एक ही दवा एक ही बीमारी से ग्रस्त विभिन्न व्यक्तियों पर एक जैसा ही असर क्यों नहीं करती। अतः आण्विक स्नैप शॉट के विश्लेषण ने हमें वैयक्तिकृत दवा विकसित करने में सफलता दिलाई है। इसके साथ साथ जीन विश्लेषण से हमें पता चल सकता है कि आगे कौन सी बीमारी हो सकती है और कौन सी दवा पहले से ही दी जानी चाहिए। एक तरह से प्रौद्योगिकी अब आंकडों पर आधारित स्वास्थ्य समस्या का निदान करने लगी है और बीमारी को काफी पहले ही आंक लेने का सामर्थ्य उत्पन्न हो गया है। इससे भी स्वास्थ्य के क्षेत्र में एक नई और अभिनव समस्या से समाज को जूझना होगा। नये तरह के कानून बनाने होंगे जो लोगों के स्वास्थ्य सम्बन्धी अधिकारों को परिभाषित करे।

4- dEI;wj foKku (Computer Vision)& इस प्रौद्योगिकी द्वारा हम एक ऐसी व्यवस्था में महसूस करते हैं, जहाँ चीजें, स्थान, लोगों आदि की Digital Images प्रतिकृति से हमें उनकी वास्तविक स्थिति की कई गुणा विस्तारित 3D समझ मिल सकती है। इसकी मदद से हम काफी दूरी से डिजिटल कैमरे और सेंसर्स के द्वारा प्रतिकृति पा सकते है एवं उसके अनुकूलनतम प्रयोग की योजनाएं बना और क्रियान्वित कर सकते हैं।

5- foLrkfjr okLrfodrk ¼Extended Reality½& इसके द्वारा हम एक वास्तविक वातावरण में कृत्रिम वातावरण की सृष्टि कर सकते हैं। प्रायः इसका प्रयोग कम्प्यूटर गेम्स जैसे Play Pokemon, PUBG, Blue Whale आदि में किया जाता है, जिसमें हमे कृत्रिम वातावरण भी वास्तविक जैसे लगता है।

6- Cykd psu VsDukYkWth ¼Block Chain Technology½& इसका प्रयोग डिजिटल लेजर (खाता बही) में किया जाता है। जिसमें ऑकडे इस तरह कूट रचित (encrypted) होते हैं कि प्रयोगकर्ताओं को किसी भी तरह इसकी गोपनीयता भंग होने का खतरा नहीं होता। इसकी मदद से जोखिम कम करके, फ्रॉड को राकने में और व्यवसाय में पारदर्शिता लाने में मदद मिलती है।

इसी तरह नई प्रौद्योगिकी इंजीरियरिंग और मेडिकल क्षेत्र में भी बड़ी तेजी से आई है। यह गति इतनी तीव्र है कि माइकल बेस (Michael Bess) के एक ऐसे समाज के आने की भविष्यवाणी कर दी जो बायोइंजीनियर्ड हैं– उन्होंने पुस्तक ही लिख दी Our Grandchildren Redesigned : Life in a Bioengineered society" इस पुस्तक में वह एक जीन संवर्द्धित या जेनेटिकली मोडिफाइड (Geneticelly mofified) समाज के खतरनाक और आशान्वित होन वाले पहलुओं पर प्रकाश डालते हैं। वह कहते हैं कि यूँ तो Facebook और Twitter को फर्जी समाचारों के लिए बदनाम किया जाता है परन्तु जब इस सोशल मीडिया की तुलना कृत्रिम ज्ञान और Gene Editing जैसे प्रौद्योगिकी से होने वाले प्रभावों से की जाये, तो सोशल मीडिया के दुष्प्रभाव इनकी तुलना में बहुत ही कम होंगे। जैसे बायो इंजीनियरिंग के द्वारा CRISPR जैसी प्रौद्योगिकी आने वाली है, जिसमें बायो इलैक्ट्रिक इम्प्लांट के द्वारा हमारे शरीर विज्ञान को ही बदल देने की क्षमता है। इसके कितने भयंकर परिणाम हो सकते हैं, कल्पना नहीं की जा सकती है। अगर मानव का Genetic Code ही परिवर्तित कर दिया जाये तो परिणाम कितना विनाशकारी होगा।

आज गूगल का प्रोजेक्ट लून और फेसबुक का इंटरनेट ड्रोन, दुनिया में सभी को हर स्थान पर जोड़ सकता है। ऐसी स्थिति में कृत्रिम बुद्धि, रोबोटिक्स और सिन्थेटिक बायोलॉजी प्रौद्योगिकी की मुख्य धारा में होगी और लोगो के जीवन पर इसका असर अच्छा खासा होगा। बहुत तीव्र गति से घटते इस प्रौद्योगिकी परिवर्तन (Technological Change) के अनेक प्रभाव हमें दिख रहे हैं और अनेको प्रभावों का आकलन हम कर सकते हैं। जो समाज में रहन सहन, आदतों कानून और नियमों में परिवर्तन लाकर एक नये प्रकार की संस्कृति लाने में सक्षम प्रतीत होता है।

आज के मोबाइल युग ने हमारे पुराने सामाजिक समागम की परिभाषा ही बदल दी है। सोशल मीडिया जैसे व्हाट्सअप ऐप और फेसबुक पर आपके हजारों लाखों मित्र हो सकते हैं परन्तु मानव वास्तविक रुप से अकेला और एकांगी महसूस करता है। सोशल मीडिया के दुष्प्रभावों में साइबर ठगी बहुत अधिक प्रचलित है। सोशल मीडिया के अच्छे प्रभाव भी है जैसे किसी आपात स्थिति में इसके प्रभाव से तुरन्त मदद की गई है कई गम्भीर बीमारियों में खून की आवश्यकता मिनटों में पूरी की गई है, कई जानें बचाई गई हैं प्राकृतिक

आपदाओं से लोगो को सावधान कर बचाया भी गया है। इस समय के बच्चे इन्हीं स्मार्ट फोन के साथ जीने के आदी हो गये हैं। परिणामतः सम्भवतः लिखने की आदत ही बच्चों में खत्म हो रही है। बच्चे गजेट्स का प्रयोग कर ही लिखने की ललक पूरी कर लेते हैं। दादी मॉ की कहानियों को सुनने की बजाए बच्चे अब वीडियो गेम्स और कम्प्यूटर पर कहानियां सुनना अधिक पसन्द करने लगे हैं।

1- vkﬤMkiﬤ vkÆ futrk dk lﬤdV& इस समय का ज्वलंत संकट है। सारे कार्य—आर्थिक, राजनीतिक और कार्यालयीय—कम्प्यूटर और इंटरनेट के माध्यम से ऑनलाइन हो रहे हैं। चाहे अनचाहे लोग अपनी पसन्द नापसन्द और अपनी व्यक्तिगत चाहते और प्राथमिकताएं ऑनलाइन जाहिर करते रहते हैं। बडी डेटा कम्पनियां अनेक माध्यमों से आपके आकडें उठा लेती हैं और आपकी निजता को खतरे में डालती रहती है। इस तरह व्यक्तियों के आर्थिक, राजनीतिक और बाजारवादी पसन्द को शनैः शनैः अपने मन माफिक प्रभावित (Manipulate) किया जा रहा है। आज लोग चुनाव जीतने के लिए सोशल मीडिया एक्सपर्ट की सेवाएं लेने लगे हैं। क्या यह जनमत को प्रभावित नहीं करता? ऐसी स्थिति में क्या लोकतंत्र में स्वतंत्र जनमत की कल्पना हो सकती है? नई प्रोद्यौगिकी के इस सुग ने कुछ और दृश्य और अदृश्य संकट पैदा कर दिए हैं।—

स्मार्ट सेन्सर्स के आने से लोगों की निजता और अधिक प्रभावित हो गई है। ऐसी स्थिति में निजता के अर्थ अलग अलग लोगों के लिए अलग अलग हो जायेंगे। आज निजता को परिभाषित करने के लिए मानव—मशीन के अन्तस्संबन्धों को भी आधार बनाने की आवश्यकता पड़ेगी।

घरों कार्यालयों और ग्रामीण इलाकों में ऊर्जा की खपत कम करने, आधार संरचनाओं के रख रखाव और निगरानी तथा सड़कों के अनुकूलतम इस्तेमाल के लिए स्मार्ट सेंसर्स लगाना आवश्यक होता है। परन्तु इसके लिए हमें बड़े पैमाने पर आंकड़ों का विश्लेषण करना होगा। चिकित्सकीय निदान में हमें बड़ी कामयाबी मिल सकती है, कृत्रिम बुद्धि के प्रयोग से। परन्तु इसका एक खतरनाक पहलू निजता का संकट भी है। हमें न सिर्फ कानून बल्कि साइबर सुरक्षा, आंकडों की सुरक्षा और इन्क्रिप्शन (Encryption) का प्रयोग भी करना होगा। हमें बड़े पैमाने पर यह राय लेनी होगी कि मानव—मशीन अन्तसंबंधों में

निजता की क्या परिभाषा होगी और कम्पनियों को निजता की कितनी और कैसे सुरक्षा करनी होगी।

2- i(yl vk(j fØeuy ¼i jk/k½U; k; & इन नयी प्रौद्योगिकी जैसे A.I. (कृत्रिम बुद्धि) आदि के आगमन से Predictive policing अथवा प्रागुक्तिक पुलिस व्यवस्था एक वास्तविकता होनी तय है। पुलिस के लिए किसी अपराध के होने की संभावना जताना और उसे रोकना (Prevention) कोई नहीं बात नहीं। मगर किसी व्यक्ति या समूह के इतिहास के आधार पर अपराध की संभावना को जान लेना और उन्हें हिरासत में लेना प्रागुक्तिक पुलिसिंग है। ब्रिटेन और अमरीका में इसका प्रयोग हाल में शुरू हुआ है, पर इसकी बहुत आलोचना भी हुई है। इसे जाति, धर्म नृजातीय, वर्ण (रंग) के आधार पर अल्पसंख्यकों के खिलाफ इस्तेमाल करने के आरोप हैं।

लेकिन ऐसा लगता है कि प्रागुक्तिक पुलिसिंग अपराधी और निर्दोष के बीच का भेद कम या खत्म कर देती है। अगर ऐसे निर्दोष लोगों के विरुद्ध ऐसी प्रागुक्तिक पुलिसिंग हो तो न्याय की आधारभूत अवधारणा ही प्रभावित हो जाती है।

3- dk; l vk(j dk; l ds vf/kdkj & प्रौद्योगिकी ने व्यापार क्षेत्र को भी व्यापक रुप से प्रभावित किया है। 'ओला और उबर' जैसी टैक्सी सेवाएं इसका उदाहरण हैं, जहाँ व्यापार का नया मॉडल पैदा हो गया है। यहाँ प्रौद्योगिकी ने रोजगार के सम्बन्धों को ही बदल दिया है। यहाँ लाखों लोग एक ऐसी कम्पनी के लिए कार्य करते हैं जो उनका कानूनी रुप से मालिक अथवा Employer नहीं है। ऐसे लोग साधारण कार्मिकों के अधिकारों के अधिकारी नही होते। न इनका कार्य–काल नियत है, न इनकी आमदनी। सब कुछ संविदा पर और लचीला। ऐसी स्थिति में ट्रेड यूनियन, काम के अधिकार और सामूहिक मोलतोल सम्भव नहीं हो पाते। इस तरह के व्यापार के लिए एक नये तरह के काम के अधिकार का कानून आवश्यक है जो निर्बल कार्यबल के अधिकारों की रक्षा कर सके। इसके अलावा ऑटोमेशन (जिसका उदाहरण बिना ड्राइवर के आटोमेटिक ड्राइविंग वाले वाहन हैं) से न सिर्फ बड़ी संख्या में रोजगार जाएंगे, बरन ऑटोमेशन के कारण नये तरह की कानूनी व्यवस्था की भी आवश्यकता होगी। Oxford University और World Bank के अनुसार सिर्फ ब्रिटेन में ही ऑटोमेशन के कारण 35% तक रोजगार छिन सकते हैं। ऐसा अमरीका और दूसरे यूरोपीय

देशों के साथ–साथ विकासशील देशों में भी हो सकता है। तो क्या लोग नया हुनर या नया कौशल प्राप्त कर इस दीर्घावधिक बेरोजगारी से पार पा पायेंगे? क्या सरकारों को किसी Universal basic income'' या ''सार्वभौमिक आधारभूत आय'' जैसी अवधारणा लानी होगी? मशीनों से प्रतियोगिता में और ऑटोमेशन के डर से क्या मजदूर रोजगार की सुरक्षा हेतु कम मजदूरी पर काम करने को राजी हो जायेंगे? और क्या इससे दुनिया में असमानता नहीं बढ़ेगी?

4- vIekurk& विश्व के स्तर पर विकास के बहुत सारे मानकों में पिछले 25 वर्षों में बढ़ोत्तरी दर्ज की गई है जैसे मातृ शिशु मृत्यु दर घटी है तो औसत आयु बढ़ी है। परन्तु एक चीज जो बड़ी तेजी से बढ़ी है वह है आय की असमानता। भारत में ही ऐसा कहा जाता है कि मात्र 10% लोगों के पास संपूर्ण संसाधनों का 90% है। यह भी कह सकते है कि सकल घरेलू उत्पाद तो बढ़े, परन्तु साथ–साथ यह भी कि गरीब और गरीब होते चले गए और अमीरों के पास और अधिक आय आती चली गई। सूचना प्रोद्यौगिकी के बढ़ते प्रभाव के कारण भी ऐसी ही स्थिति देखने को मिल रही है। एक डिजीटल डिवाइड (Digital Divide) देखने को मिल रहा है– एक तरफ तो सूचना प्रोद्योगिकी के सारे संसाधनों से लैस डिजिटल इंडिया तो दूसरी तरफ सूचना के संसाधनों से हीन दयनीय भारत या हिन्दुस्तान। इसका फायदा तो डिजिटल इंडिया उठा रहा है, जबकि हिन्दुस्तान ठगा जा रहा है, शोषित होता जा रहा है। इस प्रकार अपने ही देश में नही, दुनिया में भी गैर बराबरी बढ़ रही है। सूचना प्रोद्यौगिकी के ग्लोबल व्यापार के कारण आज प्रसिद्ध अमेरिकन कम्पनी Apple, Google और Microsoft का वार्षिक टर्नओवर भारत के सकल घरेलू उत्पाद से अधिक है। ऐसा प्रतीत होता है कि ये कम्पनियाँ ही अब सरकारों को चलाने लगी हैं क्योकि अर्थव्यवस्था इनके बल पर टिकी हुई है।

ऐसी ही गैर बराबरी या असमानता हमें विकसित और विकासशील देशों में देखने को मिलती है। पेट्रोलियम निर्यात पर आधारित अर्थव्यवस्था जैसे–कुवैत, संयुक्त अरब अमीरात, रूस इत्यादि नयी प्रौद्योगिकी (इलेक्ट्रिक वाहन, सौर ऊर्जा चालित उद्योग आदि) के बढ़ते प्रभाव में अब अपनी अर्थव्यवस्था को पेट्रोलियम से हटाकर विविध उत्पादन और निर्यात प्रणाली वाली करने पर विचार कर रहे है क्योकि पेट्रोलियम की कीमत लगातार घट रही है।

युद्ध (संघर्ष) या Warfare की स्थिति अब नई प्रौद्योगिकी जैसे–चालक

रहित उड़न खटोले (ड्रोन) कृत्रिम बुद्धि से चालित हथियारों के कारण एक विशेष स्थिति में आ गई है, जहाँ मारक क्षमता (Power of Kill) को नियंत्रिम किया जाना अपरिहार्य बन गया है। देशों को अब एक नये तरह के समझौते पर पहुँचना होगा जिसमें रोबोट आदि कृत्रिम बुद्धि से युक्त हथियार अत्यधिक जानलेवा न बन जाए। युद्धों में अगर सब कुछ कृत्रिम बुद्धि, पर छोड़ दिया जाए तो कहीं मानवता विनाश की तरफ न बढ़ जाए, ऐसी आशंका हो सकती है। अगर रोबोट में कृत्रिम बुद्धि के साथ–साथ मानव मस्तिष्क और हृदय के एहसासों को भी भर दिया जाए तो यह रोबोट कहीं मानव के जीवन पर उसके शरीर और मन पर भी अधिकार न कर ले। इसके कितने दुष्परिणाम हो सकते हैं, उसकी कुछ बानगियाँ हम भारतीय हिन्दी फिल्म रजनीकान्त अभिनीत रोबोट में देख सकते हैं।

कोई भी प्राद्योगिकी मानव जीवन को बेहतर बनाये जोने के लिए ही लाई जाती है। लेकिन 21वीं शताब्दी के दूसरे दशक तक लगभग 10–20 वर्षों में यह प्रौद्योगिकी इतनी तेज गति से आती जा रही है कि मनुष्य के क्रिया–कलाप, उसकी आदतें उसकी संस्कृति, उसका सामाजिक अस्तित्व आदि उससे तारतम्य बिठा पाने में तेजी से पिछड़ रहा है। इसके दुष्प्रभाव स्वास्थ्य से लेकर सामाजिक जीवन में भी देखने को मिलते हैं। आई–डिस आर्डर (I-disorder) जैसे Obsessive Compulsive Syndrom (एक ही क्रिया को बार–बार दुहराने की प्रवृत्ति) आत्ममुग्धता (Narcissism), ADHD आदि डिसआर्डर, सामाजिक समागम अथवा सामाजिक कुशलता में कमी, अलगाव की प्रवृत्ति, डिप्रेशन आदि बीमारियाँ आज मानव प्रोद्योगिकी इंटरफेस के परिणाम हैं। इसके आर्थिक दुष्परिणाम हमें संरचनात्मक बेरोजगारी (Structural unemployment) के रुप में तेजी से बदलती प्रौद्योगिकी के कारण देखने को मिलते हैं। इसके अलावा हम एक बिना प्रोद्योगिक अथवा इलेक्ट्रानिक सहायता (Appendage) के जीवन जीनें में अक्षम बन रहे है। धीरे–धीरे हम वास्तविकता से कटे जा रहे हैं। प्रसिद्ध विज्ञान लेखक आइजैक आसिमोव (Isacc Asimov) ने कहा है– The saddest aspect of life right now is that science gathers knowledge faster than society gets wisdom.''

तेजी से बदलती हुई सूचना संचार प्रौद्योगिकी आज के युग की वास्तविकता है। हमें इससे तालमेल बिठाना ही होगा। न सिर्फ नये प्रकार के

नियम कायदे और कानून गढ़ने होंगे, बल्कि प्रोद्यौगिकी से प्रभावित सामाजिक व्यवस्था, संस्कृति और व्यवहारों में भी आवश्यक परिवर्तन करने होंगे। नये तरह की कर व्यवस्था और श्रमिक अधिकार भी परिभाषित करने होंगे। शोधकर्ताओं को उन परिस्थितियों और संभावनाओं को तलाशना होगा, जो नयी प्रौद्योगिकी के आगमन के बावजूद मानवीयता के मानदंडों को अक्षुण्ण रखने में प्रभावी हो सके। इसके लिए आवश्यक है कि नई प्रौद्योगिकी का प्रयोग करते समय हमेशा मानवीय विवेक का प्रयोग सबसे ऊपर रहे। तभी हम नई प्रौद्योगिकी का अनुकूलतम लाभ प्राप्त कर सकेंगे।

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एसोसिएट प्रोफेसर एवं अध्यक्ष, हिन्दी विभाग,
नारायण महाविद्यालय, शिकोहाबाद, फिरोजाबाद।

नोबेल पुरस्कार विजेता विश्व बैंक के पूर्व अर्थशास्त्री जोसेफ स्टिंगलिट्स 'दि ऑब्जर्वर लंदन' के हवाले से कहते हैं कि भूमंडलीकरण जिस कार में सवार होकर दिग्विजय के लिए निकलता है उसके चार पहिए हैं– निजीकरण, पूँजी बाजार का उदारीकरण, बाजार आधारित मूल्य निर्धारण और मुक्त बाजार। भूमंडलीकरण अपने मुक्त व्यापार के लिए भाषा और संस्कृति को मोहरा बनाता है, वह एक ऐसी भाषा का निर्माण करता है जो गतिशील और अविश्वनीय होती है। उसने अपने बाजार का विस्तार करने के लिए बहुसंख्य लोगों की भाषा हिंदी को गले लगाया है। ''यह कथन अपने आप में भूमंडलीकरण के इस दौर में बाजार द्वारा हिन्दी की स्वीकार्यता को सिद्ध करने के लिए काफी है। हिन्दी ने वैश्विक पटल पर यह जो पहचान निर्मित की है उसके पीछे पूरी दुनिया में फैले हिन्दी भाषी लोगों की उस जातीय और सांस्कृतिक चेतना का बहुत बड़ा हाथ है जो औपनिवेशिक जड़ता से मुक्त होकर अपनी भारतीय पहचान को हिन्दी के माध्यम से बचाए रखना चाहते हैं। माइक्रोसाफ्ट ने बहुत पहले यह पहचान लिया था कि उसे अपने बाजार को बहुसंख्यक भारतीय समुदाय तक पहुँचाने के लिए विन्डो का हिन्दी वर्जन भी लान्च करना पड़ेगा और विन्डो एक्स पी के जमाने में ही उसने एक्स पी का हिन्दी वर्जन बाजार में उतार दिया था। वह वर्जन इतना लोकप्रिय हुआ कि माइक्रोसाफ्ट ने कमाई में नए आंकड़े छू लिए थे।

अब यह बहस का मद्दा नहीं होना चाहिए कि भूमंडलीकरण के इस दौर में हिन्दी का भविष्य उज्जवल है या नहीं। बहस का मुद्दा यह होना चाहिए कि हिन्दी वैश्विक स्तर पर रोजगार के कितने अवसर उपलब्ध करा रही है। क्योंकि यही एक ऐसी जगह है, जहाँ हिन्दी को लेकर सवाल उठाए जाते रहे हैं। जहाँ तक हिन्दी बोलने वाले समुदाय की बात है, वहाँ तो उसने एक ठीक–ठाक पहचान निर्मित कर ली है। आज अँग्रेजी को अपदस्थ कर चीन की मंदारिन के बाद वह दुनिया में दूसरी सबसे ज्यादा बोली जाने वाली भाषा के रूप में स्थापित हो चुकी है। कुछ सर्वेक्षणकर्ताओं का तो यहाँ तक कहना है कि अगर हिन्दी

की समृद्ध बोलियों जैसे अवधी, ब्रज, भोजपुरी आदि को भी जोड़ दिया जाय तो वह मंदारिन को पछाड़कर पहले नम्बर पर अवस्थित हो जाएगी। और यह सच भी है क्योंकि हिन्दी का बहुत ही समृद्ध साहित्य तो कबीर, जायसी, तुलसी, सूर, केशव, घनानन्द आदि के यहाँ उपलब्ध है जिस पर हिन्दी की साहित्यिक और सांस्कृतिक परंपरा गर्व करती रही है।

तो मैं कह रहा था कि हिन्दी में रोजगार के अवसर उपलब्ध हैं या नहीं। अगर हम भारत के सन्दर्भ में बात करें तो प्राइमरी शिक्षा से लेकर उच्च शिक्षा तक सबसे अधिक रोजगार के अवसर हिन्दी में उपलब्ध हैं। ज्ञान की अन्य जितनी शाखाएं हैं उनमें विषयगत रोजगार उच्चशिक्षा में ही ज्यादा हैं चाहे वह समाजशास्त्र हो, राजनीति विज्ञान हो, अर्थशास्त्र हो, विज्ञान विषयों के तमाम अनुशासन हों। विषयगत शिक्षक अगर हिन्दी का है तो वह प्राइमरी से लेकर उच्चशिक्षा तक राजगार प्राप्त कर सकता है। लगभग सभी बैंको और सरकारी कार्यालयों में हिन्दी अधिकारी के पद सृजित हैं। जरूरत है तो रोजगार पहचानने की और उसके प्रति अपनी योग्यता को प्रमाणित करने की। यह सही है कि चिकित्सा, अभियांत्रिकी, सूचना प्रौद्योगिकी सहित कई विषयों की पाठ्य सामग्री की उपलब्धता हिंदी में नहीं के बराबर है। इंटरनेट पर जिन दस भाषाओं में सर्वाधिक सूचनाएं उपलब्ध हैं उनमें हिंदी का स्थान न के बराबर है। लेकिन उसके लिए हिन्दी उतनी जिम्मेदार नहीं है, जितनी राजनैतिक और शैक्षणिक स्तर पर नीतिनिर्धारक ज्ञानियों की औपनिवेशिक गुलामी की मानसिकता है। जब तक अंग्रेजी को सम्मान की भाषा के रूप में और हिन्दी में बोलने वालों को दूसरे और तीसरे दर्जे के नागरिक के रूप में पहचाना जाता रहेगा, यह स्थिति बनी रहेगी। अगर दृढ़ इच्छा शक्ति हो तो असंभव कुछ भी नहीं है। स्थितियों में धीरे–धीरे बदलाव हो रहा है। भले ही चिकित्सा, अभियांत्रिकी, सूचना प्रौद्योगिकी आदि क्षेत्रों में मौलिक पुस्तकें अभी न आ रही हों, महत्पूर्ण और जरूरी पुस्तकों का हिन्दी में अनुवाद हो रहा है और पर्याप्त मात्रा में हो रहा है। इन अनुवादों को छात्रों तक न पहुँचाने में भी या यों कहें कि छात्र अगर पढ़ना चाहते हों तो हतोत्साहित करने में भी औपनिवेशक गुलामी वाली मानसिकता काम करती रही है। तर्क यह दिया जाता है कि इनके 'टेक्निकल टर्म्स' हिन्दी में अनुवादित होकर इतने कठिन हो जाते हैं कि छात्र क्या शिक्षकों की समझ से भी परे हो जाते हैं। पहली बात तो अब ऐसा हो नहीं रहा है। शुरू में ऐसी

स्थिति सामने आयी थी, जब दूसरे अनुशासन के विशेषज्ञ केवल हिन्दी अंग्रेजी जानने भर से इस कठिन क्षेत्र में कूद पड़े थे। हालांकि यह भी सही है कि उन हिन्दी प्रेमी अनुवादकों ने एक बड़ी समस्या से निजात दिलाने का काम तो शुरू कर ही दिया था और आशा की एक किरण दिखाई देनी शुरू हो गई थी। अब 'टेक्निकल टर्म्स' को उसी तरह केवल देवनागरी में लिखने की सलाह दी जा रही है और अनुवादक ऐसा कर रहे हैं। ये अनुवादक ऐसा भी नहीं है कि केवल हिन्दी अंग्रेजी को अच्छी तरह जानने वाले अनुवादक हैं। उनसे अनुवाद कराए जा रहे हैं। भले ही ऐसा युद्ध स्तर पर नहीं हो रहा है, लेकिन हो रहा है और उम्मीद की जानी चाहिए कि जैसे–जैसे हम गुलामी की मानसिकता से मुक्त होंगे, स्थितियों में अभूतपूर्व परिवर्तन परिलक्षित होता दिखाई देगा।

बाजार ने यह स्वीकार कर लिया है कि हिन्दी विश्वभाषा की दुर्लभ क्षमताओं से संपन्न और सहज ही संप्रेष्य भाषा है। हिन्दी ने अपनी यह स्थिति बनाने में कठिन संघर्ष किया है। आज अंग्रेजी, फ्रांसीसी, स्पैनिश आदि भाषाएं जो विश्व बाजार को प्रभावित कर रही हैं, उन्होंने उन्नीसवीं शताब्दी में सम्राज्यवाद के प्रचार–प्रसार और उसकी ताकत के बल पर अपनी पहचान निर्मित की। भारत बीसवीं शताब्दी के पूर्वार्द्ध तक ब्रिटिश साम्राज्यवाद की गुलामी कर रहा था। अंग्रेजों ने इस नीति का भरपूर उपयोग किया कि अगर किसी देश को गुलाम बनाना है तो सबसे पहले उसकी अपनी मातृभाषा उससे छीन लो, इसका परिणाम यह होगा कि वह देश अपनी समृद्ध जातीय परंपरा और संस्कृति से सोच और संवेदना दोनों स्तरों पर विच्छिन्न हो जाएगा। उसके भीतर ऊर्जा का संचार करने वाला अजस्र स्रोत सूख जाएगा। वह अपनी पहचान से जब कट जाएगा तब उसे पंगु बनाकर उस पर शासन करना सुलभ हो जाएगा और अपनी संस्कृति और भाषा को थोपकर उसे गुलामी की जंजीरों से जकड़ दिया जाएगा। यह एक ऐसी कारगर नीति थी जिसने ब्रिटिश साम्राज्य को अपना परचम लहराने में 'की फैक्टर' के रूप में काम किया। हिन्दी ने इस औपनिवेशिक सत्ता की साजिशी प्रक्रिया में बहुत दबाव झेला लेकिन उसकी सांस्कृतिक और आध्यात्मिक विरासत इतनी मजबूत थी कि राख के भीतर दबे अंगार की तरह सुलगती रही और उसी हिन्दी ने अन्ततः स्वतन्त्रता सेनानियों की आवाज बनकर उस सत्ता को उखाड़ फेंका जिसकी कल्पना ब्रिटिश हुकूमत कभी सपने में भी नहीं करती थी। स्वतन्त्रता संग्राम के सबसे बड़े नायक

गांधी जी को भी कहना पड़ा कि इस आन्दोलन में हिन्दी की बड़ी भूमिका थी और इस देश की राष्ट्र भाषा बनने की क्षमता अगर किसी भाषा में है, तो वह हिन्दी ही है। 'हिन्दी की अस्मिता' ने दबावों में कैसे निखरकर अपनी पहचान दुबारा निर्मित करनी है और देश की अस्मिता की मुख्य पहचान बनने का गौरव हासिल करना है, इसका उदाहरण प्रस्तुत किया था। इसलिए इसे अपनी वैश्विक पहचान बनाने और बाजार की नियामक सत्ता बनने में थोड़ा समय लगा, क्योंकि इसे अन्य भाषाओं की तरह पकी पकाई जमीन नहीं मिली थी। इसे अपनी पहचान लड़कर अर्जित करनी थी और हिन्दी ने ऐसा किया भी।

अगर विषयान्तर न हुआ हो तो मैं कहना चाहूँगा कि इक्कीसवीं सदी में हिन्दी ने अपनी ग्लोबल पहचान बनाने में जितनी तेजी से छलांग लगाई उसमें जितनी भूमिका पूरी दुनिया में फैले भारतीय श्रमिकों और कामगारों की है उतनी ही भूमिका तकनीकी स्तर पर भारतीय श्रमिकों और कामगारों की है उतनी ही भूमिका तकनीकी स्तर पर भारतीय आई0टी0 प्रोफेशनल की भी है। सरकारी प्रयास तो अपनी जगह हैं ही, लेकिन उसकी गति बहुत धीमी है, क्योंकि वहाँ बैठे औपनिवेशिक सत्ता के गुलाम उसकी रफ्तार को तेज होने ही नहीं देते। भारतीय विचारकों ने भारतीय आई0टी0 प्रोफेशनल द्वारा की गई मेहनत को हिन्दी के वैश्विक विकास में एक बड़ी भूमिका के रूप में रेखांकित किया है। हिन्दी के लेखक अमित ने सारे कामों को एक जगह इकट्ठा करते हुए यह जानकारी साझा की कि सीडैक ने स्पीच एंड नेचुरल लैंग्वेज प्रोसेसिंग रिसर्च के तहत हिंदी के लिए सॉफ्टवेयर तैयार किया है। इस सॉफ्टवेयर के द्वारा आप हिंदी में बोलते जाएँगे कंप्यूटर टाइप करता जाएगा फिर उसे वह हिंदी में बोलकर भी सुनाएगा। हिंदी को तकनीक व कंप्यूटर से जोड़ने के लिए सी–डैक, पुणे ने मंत्रा सॉफ्टवेयर विकसित किया है जिससे कि विश्व की भाषाओं का मशीनी अनुवाद हिंदी में प्राप्त हो सके। इसी प्रकार से स्पीच टू टेक्स्ट, टेक्स्ट टू स्पीच सॉफ्टवेयर तथा विश्व के लोगों को आसानी से हिंदी सिखाने के लिए प्रबोध, प्रवीण, प्राज्ञ जैसे सॉफ्टवेयर तथा विश्व के लोगों को आसानी से हिंदी सीखाने के लिए प्रबोध, प्रवीण, प्राज्ञ जैसे सॉफ्टवेयर विकसित किए हैं। भारतीय भाषा संस्थान, मैसूर ने हिंदी का कार्पोरा तैयार किया, इससे किसी भाषा को इलेक्ट्रॉनिक रूप में परिवर्तित करके कंप्यूटर पर उतारा जा सकता है। इसी तरह आईआईटी, खड़गपुर ने 'अनुभारती प्रोजेक्ट' के तहत

हिंदी को तकनीक से जोड़ने के लिए कई पाठों को ऑनलाइन करने में जुटा है। सी–डेक जोएडा मशीन अनुवाद के लिए ही 'ओसीआर' (ऑप्टीकल कैरेक्टर रिकॉग्नाईजेशन) सॉफ्टवेयर बनाया है जिससे कि कंप्यूटर पर हिंदी के पढ़े–लिखे रूप को पहचाना जाता है। बीबीसी को लगा कि अब हिंदी के बगैर बाजार में टिकना संभव नहीं है। उसने 24 घंटे अपने समाचार पत्र को हिंदी में ऑनलॉइन कर दिया। माइक्रोसॉफ्ट हिंदी में बाजार का विस्तार कर रही है वहीं गूगल जैसी सर्च इंजन भी हिंदी की ओर अभिमुख है। गूगल के मालिक एरिक श्मिट का मानना है कि अगले पाँच–दस वर्षों में हिंदी इंटरनेट पर छा जाएगी और अंग्रेजी व चीनी के साथ हिंदी इंटरनेट की प्रमुख भाषा होगी। अभी हाल ही में गूगल ने एलान किया कि हम एक लाख हिंदी व तकनीक प्रशिक्षु लोगों को भर्ती करना चाहते है। बड़ी कंपनियों को अच्छे जानकार लोग नहीं मिल रहे हैं। हिंदी के अच्छे स्क्रिप्ट लेखकों की मांग है लेकिन लोग मिल नहीं रहे हैं। देख–विदेश से प्रकाशित होने वाले समाचार पत्र–पत्रिकाओं के ऑनलाइन संस्करण पोर्टल, ब्लॉग, पोडकास्टिंग आदि की उपलब्धता ने रोजगार के कई अवसर खोले हैं। मुझे कभी–कभी लगता है कि अंग्रेजी जो दुनिया के केवल साढ़े चार देशों (ब्रिटेन, अस्ट्रेलिया, न्यूजीलैंड, अमेरिका और कनाडा के आधे हिस्से में, आधे में कनेडियन बोली जाती है) में बोली जाती है, क्यों भारतीय जनमानस में खासकर रोजगार की तलाश करने वाले नवयुवकों की पहली पसन्द बनी हुई है। बाकी सभी देश अपनी भाषा में सामाजिक, सांस्कृतिक, वैज्ञानिक, साहित्यिक, राजनैतिक वैचारिक और संवेदनात्मक विमर्श के साथ अपनी पहचान निर्मित कर रहे हैं, तो लगा कि भारत से रोजगार की तलाश में इन्ही देशों में सबसे अधिक युवा जाते हैं इसलिए अंग्रेजी भाषा की अनिवार्यता को मजबूरी में ही सही, वे अंगीकार करने के लिए प्रतिबद्ध से हो गए हैं। भारत के सांस्कृतिक और राजनैतिक सम्बन्ध भी इन्ही देशों से ज्यादा मजबूत हैं। सत्ता की पहली पसन्द भी यही देश हैं। शुरू में, जैसा कि हमेशा संक्रमणकालीन समय में होता है, इनके ऊपर भी तथाकथित रूप से सभ्य दिखने का एक नकली दबाव काम कर रहा था। लेकिन धीरे–धीरे जब वे अपने परिवार को भी साथ ले गए तो भारतीयता और हिन्दी की पारिवारिक पृष्ठभूमि ने संस्कार रूप में आत्मीयता के स्तर पर हिन्दी के साथ जुड़ गए। भले ही वे किसी भी गैर हिन्दी प्रदेश से वहाँ इकट्ठा हुए हों, टूटी–फूटी हिन्दी में ही एकजुटता का भाव

उन्हें एकसूत्रता के भाव में बांधने लगा। धीरे–धीरे भारतीय होने का अर्थ ही हिन्दी भाषी होना हो गया। इस नए सांस्कृतिक और सामाजिक प्रादुर्भाव ने हिन्दी को विश्व भाषा बनने में महती भूमिका का निर्वाह किया। वे हिन्दी सानिध्य, प्रेम, संप्रेषण और आपसी संपर्क का प्रमुख माध्यम बन गई। इसने भी वैश्विक परिवेश में हिन्दी को सक्रिय संवाद की एक प्रमुख भाषा के रूप में स्थापित कर दिया। कहने की आवश्यकता नहीं कि इक्कीसवीं सदी के बाजार ने इस नए सांस्कृतिक भाषिक हस्तक्षेप को हाथों–हाथ लिया और हिन्दी देखते–देखते विश्व पटल पर छा गई।

आज दुनिया के लगभग 160 विश्वविद्यालयों में हिन्दी का पठन–पाठन हो रहा है। अमेरिका में तो अंग्रेजी के बाद हिन्दी ही संवाद का प्रमुख माध्यम बन गई है। रूस में प्रख्यात उपन्यासकार प्रेमचन्द तो लोकप्रिय हैं ही, जिन्हें रूसी के महान उपन्यासकार गोर्की के समकक्ष रखा जाता है बल्कि हिन्दी के तमाम कवि लेखकों की कृतियों का रूसी में अनुवाद वहीं के अनुवादकों द्वारा रूसी पाठकों को सुलभ कराया जा रहा है। वे रूसी अनुवाद हिन्दी में इतने दक्ष हैं कि कभी–कभी ईर्ष्या होने लगती है। आज फ्रांस, जर्मनी, इटली, आस्ट्रेलिया, तमाम अरब देशों आदि में अकादमिक स्तर पर बाकायदा हिन्दी में सेमीनार होते हैं और हिन्दी के लगभग सभी बड़े रचनाकारों की कृतियों का वहीं के हिन्दी जानने वाले विद्वानों द्वारा अनुवाद अपने पाठकों को सुलभ कराया जा रहा है। वहाँ के शासकीय बड़े सम्मान हिन्दी के लेखकों को दिए जा रहे हैं। यूगोस्लाबिया का कविता के लिए दिया जाने वाला सबसे बड़ा सम्मान 'स्वर्गभाल सम्मान', जिसे कविता के लिए दिया जाने वाला एशिया का नोबेल प्राइज कहा जाता है, वह पहली बार हिन्दी के लेखक अज्ञेय को दिया गया था और इस सम्मान ने विश्व पटल पर हिन्दी लेखकों द्वारा हिन्दी की चर्चित पत्रिकाएं निकाली जा रही हैं। जो विदेशों में सृजनरत प्रवासी हिन्दी लेखकों के भाषिक सांस्कृतिक संवाद का प्रमुख माध्यम बन गई हैं। बड़ी बात यह है कि उनके लेखन को भारतीय हिन्दी लेखकों के बीच मान्यता भी मिल रही है। लगभग सभी विश्वविद्यालयों में प्रवासी हिन्दी लेखन को लेकर शोध भी हो रहे हैं, लगातार विश्वविद्यालयों, महाविद्यालयों द्वारा सेमीनार आयोजित किए जा रहे हैं, जिससे विदेशों में हिन्दी में सृजनरत रचनाकारों का न केवल मनोबल बढ़ा है, बल्कि उनका कद भी ऊँचा हुआ है।

संस्कृत, पाली, प्राकृत और अपभ्रंश के की विकास यात्रा से होकर आई

हिन्दी में इन भाषाओं की समृद्धि की गूँज विद्यमान है। हिन्दी ने अपने शब्द भंडार को जहाँ इन भाषाओं से समृद्ध किया है वही अपनी बोलियों जैसे अवधी, ब्रज, बुन्देली, मैथिलई, भोजपुरी आदि तथा तथा द्रविण परिवारों की भाषा एवं अंग्रेजी, उर्दू, फारसी आदि से भी संपृक्त होकर अपने शब्द–भंडार में इतनी विशाल हो गई है कि अन्तर्राष्ट्रीय बाजार यह स्वीकार करने पर विवश हो गया है कि हिन्दी ही इस समय विश्व की सबसे समृद्ध भाषा है। हिन्दी ने अपने विस्तार के लिए स्वयं को लचीला बनाया है और बहती नदी की तरह सभी के गुणों–अवगुणों को आत्मसात करते हुए अपनी निर्मलता से विश्व मनीषा को आप्लावित कर रही है। सर्वेक्षण बता रहे हैं कि इन्टरनेट पर हिन्दी में पढ़ने–लिखने वालों की संख्या पूरे विश्व में दिनोदिन बढ़ रही है। कम्प्यूटर और सूचना प्रौद्योगिकी के क्षेत्र में काम कर रहे विद्वानों का मानना है कि संचार क्षेत्र में और टेक्निकल शब्दावली को इन्टनेट के माध्यम से समर्थ सजग माध्यम के रूप में विकसित करने के सन्दर्भ में नए अध्ययन यह बताते हैं कि इसके लिए सबसे उपयुक्त माध्यम देवनागरी लिपि है।

इक्कीसवीं शताब्दी में, भूमंडलीकरण के इस उत्तर आधुनिक समय में बाजार ने हिन्दी की इसी शक्ति को पहचाना है। यह भारतीयों के लिए राष्ट्रीय अस्मिता के गौरवशाली पलों में एक नया अध्याय तो जोड़ता ही है, इसके साथ ही इस अस्मिता की वैश्विक स्वीकार्यता को लेकर गौरवान्वित होने का क्षण भी मुहैया कराता है। चूंकि आज विश्व की व्यापारिक आवश्यकताओं और मानवीय आशा–आकांक्षाओं, संवेदनाओं तथा वैचारिक विमर्श को भी हिन्दी ने पूरी सार्थकता के साथ अंगीकार कर लिया है इसलिए इस अश्वमेघ यज्ञ के घोड़े को रोक पाना किसी के वश की बात नहीं है। चिन्ता केवल भारतीय नौकरशाहों को लेकर हैं, जो इस चमक को फीका करने के लिए औपनिवेशिक एजेन्ट के रूप में काम कर रहे हैं, इसीलिए आज तक हम अपने ही देश में हिन्दी को राजभाषा के पद से ऊपर उठाकर राष्ट्रभाषा का गौरव नहीं दे पाए। लेकिन भाषा आम जनता के दिलों में बसती है और उसके लिए हिन्दी राजभाषा नहीं, इस देश की राष्ट्र भाषा है जो अपनी चमक से सारी दुनिया को अपने गिरफ्त में ले चुकी है।

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एसोसिएट प्रोफेसर, इतिहास

गोकुलदास हिंदू गर्ल्स कालेज, मुरादाबाद

21 वीं सदी में हमारे संपूर्ण जीवन और समाज के प्रत्येक हिस्से को बाजार और तकनीक पूरी तरह प्रभावित कर रहे हैं. ऐसी स्थिति में गाँधीवाद की प्रासंगिकता पर विचारकरना ही वर्तमान भारतीय समाज और राजनीतिके बारे में आरंभिक सिरे से सोचने और चलने की तरह है. इतिहासकार बिपन चंद्र कहते हैं ''आज भारत की एक महत्वपूर्ण कमजोरी राजनीतिक व्यवस्था को चलाने में उसकी अक्षमता, किसी एक ढाँचे अथवा रणनीतिक सिद्धांत के न होने से उत्पन्न होती है, जिसके अंतर्गत राजनीतिक व्यवस्था को रखा, समझा और संचालित किया जा सकता है।''[1] यह भारत का दुर्भाग्य रहा कि एक लंबे संघर्ष के बाद जब देश आजाद हुआ और आजादी को एक वर्ष भी पूरा नहीं हुआ था कि हमें आजादी के संपूर्ण आंदोलन को आकार देने में अग्रणी भूमिका निभाने वाले अपने राष्ट्रपिता को एक षडयंत्र के कारण खोना पड़ा, जब अपनी राजनीतिक, आर्थिक, सामाजिक, सांस्कृतिक सोच के अनुरूप उन्होंने देश को आकार देना था। 30 जनवरी 1948 को अपनी हत्या से पहले ही महात्मा गाँधी ने जिस काम को शुरू किया था, उससे आज गाँधी की प्रासंगिकता समझ में आ सकती है।

गाँधी जी के पास देश के बारे में अपनी एक स्पष्ट राजनीतिक, आर्थिक, सांस्कृतिक समझ थी। वह राष्ट्र को स्वदेशी, ग्राम स्वराज या पंचायती राज के आइने में देखते थे और देश की आजादी के भीतर समाज के हर हिस्से का प्रतिनिधित्व चाहते थे। 15 अगस्त 1947 को जब पूरा देश आजादी के उत्साह में सराबोर गाँधी की जय–जयकार और गाँधी टोपी पहने सड़कों पर था, तो गाँधी सांप्रदायिक दंगों को रोकने के लिये कलकत्ता के दंगाग्रस्त इलाकों में दंगा पीड़ितों से मिलकर उन्हें एक दूसरे के खिलाफ न लड़ने की गुजारिश कर रहे थे। 14 अगस्त की शाम को बंगाल के मुख्यमंत्री उनसे मिलने आये थे, जिन्होंने उनसे पूछा कि अगले दिन (15 अगस्त) इस समारोह को कैसे मनाया जाय। गाँधी जी ने कहा ''चारों तरफ लोग भूख से मर रहे हैं, फिर भी आप चाहते हैं कि इस तरह के विनाश की घटना के बीच भी कोई समारोह मनाया जाय?'' हकीकत यही थी कि गाँधी जी का मन बहुत खिन्न था। जब देश के प्रमुख

अखबार हिंदुस्तान टाइम्स के संवाददाता ने गाँधी जी से स्वतंत्रता दिवस पर संदेश देने के लिये कहा तो गाँधी जी ने जवाब दिया। ''वे अंदर से खालीपन महसूस करते हैं।''

गाँधी जी ने 15 अगस्त 1947 का दिन उपवास कर मनाया। जिस आजादी के लिये उन्होंने अथक संघर्ष किया, वह महंगी और दुखदायी साबित हुई थी। मुल्क का बँटवारा हो गया और पिछले एक वर्ष से देश लगातार हिन्दू और मुसलमानों के बीच दंगों का गवाह रहा था। कलकत्ता में 16 अगस्त 1946 को सांप्रदायिक हिंसा शुरू हुई और धीरे–धीरे इसने पूरे बंगाल को अपनी चपेट में ले लिया। आगे चलकर इन दंगों से बिहार, संयुक्त प्रांत और पंजाब भी प्रभावित हुए। गाँधी इस हिंसा में मूक दर्शक नहीं रहे। बंगाल में सांप्रदायिक हिंसा के ग्रामीण क्षेत्रों में बढ़ने के साथ ही गाँधी तत्काल दंगा प्रभावित इलाकों में पहुंचे। 77 वर्ष की आयु होने के बावजूद वह कठिन परिस्थितियों में दंगा प्रभावित हिन्दू परिवारों के साथ रहे और उन्हें भरोसा दिलाया। इसके बाद उन्होंने बिहार की यात्रा की, जहाँ मुसलमान हिंसा के मुख्य शिकार थे। फिर वह दिल्ली पहुँचे, जहाँ पंजाब से बड़ी तादाद में हिन्दू और सिक्ख शरणार्थी आये थे। उनका सब–कुछ लुट चुका था। उनके असंतोष को गाँधी जी ने शांत करने की कोशिश की। गाँधी जी इस बात से आशंकित थे कि जिन मुसलमानों ने हिन्दुस्तान में रुकने का फैसला किया है, बदले की यह भावना कहीं उनके खिलाफ न चली जाय। 15 अगस्त 1947 से दो सप्ताह से पहले ही गाँधी जी ने दिल्ली छोड़ दी और कश्मीर चले गये। चार दिन कश्मीर में बिताने के बाद फिर कलकत्ता पहुँचे, जहाँ साल भर से चला आ रहा दंगा अभी समाप्त नहीं हुआ था। 13 अगस्त की दोपहर को उन्होंने मुस्लिम बाहुल्य इलाके बेलियाघाट में अपना डेरा जमाया। गाँधी जी यहाँ इस इरादे से आये थे कि कलकत्ता जैसे महत्वपूर्ण शहर में अमन बहाली के लिये वह अपना क्या योगदान दे सकते हैं। 15 अगस्त के दिन उन्होंने उपवास और प्रार्थना कार्यक्रम का फैसला किया। दोपहर होते–होते उन्हें यह अविश्वनीय खबर मिलने लगी कि कलकत्ता के कुछ भयानक दंगाग्रस्त इलाकों में अमन और भाईचारे का माहौल कायम होने लगा है। सड़कों, गलियों और चौराहों पर हिन्दुओं ने विजय पताकाओं, ताम्रपत्रों, बैनरों और झालरों से सजावट की तो ऐसा करने में मुसलमान भी पीछे नहीं रहे।

उन्होंने अपने घरों और दुकानों में राष्ट्रीय झण्डा लगाकर इसका स्वागत किया।

अथक संघर्ष के बाद मिली आजादी के मौके पर अगर कोई व्यक्ति अपने अंदर खालीपन महसूस कर रहा हो तो सहज ही अनुमान लगाया जा सकता है कि आजादी के संघर्ष के दौरान उसके मस्तिष्क में भारतीय लोकतंत्र का कैसा खाका तैयार था। इसे रेखांकित करते हुए गाँधी की मृत्यु शीर्षक से नाटक रचने वाले महान हंगेरियन नाटककार नेमेथ लास्लो ने अपने नाटक में गाँधी का एक स्वागत भाषण प्रस्तुत किया है– ''मुझे अपने जीवन के अठत्तरवें जन्मदिन पर बधाइयां मिल रहीं हैं। मगर मैं अपने आप से पूछ रहा हूँ, इन तारों का क्या फायदा? क्या यह सही नहीं होता कि मुझे शोक संदेश दिये जाते। एक वक्त था कि जब मैं, जो भी कहूँ, लोग उस पर अमल करते थे। आज मैं क्या हूँ, मरुस्थल में एक अकेली आवाज। जिस तरफ देखो, सुनने को मिलता है, हिन्दुस्तान की यूनियन में हम मुसलमानों को बर्दाश्त नहीं करना चाहते। आज मुसलमान हैं, कल पारसी, ईसाई, यहूदी और तमाम यूरोपीय लोग। इस तरह के हालात में मैं इन बधाइयों का क्या करूं''? यह कथन भारतीय लोकतंत्र के आज के परिदृश्य में गाँधी को कितना प्रासंगिक बनाता है, सहज ही आकलन किया जा सकता है।

यह स्पष्ट है कि गाँधी जी के लिये धर्म किसी एक विशेष धार्मिक समुदाय की सैद्धांतिक व्याख्या न होकर, समस्त धर्मों में निहित मूलभूत सत्य था। गाँधी जी ने धर्म की व्याख्या सच्चाई के लिये संघर्ष के रूप में की। वे यह मानते थे कि धर्म को किसी व्यक्ति की निजी राय बताकर पीछे नहीं धकेला जा सकता, क्योंकि धर्म व्यक्तियों की समस्त गतिविधियों को प्रभावित करता है। अपनी धार्मिक मान्यताओं को उन्होंने कभी भी राष्ट्रीय संघर्ष में हावी नहीं होने दिया। उनका मानना था कि ''सभी धर्म मोक्ष की ओर ले जाते हैं, सभी ईश्वर को देखने के तरीके हैं और जहाँ तक एक दूसरे से संबंध का सवाल है, लोग पहले मनुष्य हैं और किसी संप्रदाय के अनुयायी बाद में।''

15 अगस्त 1947 को आजादी का पहला दिन गाँधी जी किस तरह मनाना चाहते थे, इसकी रूपरेखा आजादी से 17 वर्ष पहले गाँधी जी ने प्रस्तुत कर दी थी। जनवरी 1930 के पहले सप्ताह में भारतीय राष्ट्रीय काँग्रेस ने एक प्रस्ताव पारित किया, जिसके अंतर्गत महीने के आखिरी रविवार को पूर्ण स्वराज्य

के समर्थन में देश व्यापी आंदोलन करने का आह्वान कियागया था। यंग इंडिया में लिखे अपने लेख में महात्मा गाँधी ने कहा कि ''यह बेहतर होगा कि आजादी की घोषणा सारे गाँवों और शहरों में एक साथ की जाय। यह और भी अच्छा होगा कि सब जगहों में इस संदर्भ में एक ही खास समय पर बैठक की जाय।''

गाँधी जी ने सलाह दी कि समारोह की शुरूआत राष्ट्रीय झंडे को फहराकर की जाय, दिन का शेष भाग रचनात्मक कार्यों को करके बिताया जाय, चाहे यह चरखा कातना हो, अछूतों की सेवा करना हो, हिन्दू–मुसलमानों का मिलन हो या कोई काम करने से इन्कार करना हो। यह सारे काम साथ–साथ भी हो सकते हैं, यह असंभव नहीं। उन्होंने कहा कि इसमें हिस्सा लेने वाले लोग यह शपथ लें कि ''आजादी भारतीय जनता और दुनिया के किसी भी हिस्से में रहने वाली जनता का प्राकृतिक अधिकार है, ताकि वे अपनी मेहनत के फल के खुद अधिकारी हों और अगर कोई भी सरकार उनको इस हक से वंचित कर उनका दमन करती है तो उन्हें यह अधिकार है कि वे इसका विरोध करें और इस सत्ता को खत्म कर दें।''

राजनीतिक–सामाजिक आजादी के इस प्रारूप की तरह ही गाँधी ने देश के आर्थिक विकास का भी एक संपूर्ण प्रारूप प्रस्तुत किया था। गाँधी जी इस बात को अच्छी तरह समझते थे कि शोषण और आर्थिक असमानता समाज में हिंसा और खूनी संघर्ष का रास्ता है। वह इस बात को भी भली–भाँति समझते थे कि जब तक मुट्ठी भर धनवानों और करोड़ों भूखे रहने वालों के बीच बहुत अधिक अंतर बना रहेगा, तब तक अहिंसा की बुनियाद पर चलने वाली राज्य व्यवस्था कायम नहीं हो सकती। उनका कहना था कि ''ट्रस्टीशिप के मेरे सिद्धांत का बहुत मजाक उड़ाया गया है, लेकिन मैं आज भी उस पर कायम हूँ। उनके ट्रस्टीशिप सिद्धांत को हम सितंबर 1912 में दक्षिण अफ्रीका के फीनिक्स फार्म के स्वामित्व को पाँच ट्रस्टियों में स्थानांतरित किये जाने के उदाहरण से समझ सकते हैं, जब उन्होंने 'कानूनी दस्तावेज द्वारा अपने अधिकार, मिल्कियत, जमीन और फीनिक्स की मशीनरी को पाँच सदस्यों– उमर हाजी आमोद जौहरी, पारसी रुस्तमजी, कालेनबाख, रिच और प्राणजीवन मेहता को सौंप दिया और फार्म को संचालित करने के लिये आठ नियम निर्धारित किये। ....अपने जीवन काल में गाँधी उस ट्रस्ट के प्रबंधक होते और उनके

परिवार के लिये दो एकड़ जमीन और मकान होता– ऐसा प्रावधान किया गया। उन्हें भी उतना ही भत्ता मिलता, जितना वहाँ रहने वाले दूसरे लोगों को मिलना था– अर्थात पाँच पाउंड प्रतिमाह। इस बीच यदि उनकी मृत्यु हो जाती या वह फार्म छोड़कर चले जाते तो ट्रस्टियों को यह अधिकार था कि वे अपने में से किसी एक को प्रबंधक चुन लें।

गाँधी जी ने अपने ट्रस्टीशिप के सिद्धांत में कहा कि संपत्ति धनवान मालिक की अपनी नहीं होती, मालिक केवल ट्रस्टी होता है, जिसका कर्तव्य होता है कि वह संपत्ति का ध्यान रखे और उसका इस्तेमाल केवल व्यक्तिगत कल्याण के लिये नहीं, बल्कि बहुजन हिताय (जनता के एक बड़े तबके के हित में) करे। उनके अनुसार कार्य, कर्मचारियों और ग्राहकों तथा उसके नियंत्रक के बीच की त्रिपक्षीय पार्टनरशिप का मामला है। इसके ठीक विपरीत पूँजीवादी विकास का जो माडल वर्तमान समय में काम कर रहा है, उसमें संपन्नता और उपभोग मुख्य आधार है। लेकिन ध्यान देने वाली बात यह है कि यह समाज के एक छोटे से तबके तक सीमित है। ये संसाधन जिन माध्यमों से प्राप्त होते हैं, हम कभी उसका आकलन नहीं करते या वह हमारे आकलन का केंद्र बिंदु कभी नहीं होता। आज विकसित देशों का जो भी माडल हमारे सामने है, वह उपनिवेशों, नव उपनिवेशों, महाद्वीपों में स्थानीय लोगों को वंचित करके ही हासिल किया गया है। यही नहीं, ''उपभोग की वर्तमान दर से पृथ्वी के प्राकृतिक संसाधन समाप्त होते जा रहे हैं। पृथ्वी के आवरण को अक्षरणीय जल स्तर, वनों, खाद्य, ताजी हवा, तेल, कोयला, खनिजों से रहित किया जा रहा है, जो कि हमारे उपभोग की क्षमता और कृत्रिम तौर पर पैदा की गयी इच्छाओं से उत्पन्न होती है''। इसी परिप्रेक्ष्य में गाँधी जी कहते थे कि प्रत्येक की जरूरत के लिये पृथ्वी में सभी कुछ मौजूद है, लेकिन उसके लालच के लिये नहीं। आर्थिक विकास का जो माडल आज हमने लिया है, वह मनुष्य के विरुद्ध प्रकृति के नैरेटिव पर आधारित है, इसी के कारण आज हमारे द्वारा विकास के जो भी प्रयास दिखते हैं, वह प्रकृति पर विजय या फिर उसे अपने अधीन करने की है। इसी के चलते आज विश्व के समक्ष जलवायु परिवर्तन, जल संकट, जानलेवा संक्रामक रोगों जैसे विनाशकारी संकट उत्पन्न हुए हैं। इसके उपायों के रूप में भी प्रकृति का सबसे अधिक विनाश/दोहन करने वाले राष्ट्र (विकसित) चाहते हैं

कि इस संतुलन को दूर करने का उत्तरदायित्व गरीब देश उठाएं। इस संपूर्ण कवायद में दोनों ही पक्ष अपने विकास को सर्वोपरि मानते हुए कुछ औपचारिक उपायों तक ही सीमित रहते हैं, जिसके केंद्र में न तो प्रकृति होती है और न मनुष्य। इसके विपरीत गाँधी जी के लिये प्रकृति न दोहन की वस्तु है और न ही उपभोग की। गाँधीवाद की अवधारणा अनेक स्थानों पर मनुष्य और प्रकृति के सह–अस्तित्व से आगे निकलती है। गाँधीवाद मनुष्य को प्रकृति के एक अविभाज्य अंग के रूप में देखता है।

गाँधी जी का आर्थिक दर्शन सामाजिक समरसता की स्थापना की संपूर्ण कार्य योजना प्रस्तुत करता है। गाँधी जी लिखते हैं, ''मेरी राय में भारत की– न सिर्फ भारत की, बल्कि सारी दुनिया की अर्थ रचना ऐसी होनी चाहिये कि किसी को भी अन्न–वस्त्र के अभाव में तकलीफ न सहनी पड़े। दूसरे शब्दों में हर एक को इतना काम मिल जाना चाहिये कि वह अपने खाने–पहनने की जरूरत पूरी कर सके। यह आदर्श निरपवाद रूप से तभी कार्यान्वित किया जा सकता है, जब जीवन की प्राथमिक आवश्यकताओं के उत्पादन के साधन जनता के नियंत्रण में रहें। वे हर एक को बिना किसी बाधा के उसी तरह उपलब्ध होने चाहिये, जिस तरह कि भगवान की दी हुई हवा और पानी हमें उपलब्ध है। किसी भी हालत में वे दूसरों के शोषण के लिये चलाये जाने वाले व्यापार का वाहन न बनें। किसी भी देश, राष्ट्र या समुदाय का उन पर एकाधिकार अन्यायपूर्ण होगा।

जनपक्षीय अर्थशास्त्र पर अपने विचार रखते हुए गाँधी कहते हैं, ''जिस तरह सच्चे नीति धर्म में और अच्छे अर्थशास्त्र में कोई विरोध नहीं होता, उसी तरह सच्चा अर्थशास्त्र कभी भी नीति धर्म के ऊँचे से ऊँचे आदर्श का विरोधी नहीं होता। जो अर्थशास्त्र धन की पूजा करना सिखाता है और बलवानों को निर्बलों का शोषण करके धन संग्रह करने की सुविधा देता है, उसे शास्त्र का नाम नहीं दिया जा सकता''। वह आगे कहते हैं, ''आर्थिक समानता के लिये काम करने का अर्थ है, पूँजी और मजदूरी के बीच के झगड़ों को हमेशा के लिये मिटा देना। इसका अर्थ यह होता है कि एक ओर जिन मुट्ठी भर पैसे वालों के हाथ में राष्ट्र की संपत्ति का एक बड़ा भाग इकट्ठा हो गया है, उनकी संपत्ति को कम करना और दूसरी ओर से जो करोड़ों लोग आधे पेट खाते और नंगे रहते

हैं, उनकी संपत्ति में वृद्धि करना''।

अपने आर्थिक विचारों को मूर्त रूप देने के लिये गाँधी जी ग्राम स्वराज की अवधारणा सामने लाते हैं, जो पर्यावरण के साथ सामंजस्य से चलने वाली जीवन शैली की आदर्श अवस्था को दिखाती है। उनका मानना था कि ''प्रकृति का यह बुनियादी नियम है कि वह रोज उतना ही पैदा करती है, जितना हमें चाहिये और यदि हर एक आदमी, जितना उसे चाहिये, उतना ही ले, ज्यादा न ले, तो दुनिया में गरीबी न रहे और कोई आदमी भूखा न मरे। मैं समाजवादी नहीं हूं और जिनके पास संपत्ति का संचय है, मैं उसे छीनना नहीं चाहता, लेकिन मैं यह जरूर कहता हूं कि हम में से जो लोग प्रकाश की खोज में प्रयत्नशील हैं, उन्हें व्यक्तिगत तौर पर इस नियम का पालन करना चाहिये''।

अकसर यह माना जाता है कि गाँधी जी मशीनीकरण के विरोधी थे। लेकिन उनके इन विचारों से यह मिथ्या प्रचार ही लगता है–गाँधी जी मशीनीकरण या यांत्रिकीकरण के घोर विरोधी नहीं थे। उनका मानना था कि ''यंत्रों से काम लेना उसी अवस्था में अच्छा होता है, जब किसी निर्धारित काम को पूरा करने के लिये आदमी बहुत ही कम हों या नपे तुले हों। पर हिन्दुस्तान में जितने आदमी चाहिये, उससे कहीं अधिक बेकार पड़े हुए हैं। इसके उद्योगों के यांत्रिकीकरण से यहाँ की बेकारी घटेगी या बढ़ेगी..........कुछ लोगों को मेरी यह बात शायद विचित्र लगेगी पर दरअसल बात यह है कि प्रत्येक मिल सामान्यतः आज गाँवों की जनता के लिये त्रास रूप हो रही है। उनकी रोजी पर यह मायाविनी मिलें छापा मार रही हैं''।

गाँधी जी के भारत की कल्पना का मुख्य आधार ग्रामीण भारत है। इसीलिये अपने ग्राम स्वराज की अवधारणा में भी वह ग्रामीण अर्थ व्यवस्था के सशक्तीकरण एवं स्वाभिमानी, आत्मनिर्भर, खुशहाल और मेहनती ग्राम स्वराज्य का खाका प्रस्तुत करते हुए कहते हैं कि ''ग्राम स्वराज्य की मेरी कल्पना यह है कि वह एक ऐसा पूर्ण प्रजातंत्र होगा, जो अपनी अहम जरूरतों के लिये अपने पड़ोसी पर निर्भर नहीं करेगा और फिर भी बहुत सी दूसरी ऐसी जरूरतों के लिये जिनमें दूसरों का सहयोग अनिवार्य होगा, वह परस्पर सहयोग से काम लेगा। इस तरह हर एक गाँव का पहला काम यह होगा कि वह अपनी जरूरत का तमाम अनाज और कपड़े के लिये कपास खुद पैदा कर ले। उसके पास

इतनी सुरक्षित जमीन होनी चाहिये, जिसमें ढोर चर सकें और गाँव के बड़ों और बच्चों के लिये मन बहलाव के साधन और खेल–कूद के मैदान वगैरह का बंदोबस्त हो सके। इसके बाद भी जमीन बची तो उसमें वह सामुदायिक रूप से ऐसी उपयोगी फसलें उगाए, जिन्हें बेचकर वह आर्थिक लाभ उठा सकें''।

आज के दौर में आत्मनिर्भर भारत का इससे बेहतर माडल और क्या हो सकता है। हमें याद रखना चाहिये कि गाँधी जी के जो भी विचार आकार ले रहे थे, वह उनके दौर की ही वस्तुस्थितियों से प्रतिफलित हुए थे। आज जब वैश्वीकरण का माडल अपनाने के कारण राष्ट्र के सामने हर मोर्चे पर चुनौतियाँ खड़ी हैं, गाँधी जहाँ राजसत्ता में आम आदमी कि हिस्सेदारी, कृषि, व्यापार तथा उद्योगों में उसकी सक्रिय भागीदारी का विचार प्रस्तुत करते हैं और इसी के माध्यम से आम आदमी के सशक्तीकरण और राष्ट्र निर्माण में उसकी महत्वपूर्ण भूमिका तय करते हैं, इसके विपरीत वैश्वीकरण का विचार उनके इस विचार का पूरी तरह से निषेध करते हुए नागरिक को अपने माल के लिये एक उपभोक्ता के रूप में ही स्थापित करता हैं। आज विश्व अर्थव्यवस्था की पूँजी का संकेंद्रण सिर्फ सौ बड़े कारपोरेशन्स (फोर्ब्स 13 मई 2020) के हाथ में है। इससे स्पष्ट है कि विश्व अर्थव्यवस्था में विशालकाय कारपोरेट निगमों का कब्जा हो चुका है। इस दायरे से बाहर बहुसंख्यक नागरिक इन निगमों के लिये मुनाफे के एक बाजार के सिवाय कुछ नहीं हैं। हावी होती तकनीक के कारण मानव श्रम के लिये लगातार अवसर कम होते जा रहे हैं और इस अंतर्विरोध के चलते समाज में विपन्नता की खाई चौड़ी होती जा रही है। धीरे–धीरे यह रूप पूँजीवाद के वर्तमान वैश्विक माडल के सामने ही संकट की स्थितियाँ पैदा कर रहा है। वैश्वीकरण के माडल में उसके हितों की पूर्ति करने वाले एक खास वर्ग को ही ध्यान में रखा जाता है। जो वर्ग इस दायरे से बाहर है, उसके लिये न राजसत्ता के पास कोई विचार है और न ही वह वर्तमान में इसके केंद्र में है। राष्ट्र के भीतर आबादी का यही हिस्सा बहुसंख्यक रूप में उपस्थित है और वैश्वीकरण के इस दौर में विपन्न और उपेक्षित हालातों में जी रहा है। वर्तमान परिदृश्य में गाँधी जी के विचार आधुनिकता विरोधी लग सकते हैं, जिनमें वह पश्चिमीकरण को आधुनिकता का पर्याय मानने वाले भारतीय और उच्च मध्य वर्ग की विचारधारा के विपरीत एक ग्राम्य अर्थ व्यवस्था को मजबूत करने की बात करते हैं।

गाँधी जी ने वैश्वीकरण के आधुनिक रूपों को समझने के लिये अपना एक सिद्धांत विकसित किया और अपने तथा भारतीय समाज के साथ अनेक प्रकार के प्रयोग करने के बाद इसका प्रतिरोध करने के कई विशिष्ट तरीके भी खोजे। उनकी मान्यता थी कि एक प्रक्रिया के रूप में वैश्वीकरण आधुनिकता के जन्म के समय भी मौजूद था। पूँजीवादी अर्थव्यवस्था के अंतर्गत असीमित उपभोग और नयी प्रौद्योगिकी के चलते जीवन के अन्य परंपरागत आयामों के नष्ट होने की उन्होंने तार्किक व्याख्या प्रस्तुत की।

आज भारत सहित विश्व के सभी प्रमुख देशों की अर्थ व्यवस्था गंभीर संकट के दौर में गुजर रही है। अधिकांश अर्थशास्त्रियों का मानना है कि 1929—30 की विश्वव्यापी आर्थिक मंदी के बाद पूरा विश्व एक बार फिर इसी भयावह मंदी से त्रस्त है। इस व्यवस्था का समर्थक सुविधा संपन्न उपभोक्ता वर्ग भी संकट में घिर चुका है। जिस समय गाँधी जी ने अपना हिन्द स्वराज का माडल प्रस्तुत किया, वह देश की आजादी के आंदोलन के परिप्रेक्ष्य में एक आत्मनिर्भर देश के निर्माण का माडल था और उनके समक्ष मुख्य शत्रु के रूप में ब्रिटिश साम्राज्यवाद था, परंतु आज के बदले हुए परिदृश्य में विश्व के सभी राष्ट्रों में अन्तःक्रियाएं तीव्र हुई हैं और कोई भी राष्ट्र परस्पर सहयोग के बिना समग्र विकास नहीं कर सकता। इस स्थिति में देश की संप्रभुता एवं आर्थिक आत्मनिर्भरता से बिना कोई समझौता किये हमें विभिन्न राष्ट्रों के साथ संबंध कायम करने चाहिये। गाँधी के विचार के मूल में राष्ट्र एवं जन की आत्मनिर्भरता प्रमुख थी और यही राष्ट्र के सशक्तीकरण का प्रस्थान बिंदु होना चाहिये। 21वीं सदी की इस चरम प्रगति के दौर में गाँधी के विचारों को व्यापक जन समुदाय के हित के लिये एक बार पुनर्परिभाषित किये जाने की जरूरत है।

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❖ रामचन्द्र गुहा, भारतरू गाँधी के बाद, पेंगुइन बुक्स, दिल्ली, 2012, पृ.10

❖ रामचन्द्र गुहा, वही,पृ.10

❖ रामचन्द्र गुहा, वही,पृ.12

❖ गाँधी की मृत्यु, नेमेथ लास्लो, हिन्दी अनुवाद गिरिधर राठी , मारगित कोवेश, रजा फाउंडेशन, 2018, पृ.12

❖ एच. एस.एल. पोलक, पैसिवरेजिस्टेंसमूवमेंट इन साउथ अफ्रीका, देखें संदर्भ, राम चंद्र गुहा, गाँधीः भारत से पहले, दिल्ली, 1915, पृ.583 एवं 691

❖ राम चन्द्र गुहा, भारत गाँधी के बाद,वही,पृ.4

❖ रामचन्द्र गुहा, वही,पृ.4

❖ गाँधी कारचनात्मक कार्यक्रम

❖ पी. सुब्रह्मणयम अय्यर, एन अनजस्ट टैक्स आन इंडियन इमिग्रैंट्सः अपील टु द अम्पायर (डरबन अफ्रीकन क्रोनिकल प्रिंटिंग वर्क्स, 1911)।

❖ देखें संदर्भ, रामचंद्र गुहा, गाँधीः भारत से पहले, दिल्ली, 1915, पृ.12 एवं 676

❖ एडमिरल विष्णु भागवत, गाँधी को याद करते हुए।

❖ यंग इंडिया, 15 नवंबर 1928

❖ हरिजन, 9 अक्टूबर, 1937

❖ हरिजन, वही

❖ स्पीचेज एंड राइटिंग्स आफ महात्मा गाँधी

❖ हरिजन सेवक, 23 नवंबर, 1934

❖ हरिजन सेवक, 2 अगस्त 1942

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एसोसिएट प्रोफेसर, दीन दयाल उपाध्याय
राजकीय स्नातकोत्तर महाविद्यालय,
सीतापुर।

विकास एक सतत प्रक्रिया है और आर्थिक और तकनीकी विकास के साथ–साथ समाज के सभी वर्गों का चहुंमुखी विकास ही राष्ट्र की प्रगति का आधार है। विकास को सकल घरेलू उत्पाद और सकल राष्ट्रीय उत्पाद के आधार पर परिभाषित किया जाता है। अस्सी के दशक में अमर्त्य सेन के शोध के आधार पर माना गया कि किसी भी राष्ट्र की प्रगति का पैमाना सकल राष्ट्रीय उत्पाद (जी.एन.पी.) एवं सकल घरेलू उत्पाद (जी.डी.पी.) के स्थान पर उसका मानव विकास सूचकांक (एच.डी.आई.) होना चाहिए। उनके द्वारा असमानता पर जब शोध प्रस्तुत किया गया, तो लैंगिक असमानता को सबसे प्रमुख समस्या के रूप में देखा गया। यह भी देखा गया कि जब भी विकास की बात की जाती तो सामान्यतः केवल पुरुषों एवं उनके विचारों, उपलब्धियों अथवा असफलताओं का ही जिक्र किया जाता है और उसी के आधार पर समस्त शोध, लेखन और योजनायें बनाई जाती हैं। बीसवीं सदी के उत्तरार्द्ध में विश्व परिदृश्य में परिवर्तन आया और महिलाओं की दशा सुधारने पर ध्यान दिया जाने लगा। यह माना गया कि समाज के सतत् विकास हेतु लैंगिक समानता एक आवश्यक शर्त है। किसी समाज में उसकी आधी आबादी महिलाओं की स्थिति एवं दशा का मूल्यांकन किए बगैर उस समाज की वास्तविक प्रगति का मूल्यांकन नहीं किया जा सकता।

इसके आलोक में 21वीं सदी के दो दशक बीत जाने के बाद भारत में महिला सशक्तिकरण की वास्तविक स्थिति क्या है, इसकी पड़ताल करने की आवश्यकता है। इस शोधपत्र के माध्यम से मानव विकास सूचकांक के प्रमुख बिन्दुओं–शिक्षा, स्वास्थ्य, सुरक्षा के पैमानों पर महिलाओं की स्थिति एवं दशा का तुलनात्मक मूल्यांकन किया गया है। साथ ही भविष्य हेतु निर्धारित लक्ष्यों का भी विवेचन किया गया है।

20वीं सदी में अनेक नारीवादी संगठनों का गठन हुआ, जिन्होंने लैंगिक समानता और महिला सशक्तिकरण हेतु कई आन्दोलन किए। सन् 1995 में बीजिंग में हुए अर्न्तराष्ट्रीय महिला सम्मेलन में महिला सशक्तिकरण के मुद्दे को तीव्रता से उठाया गया तथा 1995 की संयुक्त राष्ट्र विकास प्रोग्राम (यू.एन.डी. पी.) की वार्षिक रिपोर्ट[1] में भी महिला सशक्तिकरण पर ध्यान केन्द्रित किया गया। इस रिपोर्ट को भारतीय अर्थशास्त्रियों अमर्त्य सेन, मेघनाद देसाई और सुधीर आनन्द ने तैयार किया था। इसमें ज्ञान और सम्पत्ति के स्तर का तुलनात्मक अध्ययन प्रस्तुत किया गया। विभिन्न देशों के अध्ययन से यह निष्कर्ष निकला कि विकास का स्तर स्त्री के प्रश्न पर आकर गिर जाता है। विकसित देशों में भी महिलाओं की स्थिति पुरुषों से बदतर पायी गयी। इस रिपोर्ट में कहा गया कि लैंगिक असमानता तकनीकी लक्ष्य नहीं वरन् राजनीतिक प्रक्रिया है, उसके लिए नये विचारों और चिन्तन की आवश्यकता है। विद्वानों ने स्वीकारा कि नारी पुरुष सम्बन्धों को परम्परागत ढंग से विचार करने के स्थान पर नये दर्शन, नये दृष्टिकोण से देखने की आवश्यकता है। विकास के मानदंड के लिए नए मानक प्रस्तुत करने में विशेष योगदान देने वाले महबूब—उल हक ने भी अपनी पुस्तक 'रिफ्लेक्शंस आन ह्यूमन डेवलपमेंट' में इस बात पर जोर दिया कि विकास के लिए नये प्रतिमान बनाने होंगे। लैंगिक भिन्नता के स्थान पर सभी को सामान्य रूप से विकास के लिए आवश्यक अवयव के रूप में देखना होगा। महिला की नियति को उसकी दशा का कारण मानने के स्थान पर उसको अवसर प्रदान कर बेहतर करने की आवश्यकता है। महबूब—उल हक का कहना था— विकास का उद्देश्य है लोगों को अपेक्षातया लम्बी उम्र, अधिक उर्वर और पारितोषपूर्ण जीवन जीने में मदद करना। ऐसा आर्थिक विकास जिसके केन्द्र में जन न हो आत्मा विहीन विकास है।[2]

अमर्त्य सेन द्वारा स्त्री पुरुष विषमता के स्वरूपों को विभिन्न वर्गों में विभाजित किया गया है— जीवन धारण, जन्मदर, सुविधा, स्वामित्व, पारिवारिक दायित्व, पारिवारिक हिंसा और उत्पीड़न सम्बन्धी विषमताएं।[3] सन 2000 में संयुक्त राष्ट्र के द्वारा सदस्य राज्यों के लिए 2015 तक के लिए सहस्राब्दी विकास लक्ष्य (एम.डी.जी.) निर्धारित किए गए। इनमें लक्ष्य तीन में लिंगीय समानता और सशक्तिकरण तथा लक्ष्य पाँच में मातृत्व स्वास्थ्य में सुधार हेतु लक्ष्य निर्धारण किए गए। सितम्बर 2015 में संयुक्त राष्ट्र ने सतत विकास लक्ष्य

(एस.डी.जी.) में सत्रह लक्ष्य निर्धारित किए, जिनमें लक्ष्य पाँच लिंगीय असमानता को दूर करने के लिए निर्धारित किया गया। संयुक्त राष्ट्र के सहस्त्राब्दी विकास लक्ष्य (एम.डी.जी.) और सतत् विकास लक्ष्य (एस.डी.जी.) के अन्तर्गत भारत सरकार ने भी लक्ष्य निर्धारित किए। तदनुसार महिला विकास, स्वास्थ्य और सशक्तिकरण सम्बन्धी योजनायें लागू की गयीं, जिन में कुछ योजनाओं के सकारात्मक परिणाम आए, लेकिन कुछ मामलों में मामूली सुधार हुआ, तो कुछ पर कोई प्रभाव नहीं पड़ा। नीति आयोग द्वारा 30 दिसम्बर, 2019 में देश में तथा सभी राज्यों में सतत् विकास की स्थिति से सम्बन्धित राष्ट्रीय सूचकांक जारी किए गए, जिनमें लैंगिक समानता के क्षेत्र में लगभग सभी राज्यों का प्रदर्शन खराब रहा। कश्मीर, हिमाचल और केरल को छोड़कर सभी राज्य पचास अंक भी नहीं प्राप्त कर सके।[4] प्रेस ट्रस्ट ऑफ इन्डिया के एक सर्वेक्षण जिसमें गरीबी, स्वास्थ्य, शिक्षा, साक्षरता, राजनैतिक भागेदारी और कार्यक्षेत्र में समानता के आधार पर सर्वेक्षण किया गया[5] के अनुसार भारत लिंगीय समानता सूचकांक में 129 देशों में 95 स्थान पर है।

भारत में 2001 की जनगणना के अनुसार लिंगीय अनुपात प्रति 1000 पुरुषों पर 933 महिलायें था, जो 2011 की जनगणना के आंकड़ों के अनुसार मामूली वृद्धि के साथ 940 रहा।[6] वर्तमान में इसमें सुधार की अपेक्षा गिरावट पायी गयी। 2019 के नीति आयोग के आंकड़ों के अनुसार यह 898 है। सन् 1994 के लिंग परीक्षण तकनीक एक्ट के द्वारा कन्या भ्रूण हत्या को रोकने हेतु सोनोग्राफी तकनीक के गलत प्रयोग पर रोक लगाने के बावजूद लिंगीय समानता के ग्राफ में सुधार नहीं हुआ। स्वास्थ्य और परिवार कल्याण मंत्रालय के द्वारा कराये गए 2005–06 की राष्ट्रीय परिवार स्वास्थ्य सर्वे की रिपोर्ट[8] में भी जो आंकड़ा दिया गया है, उसमें छः वर्ष के शिशुओं में 1000 बालकों पर 918 कन्या शिशु था। जन्म के समय का लिंगानुपात सन् 2011 तक 1000 पर मात्र 927 कन्या शिशु ही हुआ। नीति आयोग ने राष्ट्रीय लक्ष्य 1000 बालकों पर 954 रखा, जिसे केवल केरल और चंडीगढ़ ही पार कर सके। अतः पिछली सदी से ही देश मे सरकारी एवं गैर सरकारी संस्थाओं द्वारा निरन्तर लिंगीय अनुपात के अन्तर को कम करने हेतु प्रयासों का कोई सकारात्मक परिणाम नहीं प्राप्त हुआ।

देश में लिंगानुपात में अन्तर भ्रूण हत्या के साथ ही स्वास्थ्य सेवाओं और स्वच्छता से भी जुड़ा है। महिला पुरुष के मध्य असमानता भोजन, पौष्टिक

पदार्थों एवं स्वास्थ्य सम्बन्धी देखभाल की भी है। 2018 के एक सर्वेक्षण के अनुसार पचास प्रतिशत किशोरवय लड़कियां अपनी आयु के हिसाब से कम वजन की हैं और बावन प्रतिशत खून की कमी से पीड़ित हैं। स्वास्थ्य मंत्रालय के अनुसार सर्वाइकल कैंसर के 60000 मामलों में दो तिहाई माहवारी के दौरान साफ—सफाई की कमी के कारण हैं। स्वास्थ्य सम्बन्धी उपेक्षा से प्रति वर्ष लाखों महिलाओं की मृत्यु हो जाती है, तथापि स्वास्थ्य सेवाओं में सुधार और वृद्धि का सबसे अधिक असर महिलाओं पर ही दिखता है। पिछले छह—सात वर्षों में मातृ मृत्यु दर में बेहतर सुधार रहा। 2001 की जनगणना अनुसार भारत में मातृ मृत्यु दर प्रति एक लाख में 436 थी, जिसमें सुधार के साथ 2006 में 254 हो गयी। नीति आयोग के अनुसार 2014—15 में मातृ मृत्यु दर 130 थी, जो 2017 में 6.2 प्रतिशत गिरकर 122 रह गयी।[8] इसमें परिवार नियोजन के उपायों में सुधार, आधुनिक गर्भनिरोधक तकनीक का प्रयोग और सरकार द्वारा प्रोत्साहन राशि आदि का भी योगदान रहा।

महिला की शिक्षा और तद्नुरूप नीति निर्धारण में भूमिका सामाजिक परिवर्तन और प्रगति की दिशा तय करती है। महिला साक्षरता की क्षेत्र में सकारात्मक वृद्धि हुयी। 1991 में महिला साक्षरता दर 39.42 थी, जबकि पुरुष साक्षरता दर 63.86 थी। 2001 में इसमें वृद्धि हुयी, इस समय 53.67 प्रतिशत महिलायें और 75.26 पुरुष साक्षर थे। जनगणना 1991 के अनुसार 40 करोड़ 68 लाख 32 हजार महिलाओं में से 61 लाख 56 हजार महिलाएं निरक्षर थीं।[9] जनगणना 2001 के अनुसार 36.5 करोड़ महिलाएं अशिक्षित थीं। 2011 की जनगणनानुसार भी साक्षरता में वृद्धि हुयी और महिला साक्षरता 65.46 प्रतिशत हो गयी। साक्षरता के मामले में पिछली सदी से निरन्तर वृद्धि के बाद भी लैंगिक असमानता में कमी नहीं आयी। 2011 में पुरुष साक्षरता 82.14 प्रतिशत की तुलना में महिला साक्षरता अभी कम है।[10]

केन्द्र सरकार तथा राज्यों की सरकारों ने साक्षरता बढ़ाने हेतु कुछ योजनायें चलाई। 2004 में कम साक्षरता वाले स्थानों में कस्तूरबा गांधी बालिका विद्यालय खोले गए। 2015 में बेटी बचाओ, बेटी पढ़ाओ अभियान, समग्र शिक्षा अभियान चलाया गया। 6 से 14 वर्ष तक के बच्चों को स्कूल में मुफ्त और अनिवार्य शिक्षा एक्ट 2009 द्वारा अधिक से अधिक कन्याओं को शिक्षित करने का लक्ष्य रखा गया। माध्यमिक और उच्च शिक्षा में नामांकन 46.2 प्रतिशत है।

आल इंडिया सर्वे आफ हायर एजूकेशन के सर्वे के अनुसार 2010—11 में 1.2 करोड़ महिलायें और 2017—18 में 17.4 करोड़ महिलायें उच्च शिक्षा में नामांकित हुयीं।[11] विश्वविद्यालय अनुदान आयोग के पूर्व अध्यक्ष एस.के. थोराट का मानना है कि उच्च शिक्षा में महिलाओं की वृद्धि का कारण केन्द्र सरकार की योजनाओं—विशेष रूप से छात्रवृत्ति तथा यातायात सम्बन्धी सुविधाएं हैं।[12]

उच्च और माध्यमिक शिक्षा में महिलाओं की संख्या में 2011 के बाद आयी वृद्धि के परिणामस्वरूप विभिन्न क्षेत्रों में महिलाओं की सक्रियता बढ़ी। यद्यपि वर्ल्ड बैंक की एक रिर्पोट के अनुसार 29 प्रतिशत महिलाओं के पास ही रोजगार है। 15 से 24 वर्ष की महिलाओं में बेरोजगारी दर 11.5 प्रतिशत है, जबकि उसी वर्ग के पुरूषों में 9.8 प्रतिशत हैं। महिलायें संगठित और असंगठित दोनों ही क्षेत्र में कार्यरत हैं, परन्तु महिलाओं की श्रमशक्ति का अधिकांश भाग असंगठित क्षेत्र में कार्य करता है। रोजगार के स्तर और गुणवत्ता की दृष्टि से वे पुरूषों के पीछे रह जाती हैं। 2011 की जनगणना के अनुसार भारत में कुल 48.46 प्रतिशत महिलाओं में से 25.67 प्रतिशत श्रमिक हैं। महिलाओं के घरेलू कार्यों का मूल्यांकन नहीं किया जाता है और असंगठित क्षेत्र में पुरूष की अपेक्षा कम भुगतान किया जाता है। मान्स्टर सैलरी इंडेक्स 2016 के आंकड़ों के अनुसार भारत में महिलाएं 25 प्रतिशत कम वेतन पाती हैं। उच्च पदों पर भी महिलाओं की संख्या अपेक्षाकृत कम है। 2018—19 वार्षिक सर्वेक्षण के अनुसार उच्च शिक्षा संस्थानों में 100 पुरूषों पर 73 महिला शिक्षक ही हैं। कार्यस्थल पर महिलाओं की योग्यता को कम आंका जाता है और उसे स्वयं को बार—बार साबित करना पड़ता है। महिलाएं अपनी स्वयं की सम्पत्ति के मामले में भी पुरूषों से बहुत पीछे हैं।

यद्यपि बीसवीं सदी की अपेक्षा महिलायें सामाजिक, राजनैतिक और आर्थिक क्षेत्र में बड़े पैमाने पर भागेदारी करने लगीं हैं, नीति निर्धारण और प्रशासन में योगदान देने लगीं हैं, 17वीं लोकसभा में 76 महिलायें निर्वाचित हुयीं, जो अबतक के इतिहास में सबसे ज्यादा संख्या है। साथ ही महिलाओं का मत प्रतिशत भी बढ़ा है। तथापि यह सतत् विकास सूचकांक के 50 प्रतिशत भागेदारी लक्ष्य से बहुत पीछे है।

शिक्षा, स्वास्थ्य, रोजगार के क्षेत्र में हुयी प्रगति के विपरीत महिला सुरक्षा के क्षेत्र में कोई विशेष बदलाव नहीं दिखाई देता। महिलाओं के विरूद्ध यौन

हिंसा, घरेलू हिंसा, एसिड अटैक, दहेज हत्या, तस्करी आदि अपराधिक मामलों में निरन्तर वृद्धि दिखाई देती है। महिला आर्थिक रूप से सम्पन्न हो या विपन्न, अस्सी वर्ष की बुजुर्ग हो या तीन वर्ष की मासूम यौन हिंसा का निरन्तर शिकार हो रही हैं। मानवाधिकार आयोग की रिर्पोट के अनुसार 31 मार्च 2010 से पूर्व दस वर्ष की शिकायतों में महिलाओं से अत्याचार से सम्बन्धित शिकायतें 66926 हैं।[3] राष्ट्रीय अपराध ब्यूरो के अनुसार 2011 से 2015 तक 34 प्रतिशत अपराधों की वृद्धि हुयी। इनमें सर्वाधिक अपराध पति और उसके रिश्तेदारों द्वारा किए गए।[14] राष्ट्रीय अपराध ब्यूरो की रिर्पोट बताती है कि 2016 में देश में महिला हिंसा के तीन लाख मामले दर्ज हुए, जो 2008 की अपेक्षा दुगने हैं। निर्भया कांड, उन्नाव कांड तथा हैदराबाद कांड में प्रियंका रेडडी के साथ बलात्कार और हत्या आदि मामलें तमाम कानूनों के बावजूद बढ़ रहे हैं। निर्भया कांड में लड़की के साथ की गयी भयावह क्रूरता, उन्नाव कांड में पीड़िता के परिवार को रिर्पोट न लिखाने के लिए धमकाना–डराना और प्रताड़ित करना दिखाता है कि इस मामले में अपराधी को कानून का कोई भय नहीं है। महिलाओं के प्रति हिंसा में एसिड अटैक के मामलों में भी अत्यन्त वृद्धि हुयी है। यह सोचने को मजबूर करता है कि आखिर महिलाओं के खिलाफ होने वाले अपराधों का ग्राफ लगातार बढ़ क्यों रहा है। तर्क दिया जाता है कि समाज में जागरूकता बढ़ी है, इसलिए अधिक संख्या में ऐसे मामले संज्ञान में आने लगे हैं। यह सच है कि समाज का बड़ा हिस्सा ऐसी घटनाओं का तीव्र विरोध करने लगा है और सरकार पर नए कानून बनाने के लिए निरन्तर दबाव डालता है, परन्तु कई सख्त कानूनों के लागू होने के बाद भी अपराध कम नहीं हुए हैं।

महिलाओं को कार्यस्थल में भी यौन उत्पीड़न और शोषण के मामले निरन्तर बढ़ रहे हैं। यहां तक कि न्यायालयों में भी आज महिला असुरक्षित है। संस्था के सर्वोच्च व्यक्ति पर आरोप लगाने पर कोई बोलने का साहस नहीं करता। वरिष्ठ अधिवक्ता इंदिरा जयसिंह का कहना है कि ''महिलाएं किसी भी अन्य बात की तुलना में कार्यस्थल पर अपने आत्मसम्मान की लालसा रखती हैं, लेकिन अपनी पचास साल की प्रैक्टिस में मुझे अदालतों की संस्कृति में, जो कि मुख्य रूप से पुरुष प्रधान है, कोई सुधार दिखाई नहीं दिया।''[15] कार्यस्थल पर महिलाओं को सर्वाधिक भाषायी हिंसा का सामना करना पड़ता है। लैंगिक भेदवादी भाषा का प्रयोग करते समय पुरुष को यह अहसास भी नहीं होता कि

इससे साथ में कार्य करने वाली महिलाओं के सम्मान को ठेस पहुँच सकती है। डेबोरा कैमरोन जैसे भाषा विज्ञानी लिंग भेदभावी भाषा को हिंसक मानती हैं। भाषा विद्वानों का मानना है कि लैंगिक असमानता को दूर करने के लिए पहले भाषा में परिवर्तन करना आवश्यक है। इसके लिए पाठ्य पुस्तकों में बदलाव करने का प्रस्ताव भी भाषा विद्वानों द्वारा दिया गया।

भारत में सन् 2001 का वर्ष महिला सशक्तिकरण वर्ष घोषित किया गया और तब से निरन्तर किए जा रहे प्रयासों के सकारात्मक परिणाम सामने आए। सामाजिक और राजनैतिक सुधारों का दायरा कल्याणकारी योजनाओं से बढ़कर सशक्तिकरण की ओर मुड़ा। महिलाओं की स्वायत्ता को स्वीकारा गया और स्वयं महिलाओं को भी अपमान बोध हुआ और वह संगठित होकर अपनी समस्याओं के सन्दर्भ में आन्दोलन भी करने लगी हैं। सरकार द्वारा महिला सशक्तिकरण के हेतु निरन्तर प्रयास किए गए। घरेलू सम्बन्धों में हिंसा और उत्पीड़न झेल रही महिलाओं को तत्काल राहत पहुँचाने हेतु 2005 में घरेलू हिंसा महिला संरक्षण अधिनियम, कन्या विवाह रोकने के लिए 2006 में बाल विवाह रोकथाम एक्ट तथा कार्यस्थल पर महिलाओं की सुरक्षा हेतु 2013 में यौन शोषण एक्ट पारित किए गए। सितम्बर 2018 में एक जनहित याचिका पर निर्णय देते हुए पांच जजों की खंडपीठ ने सर्वसम्मति से 1860 से चली आ रहा आई पी सी की धारा 497 का अडल्ट्री कानून खत्म कर दिया। यह माना गया कि धारा 497 संविधान के अनुच्छेद 21 और अनुच्छेद 14 का उल्लंघन करती है। महिलाओं की स्वायत्ता उसके गरिमापूर्ण जीवन का मूल्य है और यौन संबंधों में भी स्त्री की सहमति मायने रखती है। मुस्लिम महिलाओं में तीन तलाक–निकाह और हलाला के खिलाफ संसद में बिल पारित करना आदि महिलाओं को सशक्त करने की ओर बढ़ते कदम हैं। जेंडर बजटिंग के माध्यम से भी असमानता को दूर करने के प्रयास किए जा रहे हैं। बदलाव यह दिखा कि 20वीं सदी में जहाँ बलात्कार पीड़िता को ही दोषी करार दिया जाता था और वह बदनामी के डर से चुप रह जाती थी, वहाँ अब वह खुलकर रपट लिखाने लगी है। समाज का एक बड़ा हिस्सा उसको दोष देने की अपेक्षा उसका सहयोग करने लगा है। महिलाओं द्वारा स्वयं मंदिर प्रवेश आन्दोलन और यौन शोषण के विरूद्ध खुलकर मी–टू अभियान चलाना आदि भविष्य में महिलाओं की स्थिति में सुधार के संकेत देते हैं और लैंगिक असमानता को दूर करने की ओर अग्रसर करते हैं।

महिलाओं के मुद्दों को संवेदनशीलता से देखने की जरूरत है। आंकडों से यह निष्कर्ष निकलता है कि शिक्षा, रोजगार और स्वास्थ्य के क्षेत्र में तो लैंगिक भेद कम करने की दिशा में कदम बढे हैं, और कुछ हद तक बीसवीं सदी से बेहतर हुए हैं, परन्तु सुरक्षा के मामले में हम पीछे रह गए हैं। मात्र कानून बना देना किसी समस्या का निदान नहीं कर सकता, कानून को सही प्रकार से लागू करना, उसके दुरूपयोग को रोकना भी आवश्यक है। बलात्कार और हिंसा के मामले में त्वरित न्याय हेतु फास्ट ट्रैक कोर्ट की व्यवस्था होने के बाद भी न्याय शीघ्र नहीं मिल पाता। निर्भया कांड में न्याय के लिए पीड़िता के परिजनों को सात वर्ष प्रतिक्षा करनी पड़ी। अपराधी के पद, जाति, धर्म सम्बन्धित पूर्वाग्रहों से न्याय प्रकिया को बाधित होने से रोकना भी आवश्यक है। इस सम्बन्ध में यह भी विचारणीय है कि महिला या उसके सम्बन्धी द्वारा भी कानूनों का दुरूपयोग न किया जा सके। सन् 2016 में दर्ज दुष्कर्म के मामलों में कुछ मामले झूठे पाए गए, इसी प्रकार घरेलू हिंसा के भी कुछ मामले झूठे पाए गए। कानूनों का दुरूपयोग या झूठे मामले दर्ज होने पर वास्तविक पीड़िता के प्रति भी सन्देह होने लगता है और लैंगिक समानता, महिला सुरक्षा के सभी प्रयासों को आघात पहुँचता है।

भारत सरकार द्वारा लैंगिक असमानता को दूर करने के लिए 2030 तक जो लक्ष्य निर्धारित किये गए हैं, उन लक्ष्यों को तभी प्राप्त किया जा सकता है जब समाज संवेदनशील बने। लैंगिक समानता पुरूष विरोधी नहीं है, इसका सीधा अर्थ है महिलाओं को बराबरी का अधिकार देना। इसके लिए परिवारिक मूल्यों को लैंगिक समानता के पक्ष में करना होगा, परम्पराओं और संस्कृति के नाम पर चली आ रही कुप्रथाओं को बदलना होगा। यह बदलाव महिला बनाम पुरूष न होकर समग्र का विकास की दिशा में करना होगा। देश में राजनैतिक संगठनों, नागरिकों, सामाजिक संगठनों और संस्थाओं आदि को साथ मिलकर पितृसत्तात्मक और रूढ़िवादी सोच को बदलना होगा।

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असिस्टेंट प्रोफेसर, राजनीति विज्ञान विभाग

नारी शिक्षा निकेतन पी0जी0 कॉलेज, कैसरबाग, लखनऊ

प्रस्तुत शोधपत्र भारत की विदेश नीति के सन्दर्भ में है हमारा राष्ट्र अपने राष्ट्रीय हितों की रक्षा करने ओर बढ़ावा देने के लिए राष्ट्रों के समूह में अपना स्थान कैसे हासिल करता है यह एक आसान नहीं बल्कि वास्तव में जटिल कार्य है विदेश नीति के बुनियादी सवाल क्या हैं? भारत में इसे कौन बनाता है? इस शोध में सभी सवालों के जवाब मौजूद हैं? भारत में विदेश नीति और कूटनीति की एक लम्बी परंपरा है? यह प्राचीन काल में आरम्भ हुआ? चाणक्य को कूटनीतिक परंपरा का जनक माना जाता है। औपनिवेशिक काल में ब्रिटिश भारत ने एक ऐसी नीति अपनाई जो मुख्य रूप से औपनिवेशिक सत्ता के हितों द्वारा तय की गयी थी। जवाहरलाल नेहरू से लेकर नरेन्द्र मोदी तक की भारत की विदेश नीति के विकास की कहानी आकर्षक और लम्बी है। हम पिछले दो दशकों यानी 1998—2019 तक विदेश नीति पर ध्यान केन्द्रित कर सकते हैं।

'kCn dkŚk%& नई शक्ति बनने की ओर भारत, विदेश नीति और सुरक्षा राजनीति, वैश्विक उथल—पुथल में भारतीय विदेश नीति।

भारत की विदेश नीति की बुनियादी पण्डित नेहरू ने वैश्विक निरशास्त्रीकरण, गुटनिरपेक्षता और पंचशील के सिद्धान्तों पर रखी थी। विदेश नीति में राष्ट्रहित सर्वोपरि होता है। आधुनिक युग में विदेश नीतियाँ घण्टों के हिसाब से परिवर्तित होती हैं। किसी भी देश की विदेश नीति केवल नई सरकार आ जाने से अपने पुराने संबन्धों को तोड़ नहीं देती मोदी सरकार की 'पड़ोस पहले' नीति कांग्रेस के नेतृत्व वाली संयुक्त प्रगतिशील गठबंधन सरकार की दशकों पुरानी नीति के अनुसार ही है। जिसने भारत के पड़ोसियों के साथ दोस्ती पर जोर दिया था उदाहरण के लिए बंगलादेश के साथ द्विपक्षीय संबंध नीति निरंतरता के सबसे सकारात्मक प्रतिनिधि है। जहाँ मोदी सरकार ने अवामी लीग पर अधिक निर्भरता दिखाई है। इसी तरह अफगानिस्तान के साथ संबंध दोस्ताना ही रहे हैं।

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dgrsg%& 26 मई 2014 को सत्ता में आने के बाद से ही मोदी सरकार ने अन्य देशों के साथ सम्बन्धों को नया आयाम देने की दिशा में कार्य करना आरम्भ कर दिया।

        2014 में श्रीमती सुषमा स्वराज भारत की विदेश मंत्री थीं। दक्षिण ऐशिया के अपने पड़ोसियों से सम्बन्ध सुधारना मोदी की विदेश नीति के केन्द्र में थी। इसके के लिए उन्होंने 100 दिन के अन्दर ही भूटान, नेपाल, जापान की यात्रा की इसके बाद अमेरिका, म्यांमार, आस्ट्रेलिया और फिजी की यात्रा की।

        श्रीमती सुषमा स्वराज ने बांग्लादेश, भूटान, नेपाल, म्यांमार, सिंगापुर, वियतनाम, बहरीन, अफगानिस्तान, तजाकिस्तान, यूएसए, यूके, मालदीव कोरिया, चीन, ओमान और श्रीलंका की यात्रा की है।

        प्रधानमंत्री बनने से पहले ही नरेन्द्र मोदी ने संकेत दिया था कि उनकी विदेश नीति भारत को पड़ोसियों के साथ सम्बन्धों को सुधारने पर ध्यान केंद्रित करेगी। उन्होंने अपनी सरकार के उद्घाटन समारोह में दक्षिण एशिया देशों के सभी शासनाध्यक्षों को आमंत्रित करके अच्छी शुरूआत की थी और दूसरे दिन अपने कार्यालय में उन्होंने व्यक्तिगत रूप से सभी के साथ द्विपक्षीय वार्ता की, जिससे लघु सार्क सम्मेलन का नाम दिया गया।

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        मोदी सरकार की सबसे बड़ी विदेश नीति की सफलताएं भारत के बाहरी सम्बन्धों में देखी गयी है। 2014 से प्रशासन बड़ी शक्तियों के साथ सक्रिय रूप से सम्बन्ध बढ़ाने में लगा हुआ है और कुछ अर्थों में, गुट निरपेक्ष नीति से दूर भी हुआ है। यह विशेष रूप से भारत–अमेरिका रणनीतिक साझेदारी के मामले में सफल रहा, जहाँ द्विपक्षीय भागीदारी के मामले मे दोनों पक्षो ने इतिहास के बोझ को उतार फेका और रक्षा सहयोग, आधारभूत लौजिस्टिकल समझौतों और भारत प्रशांत क्षेत्र में सहयोग सहित कई मुद्दों पर सामान्य समझ पर पहुचने में प्रगति दिखाई। दोनों पक्षों के बीच सम्बन्ध साझा हितों के कारण बढ़े हैं और आशा है कि भविष्य में भी ऐसा ही चलता रहेगा।

        लेकिन रूस के साथ सम्बन्ध बिगड़ गये है क्योंकि भू–राजनीतिक गतिशीलता में बदलाव के कारण भारत अमेरिका सम्बन्ध घनिष्ठ हुए है। विशेष रूप से रक्षा मामले में और रूस ने चीन और पाकिस्तान के सम्बन्ध बढ़े है।

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मोदी सरकार ने अपनी शुरूआती दौर मे पाकिस्तान के साथ तालमेल बढ़ाने की कोशिश की थी। लेकिन जब इससे कुछ हासिल होता हुआ दिखाई नहीं दिया तो सरकार ने बिस्मटेक को तरजीह देना शुरू किया सन् 2016 में इस्लामाबाद में सार्क देशों का सम्मेलन आयोजित हुआ था। भारत ने कश्मीर में चरमपंथी हमलो के लिए पाकिस्तान को जिम्मेदार ठहराते हुए इस सम्मेलन को दरकिनार करने का आह्वान किया, इसके बाद कुछ देशों ने भारत की पहल का समर्थन भी किया।

अगर भारत सरकार बिस्सटेक पर अपना ध्यान केन्द्रित करते हुए रचनात्मक ढंग से इसके सदस्य देशों के साथ तालमेल बढ़ाती है तो ये भारत को पूर्व और दक्षिण पूर्व एशिया में अपनी जगह को मजबूत करने में मदद दे सकता है।

मोदी ने अपने पहले कार्यकाल में लम्बे समय तक तर्क दिया है कि वैश्विक तंत्र में भारत ने सक्रिय रूप से दुनिया के नियम बनाने वाली ताकत की जगह एक संतुलन बनाने वाली शक्ति के रूप में काम किया है।

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आज का भारत दुनिया के महत्वपूर्ण शक्ति केन्द्रों में से एक है यह एक प्रमुख एशियाई शक्ति और एक वैश्विक खिलाड़ी है इसके अलावा यह एक वैश्विक शक्ति के रूप में उभरने की महत्वांक्षा से ऊर्जित है। प्रधानमंत्री वाजपेयी ने परमाणु क्षेत्र में भारत की भेधता पर काबू पाने को सर्वोच्च प्राथमिकता दी, परमाणु सशस्त्र चीन को मुख्य प्रतिद्वंद्वी के रूप में देखा 1998 में परमाणु परीक्षणों ने शुरू में एक प्रतिकूल अर्न्तराष्ट्रीय वातावरण बनाया, लेकिन हमारी राजनीतिक शिथिलता और रचनात्मक कूटनीति ने भारत को परमाणु हथियार राज्य या परमाणु शक्ति के रूप में धीरे–धीरे स्वीकार करने में मदद की। प्रधानमंत्री मनमोहन सिंह ने रूस और चीन के साथ संतुलित संम्बन्ध बनाये रखने की नीति का अनसुरण करते हुए अमेरिकी और अन्य पश्चिमी शक्तियों के साथ सम्बन्धों को मजबूत करने की दिशा में अभियान को आगे बढ़ाया।

वर्ष 2014 से प्रधानमंत्री मोदी के शासन के दौरान, सरकार ने अमेरिका, जापान और यूरोपीय संघ के साथ घनिष्ठ साझेदारी का पोषण करने के लिए विशेष, निरंतर और सफल प्रयास किए। संयुक्त राष्ट्र परिषद के पी–5 देशों के

साथ भारत के सम्बन्ध नीति निर्माताओं के लिए सर्वोच्च प्राथमिकता है। ऐसे समय में जब वैश्वीकरण उन बहुत विकसित राष्ट्रों द्वारा गंभीर पूछताछ और प्रतिरोध का सामना कर रहा है। जिन्होंने मुख्य रूप से इसे बनाया था, भारत ने वैश्विक दक्षिण के देशों के बीच जगह बनाई है जो एक वैश्विक दुनिया का पक्ष लेते है जिसे बहुपक्षवाद के ''सुधार'' से सुरक्षित किया जा सकता है।

विदेश नीति आरै सुरक्षा राजनीति:-

2014—19 से द्विपक्षीय और बहुपक्षीय विदेश नीति की गतिविधियों में प्रधानमंत्री मोदी बहुत अधिक सक्रिय और मुखर रहे है और उन्होंने अपने पूर्वर्तियों की तुलना में अधिक यात्राएँ भी की हैं उन्होंने अनेक ऐसे देशों की यात्राएँ भी कीं, जहाँ दशकों से कोई प्रधानमंत्री नहीं गया था। उदाहरण के लिए सन् 2015 में कनाडा और संयुक्त अबर अमीरात की यात्राएँ। सन् 2015 में मोदी ने सबसे पहले श्रीलंका की यात्रा की इस यात्रा से उन्होंने भावी सहयोग और सांस्कृतिक एकता पर बल देने का सफलतापूर्वक संकेत दिया। हालांकि उसके कुछ समय के बाद ही दोनों देशों के सम्बन्ध बिगड़ने शुरू हो गये। खास तौर पर जब श्रीलंका ने अपना हबंनटोटा बंदरगाह चीन को पट्टे पर देने का फैसला किया। इसके कारण इस द्वीप पर 99 साल तक चीन को मौजूद रहने की पक्की अनुमति मिल गई। मालदीव ने भी भारत के प्रस्ताव के बावजूद चीन के साथ मुफ्त व्यापार समझौते की पुष्टि कर दी। 2015 में भूकम्प के बाद मोदी के शुरूआती प्रयासों और समर्थन के बावजूद नेपाल में भी चीन के साथ मुफ्त व्यापार समझौते की पुष्टि कर दी, कुल मिलाकर भारत के सभी नजदीकी पड़ोसी देशों को चीन की वन बेल्ट वन रोड परियोजना में सुलतापूर्वक शामिल कर लिया गया है। जिसके सम्बन्ध में भारत की प्रतिक्रिया अभी भी स्पष्ट नहीं है ।

जहाँ तक पाकिस्तान के साथ रिश्तों का सम्बन्ध है इसमें काफी उतार–चढ़ाव आये हैं। शुरू में पाकिस्तान के साथ काफी गर्मजोशी दिखाई पड़ी। लेकिन बाद में पिछली सरकार की तरह इस सरकार के भी पाकिस्तान के साथ रिश्ते बिगड़ते चले गये खास तौर पर 2015 में जब पाकिस्तान के समर्थन से आतंकवादियों ने कश्मीर पर आतंकी हमले शुरू कर दिये और नियंत्रण रेखा पर लगातार और घातक झड़पें होने लगीं। सन् 2019 में पाकिस्तान के साथ भारत के सम्बन्ध बेहद खराब हो गये और भारत ने

सर्जिकल स्ट्राइक करके और उसके बाद भारतीय वायुसेना द्वारा पाकिस्तान की सीमा में घुसकर आतंकी शिविरों पर एअर स्ट्राइक करके पाकिस्तान के साथ आक्रामक विदेश नीति अपना दी।

कुल मिलाकर मोदी सरकार ने पाकिस्तान को छोड़कर शेष नजदीकी पड़ोसी देशों के साथ समान नीति का निरंतर अनुसरण किया है। पिछले पाँच वर्षों में दक्षिण? एशियाई क्षेत्रीय सहयोग संघ (SAARC) की केवल एक शिखर बैठक का ही आयोजन किया जा सका है और खास तौर पर भारत–पाक दुश्मनी के कारण इस दिशा में कोई प्रगति नहीं हो पा रही है।

श्री नरेन्द्र मोदी ने 30 मई 2019 को भारत के प्रधानमंत्री के रूप में दूसरी बार शपथ ली है जो उनके दूसरे कार्यकाल की शुरूआत है।

विदेश नीति के मोर्चे पर मोदी सरकार ने चुनाव जीतने के बाद ही काम करना शुरू कर दिया है। प्रधानमंत्री मोदी ने मालदीव और श्रीलंका की यात्रा की इसके साथ ही विदेश मंत्री एस0 जयशंकर ने भी भूटान का दौरा किया। मोदी ने पहली विदेश यात्रा के लिए मालदीव और श्रीलंका को चुनकर यह साबित कर दिया है कि वह अपनी 'नेबरहुड–फर्स्ट पॉलिसी' यानी पड़ोसी देशों को विदेश नीति में तरजीह देने की नीति के प्रति समर्पित हैं। खास बात यह है कि मोदी इस नीति के प्रति अपने समर्पण को दर्शा रहे हैं जब चीन ने दक्षिण एशिया और हिंद महासागर क्षेत्र में अपने दखल को गम्भीर रूप से बढ़ाया है।

मोदी की यात्रा के दौरान मालदीव के राष्ट्रपति इब्राहिम मोहम्मद सोलेह ने भी अपने प्रशासन की ओर 'इण्डिया–फर्स्ट पॉलिसी' यानी भारत को प्रमुखता देने की नीति पर जोर देकर भारत और मालदीव के सम्बन्धों को ऐतिहासिक करार दिया। मालदीव की पिछली सरकार में दोनों देशों के सम्बन्ध काफी तनावपूर्ण हो गये थे। भारत–मालदीव के संयुक्त बयान में भी सोलेह ने अपनी सरकार की बहुपक्षीय और पारस्परिक रूप से लाभप्रद साझेदारी को गहरा करने की अपनी प्रतिबद्धता पर जोर दिया। वही मोदी जी ने जलवायु परिवर्तन और आतंकवाद के खिलाफ लड़ाई में मालदीव की सहायता करने का ऐलान किया है।

मोदी जी की श्रीलंका यात्रा की बात करें तो उनके इस दौरे की थीम चरमपंथ था। मोदी जी ने हाल में हुए चरमपंथी हमलों को 'संयुक्त खतरा' करार देते हुए साफ किया कि चरमपंथ के खिलाफ साझा मुकाबले में भारत नेतृत्व

करने के लिए तैयार है।

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मोदी की विदेश नीति एक ऐसे वक्त में आकार ले रही है जब अमरीका और चीन के बीच बढ़ता हुआ तनाव विश्व व्यवस्था में एक असंतुलन पैदा कर रहा है। व्यापारिक मुद्दों पर असहमतियों के चलते भारत–अमरीका सम्बन्ध भी एक खराब दौरे से गुजर सकते हैं।

अमरीका ने भारत के 5.6 अरब डालर के निर्यात पर भी शुल्क लगाने का ऐलान कर दिया है जिसे इससे पहले छूट मिली हुई थी। हालांकि भारत सरकार ने कहा है कि वह अमरीका के साथ आर्थिक और आम लोगों के बीच सम्बन्धों को लगातार मजबूत बनाने के लिए अपने प्रयास जारी रखेगा। लेकिन यह बात साफ है कि आने वाले दिन चुनौतियों से भरे हो सकते हैं। अमेरिका के राष्ट्रपति डोनाल्ड ट्रंप को आने वाले दिनों में चुनावों का सामना करना है। ऐसे में वह दुनिया भर में व्यापारिक मुद्दों पर अमरीकी हितों की सुरक्षा करने की बात को तरजीह देगें।

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विदेश नीति के दृष्टिकोण से भारत आज जिन चुनौतियों का सामना कर रहा है और भविष्य में आने वाले समय में जिनका सामना करना जारी रखेगा इनमें से कुछ ये हैः–

1. आर्थिक मजबूती राष्ट्रीय सुरक्षा का सबसे बड़ा स्त्रोत है हमारा उद्देश्य अगले तीन दशकों तक 8 प्रतिशत जी0डी0पी0 विकास दर हासिल करना है। यह कैसे किया जाय यह राष्ट्रीय प्राथमिकता है।

2. राष्ट्रीय सुरक्षा को खतरा वे आतंकवाद और कट्टरता जैसे गैर पारंपरिक स्त्रोतों चीन और पाकिस्तान जैसे पारंपरिक स्त्रोतों से और साइबर सुरक्षा में कमी जैसे नए स्त्रोतों से आते हैं।

3. ऊर्जा और जलवायु परिर्वतन

4. ब्लूइकोनामी

5. वैश्विक प्रशासन 8 में सुधार

6. चौथी औद्योगिक क्रान्ति, विशेष रूप से काम के भविष्य पर इसका प्रभाव।

एक ऐसे राष्ट्र के लिए जो वैश्विक शक्ति बनना चाहता है, भारत को

इनकी आवश्यकता है।

व्यापक रूप से अपनी व्यापक राष्ट्रीय शक्ति को बढ़ाना है। प्रधानमंत्री नरेन्द्र मोदी सत्ता संभालने के बाद से ही विदेश नीति के मसले पर सक्रिय रहे है प्रधानमंत्री मोदी की विदेश नीति 'मोदी डाक्ट्राइना' के नाम से मशहूर रही है उन्होंने दक्षिण एशिया के पड़ोसी देशों से रिश्ते बेहतर करने का प्रयास किया। मोदी जी ने अन्तर्राष्ट्रीय नेताओं से मुलाकात करके अपने तरीकों और कई मौकों पर प्रोटोकाल तोड़कर विदेश नीति की नई परिपाटी बनाने का प्रयास भी किया। हालांकि उन प्रयासों के बाद भी ऐसे मौके आये है जबकि कई मुल्कों ने भारत की हितों के अनुरूप फैसले नहीं लिए है और मोदी सरकार की किरकिरी हुई है।

जॉन एफ कैनेडी ने कहा था कि घरेलू नीतियों की गलतियाँ हमें हरा सकती हैं किन्तु विदेश नीतियों की गलतियाँ हमारे प्राण ले सकती हैं। ऐसा ही कुछ भारत के साथ हो रहा है। भारत में विदेश नीति मुख्य तौर पर तीन विभाग बनाते है प्रधानमंत्री कार्यालय, राष्ट्रीय सुरक्षा परिषद, और विदेश विभाग। यहीं से नीतियों का निर्धारण होता है। इन्हीं नीतियों के आधार पर दुनिया भर में बैठे भारत के राजनयिकों को दिशा निर्देश भेजे जाते हैं।

निष्कर्ष

मोदी सरकार की विदेश नीति के पिछले पांच वर्ष इसलिए याद किये जायेंगे कि विदेश भारतीय भूमिका के लिए उत्साह रहा सारंस्कृतिक कूटनीति की भूमिका बढ़ी, विश्व के नेताओं के साथ मोदी जी की व्यक्तिगत दोस्ती रही और भागीदारों के साथ मिलकर अपने सामान्य हितों को अपने लाभ के लिए उपयोग करने में अधिक सक्रियता दिखाई। बीजेपी सरकार के हालिया राजनीतिक प्रदर्शन को देखकर ऐसा लगता है कि विदेश नीति के क्षेत्र में महान शक्ति के साथ सम्बन्धों को मजबूत करने और मोदी सरकार के नेतृत्व में दक्षिण एशियाई पड़ोसियों के साथ सम्बन्ध घनिष्ठ होंगे। 2014 से मोदी सरकार बाहरी शक्तियों के साथ सक्रिय रूप से सम्बन्ध बढ़ाने में लगा हुआ है। यह विशेष रूप से भारत अमेरिका रणनीतिक साझेदारी के मामले में सफल रहा है। श्री मोदी की विदेश नीति की पहल ने दुनिया के सबसे बड़े लोकतंत्र की वास्तविक क्षमता और भूमिका को महसूस किया है।

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एसोसिएट प्रोफेसर रा0 स्ना0 म0 ऋषिकेश.

बीसवीं शताब्दी के उत्तरार्द्ध से ही उत्तराखंड का साहित्य लोक एवं माध्यमों यथा रेडियो, दूरदर्शन, नाट्य मंचों आदि के माध्यम से प्रसारित होता रहा है। साहित्य का सामना अब सूचना और संचार माध्यमों और संचार के जगत से हो रहा है। साहित्य अब पुस्तकों तक सीमित नहीं है, उसे अब दृश्य और श्रव्य माध्यमों का भी सामना करना है। आज जितने भी संचार माध्यम हैं, उनमें साहित्य रचना का प्रयोग किस रूप में ही सकता है, यह सवाल अत्यंत जटिल है। साहित्य को इन माध्यमों के उपयोग के अनुसार किस प्रकार आकृति दी जा सकती है, यह आकृति भाषिक शब्दों में हो या शब्द ध्वनियों में हो या शब्द चित्रों में हो। यह आधुनिक युग की सबसे बड़ी समस्या ही नहीं चुनौती भी है।[1]

शिष्ट साहित्य और दृश्य–श्रव्य माध्यमों के अन्तःसंबंध के विवेचन से यह प्रकट होता है कि उत्तराखंड के साहित्यकारों की अपने अंचल के लोक जीवन से संबंधित रचनाओं की तुलना में उनकी अन्य रचनाएँ इन माध्यमों में अधिक मंचित या प्रसारित हुई हैं। यह अवश्य है कि शिष्ट साहित्य की अपेक्षा इन माध्यमों में उत्तराखंड के लोक साहित्य के प्रसार का नैरन्तर्य बना रहा है।

इस शोध पत्र में हिन्दी की साहित्यिक रचनाओं के मंचन और प्रसार के ऐतिहासिक परिदृश्य का अवगाहन किया गया है।

उत्तराखंड के नाटककार जिनकी रचनाएँ अभिनीत हुई हैं उनमें गोविन्दबल्लभ पंत का नाम उल्लेखनीय है। उन्होंने कई नाटक कंपनियों–व्याकुल भारत, रामविजय, न्यू अल्फ्रेड, पृथ्वी थियेटर्स आदि के लिए नाटक लिखे और अभिनय भी किया। ऐसे नाटकों में अहंकार, प्रेमयोगी, मातृभूमि, स्वयंवर प्रमुख हैं।

उत्तराखंड में कई नाट्यमंचों यथा युगमंच, शैलनट (पौड़ी टिहरी), कलादर्प (उत्तरकाशी), जन नाट्यमंच, सहमत, जागर संस्था (गिर्दा) के द्वारा यह संपूर्ण साहित्य अभिनीत होता रहा है।

युगमंच–जहूर आलम ने चर्चित नाट्य संस्था युगमंच का संचालन

किया। इस संस्था से नाटकों का अक्षर ज्ञान लेकर सोलह कलाकार राष्ट्रीय नाट्य विद्यालय नई दिल्ली और पाँच पुणे फिल्म टी0वी0 संस्था में गये जो किसी संस्था के लिए एक कीर्तिमान है।

इसी तरह से पाराशर गौड़ ने पुष्पांजलि रंगशाला व आंचलिक रंगमंच की स्थापना की। हिन्दी रंग जगत में अभिनेता, निर्देशक के रूप में राष्ट्रीय नाट्य उत्सवों में भागीदार रहे हैं तथा कई फिल्मों तथा टेली फिल्मों तथा टी0 वी0 सीरियल में अभिनय भी किया है। उत्तरी अमेरिका में गढ़वाली एकांकी का मंचन किया। हिमांशु जोशी ने कई रेडियो नाटकों की रचना की। जिनमें कगार की आग तथा अन्य एकांकी, सुराज तथा अन्य एकांकी, समय की शिला पर, इस बार आदि अन्य रचनाएँ हैं। उन्होंने हिन्दी फिल्मों में लेखन कार्य भी किया। हिमांशु जोशी के सुराज पर आधारित। फिल्म सु—राज ने इंडियन पैनोरमा के अन्तर्गत अन्तर्राष्ट्रीय फिल्म समारोह में भारत का प्रतिनिधित्व किया। उनके उपन्यास 'तुम्हारे लिए' पर दूरदर्शन धारावाहिक एवं प्रसार भारती द्वारा फिल्म बनाई गई। 'कगार की आग' की कहानी उत्तराखंड के जन—जीवन पर ही आधारित है। उन्होंने फिल्म राइटर्स एसोसिएशन के सदस्य भारत सरकार के मंत्रालयों की हिन्दी सलाहकार समितियों के सदस्य, दूरदर्शन तथा आकाशवाणी के लिए भी कार्य किया।

'दयानंद अनत' ने भी पाँच टेलीविजन धारावाहिकों की रचना की थी। इसके अलावा श्रीश डोभाल ने हिमालय की सांस्कृतिक विरासत पर कुछ डॉक्यूमेंट्री फिल्मों का निर्माण किया है।

मंगलेश डबराल की संगतकार, तानाशाह, मैं चाहता हूँ तथा अन्य कविताएँ, डी डी भारती कवि सम्मेलन में वीरेन डंगवाल की 'दुष्चक्र में सृष्टा' इसके अलावा हिरावल आदि संस्थाओं ने वीरेन डंगवाल की इतने भले नहीं बन जाना साथी का प्रसारण किया है। विभिन्न संस्थाओं द्वारा उत्तराखंड के लोकगीत एवं लोक रचनाएँ प्रसारित होती रहती हैं। लीलाधर जगूड़ी की कविता 'उत्तर पाशाघ काल का भतीजा' यू—ट्यूब चैनल हिन्दी कविता में उनकी आवाज में रिकार्ड की गयी हैं।[2]

'शैलेश मटियानी 'धर्मेश तिवारी', 'तिग्मांशु धूलिया', 'गोविन्द चातक'' 'जहूर आलम' इत्यादि की कई रचनाओं का नाम भी इस संदर्भ में उल्लेखनीय है।

रस्किन बांड की रचना फ्लाइट ऑफ़ पिजन्स (कबूतरों की उड़ान) और एंग्री रिवर (अप्रसन्न नदी) नामक कई उपन्यास पर फ़िल्म का रूप ले चुकी हैं। फिल्म अभिनेता / निर्माता शशि कपूर और निर्देशक श्याम बेनेगल ने 80 के दशक में फ्लाइट ऑफ पिजन्स पर ही जुनून नाम से एतिहासिक–प्रेम आधारित फिल्म बनाई। भारतीय फिल्म निर्देशक / निर्माता विशाल भारद्वाज ने उनकी रचना सुज़ैन सेवेन हसबैंड्स पर सात खून माफ़ जैसी रोमांटिक–थ्रिलर के साथ बाल–कथा द ब्लू अंब्रेला नाम से भी हास्य–ड्रामा आधारित फिल्म बनाई। बॉलीवुड में शुरु से ही साहित्य आधारित फिल्में बनती रही हैं। विशाल भारद्वाज की फिल्म ओमकारा और मकबूल जहां सेक्सपियअर के नाटक ओथैलो और मैकबेथ पर आधारित थीं, वहीं विशाल भारद्वाज की ही एक और फिल्म सात खून माफ, रस्किन बॉन्ड की कहानी सुजैना सेवेन हसबैंड पर आधारित थी।[3]

उत्तराखंड के तिग्मांशु धूलिया ने बैंडिट क्वीन के लिए संवाद लिखे। मणिरत्नम की फिल्म 'दिल से' में भी संवाद लिखे। अनेक टेली फिल्मों की कहानियाँ लिखीं। फिल्म 'इतना सा ख्वाब है' का लेखन किया। गंगाप्रसाद विमल के उपन्यास मृगोतक पर आधारित अंग्रेजी में 'बोक्षु द मिथ' फिल्म बनी हैं, जिसका प्रदर्शन अन्तर्राष्ट्रीय फिल्म महोत्सव में भी हुआ था। सिनेमा मनोरंजन, ज्ञान विज्ञान, दुर्लभ और विविध दृश्यावली का प्रमुख साधन है और नौ दशक पूर्व भी मनोरंजन का साधन थी। हालांकि तब के मनोरंजन में आश्चर्य और कौतूहल सम्मिलित था। आज नई–नई तकनीक, नए–नए वाद्य यंत्र, कम्प्यूटर और कैमरा और नए–नए प्रयोगों से इस मनोरंजन की प्रस्तुति को नए आयाम मिले हैं।[4]

सिनेमा साहित्य की एक विधा है इसे भी उन्हीं तकाजों को पूरा करना चाहिये जो दूसरी साहित्यिक विधाएँ पूरा करती हैं। यानि वह प्रचार या प्रोपोगेंडा नहीं है, वह लोगों को सुख प्रदान करता है तथा इस सुख से वह समाज को स्वस्थ बनाने की लड़ाई लड़ता है। जिस तरह कोई नज़्म, नाविल, कहानी या साहित्य जो इस कर्तव्य को पूरा नहीं करता वह बेकार है, उसी तरह जो फिल्म इस कर्तव्य को पूरा नहीं करती वह बेकार है।[5] 1986 में पहली कुमाउँनी फिल्म 'मेघा आ' में अभिनय करने वाले उत्तराखंड के साहित्यकार, रंगमंच और सांस्कृतिक गतिविधियों में सक्रिय रहे हैं।[6] प्रभात कुमार उप्रेती नाटक एवं रंगमंच के क्षेत्र में विशेष रूप से सक्रिय रहे हैं। नाटकों पर उनकी

पुस्तक 'पगलाए लोग' एक महत्वपूर्ण रचना है। इसके सभी नाटक मंचित हो चुके हैं। कुछ नाटक "पगलाए लोग" लुप्त प्रजाति', 'मानव की खोज', 'वेटिंग फॉर डैथ', 'कुली बेगारी', 'रवाँई के सिरकटे', 'श्रद्धेय सुमन' 'गढ़वाल के क्रांतिकारी', 'चौकोट के बागी' इत्यादि नाटक अनाम, शैलनट, कलादर्पण से अभिनीत हो चुके हैं।' प्रजातंत्र नाटक' शैलनट संस्था से अभिनीत हुआ है।[7]

पाराशर गौड़ ने 1983 में पहली गढ़वाली फिल्म जग्वाल का निर्माण किया। उत्तरी अमेरिका में गढ़वाली एकांकी का मंचन किया तथा गढ़वाली गीतों का वीडियो निर्माण करने में योगदान दिया। पुष्पांजलि रंगशाला व आंचलिक रंगमंच के संस्थापक रहे।[8]

वस्तुतः हमारा रंगकर्म निश्चय ही एक गम्भीर संकट के दौर से गुजर रहा है। जो थोड़ा बहुत उल्लेखनीय रंगकर्म हो भी रहा है वह पूरी तरह सरकारी या गैरसरकारी आर्थिक सहायता अथवा अनुदान की बैसाखियों पर लड़खड़ा रहा है। आज की सामाजिक मूल्य व्यवस्था को देखते हुए रंगमंच को छोड़कर अच्छे कलाकारों के फिल्म, टी0 वी0 की ओर लगातार भागते जाने की प्रवृत्ति को बुरा भला और कलाकारों को विश्वासघाती कहना बेमानी ही नहीं बेइमानी भी है।[9]

मनोहर श्याम जोशी द्वारा लिखा गया हम 'लोग' उन्नीस सौ बयासी में भारत के राष्ट्रीय चैनल है एक ऐसी धारावाहिक कथा दूरदर्शन पर प्रसारित हुआ। उनके द्वारा लिखे गये अन्य धारावाहिक 'बुनियाद', 'कक्का जी कहिन' मुंगेरी लाल के हसीन सपने' दृश्य माध्यम के लोकप्रिय धारावाहिकों में रहे। हमलोग और बुनियाद की सफलता की बुनियादी वजह यह थी कि इन दोनों धारावाहिकों ने हम लोगों की नब्ज पहचानी थी। इनमें मध्यवर्गीय पारिवारिक सुख–दुख को पहले हास्य फिर आदर्श (देश प्रेम का पुट) देकर दिलचस्प रूप में पेशकिया गया था।[10] ये धारावाहिक सोप ओपेरा कहे जाते हैं। टी वी के जिन नाटकीय मनोरंजक कार्यक्रमों को सीरियल के नाम से जाना जाता है उनकी शुरुआत 'सोप ओपेरा नाम से अमेरिकी टी वी पर तीस के दशक में हुई। सोप ओपेरा का मतलब धारावाहिक कथा जिसका उपसंहार कभी नहीं होता और जिसकी हर किश्त इस आश्वासन के साथ ख़तम होती है कि कहानी अगले दिन भी जारी रहेगी। भारत में सोप ओपेरा शैली का प्रारम्भ अस्सी के दशक में बेहद कामयाब हम लोग सीरियल से हुआ था।[11] कसप पर भी फिल्म का

निर्माण हुआ है। राजेन्द्र धस्माना 1960 से रंगकर्मी के रूप में सक्रिय रहे हैं। उन्होंने गढवाली रंगमंच के लिए नाटक लिखे। इन नाटकों में जंकजोड़, अर्धग्रामेश्वर, पैसा न ध्यल्ला गुमान सिंह रौत्यल्ला, जय भारतजय उत्तराखंड के मंचन काफी चर्चित रहे। भवानीदत्त थपल्याल के प्रह्लाद नाटक को अपडेट किया, जिसके दो प्रदर्शन हुए। इलैक्ट्रोनिक मीडिया और कुछ संस्थानों के लिए उन्होंने बीस से अधिक डाक्यूमेंट्री निर्मित कीं।[12]

उत्तराखंड के प्रसिद्ध लोक कवि गिरीश तिवारी गिर्दा ने नगाड़े खामोश हैं तथा धनुष यज्ञ नाटक का लेखन किया। बहुत से नाटक अंधा युग, अंधेर नगरी, थैंक्यू मिस्टर ग्लाड, भारत दुर्दशा निर्देशित किये। गिरदा का व्यक्तित्व बहुमुखी रहा है। उनके गाए तेरी जय जयकारा म्यार हिमाला, जैता एक दिन तो आलो, इस व्योपारी को प्यास बहुत है इत्यादि उनकी आवाज में यू–ट्यूब में मौजूद हैं।

जीत सिंह नेगी ने हिन्दी में गेय गीतों की रचना की। बाद में उत्तराखंड की संस्कृति को आधार बनाकर गीत लिखे और उनकी धुनें बनाकर गायीं। 'तू ढोल वीरा——.' अत्यंत लोकप्रिय रहा है। नेशनल ग्रामोफोन कंपनी बंबई में कुछ रिकॉर्ड तैयार किए। बाद में हिज मास्टर्स वायस एण्ड कोलम्बिया ग्रामोफोन कम्पनी द्वारा गढ़वाली गीतों के रिकॉर्ड बने तथा गढ़वाली गीतों के टेप तैयार किये। आकाशवाणी एवं दूरदर्शन के लिए उत्तराखंड की संस्कृति, समस्याओं एवं जीवन पर केन्द्रित गीत लिखे व गाए।

लोक साहित्य में 'कबूतरी देवी', 'जीत सिंह नेगी' तथा अन्य लोक कलाकारों की विभिन्न रचनाएँ निरन्तर दूरदर्शन में प्रसारित होती रही हैं। वरुण बडोला ने 'अस्तित्व एक कहानी' के संवाद लिखे।

उत्तराखंड के प्रसिद्ध लोककथा गायक तथा वादक ऋतुरैण के विशेषज्ञ झूसिया दमाई के लखनऊ, दिल्ली, भोपाल में विभिन्न कार्यक्रम तथा दूरदर्शन व रंगमंच में प्रसारण होता रहा है।[13]

कबूतरी देवी लोकगीतों तथा संगीत की जानकार हैं। रेडियो तथा दूरदर्शन के लिए उन्होंने गायन किया है। उनका जागर गीत तथा अन्य कुमाऊँनी गढ़वाली गीत दृश्य श्रव्य माध्यमों में प्रसारित हो चुके हैं।

रेडियो श्रव्य माध्यम है रेडियो में गीत अभिनय सभी ध्वनियों के माध्यम से संप्रेषित होता है। रंगमंच और टी0वी0 दोनों ही दृश्य माध्यम हैं। अन्तर यह

है कि रंगमंच लाइव विधा है जो दर्शकों के सामने अभिनीत होती है, जबकि टी0वी0 में रिकॉर्डिंग की सुविधा है। (रीटेक के जरिये गलतियाँ सुधारना संभव है)। दूसरा अंतर यह है कि रंग नाटक को रंगमंच की सीमितता के भीतर मौलिक परिवेश की रचना करनी है, आउटडोर, लोकेशन मिक्सिंग आदि के जरिये विशेष प्रभाव आदि की सुविधा भी यहाँ नहीं है। इसलिए रंगमंच टी0 वी0 नाटक से ज्यादा चुनौतिपूर्ण सृजन है।[14] यही अंतर सिनेमा और रंगमंच में भी है। साहित्य और सिनेमा दो भिन्न–भिन्न कलारूप हैं अतः जब किसी एक कला का दूसरी कला की कृति में रूपांतरण होता है तो बड़े स्तर पर परिवर्तन अनिवार्य हो जाता है। विश्व की प्राचीनतम और नवीनतम कलाओं के भिन्न–भिन्न स्वरूपों का तुलनात्मक अध्ययन करने पर हम इस निष्कर्ष पर पहुँचते हैं कि दोनों कलारूपों में यद्यपि पर्याप्त अंतर है किन्तु यह अंतर इतना अधिक भी नहीं है कि फिल्मांतरण असंभव हो जाए।[15]

संदर्भ–

1- feJ] MkWjktsn]u] bf"krk feJ%n`; J0; ek/;e y{ku i"B 09
2- ;wV÷;c%p&uy%fgUnh dfork
3- IkfgR; vk§ fluek vt; dekj pk§kjh y%k%tudfr if=dk
4- fnypLi%fgUnh fluek ds IkSo"kl%Hkkjrh; iतrd ifj"kn ubZfnYyh i"B11
5. jtk] jkgh eklुe%fluek vk§ Iतdfr ok.kh izdk"ku] i"B 23 6 Mkxh] pUnu%mRrjk[kM dh ifrHkk,¡ i"B 42
7- y{kd ,oajxdehZifHkkr mिrh th Is0;fDrxr okRkkZ ds vk/kkj ij
8- Mkxh] pUnu%mRrjk[kM dh ifrHkk,¡ i"B 73
9- rustk] t;no%jxdeZ vk§ ehfM;k i"B 123
10- rustk] t;no%jxdeZ vk§ ehfM;k i"B 047
11 nqcs vHkk; dekj %Isekt foKku fo'ookS'k [kM 6 i"B 2119
12- Mkxh] pUnu%mRrjk[kM dh ifrHkk,¡ i"B 145
13- >fl ;k nekbZ dkseSusLo;auSfhrky esिigkM+ds,d dk;Øe esaa[kk rFkk Isuk g¨
14- feJ] MkWjktsn]u] bf"krk feJ%n`; J0; ek/;e y{ku i"B110
15- nqcs foosd] fgUnh IkfgR; vk§ fluek i"B 213

Lkedkyhu ifjif{; eaxkadhokn

MkW uhrwekg˚

असिस्टेंट प्रोफेसर (इतिहास)

राजकीय महाविद्यालय, हेमपुर, बीसलपुर, पीलीभीत

गांधी ने अपने नाम के साथ 'वाद' की स्थापना में कभी भी विश्वास नहीं किया। परन्तु फिर भी इसे केन्द्रीय मूल्य या कृपलानी ने इसे ''गांधीवादी तरीका'' कहा है, हमारे सामने यह अहिंसा और शान्ति की एक उत्कृष्ट विचाराधारा के रूप में खड़ा है। 20वीं शताब्दी के दौरान अन्तर्राष्ट्रीय व्यवस्था ने बहुत से संगठनों और विचारधाराओं के कार्यों का अनुभव किया गया, परन्तु इनमें से कोई भी वैश्विक स्तर पर शान्ति की चिरस्थायी खोज की प्राप्ति नहीं कर पाई। परिणामस्वरूप, 21वीं शताब्दी में गांधीवाद की प्रासंगिकता निर्विवाद बन गई है। यह अहिंसा के केन्द्रीय मूल्य पर आधारित समय की कसौटी पर खरी एक विचाराधारा है जिसका मूलभूत उद्देश्य शान्ति प्राप्ति करना है। वैश्विक शंकाओ और वाद–विवाद के बावजूद, समकालीन विश्व में इस दर्शन की अत्यधिक प्रासंगिकता है।

लेक वेलसा, जो सोलिडेरिटी मूवमेन्ट के नेता और बाद में पौलेण्ड के राष्ट्रपति भी बने, उन्होंने सत्याग्रह आन्दोलन के 100 वर्ष पूरा होने पर अपनी नई दिल्ली की यात्रा के दौरान कहा, ''जब हम हिंसा के साथ लड़ते हैं तो असफल हो जाते हैं, परन्तु जब हम अहिंसा (गांधीवाद तरीका) को अपनाते हुए लड़ते हैं, हम सफल हो जाते हैं।'' (द हिन्दू, 29 जनवरी, 2007)। जितने भी वाद हैं जिन्होंने 20वीं और 21वीं शताब्दी में वर्चस्व बनाए रखा था उनमें गांधीवाद एक अलग तरीके के रूप में खड़ा है। वे प्रायः इस बात पर बल देते थे कि, ''मैंने किन्हीं नए सिद्धान्तों को जन्म नहीं दिया है परन्तु पुराने सिद्धान्तों को फिर से रखने का प्रयास किया है। गांधीवाद जैसी कोई चीज नहीं है और मैं अपने बाद कोई सम्प्रदाय छोड़कर जाना नहीं चाहता। मै यह कोई दावा नहीं करता कि मैंने किसी नए सिद्धान्त को जन्म दिया है। मैंने तो सनातन सत्यों को अपने दैनिदन जीवन और समस्याओं के समाधान में अपने ढंग से लागू करने का प्रयास भर किया है।''

गांधी युग के बाद बहुत से आन्दोलन सामने आये है। नागरिक अधिकारों के आन्दोलनों से लेकर पर्यावरण से जुड़े आन्दोलन, समय–समय पर अहिंसा की कारगरता की परीक्षा होती रही है। और प्रायः इन तरीकों और दृष्टिकोणों को विजय मिलती रही है। यह एक ऐसी विचारधारा है जो अभी भी इस संसार को विश्वास दिलाती है कि अगर मानवता चाहे तो संघर्षों का समाधान शान्तिपूर्ण व परस्पर सहयोग के तरीके से ही हो सकता है। गांधीवाद चार स्तम्भों पर खड़ा है : सत्य, अहिंसा, नैतिकता और आध्यात्मिकता। इन सिद्धान्तों में अडिग विश्वास व इनका बेहतर व्यवहारिक प्रयोग ही समाज को नई दिशा दे सकता है।

समकालीन समय और समाज की स्थिति ने हमारे सामने बहुत सी चुनौतियां खड़ी कर दी हैं। हमारे बदलते हुए जीवन स्तर ने व्यापक रूप से हमारे मूल्यों, दृष्टिकोणों और विश्वासों को निर्देशित किया है भौतिकतावाद ने मानवीय मूल्यों को अपने अधीन कर लिया है और यह हमारे सामने निरंतर एक खतरा है इस भौतिकतावाद ने हमे जकड़ लिया है, इससे बाहर आने का मार्ग दिखाई नहीं दे रहा है। गांधी के समय के विपरीत, हम उन्नतिशील लोकतंत्र, स्वतंत्रता, स्वाधीनता और सद्इच्छा का उपभोग कर रहे हैं। राष्ट्र ने कुछ सीमा तक आर्थिक व सामाजिक रूप से प्रगति की है, यद्यपि शोषित व गरीब लोगों की स्थिति में काफी सुधार हुआ है, मगर फिर भी इस उद्देश्य के लिए काफी कुछ करना बाकी है। साथ ही हम नई चुनौतियों का सामना कर रहें है जैसे संघर्षों का विस्तार, पर्यावरण का ह्रास, गरीबी उन्मूलन, लिंग असमानता और संपोषणता व स्थायित्व की कमी। यहां यह बात ध्यान देने की है कि गांधी ने अपने समय में इन सन्निकट समस्याओं के प्रति हमे चेताया था।

हम आज के संसार में जिन चुनौतियों का सामना कर रहे हैं, वे विभिन्नरूप लिए हैं। ये विविध रूपी, बहुपक्षीय, परस्पर विरोधी व अन्तर्विरोधी हैं। ऐसे बहुत से मुद्दे हैं जिन्होंने जीवन के सब क्षेत्रों–राजनीतिक, सामाजिक, आर्थिक और सांस्कृतिक–को प्रभावित किया है। युद्ध, विस्थापन, प्रवासी, जातीय संघर्ष और गरीबी जो हर युग में अत्यधिक ज्वलंत समस्या रही है, की समस्याएं सामने खड़ी हैं। भ्रष्टाचार व शासन की समस्याएं राजनीतिक क्षेत्र में घुस गई

हैं, विशेष कर भारतीय सन्दर्भ में जाति, रंग, लिंग के आधार पर भेदभाव, परिवार की प्रतिष्ठा के कारण हत्याएं रोज—मर्रा की बातें हो गई हैं, आर्थिक तौर पर संसार उत्तरी व दक्षिण गुटों, विकसित व विकासशील देशों अमीर और गरीब, सम्पन्न और विपन्न के बीच बंटा हुआ है सांस्कृतिक तौर पर पाश्चात्य मूल्यों, संस्कृति, विचार व दृष्टिकोण भाषा इत्यादि का वर्चस्व है और ये स्थानीय संस्कृतियां, परम्पराओं, रीति—रिवाजों व व्यवहारों को नकारात्मक रूप से प्रभावित कर रहे हैं। हम विकास व प्रगति के अन्तर्विरोधी व झूठे विचारों में रह रहे हैं।

ये समस्याएं केवल आज की ही नहीं है। ये 19वीं और 20वीं शताब्दी में भी थीं। परन्तु इनकी प्रकार, प्रकृति व मात्रा उस समय भिन्न थी। उन दिनों हम औपनिवेशिक प्रजा थे, औपनिवेशिक शासन के अधीन रह रहे थे। संसार ने देखा कि उपनिवेशों का भौतिक व व्यवसायिक लाभों के लिए संसाधनों का दोहन करके बहुतायत धन को उपनिवेशों से शासक राष्ट्रों को भेजा जा रहा था और महत्वपूर्ण बात यह थी कि ये उपनिवेश अपनी सम्प्रभुता खो चुके थे आज के युग में, हम एक नए प्रकार के नव—उदारवाद के चंगुल में फंस गए हैं। यह सम्प्रभु राष्ट्रों को निर्देशित करता है कि घरेलू नियमों और आर्थिक ढांचे को किस तरह बनाया जाए।

जिस प्रकार गांधी के समय में ये समस्याएं थी, वे आज भी व्यापक हैं। और हम इन समस्याओं से छुटकारा पाने के लिए संघर्ष कर रहे हैं। हम कोई से भी साधन, चाहें हिंसक हों, का प्रयोग कर रहे हैं। हमने उन कारगर तकनीकों को दर किनार कर दिया है। जो हमे दीर्घ—कालीन समाधान प्रदान कर सकती थी। वर्तमान परिप्रेक्ष्य में यह निर्विवाद है कि गांधी जी वे अपने विचारों और दृष्टिकोणों में सही थे और हम वर्तमान सन्दर्भ और समस्याओं के विषय को ध्यान में रखते हुए उनके विचारों को अपनाना चाहिए। इस प्रकार से गांधीवाद या गांधीवादी केन्द्रीय मूल्यों का प्रयोग सार्वभौम है और यह समय व स्थान के बन्धन के परे है।

जिस प्रकार से संसार भर में भूमण्डलीकरण की प्रक्रिया के प्रारम्भ होने से विश्व का आर्थिक परिदृश्य व्यापक रूप से बदल गया है। शीत युद्ध की

समाप्ति के बाद भूमण्डलीकरण की प्रक्रिया आरम्भ हुई जिसने विश्व की संरचनात्मक व कार्यात्मक गतिशीलता में परिवर्तन ला दिए। विश्व के लिए सामान्य तौर पर और विकासशील देशों के लिए विशेष तौर पर इन परिवर्तनों के सकारात्मक और नकारात्मक दोनों निहितार्थ थे।

आर्थिक तौर पर एक तरफ तो उदारीकरण, निजीकरण और भूमण्डलीकरण की प्रक्रिया (एल0पी0जी0) के शुरू होने से विकासशील देशों में सीमा शुल्क के झंझट समाप्त हो गए हैं और यहाँ विकसित देशों का माल निर्बाध गति से आ रहा है तो दूसरी ओर इस प्रक्रिया ने उत्पादन और वितरण के पूंजीवाद ढंग को मजबूती की प्रदान की है। अर्थव्यवस्था के भूमण्डलीकरण से समानतावादी और न्यायासंगत वैश्विक व्यवस्था के विकास में मदद नहीं मिल रही है। इसके विपरीत, नई अन्तर्राष्ट्रीय आर्थिक व्यवस्था की स्थापना की विकासशील देशों की मांग बहुत पीछे चली गई है। इसके अतिरिक्त, इस प्रक्रिया ने दो संस्थाओं आई0एम0एफ0 और वर्ल्ड बैंक के होने के बावजूद विश्व व्यापार संगठन (डब्ल्यू0 टी0 ओ0) के रूप में एक तीसरे संस्थानिक व्यवस्था की स्थापना से ब्रटेन वुड्स मॉडल को मजबूती प्रदान की है। व्यापक पैमाने पर व्यापार के रूप में 'दक्षिण' अपने बाजारों को 'उत्तर' के देशों के लिए खोल रहा है। प्रत्यक्ष विदेशी निवेदश या संयुक्त उपक्रम को अपनाने वाले देशों की आर्थिक स्थितियों में कोई सुधार नहीं हुआ है। इसके विपरीत समाज में व्यापक रूप से असमानताएं फैली हैं। इन देशों में अमीर व गरीब के बीच निरंतर अन्तर बढ़ रहा है। जिसके कारण सामाजिक तनाव, राजनीतिक उथल पुथल और ऐसी ही अन्य समस्याएं उभरकर सामने आई है।

वर्तमान अन्तर्राष्ट्रीय व्यवस्था के लिए आतंकवाद, विशेषकर इसकी बढ़ती उच्च तकनीकी प्रकृति के कारण, अन्य गंभीर समस्या है। जिसका यह व्यवस्था सामना कर रही है 9 / 11 के बाद से यह मुद्दा अत्यधिक महत्वपूर्ण बन गया है, आतंकवाद के इस चेहरे ने यह दर्शाया है कि विश्व का शक्तिशाली देश भी इसकी चपेट में आ सकता है। आंतकवाद वास्तव में उत्तर–आधुनिक युद्ध संघर्ष है–अनियतरूपी, भ्रामक, भावात्मक व्यक्तिगत, मायावी और छितराया हुआ।

गांधी ने स्वतंत्र भारत के लिए सामाजिक पुनरूद्धार कार्यक्रम का एक

खाका खींचा था। काफी समय से इसे उपेक्षित किया जाता रहा। यद्यपि राष्ट्रपिता को सम्मान देने के लिए यह आधिकारिक नीति व कार्यक्रम के दस्तावेज में दृष्टिगोचर होता है। केवल कुछ अपवादों को छोड़कर गांधी का सादा जीवन, संसाधनों का मितव्ययी प्रयोग, अन्यों के लिए त्याग का समर्थन अब दिखाई नहीं देता है। भ्रष्टाचार जीवन का ढंग बन गया है और यह जनता में बेचैनी पैदा कर रहा है, ऐसे में एक व्यवहार के उन्मूलन के लिए गांधी को विचार व भावना में व्यक्त किया जा रहा है। नागरिकता समाज लोगों में विश्वास की भावना पैदा कर रहा है। कहा जा रहा है। कि आज के समाज में गांधी की विचारधारा और व्यावहारिक तरीकों की अभी भी प्रासंगिकता है।

भारत में सामाजिक परिदृश्य मिश्रित परिणाम लिए हुए है। गांधी के विचार और इसके बाद सांवैधानिक प्रावधानों के अनुसार, हाशिए पर खड़े समाजों ने काफी प्रगति देखी है। ये समुदाय अपने अधिकारों और सुविधाओं के लिए अत्याधिक मुखरित और हठधर्मी हुए हैं और सभी सम्भावित मंचों से अपनी प्रगति के लिए समर्थन जुटा रहे हैं। यद्यपि दूर–दराज के गांवों ने वह प्राप्त कर लिया है जो उचित रूप से उनका ही था। अपवाद भी है। गैर सरकारी संगठन सक्रिया रूप से भाग ले रहे है और नागरिक समाज इन प्रयासों के समर्थन के लिए आवाज उठा रहा है, इससे भारत में सामाजिक स्थितियां काफी सुधार हुआ है परन्तु बहुत कुछ किया जाना अभी बाकी है।

औद्योगिक विकास की तीव्र गति ने पर्यावरण ह्रास की गंभीर समस्या को उत्पन्न कर दिया है। संयुक्त राष्ट्र ने इस मामले पर चार सम्मेलन का स्टॉकहोम (1972), नैरोबी (1982), रियो डी जेनेरियो (1992) और जोहानिसबर्ग (2002) में आयोजन किया परन्तु ह्रास की समस्या अभी भी नहीं सुलझी है। कुछ महत्वपूर्ण संधियों जैसे क्योटो को अभी भी लागू नहीं किया जा सका है। यहाँ तक की ''संपोषित विकास'' के लिए उपपयुक्त नीति निर्देश अभी भी व्यवहर में नहीं आ पाए है। अधिक महत्वपूर्ण बात यह है कि यह परिस्थितिकी आन्दोलन ही है जिसने गांधी से अपने महानतम व अधिकतम समर्थन का स्त्रोत प्राप्त किया। मुख्य रूप से महिलाओं से जुड़े मुद्दे, उनका सशक्तीकरण, आने वाली पीढ़ियों की आवश्यकता को ध्यान में रखकर प्राकृतिक संसाधनों में समान रूप

से भागेदारी आदि ऐसे विषय है जो गांधी जी को निर्वतमान परिस्थितियों में अत्याधिक प्रासंगिक बनाते है।

गांधीवादी मूल्यों का प्रयोग एवं गांधीवादी व्यवहार में ही उपरोक्त समस्याओं का समाधान समाहित है। गांधीवाद के केन्द्रीय मूल्यों पर आधारित रणनीतियों को अपनाकर ही इन मुद्दों को सुलझाया जा सकता है। इन मूल्यों का नीचे दिए गए ढ़ग से विस्तार किए जाने की आवश्यकता है।

धन के केन्द्रीकरण या फिर इसके असमान वितरण के कारण वर्तमान विश्व में आर्थिक असमानताएं विद्यमान हैं। गरीब देशों द्वारा न्यायसंगत व समानतावादी व्यवस्था की मांग को सुलझाया नहीं गया है। भूमण्डलीकरण की प्रक्रिया ने विकासशील राज्यों की स्थितियों को सुधारने की अपेक्षा अधिक समस्याओं को पैदा कर दिया है इस परिस्थिति में गांधी की ट्रस्टीशिप की अवधारणा महत्वपूर्ण बन जाती है। मानवता के वंचित तबकों के लिए अमीर को अपना योगदान देनी चाहिए। इस प्रकार की पद्धति में सबके साथ समानता का व्यवहार किया जाता है, इसलिए किसी का किसी के द्वारा शोषण नहीं होता है।

इसी प्रकार से गांधीवादी मूल्यों को व्यवहार में लाते हुए मानवतावादी समस्याओं जैसे हथियारों की दौड़, आतंकवाद और पर्यावरण का ह्रास को हल किया जा सकता है। हथियारों के लिए दौड़ की समस्या हथियारों के लिए विकास की अपेक्षा कहीं अधिक अज्ञानता से जुड़ी समस्या है। हथियारों की दौड़ राज्यों के बीच अविश्वास से उपजी है। इस प्रकार, अत्यधिक महत्वपूर्ण प्रश्न यह है कि पड़ौसी देशों के बीच विश्वास किस तरह से पैदा किया जाए।

इसी प्रकार से पर्यावरण से जुड़ी समस्या का मुख्य कारण तकनीकी रूप से विकसित देशों की तृष्णा है। ये देश अपने देश को मजबूत करने और आर्थिक स्थिति में मजबूती लाने के लिए सारा धन इकट्ठा करके प्रकृति के सारे संसाधनों पर कब्जा जमाना चाहते है। गांधीवाद का मानना है कि प्रकृति ने प्रत्येक वस्तु को पर्याप्त मात्रा में उपलब्ध किया हुआ है जिससे सबकी तृष्णा की नहीं बल्कि सबकी आवश्यकताएं पूरी हो जाती हैं। इसलिए, गांधीवाद का विचार मानवता की आवश्यकताओं की निरंतर पूर्ति के लिए संपोषित विकास का समर्थन करता है।

एक युगदृष्टा के रूप में गांधी ने मानवता को चेतावनी दी कि वह लालच वृत्ति का त्याग कर दे, और दृढ़ रूप से अपरिग्रह व्रत का समर्थन किया जिससे कि लालच पर काबू पाया जा सके। गांधी का आम तौर पर पारिस्थितिकी, पर्यावरणीय साहित्य और आन्दोलनों में काफी उद्घृत किया जाता है। विरोध के अहिंसक तरीके, घेराव, अपनी मांग के समर्थन में पर्चें बांटना, सरकार को वर्तमान स्थितियों की समीक्षा के लिए मजबूर करना, उससे वार्ता करना ये कुछ ऐसे प्रभावशाली तरीके हैं जिनका प्रयोग आन्दोलनकारी समय–समय पर करते आ रहे हैं। चाहे राजनीति, आर्थिक, सामाजिक या पर्यावरण से जुड़ा आन्दोलन हो, गांधी के तरीकों को बार बार अपनाया जा रहा है, उनका परीक्षण किया जा रहा है, उनके साथ प्रयोग किये जा रहे हैं ताकि मानवता को यह बताया जा सके कि इन तरीकों का आज भी महत्व है, इनकी पहले से कहीं अधिक प्रासंगिकता है और समय के साथ इन पर धूल नहीं जमी है।

एक अन्य क्षेत्र जहां गांधी को उद्घृत किया जाता है वह है मानव अधिकारों का क्षेत्र। मानव अधिकार द्वारा व्यक्ति गरिमा और सम्मान के साथ अपना जीवन बिताता है। इस अधिकार का किसी भी प्रकार का उल्लंघन का अर्थ है व्यक्ति को उसके अधिकार से वंचित करना और उसके जीवन पर इन अधिकारों की अस्वीकृति का प्रतिबन्ध लगाना। गांधी का दक्षिण अफ्रीका में पहला संघर्ष ही अप्रवासी भारतीयों के अधिकारों के लिए था जिससे वे वहां सम्मान व गरिमा के साथ जीवन बिता सकें।

अंत में, हम थॉमस वेबर के इन शब्दों से सारांश में कह सकते हैं कि, समाज में अपनी वर्तमान कमजोर स्थिति की उद्देश्यपरक वास्तविकता के बावजूद, बहुत से पुराने गांधीवाद तथापि गांधीवादी के मूल्य के बारे में आशावादी हैं। ये मानते हैं कि गांधीवाद को एक ऐसी शक्ति समझा जा सकता है जो भलाई के लिए परिवर्तन ला सकती है।

संसार भर में सामाजिक आन्दोलनों की संख्या बढ़ती ही जा रही है और वे गांधवादी तरीकों को अपना रहे हैं, और पर्यावरण के ह्रास का दृष्टिकोण बाध्य कर रहा है कि पाश्चात्य जीवन स्तरों का एकाधिकार और उपभोग के ढंग का फिर से इस तरीके से मूल्यांकन किया जाए ताकि लोग

गांधवादी दृष्टिकोण की ओर मुड़ें। गांधी के विचारों का विश्लेषण, विभिन्न आन्दोलनों में उनके द्वारा अपनायें गये तरीकों, सामान्य दिनों में उनके द्वारा किये गये रचनात्मक कार्य और उनका स्वयं का संयमित जीवन दर्शन किसी भी युग में गांधीवाद की सफलता की गारन्टी है।

I UnHkZ

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सहायक आचार्य (हिन्दी)

दीन दयाल उपाध्याय राजकीय स्नात्कोत्तर महाविद्यालय

सीतापुर।

भाषा समाज के विचारों का अभिव्यक्त करने का माध्यम रही है भाषा ही वह जीवन ज्योति है जो एक व्यक्ति का दूसरे व्यक्ति से संबंध स्थापित करता करती है। मानव के विचार ही उसका समाज से संपर्क स्थापित करते हैं और यह संपर्क भाषा के माध्यम से ही होता है प्रत्येक समाज अपनी आवश्यकतानुसार अलग–अलग भाषाएं विकसित करता है यही कारण है कि विश्व में अनेक भाषाएं बोली जाती हैं। किसी भी समाज की भाषा उसकी विशिष्टता की वाहक होती है। वह समाज की बौद्धिक परिपक्वता का भी प्रतीक होती है। जो समाज जितना अधिक विचारशील और प्रबुद्ध होता है उसकी भाषा उतनी ही अधिक समृद्ध एवं उन्नत होती है।भाषा वह इकाई है जिसका संबंध मानव जाति के सबसे छोटे अवयव वक्त से लेकर संसार के का एकांत में पड़ा हुआ व्यक्ति भी किसी भाषा का प्रयोग करता है और एक विश्व विख्यात व्यक्ति भी किसी विशेष भाषा का प्रयोग करता है काल–भेद, स्थान –भेद, देश–भेद ,स्तर –भेद आदि के आधार पर भाषाओं की अनेकरूपता दृष्टिगोचर होती है भाषा का स्वरुप सदैव गत्यात्मक होता है। एक ही काल मे एक ही भाषा के विभिन्न रूप प्रचलित होते हैं जैसे मूल भाषा, परिनिष्ठित भाषा, भाषा, बोली, व्यक्तिगत भाषा आदि। अपने मानकीकृत रूप से भिन्न बोलियां या जनभाषा का रूप सदैव ही गतिमान होता है । गत्यात्मक होने के कारण ही वह अत्यंत प्राणवान और जीवंत होती है। जब कभी भाषा के मानकीकृत रूप का विकास अवरूद्ध हो जाता है तब पुनः सौंदर्य और जीवंतता प्राप्त करने के लिए जनभाषा का आश्रय ग्रहण करती है। इस प्रकार हम देखते हैं कि समाज भाषा पर और भाषा समाज पर आश्रित होती है। भाषा का सर्वोत्तम उपयोग व्यक्ति को समाज से समन्वित करने का है। भाषा समाज का समन्वय सूत्र है जिससे समाज समन्वित, संगठित एवं समृद्ध है अतएव ऋग्वेद में कहा है कि भाषा राष्ट्री–राष्ट्र निर्मात्री और संघमनी अर्थात

समन्वित करने वाली शक्ति है –

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भाषा की दशा और दिशा को तय करने में समाज की महती भूमिका होती है। कोई भी भाषा तभी तक जीवित रहती है जब तक समाज द्वारा स्वीकृत रहती है। जन समान्य के साथ ही साथ विद्वतजन उसे बोलचाल से लेकर पठन–पाठन मे प्रयुक्त करते रहे। भाषा का सामान्य कार्य सर्वव्यापी होता है अर्थात विश्व की अन्य भाषाओं के शब्दों अर्थों आज से उनका शब्दार्थ कमोबेश मिलता–जुलता है जबकि विशिष्ट कार्य उसकी विशिष्ट सामुदायिक सम सांस्कृतिक सामूहिक धरोहर होती है जो अन्यत्र दुर्लभ होती है यह विशिष्टता प्राकृतिक, सांस्कृतिक या दोनों का द्योतक होती है। विश्व की अनेक महान भाषाएं काल के गर्त में इसीलिए समा गईं क्योंकि जनता ने उन्हें नकार दिया। महान और समृद्ध साहित्य भंडार होने के बावजूद ये भाषायें अब इतिहास है। विश्व में अनुमानित करीब 6700 भाषाएं जीवित हैं मगर पिछली कुछ सदियों में सैकड़ों भाषाएं लुप्त हो चुकी हैं अथवा लुप्त होने के कगार पर हैं। यूनिस के यूनेस्को के अनुसार जब किसी भाषा में निम्नलिखित तीन दशाएं दिखाई पड़ती हैं तो वह भाषा खतरे में पड़ जाती है–

१– जब भाषा –भाषी उस भाषा को बोलने में प्रयोग नहीं करते हैं ।

२– भाषा–भाषी संप्रेषण क्षेत्रों में इसका प्रयोग बहुत कम बार करते हैं।

३– भाषा–भाषी उस भाषा को अगली पीढ़ी को हस्तांतरित नहीं करते हैं।

यदि हम हिंदी भाषा की स्थिति पर दृष्टिपात करें तो पता चलता है एक ओर हिंदी भाषा को आज विश्व में बोली जाने वाली भाषाओं में तृतीय स्थान प्राप्त है वहीं दूसरी ओर अपने हिंदी समाज में उसकी स्थिति दोयम दर्जे की है। इसके अनेक कारक है जो इस भाषा को सर्वोच्च पद दिलाने में बाधक है।

आज भी हिंदी समाज का झुकाव अंग्रेजी भाषा के प्रति अधिक है हम अगर हिंदी भाषी प्रदेश के समाज के मनोविज्ञान का चिंतन करें तो हम पाते हैं कि समाज का पढ़ा–लिखा वर्ग अपने बच्चों को अंग्रेजी माध्यम की शिक्षा देने में ज्यादा जोर लगाता है। उसे लगता है कि अंग्रेजी माध्यम से ज्ञान प्राप्त विद्यार्थी अपने भविष्य में ज्यादा सफल होंगे। माता–पिता अपने बच्चों को हिंदी

सिखाने से पहले अग्रेंजी भाषा सिखाते हैं। यह भाषा स्टेटस सिम्बल के रूप में मानी जाती है। लोग घरों में भले ही हिंदी भाषा बोले परंतु सभ्य समाज में स्वयं को पढ़ा–लिखा सिद्ध करने के लिए अंग्रेजी भाषा में व्यवहार करते हैं। अपनी भाषा के प्रति हिंदी समाज में गौरव का भाव नहीं है। भाषा के प्रति हीन भावना से ग्रसित होकर हिंदी भाषी प्रदेश की जनता अपनी ही भाषा से दोयम दर्जे का व्यवहार करती है। हिंदी भाषा में साहित्य तो प्रचुर मात्रा में प्राप्त होता है परंतु ज्ञान साहित्य जैसे कि तकनीकि, चिकित्सा, विज्ञान आदि अंतरिक्ष विज्ञान की शाखाएं उन शाखाओं का ज्ञान अभी भी हिंदी भाषा में प्राप्त नहीं है। जो प्राप्त भी है उसके अनुवाद की गुणवत्ता ऐसी नहीं है कि वह विद्यार्थी को आसानी से समझ में आए इसीलिए जब भी विज्ञान वर्ग के, चिकित्सा वर्ग के छात्रों को अंग्रेजी भाषा की पुस्तकों या हिंदी भाषा की पुस्तकों में चयन करना होता है। वे अंग्रेजी भाषा के पुस्तकों का चयन ही करते हैं। भले ही वह भाषा मातृभाषा नहीं होती है फिर भी उस भाषा में लिखी हुई बातें उन्हें आसानी से आती हैं। यह भी एक बड़ा कारक है जिसके कारण विद्यार्थी वर्ग अपनी मातृभाषा को अपनाने में हिचकता है क्योंकि वह जानता है कि बड़े स्तर पर यानी जब उच्च शिक्षा में जाएगा तो यह भाषा उसका साथ नहीं दे पाएगी इसलिए वह शुरुआत से ही ऐसी भाषा का चयन करता है जो जीवन में उसे आगे बढ़ाए। दुर्भाग्यवश अभी भी भारतीय समाज में आधुनिक होने का आशय पश्चिम का अंधानुकरण ही माना जाता है चाहे वह खानपान के स्तर पर हो, वेशभूषा या भाषा के स्तर पर जो व्यक्ति अपने आप को आधुनिक दिखाना चाहता है वह सबसे पहले पाश्चात्य वेशभूषा धारण करता है, फिर वहां का खानपान अपनाता है और साथ भाषा को भी। अभी तक हमारा समाज अपना स्वतन्त्र आधुनिक स्वरूप विकसित नहीं कर पाया है इसीलिए हिंदी भाषा को आधुनिक मानने में हिचकता है।

हमारे भारतीय समाज में यह प्रवृत्ति अब आम हो गयी है जैसे–जैसे व्यक्ति अपने जीवन में सफल होता जाता है वह अपनी मातृभाषा को छोड़कर आंग्ल भाषा को स्वीकार कर लेता है जैसे हिंदी सिने जगत के अभिनेता, खिलाड़ी, अधिकांश राजनेता, व्यवसायी, साहित्य कार, वैज्ञानिक आदि। ये सभी हमारे देश के नव युवकों के रोल मॉडल है यानी हमारी नयी पीढ़ी इनके जैसी

बनने का सपना लिए बड़ी होती है। आज का युवा वर्ग अपने माता–पिता, परिवार से अधिक इन्हीं सफल व्यक्तियों का अनुकरण करना पसंद करती है। अंग्रेजी भाषा का प्रयोग कर रहे ये लोग उसकी मनः स्थिति पर बड़ा ही गहरा और दूरगामी प्रभाव डालते है। युवा वर्ग अपनी भाषा से कट जाता है। उसे लगता है कि उसकी हिन्दी भाषा में वह बात नहीं है जो उसे सफल बना सके इसीलिए जब वह सफलता के पायदान चढ़ता है तो अपनी भाषा को पीछे छोड़ जाता है। समाज पर इसका मनोवैज्ञानिक प्रभाव पड़ता है और समाज अपनी ही भाषा को दोयम दर्जे का मान लेता है।

वैश्वीकरण के इस दौर में आज पूरी दुनिया एक गांव हो गई है और विश्व के एक कोने की खबर दूसरे कोने तक चंद मिनटों में पहुंच जाती है ऐसे में विश्व की भाषाएं एक दूसरे से प्रभावित हो रही हैं। हिंदी भाषा भी इससे अछूती नहीं है। किसी भी भाषा का शब्द–भंडार अनेक बोलियों और संबंधित मातृभाषा के शब्दों से मिलकर बना होता है। हिंदी भाषा सर्वाधिक भारतीय भाषाओं के अतिरिक्त अंग्रेजी भाषा से प्रभावित हुई है। अंग्रेजी भाषा के अनेक शब्द यथावत हिंदी भाषा में प्रयोग होते हैं। वर्तमान में यह प्रवृत्ति बढ़ी है कि हिंदी भाषा में प्राप्त समुचित शब्दों के स्थान पर अंग्रेजी शब्दों का प्रयोग होने लगा है। दैनिक समाचार पत्रों में ऐसी प्रवृत्ति देखने को मिल रही है वह न तो हिंदी के शब्दों के शुद्ध लेखन पर बल देते हैं और न ही शब्दों को हिंदी में रूपांतरित ही करते हैं। हिंदी समाज का पढ़ा–लिखा वर्ग भी इसके प्रति अत्यंत उदासीन है वह कभी भी अशुद्ध वर्तनी अथवा त्रुटिपूर्ण शब्द योजना पर रोष प्रकट नहीं करता है। जिस कारण मूल भाषा अपना स्वरूप खोती जा रही है।

यह बड़े ही आश्चर्य की बात है कि दैनिक जीवन में प्रयोग होने वाली अनेक वस्तुओं का हमारी हिंदी भाषा में कोई समुचित शब्द नहीं है। इस दिशा में कार्य करने की आवश्यकता है। जिससे हिंदी भाषा की समृद्धि बढ़े और भाषा शब्द संपदा के लिए अन्य भाषाओं पर निर्भर न रहे। इसके लिए यह आवश्यक है कि अन्य भारतीय भाषाओं से शब्द लिए जाएं। जिससे भाषा की व्यापकता में प्रसार हो परंतु साथ ही साथ यह भी आवश्यक है कि हिन्दी भाषा का शब्द–भंडार निर्मित किया जाए।

हिंदी भाषा के संदर्भ में एक प्रवृत्ति और भी देखी गई है की सामान्य बोलचाल की हिंदी, सरकारी कार्यालयों में लिखी जाने वाली हिंदी और न्यायालयों में विधिक कार्यों के लिए प्रयुक्त हिंदी के स्वरूप में बहुत अधिक अंतर है। सामान्य जनता को सरकारी संस्थाओं की हिंदी भाषा को समझने में अत्यंत कठिनाई होती है। उदाहरण के तौर पर यदि आप बैंक जाएं, वहा पर आपको पैसा निकालना हो तो इस प्रक्रिया में जिस हिन्दी का प्रयोग होता है , उस हिंदी को समझना शिक्षित व्यक्ति के लिए भी कठिन होता है। ऐसे में ना चाहते हुए भी व्यक्ति अंग्रेजी भाषा के तरफ झुक जाता है। उसे लगता है कि यह कार्य अंग्रेजी भाषा में करना ज्यादा आसान है। यह समस्या वस्तुतः अप्राकृतिक अनुवाद की है या शब्दावर अनुवाद की है। समाज और भाषा के बीच की इस दूरी को कम करने की आवश्यकता है। मैं यह नहीं कह रही हूं कि न्यायालयों की भाषा इतनी सरल कर दी जाए उसके अनेकार्थ निकलने लगे परंतु भाषा ऐसी अवश्य होनी चाहिए जो सर्वग्राही हो। अभी तो हाल यह है कि उच्च शिक्षित व्यक्ति भी न्यायालयों में प्रयोग होने वाली हिंदी भाषा या बैंकों में प्रयुक्त भाषा को समझने में सक्षम नहीं होता।

वर्तमान परिदृश्य में हिंदी भाषा विश्व की लोकप्रिय भाषा हो गई है जिसमें हिंदी सिनेमा का बहुत ही महत्वपूर्ण योगदान है। हिन्दी सिनेमा विश्व के अनेक देशों में देखा जाता है, समझा जाता है। उसके गाने विभिन्न देशों में गुनगुनाए जाते हैं परंतु साथ ही साथ भाषा को प्रत्येक क्षेत्र में समृद्ध होने की आवश्यकता है। समाज के परिवेश में परिवर्तन होने के साथ ही साथ भारत के नए क्षेत्र पैदा हो जाते हैं कोई भी भाषा जब आधुनिक चुनौतियों को पूरी नहीं करती तो वह अप्रासंगिक हो जाती है। हिंदी भाषा को भी स्वयं को विभिन्न क्षेत्रों के लिए तैयार करना होगा। सूचना संचार क्रांति के इस दौर में हिंदी भाषा को विभिन्न सूचना माध्यमों के अनुरूप स्वयं को ढालना होगा।

निसंदेह वर्तमान परिदृश्य में हिंदी भाषा के सम्मुख अनेक चुनौतियां हैं जिससे उसे सामना करना है। किसी भी भाषा को समृद्ध बनाने में उस भाषा के समाज का सकारात्मक रवैया बहुत बड़ी भूमिका निभाता है हिंदी भाषी प्रदेश की जनता। जनता को भाषा संबंधी अपनी हीन भावना से उबर कर हिंदी भाषा की

समृद्धि के लिए हिंदी भाषा की समृद्धि और विकास के लिए प्रयत्न करने होंगे। जिन क्षेत्रों में हिंदी भाषा अल्पविकसित है, उसे विकसित करने की आवश्यकता है। हम क्योंकि अपनी मातृभाषा से विलग होकर हम अपनी अस्मिता को खो देंगे। अंग्रेजी भाषा को अन्य भाषा के रूप में सीखना चाहिए परंतु मौलिक चिंतन सदैव अपनी मातृभाषा में ही होता है। भारतेंदु हरिश्चंद्र ने भी कहा है कि—

निज भाषा उन्नति अहै ,सब उन्नति को मूल।

■ Hkk"kk foKku ,oaHkk"kk 'kkL=] Mk dfiy nso f}osnh] i॑ॱ॒ l a– …] fo'ofo|ky; çdk'kuA

■ ogh] i॑ॱ॒ l & …„

■ __Xosn lafgrk – ƒâ.ƒ„‡-…] lkroydj

■ lᘺ–fr vk§ lekt – ƒƒ†] luHkkÓ"k 'kekl] Hkkjrh; KkuihBA

■ ogh & ƒƒ‡

Mksdyke Hkkjr dh lfØ; fons‘k uhfr

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विभागाध्यक्ष—राजनीति विज्ञान विभाग

दीनदयाल उपाध्याय राजकीय स्नातकोत्तर महाविद्यालय,

सीतापुर।

सीमा विवाद पड़ोसी देशों के साथ भारत का मुख्य मुद्दा रहा है। डोकलाम सीमा विवाद का ही एक प्रकट रूप है। चीन के साथ सीमा विवाद के मुद्दे पहले भी रहे हैं तथा इस संबंध में चीन से एक युद्ध भी हो चुका है। अंग्रेजों ने चीन के साथ किसी भी संभावित संघर्ष से बचने के लिए ‘तिब्बत का पूर्ण अधिग्रहण करके बफर जोन तथा तिब्बत की स्वायत्ता दोनों को समाप्त कर दिया। डोकलाम भारत की सुरक्षा से जुड़ा मुद्दा है। इसकी भौगोलिक अवस्थिति ट्राइ—जंक्शन की है। जहां भारत, चीन व भूटान की सीमाएं मिलती हैं। यह ट्राइ—जंक्शन नाथुला दर्रा से मात्र 15 किलोमीटर की दूरी पर है।[1] डोला भारत का हिस्सा नहीं है। डोकलाम को भूटान तथा चीन दोनों अपना हिस्सा मानते हैं। भारत इसे भूटान का भाग मानता है। विवाद की वास्तविक शुरुआत तब हुई जब जून के प्रारम्भ में चीन ने इस क्षेत्र में सड़क निर्माण का कार्य शुरु किया।[2]

‘‘भूटान’’ ने चीन के इस कदम का जमीनी तथा राजनीतिक रूप से कई बार विरोध किया।[3] भूटान का आरोप है कि चीन का यह कदम 1988 तथा 1998 के चीन—भूटान समझौते का उल्लंघन है।[4] जिसके अनुसार चीन तथा भूटान डोकलाम क्षेत्र में शांति बनाए रखने का कार्य करेंगे।[5] भारत के विदेश मंत्रालय ने चीन के इस कदम का इलाके की मौजूदा स्थिति में बदलाव माना।[6] सड़क निर्माण से चीन एक बड़े सैन्य लाभ की स्थिति में होगा क्योंकि भारतीय सेना इस इलाके को ‘चिकन नेक’ मानती है। युद्ध की स्थिति में डोकलाम से चीन सीमा पूरे पूर्वोत्तर भारत को शेष भारत से काट सकती है।

भारत ने 1949 तथा 2007 के भारत—भूटान के बीच के रक्षा समझौते के आधार पर भारत ने चीनी सीमा के सड़क निर्माण से रोक दिया। तत्पश्चात् लगभग 72 दिनों के गतिरोध के बाद चीन—भारत की सेनाएँ वापस लौट गयीं। यह भारत की एक बड़ी कूटनीतिक जीत है। चीन द्वारा लगातार युद्ध की धमकियों के बाद भी भारत के कूटनीतिक संयम ने इस विवाद को निपटाने में मदद की।

डोकलाम मुद्दे पर अमेरिका तथा जापान ने खुलकर भारत के पक्ष का समर्थन किया।

Discussion & Finding ¼fooe'kZ ,oa ifj.kke½&

1½ **Hkkjr dh vkØked fons'k uhfr&** डोकलाम मुद्दे पर भारत ने आक्रामक विदेश नीति का पालन किया। संभावित खतरे को भांप कर सही तथा कठोर निर्णय लिया।

2) Pro Active Step ¼igys dh phu uhfr l s vyx½& पूर्व की चीन नीति से अलग इस बार भारत ने चिकन नेक को ध्यान में रखते हुए Pro Active Action लिए।

3½ **dWuhfrd thr&** चीन द्वारा लगातार युद्ध की धमकियों के बाद भी भारत ने संयम रखते हुए मूल मुद्दे पर ही ध्यान केंद्रित रखा। यह बड़ी कूटनीतिक जीत है।

4½ **vrjkZ'Vªh; lk[k esa of)&** डोकलाम मुद्दे पर भारत की संयमित तथा सधी हुई नीति से इसके अंतर्राष्ट्रीय साख में वृद्धि हुई है। भारत एक 'जिम्मेदार' तथा 'मजबूत' राष्ट्र दिख रहा है।

5½ **,f'k;k esa phu dk lrgyu&** डोकलाम मुद्दे से अमेरिका तथा जापान आदि राष्ट्रों को एशिया में चीन के संतुलन में भारत दिख रहा है।

6½ **vkfl;ku ns'kka esa dn c<k&** चीन के साथ सीमा और समुद्र विवाद के परिप्रेक्ष्य में आसियान देशों में भारत की डोकलाम नीति ने एक अच्छा संकेत छोड़ा है।

fu"d"kZ% डोकलाम के संदर्भ में भारत की विदेश नीति पहले के चीन विवादों के संदर्भ में अधिक सक्रियता की है। मोदी सरकार ने अपनी सक्रिय विदेश नीति को डोकलाम मुद्दे पर कार्यान्वयन (FUNCTIONAL) के स्तर पर लागू किया।

l nHkZ xzaFk lph (BIBILIOGRAPHY)-

1½ Vh-Vh-ds , Vyl

2½ Mh-Mh-U;wt 18 tw 2017

3½ bf.M;k VMsts tqykbZ 2017

4½ nSud tkxj.k 22 tw 2017

5½ bf.M;k VMsts tqykbZ 2017

6½ Mh-Mh- U;wt 20 tw 2017

xk/kh th ds vfgal koknh fl)kUr
vkt Hkh ikl fxd g\

Mk0 iou dpekj ;kno

एसो0 प्रोफेसर–इतिहास विभाग

आर0 एम0 पी0 (पी0जी0) कालेज, सीतापुर

गाँधी जी के विचार जो सत्य, अहिंसा, सत्याग्रह, ब्रह्मचर्य, त्याग एवं बलिदान पर आधारित है यही विचार गाँधीवाद के नाम से जाना जाता है। अपने इन विचारों और सिद्धान्तों का गाँधी जी ने स्वतः आचरण के रूप में खुद जिया और दूसरों के लिए प्रेरणा के पुंज बने।

महात्मा गाँधी युग निर्माता थे। वह मानवता के महान पुजारी थे। वह एक ही साथ महान सन्त, विचारक, समाजसुधारक, स्वतंत्रता प्रेमी तथा सच्चे राष्ट्रभक्त थे। वह एक महान कर्मयोगी थे। उनके जीवन का मार्ग सत्य व अहिंसा से होकर जाता था। वह घृणा, क्रोध, साम्प्रदायिकता तथा हिंसा के विरोधी थे। व्रत, अनुशासन तथा आत्मसंयम उनके जीवन की साधना थी। वह दयालुता की सच्ची प्रतिपूर्ति, प्रेम, भाईचारा एवं सौहार्द्र के प्रबल संदेशवाहक थे।

आज जहाँ हम चरम वैज्ञानिक विकास के कारण चाँद तथा मंगल पर पहुँचने लगे हैं, खुद को आधुनिक तथा सभ्य कहलाने में लगे हैं वही नैतिक मूल्यों का ह्रास आज समाज की सबसे बड़ा चुनौती है। नैतिक होना अर्थात् शुभ की ओर बढना। भारतीय नीति दर्शन का सार है– 'सत्यम्–शिवम्–सुन्दरम्' अर्थात् जो सत्य है, वही शिव है अर्थात् कल्याणकारी है और जो कल्याणकारी है, वही सुन्दर है। नैतिकता हमें सत्यम्–शिवम्–सुन्दरम् के आदर्शों पर चलने की प्रेरणा देती है लेकिन विसंगति यह है कि प्रत्येक मनुष्य के लिए इस मार्ग पर चलना टेढी खीर लगता है।

भारतीय वांग्मय हमें नैतिकता के मार्ग पर चलने के लिए प्रेरित करते हैं। समय–समय पर हमारे महापुरुषों ने इस मार्ग का अनुकरण करके हमारे लिए पथ प्रदर्शन किया है। ऐसे ही महापुरुष थे महात्मा गाँधी, जिन्हे समस्त राष्ट्र राष्ट्रपिता महात्मा गाँधी के नाम से जानता है तथा सम्मान से बापू कहकर पुकारता है। अनैतिकता के फैलने से समाज में चोरी, हत्या, भय, हिंसा, बलात्कार, आतंकवाद, रिश्वतखोरी, जमाखोरी, बेरोजगारी, भाई–भतीजावाद, वर्ग

संघर्ष, गरीबी, शोषण, धर्मान्धता, जातीयता, भ्रष्टाचार तथा बलात्कार जैसी चीजों ने जड़े जमा ली है। महात्मा गाँधी ने उपर्युक्त समस्याओं और चुनौतियों के समाधान के लिए एकादश व्रत के पालन को आवश्यक बताया है। उनके द्वारा निर्दिष्ट एकादश व्रत है– सत्य, अहिंसा, ब्रह्मचर्य, अस्वाद, अस्तेय, अपरिग्रह, अस्पृश्यता निवारण, शारीरिक श्रम, सर्वधर्म समभाव तथा स्वदेशी। यही गाँधीवादी दर्शन की आधारशिला है।

गाँधी के अनुसार अहिंसा नैतिक जीवन जीने का मूलभूत तरीका है। यह सिर्फ आदर्श नहीं, बल्कि यह मानव जाति का प्राकृतिक नियम है। हिंसा से किसी समस्या का तात्कालिक और एक पक्षीय समाधान हो सकता है किन्तु स्थायी एवं सर्वमान्य समाधान अहिंसा से ही संभव है। गाँधी जी का कहना था कि यदि हिंसा और कायरता में से एक को चुनना हो तो हिंसा को चुनना उचित है। अहिंसा को साधन बनाने वाले पहले व्यक्ति गाँधी जी नहीं थे परन्तु इसे आन्दोलन का रूप देने वाले गाँधी जी पहले व्यक्ति थे।

अहिंसा को अपना धर्म मानने वाले मोहनदास करमचंद गाँधी स्वाधीनता संग्राम के राजनैतिक और अध्यात्मिक नेता थे। सत्याग्रह, अहिंसा और सादगी को ही एक सफल मनुष्य_जीवन का मूल मंत्र मानने वाले गाँधी जी के इन्हीं आदर्शों से प्रभावित होने के बाद रवीन्द्रनाथ टैगोर ने पहली बार उन्हें महात्मा का दर्जा दिया था। गाँधी जी ने अपना जीवन अहिंसा के मार्ग पर चलते हुए सत्य की व्यापक खोज में समर्पित कर दिया था।

गाँधी जी अहिंसा के सिद्धान्त के प्रवर्तक नहीं थे फिर भी इसे पैमाने पर राजनैतिक क्षेत्र में इस्तेमाल करने वाले पहले व्यक्ति थे। अहिंसा का भारतीय धार्मिक विचारों में एक लंबा इतिहास है और इसके हिन्दू, बौद्ध, जैन, यहूदी और ईसाई समुदायों में बहुत सी अवधारणायें है। गाँधी जी ने अपनी आत्मकथा The Story of My Experiments with Truth में दर्शन और अपने जीवन के मार्ग का वर्णन किया है। उन्होंने बताया था।

"जब मैं निराश होता हूं तब मैं याद करता हूँ कि हालाँकि इतिहास सत्य का मार्ग होता है किन्तु प्रेम इसे सदैव जीत लेता है। यहां अत्याचारी और हत्यारे भी हुए हैं और कुछ समय के लिए वे अपराजेय लगते थे किन्तु अन्त में उनका पतन ही होता है– इसका सदैव विचार करें।"

"एक आंख के लिए दूसरी आंख पूरी दुनिया को अंधा बना देगी।"

"मरने के लिए मेरे पास बहुत से कारण हैं किन्तु मेरे पास किसी को मारने का कोई कारण नहीं है।"

इन सिद्धान्तों को लागू करने में गाँधी जी ने इन्हें दुनिया को दिखाने के लिए सर्वाधिक सीमा पर ले जाने से भी मुंह नहीं मोड़ा जहां सरकार, पुलिस और सेनाएं भी अहिंसात्मक बन गयीं। "विज्ञान का युद्ध किसी व्यक्ति को तानाशाही, शुद्ध और सरलता की ओर ले जाता है। अहिंसा का विज्ञान अकेले ही किसी व्यक्ति को शुद्ध लोकतंत्र के मार्ग की ओर ले जा सकता है। प्रेम पर आधारित शक्ति सजा के डर से उत्पन्न शक्ति से हजार गुना अधिक और स्थायी होती है। यह कहना निन्दा करने जैसा होगा कि अहिंसा का अभ्यास केवल व्यक्तिगत तौर पर किया जा सकता है और व्यक्तिवादिता वाले देश इसका कभी अनुसरण नहीं कर सकते हैं।

सरलता की पराकाष्ठा का व्यक्तित्व एवं जीवन वर्तमान के सामाजिक, राजनीतिक एवं अन्तर्राष्ट्रीय परिप्रेक्ष्य में उतना ही प्रासंगिक है जितना 100 साल पहले था। जब भी भारतीय समाज की बात होती है तो गाँधी दर्शन के बिना अधूरी रहती है। महात्मा गाँधी के विचार आज भी उतने प्रासंगिक है जितने अपने वक्त में थे। गाँधी जी का बचपन, उनके सामाजिक एवं राजनीतिक विचार, सर्वोदय, सत्याग्रह, खादी, ग्रामोघोग महिला हिंसा, अस्पृश्यता, स्वालम्बन एवं अन्य सामाजिक चेतना के विषय_आज के युवाओं के शोध एवं शिक्षण के प्रमुख क्षेत्र है।

गाँधी जी ने अपने पीढी के युवाओं को भयरहित कर अंग्रेजों के दमन का सामना करने का अद्भुत साहस दिया था। आन्दोलन के समय हमेशा युवाओं को सतर्क करते रहते थे। सविनय अवज्ञा आन्दोलन के समय उन्होंने कहा था हमारा आन्दोलन हिंसा का अग्रदूत न बन जाए इसके लिए मैं हर दण्ड सहने के लिए तैयार हूँ, यहाँ तक कि मैं मृत्यु का वरण करने को भी तैयार हूँ।

मानव प्रजाति की उत्पत्ति से लेकर आज तक की सारी मानवता, व्यक्तिगत, सामाजिक, जातीय, राष्ट्रीय एवं अंतर्राष्ट्रीय स्तर पर शान्ति के लिए प्रयासरत रहीं है। गाँधी जी का मानना था कि समाज में शान्ति की स्थापना तभी सम्भव है, जब व्यक्ति भावनात्मक समानता एवं आत्मसन्तोष को प्राप्त कर लेगा। गाँधी जी के अनुसार शान्ति की प्राप्ति प्रत्येक युवा का भावनात्मक एवं कियात्मक लक्ष्य होना चाहिए तभी उसकी उर्जा, गतिशीलता एवं उत्साह राष्ट्रीय

हित में समर्पित होगें।

वैश्विक स्तर पर आज हिंसा, मतभेद, बेरोजगारी, मँहगाई तथा तनावपूर्ण वातावरण में आज एक बार पुनः महात्मा गाँधी के सत्य और अहिंसा के विचारों की प्रासंगिकता महसूस की जा रही है। गाँधीवाद का जितना विरोध भारत में हुआ शायद ही दुनिया के किसी अन्य देश में इतना विरोध हुआ होगा। गाँधी के विचारों की प्रासंगिकता तब भी नहीं महसूस की गयी थी जब वो जीवित थे। उनके विचारों से असहमत एक कट्टरपंथी ने उनकी हत्या कर दी।

आज गाँधी के विचारों से मतभेद रखने वाली उन्हीं शक्तियों को यह भली–भाँति यह महसूस होने लगा है कि गाँधी अपने विरोधियों के लिए दरअसल जीते जी उतने हानिकारक नहीं थे जितना कि हत्या के बाद साबित हो रहे है। और इसकी वजह केवल यही है कि जैसे–जैसे विश्व हिंसा, आर्थिक मंदी, भूख, बेरोजगारी तथा नफरत जैसे तमाम हालात में उलझता जा रहा है, वैसे–वैसे दुनिया को न केवल गाँधी के दर्शन याद आ रहे है बल्कि गाँधी दर्शन को आत्मसात करने की आवश्यकता भी बड़ी शिद्दत से महसूस की जाने लगी है। गाँधीवाद की आज के समय में प्रासंगिकता को महसूस करने के लिए हाल ही की कुछ घटनाओं पर नजर डालनी होगी।

अमेरिका पर 9/11 को हुए आतंकवादी हमले ने दुनिया की राजनीति का रूख ही बदल कर रख दिया। अमेरिका पर हुए आतंकी हमले के बाद हमला मानते हुए राष्ट्रपति बुश ने आतंकवाद के विरूद्ध युद्ध की घोषणा कर दी। शान्तिप्रिय संसार की मनोकामना करने वाले विश्व की अधिकांश देशों ने आतंकवाद के विरूद्ध अमेरिका का साथ दिया। आतंकवाद से पीडित कई देश दरअसल यह चाहते थे कि केवल आतंकवाद के विरूद्ध अमेरिकी नेतृत्व में एक विश्व व्यापी निर्णायक जंग लडी जाए। कई देशों से आतंकवाद का दंश से मिल रहे देशों को आतंकी घटनाओं से छुटकारा मिले तथा दुनिया शान्ति व अमन चैन से रह सके और यह सब पूरी ईमानदारी व पारदर्शिता के साथ हो। परन्तु दुनिया की उपरोक्त सभी कल्पनाएं तथा मनोकामनाएं धरी की धरी रह गयी। आतंकवाद के विरूद्ध युद्ध की राष्ट्रपति बुश की घोषणा के बाद बुश के पूरे शासनकाल के दौरान दुनिया के किसी भी देश से आतंकवाद का सामना नहीं हो सका। अफगानिस्तान, इराक, ईरान, यमन, ओमान, इजराइल फिलिस्तीन में हिंसा आज भी जारी है और अलकायदा जैसे आतंकी संगठन पहले से और

मजबूत हुए है।

आतंकवाद के विरूद्ध युद्ध के भयावह परिणाम इसके नाम पर विभिन्न देशों में लाखों लोगों की होने वाली मौतें, आतंकवाद के नाम पर होने वाले अरबों डालर के खर्च, लाखों बेगुनाहों के साथ–साथ हजारों अमेरिकी व उसके सहयोगी देशों के सैनिकों की मौतों तथा इन सब के बीच विश्व में छायी भारी आर्थिक मंदी, बेरोजगारी एवं मानव अधिकारों के हनन के परिणाम स्वरूप उपजने वाले विश्वव्यापी असंतोष के बीच अमेरिका में 2009 में हुए राष्ट्रपति के चुनाव में सत्य, अहिंसा तथा शान्ति की बात करने वाले पहले अश्वेत अमेरिकी राष्ट्रपति के रूप में ओबामा ने राष्ट्रपति पद की शपथ ग्रहण की। अमेरिका राजनीति में आए इस क्रान्तिकारी परिवर्तन के पीछे आखिर रहस्य क्या था? महाबली, सर्वशक्तिमान तथा ऐसी और न जाने कितनी उपाधियों से पुकारे जाने वाले अमेरिका की जनता आखिर जॉर्ज बुश के तथा कथित आतंकवाद विरोधी युद्ध से उबर कर क्यों शान्ति की बात करने वाले ओबामा के समर्थन में एकमत हो गयी? इसी ऐतिहासिक परिवर्तन ने एक बार फिर वह प्रश्न अंतर्राष्ट्रीय स्तर पर खडा कर दिया है कि कही आज के हिंसापूर्ण वातावरण में महात्मा गाँधी के आदर्शों की पुनः प्रासंगिकता तो नहीं महसूस की जा रही है? ओबामा का जीवन महात्मा गाँधी के आदर्शों से प्रेरित रहा है। राष्ट्रपति चुनाव के समय ओबामा ने अपने सीनेट कार्यालय में महात्मा गाँधी की वह तस्वीर लगा रखी थी जिसमें वह शान्ति का सन्देश देते हुए नजर आ रहे थे।

सर्वधर्म समभाव की जीती जागती तस्वीर समझे जाने वाले गाँधी मानते थे कि हिंसा की बात चाहे किसी भी स्तर पर क्यों न की जाए, परन्तु वास्तविकता यही है कि हिंसा किसी भी समस्या का सम्पूर्ण एवं स्थाई समाधान कतई नहीं है। जिस प्रकार आज के दौर में आतंकवाद व हिंसा विश्व स्तर पर अपने चरम पर दिखाई दे रही है ऐसी परिस्थितियों में गाँधी जी की अहिंसा की बात की प्रासंगिकता एक बार पुनः स्वतः स्पष्ट हो जाती है।

अहिंसा से हिंसा को पराजित करने की सारी दुनिया को सीख देने वाले गाँधी जी स्वयं गीता से प्रेरणा लेते थे। हांलाकि वे गीता को एक अध्यात्मिक ग्रंथ स्वीकार करते थे। गाँधी जी श्रीकृष्ण द्वारा अर्जुन को दिये गये संदेश में कर्म के सिद्धान्त से अत्याधिक प्रभावित थे। "कर्म किए जा, फल की चिंता मत कर" को आधार बनाकर अहिंसावादी सिद्धान्तों को आत्मसात किया था।

आज पूरी दुनिया बदल रही है महात्मा गाँधी उतने ही ज्यादा प्रासंगिक होते जा रहे है। सरकार स्वच्छ भारत अभियान की शुरूआत करे तो उसे गाँधी ही याद आते है, उसे रोकने के लिए गाँधी के आदर्श याद आते है। अमेरिका राष्ट्रपति बराक ओबामा को गिफ्ट देने की बात आती है तो नरेन्द्र मोदी की तलाश गाँधी की लेखनी पर जाकर ही खत्म होती है। गाँधी भारत में [2] अक्टूबर को याद किए जाते हैं लेकिन विश्व में हर रोज याद किये जाते हैं।

गाँधीवाद से प्रेरणा लेने वाले 20वीं सदी के नेताओं में मार्टिन लूथर किंग जूनियर दलाईलामा और डेसमंड टूटू जैसे धर्मध्वजी योद्धा शामिल है। तो नेल्सन मंडेला, आन सान सू की और अमेरिकी राष्ट्रपति बराक ओबामा भी बापू से प्रभावित हुए बिना नहीं रह सकें है। "लीडरशिप द गाँधी वे" पुस्तक के लेखक वीरेंद्र कपूर ने लिखा है कि आज के नेता गाँधी की राह पर चल पड़े तो उन्हें कामयाब होने से कोई नहीं रोक सकता।

आज भारतीय समाज जाति, पार्टी, साम्प्रदायिकता, क्षेत्रवाद तथा हिंसा की राजनीति में फँस चुका है। पूरे देश में अशान्ति तथा असुरक्षा का माहौल बना हुआ है। इस स्थिति पर स्वयं भारत की उच्चतम न्यायालय की चीफ जस्टिस एस0 ए0 बोबडे ने चिंता जाहिर करते हुए टिप्पणी की है। देश में लगातार कई क्षेत्रों में धारा 144, धरना, प्रदर्शन तथा हिंसा का वातावरण बना हुआ है। ऐसे में सिर्फ महात्मा गाँधी की अहिंसावादी विचार धारा ही भारतीयों का मार्गदर्शन कर सकती है। गाँधी जी के अहिंसावादी विचार सर्वकालिक तथा अजेय है।[2] अक्टूबर 2019 को गाँधी जयन्ती के अवसर पर याद करते हुए उत्तर प्रदेश के पूर्व मुख्यमंत्री श्री अखिलेश यादव ने कहा–"वर्तमान समय में संकट और बदलाव के दौर में भारत की तमाम समस्याओं का समाधान सिर्फ गाँधी जी के मार्ग पर चलकर ही प्राप्त किया जा सकता हैं। देश को तानाशाही तथा साम्प्रदायिकता से सिर्फ बापू के हथियारों से ही परास्त किया जा सकता हैं।" उन्होनें गाँधी जी को याद करते हुए कहा है कि "ईश्वर अल्लाह तेरो नाम, सबको सम्मति दे भगवान।" गाँधी जी की इसी भावना से हम देश को एकजुट तथा सुरक्षित रख सकते हैं।

आज दुनिया के किसी भी देश में शान्तिमार्च का निकालना हो अथवा अत्याचार व हिंसा का विरोध किया जाना हो या हिंसा का जवाब अहिंसा से दिया जाना हो, ऐसे सभी अवसरों पर पूरी दुनिया को गाँधी जी की याद आज

भी आती है और हमेशा याद आती रहेगी। अतः यह कहने में कतई अतिशयोक्ति नहीं होगी कि गाँधी जी के विचार कल भी प्रासंगिक थे, आज भी प्रासंगिक हैं और जब तक दुनिया रहेगी तब तक प्रासंगिक बने रहेंगे।

इसलिए प्रस्तुत शोधपत्र में एक बार पुनः गाँधी के अहिंसावादी विचार की विवेचना का वर्तमान में संकटग्रस्त विश्व के सन्दर्भ में समीचीन प्रतीत हो रही है। इस शोधपत्र में इस विवेचना का एक सूक्ष्म प्रयास किया गया है।

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Themes and Issues of Women writers in Postcolonial Indian English Fiction

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"Postcolonial theory takes many different shapes and interventions, but all share a fundamental claim: that the world we inhabit is impossible to understand except in relationship to the history of imperialism and colonial rule…. it has taken multiple forms: it has been concerned with forms of political and aesthetic representation; it has been committed to accounting for globalization and global modernity; it has been invested in reimagining politics and ethics from underneath imperial power, an effort that remains committed to those who continue to suffer its effects; and it has been interested in perpetually discovering and theorizing new forms of human injustice, from environmentalism to human rights. Postcolonial theory has influenced the way we read texts, the way we understand national and transnational histories, and the way we understand the political implications of our own knowledge as scholars."[1]   Thus we understand that Post colonialism is an umbrella term which is inclusive of all discourses that challenge the dominance of all kinds of hegemony in every walks of human life. Postcolonial writers engaged themselves in opening up and looking towards a new world of possibilities. Their writings can be taken as a medium of resistance to the former colonizer with their themes focusing on the issues like identity, national and cultural heritage, hybridity, partition, diaspora, contemporary socio-economic reality, human relationships and emotions etc. By breaking away from the burden of the colonial past and the traditional limitations of Indian society, the postcolonial women writers carved out a place for a distinct female identity in the Indian English fiction.

The predominant theme of the women's fiction is the status of the Indian woman in relation to the tradition-bound patriarchal society; her struggle to overcome its constraints; and the concerns of the emerging post-colonial generation in relation to the burden of the British legacy. They emphatically captured the suffering and sacrifice of the downtrodden Indian women. Such literary production represented a breakthrough in the further development of the women's writing. It became possible to start redefining the social position of women.The writers empowered women, granted them identity, mobility and the freedom of expression. For this reason, the late twentieth century women's literature made a significant contribution to the change of attitudes towards the position of women in the Indian society and literature, and as such it holds an important place in the development of women's writing.

In contrast to the generic portrayal of the Indian women as an ideal creature, an embodiment of various virtues, docile, unassertive and deferential

in the novels prior to 1960s, the postcolonial delineation of modern women reflects departure and quest for identity. Now the women, being educated and conscious of their right and privileges are demanding their proper place in society. Undeniably, under the influence of western feminists like Simone de Beauvoir [The Second Sex, 1952], Betty Friedan [The Feminine Mystique, 1963] and Kate Millet [Sexual Politics, 1970] the Indian women writers delve deep into the psyche of their characters and also herald a new concept of morality. The most basic issue of man-woman relationship acquired the central focus in the postcolonial literary canon as well but often with a different edge.Marx has said. "The nature of this relation determines to what point man himself is to be considered as a generic being, as mankind; the relation of man to woman is the most natural relation of human being to human being. By it is shown, therefore, to what point the natural behaviour of man has become human or to what point the human being has become his natural being, to what point his human nature has become his nature"[2]. In the novel of Shashi Deshpande*The Dark holds No Terror*, dealing with the theme of discord in marital life, we see the total violation of Max's above observation but even then the emergence of a new 'Indian' woman who derives strength from her weak position on account of her belief in the long cherished Indian values and discovers a new meaning of life. "Bryan Palmer counters current gender studies with an argument for the necessity to analyze lived experiences and the structures of subordination and power. Sarita's repentance and realization of the lived experience showed her the light. From comparing the "house" of choice with the "hell of savagery and submission" she was all set to start afresh. The peculiar nature of her eroticism and the difficulties that beset a life of freedom urges woman towards monogamy. She could transcend suffering to be a powerful woman as observed by de Beauvoir: "The fact is that physical love can be treated neither as an end in itself nor as a mere means to an end; it cannot serve as a justification of existence; but neither can it be justified extraneously. That is, it should play in any human life an episodic and independent role which is to say that above all it must be free" ... "On the day when it will be possible for woman to love not in her weakness but in her strength, not to escape herself but to assert herself –on that day love will become for her, as for a man, a source of life and not of mortal danger". This analysis establishes the view that the peculiar nature of feminine eroticism and the difficulties that beset a life of freedom urge woman towards monogamy. Extra-marital relations and other kinds of modernistic concepts of sexual gratification, such as homosexuality and so on, are the results of perverted psychology. The end of the novel points to a woman's eternal quest to find fulfillment through the man who has created and explored her. The novel promises an egalitarian future where there would be the possibility of a newer insight into the man–woman relationship, a relationship of perpetual mutual understanding and harmony

between the sexes through acceptance and appreciation of natural differences and individualities."[3]

In post-colonial period, the Partition of India has also been the most prominent theme for women novelists. Amrita Pritam's novel *Pinjar*, based on partition-theme, presents a universal and irreparable experience of loss of a woman during this historical holocaust. The novelist describes how the dreams of many girls of this country were destroyed due to the Partition of India. Tarun K. Saint writes about *Pinjar* in his book *Witnessing Partition*: "Amrita Pritam here traces the prehistory to the widespread abductions during the partition, acknowledging the long-standing feuds and mutual distrust within village society. *Pinjar* sharply critiques the double standards at work in a society in which notions of stigma and pollution by touch led to the marginalization of such abducted women even if recovered."[4] The protagonist Pooro is a woman victim of the partition. Her kidnapping and abduction, her parents' refusal to take her back into the family, her conversion from Pooro to Hamida and marriage to Rashid and motherhood by a Muslim- all represent myriad of cruelties – physical, social, economic and psychological. But she endures all and develops the sense of deeper truth. Later on her personal painful experiences mingle with the lives of other ill-fated women. Reena Maitra comments on the novel: "*Pinjar* depicts the world of social reality which draws its meaning from an interpretation of experienced reality, a reality which is engendered not by a system or a doctrine that prevails but by a sense or a sensitivity which helps organize the raw data of experience into a cognition and an appreciation. To put it simply, the novel takes stock of that which asserts itself in the experiential past, however much we try to banish it from our consciousness."[5] Urvashi Butalia in her most famous work *The Other Side of Silence* also presents the unheard tales of women survivors of the Partition. These women victims face double violence during the exodus, one from the 'enemy' community and the other from their own 'guardians' – fathers, brothers and husbands, who killed women to protect their 'honour'. The chilling account of double violence is a reminder that in all religious, racial and political upheavals, it is the women who suffer the most.

One of the most prominent themes of the postcolonial literature has been the theme of loss of identity, rootlessness, nostalgia, migration and exile. The past became a part of the present consciousness in the literature of diaspora. A number of women writers like Bharati Mukherjee, Chitra Banerjee Divakaruni, Ruchira Mukherjee, Jhumpa Lahiri, Manju Kapur etc. earned accolade for their graphic presentation of the issue in their novels. JumpaLahiri, though born and raised in London, feels connected to India because of the influence of her frequent childhood visits to India and her immigrant parents' experiences of their native country India. All the nine stories of JhumpaLahiri's Pulitzer Prize winning collection, *Interpreter of Maladies,* set both in India and America, deal with the theme of exclusion

and loneliness. "Jhumpa admits that there is less of a divide between American culture and Indian because of the greater access and communication channels, but she has observed a sense of emotional exile in her parents and in her friends that she feels can never go away. On the other hand, the problem for children of immigrants, those with strong ties to their country of origin, is that they feel neither one thing nor the other. She says:

I've inherited my parents' preoccupations. It's hard to have parents who consider another place "home" – even after living abroad for thirty years, India is home for them. We were always looking back so I never felt fully at home. There's nobody in this whole country that we're related to. India was different – our extended family offered real connections. To see my parents as children, as siblings, was rare.

(Lahiri's First Book Gets Raves." *http://www.rediff.com/news/may22/1999)*"[6]

The exposure to both Indian and American cultures enabled Lahiri to present cross cultural currents in her next novel *Namesake* as well. This novel's characters also suffer from the feeling of alienation. "All diasporic literature is an attempt to negotiate between these two polarities. The writings of exiled/ immigrant writers undertake two moves, one temporal, and other spatial. It is, as Meena Alexander puts it 'writing in search of homeland'."[7]

The multidimensional matrix of cross culture has also been dealt with by a number of women writers. Such as Meena Alexander, the prolific academician par excellence, explores the theme of geographic identity in her life narrative *Faultlines* (1993). In the words of renowned thinker, GayatriSpivak, a subaltern is in search of identity here. This is a book of the writer's genesis. The memoir details about her matrilineal lineage. She is the proud granddaughter of the first lady member of the Travancore legislative assembly, her grandmother Kunju. Her deep bond with Amma and Kunju, this matrilineal linking, is suggestive of her longing for her motherland and mother tongue. Kunju, though dead before her birth, is her idol who had challenged the orthodoxy and fought for issues pertaining to women. Throughout the fragmented autobiographical narrative we notice the voice of the marginalized, dislocated and devoiced soul yearning to identify her real self. Her Amma is the spokesperson of patriarchy but she transgresses the rigid bonds and conventions of patriarchy. Her marriage with David Lelyveld, an American Jew, brought opposition from all corners. Her nostalgia regarding parting and farewell, a trope of loss, overpowers her. Being a subject to dislocation she searches for her identity in respect of nativity, nationality, ethnicity, genealogy, sex, and religious and political ideologies. She has been uprooted so many times that now she can connect nothing with nothing and still the process of becoming continues.

In this way we find that the postcolonial narrative by women writers on one hand looks backward to past inheritance as well as on the other hand

widens their horizon of experience and explorations. They look forward to realize their real self and struggle hard for their own voice, liberty and identity. They touch upon the variegated strands of life experiences, strive continuously and make efforts to give their life solidarity and meaning. They are not hesitant to explore the truth and give place to them in the creative work. Their contribution to the literary treasure truly deserves accolade.

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Response of maize seedlings to chromium (VI) and ultraviolet-B irradiation: effects on photosynthesis

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1. Introduction

The global environment is under continuous modifications as a result of human activities. In recent years, enhanced UV-B irradiation at the Earth surface and spilling of toxic metals in soil and aquatic habitats have been recognized as issues of major concern affecting growth and development of plants (Hidema, 2006). During the last two decades, thinning of stratospheric ozone layer is accelerated due to anthropogenically produced-halons and nitrogen oxides. In addition to this, the increasing greenhouse effect also provides favorable conditions for the splitting of ozone molecules by lowering down temperature in stratospheric region (Pyle, 1997). Decrease in thickness of ozone layer facilitates the transmission of UV-B irradiation (280-320 nm) to the Earth surface. Recently, maximum thinning of ozone layer is recorded over Antarctica and Arctic since measurements began. Although, UV-B irradiation comprises only a small portion of the electromagnetic spectrum, it has disproportionately large photobiological effects on both plants and animals owing to its absorption by important functional and structural biomolecules such as proteins, lipids and nucleic acids (Jansen et al., 1998). UV-B irradiation can affect many aspects of plant growth and metabolism (Carletti et al., 2003). In natural habitats, plants and microorganisms are often exposed to multiple environmental factors such as temperature, drought, pesticides, heavy metals, etc., which may modify UV-B-induced effects (Prasad et al., 2005). As a consequence of modern agricultural practices, heavy industrialization and faster urbanization, several toxic metals such as Hg, Cd, Pb, Ni, Cu, Mn and Cr are spilled in agricultural fields (Panda and Chaudhary, 2005). Chromium, one of the toxic metals is an increasing problem in soil and aquatic system, where it exists in two stable oxidation states; trivalent (Cr, III) and hexavalent (Cr, VI) chromium. Both Cr (III) and Cr (VI) differ in terms of mobility, bioavailability and toxicity. Cr (VI) is found to be more toxic than Cr (III) due to its oxidizing and free radical forming properties (Panda and Chaudhary, 2005). Cr (VI) forms chromate and dichromate and is highly soluble in water. Plants growing in Cr (VI) contaminated soil may absorb appreciably high amount of metal and its accumulation in plant parts, particularly in leaves may be many folds higher than the level present in the soil and aquatic system (Sharma et al., 1995; Hagemeyer, 1999; Shanker,

et al., 2004). The high accumulation of Cr can influence many key metabolic activities of microorganisms and crop plants (Prasad et al., 1991; Panda and Chaudhary, 2005).

Chromium and UV-B singly have been shown to cause strong damaging effect on PSII in cyanobacteria (Prasad et al., 1991; Prasad and Zeeshan, 2005) and plants (Strid et al., 1990; Ali et al., 2006).

The present study was undertaken to understand the responses of plants, subjected to different stresses. Since, Cr (VI) and UV-B irradiation often co-exists in the environment and both have been implicated in causing oxidative stress; it would be interesting to compare the effects of two stressors on plants, either applied singly or in combination. Recently, the combined effects of UV-B and metals (Cu^{2+}, Ni^{2+}, Cd^{2+}) on growth, nutrient uptake, photosynthesis and oxidative stress in cyanobacterium *Anabaena doliolum* (Rai et al., 1998), and soybean seedlings (Prasad et al., 2005) have been reported, but none of them have dealt with interactive effects of UV-B and Cr (VI), a situation very likely to exist in crop fields. Thus, in the present study the influence of increasing Cr (VI) levels and UV-B irradiation, singly and in combination, on (a) photosynthetic efficiency and electron transport chain, (b) growth parameters such as fresh mass and photosynthetic pigment contents in leaves of maize (*Zea mays* L.) seedlings were evaluated.

2. Material and methods

2.1. Plant material and growth conditions

Seeds of maize (*Zea mays* L. cv. Nootan) were surface-sterilized, thoroughly washed and soaked for 24 h in sterilized distilled water. Pre-soaked seeds were sown in acid washed sterilized sand filled in plastic trays, and incubated in dark at $28 \pm 2^{o}C$ for 2 days. Seedlings were grown in a growth chamber at $28 \pm 2^{o}C$ under 16 h light period (150 µmol photon $m^{-2}s^{-1}$, PAR), with relative humidity of 60 %. After 5 days of growth, uniform seedlings were gently transferred in 0.2 strength Rorison nutrient medium (pH 6.8) containing mM: 0.4 $Ca(NO_3)_2$, 0.2 $MgSO_4$ and 0.2 KH_2PO_4 and mM: 0.1 $CuSO_4.5H_2O$, 0.2 $ZnSO_4.7H_2O$, 9.2 H_3BO_3, 1.8 $MnCl_2.4H_2O$, 0.2 $NaMoO_4.2H_2O$ and 10 Fe-EDTA. The nutrient medium was aerated with sterile air and changed twice a week.

2.2. Chromium and UV-B treatments

After acclimatizing in nutrient medium for three days, healthy and uniform size seedlings were transferred to fresh nutrient medium containing different concentrations (0.01, 0.1 and 1.0 mM) of Cr (VI) as potassium dichromate, and half of the seedlings were given two successive exposures of UV-B (0.4 Wm^{-2} simulating 15 % ozone depletion at Varanasi, India, adjoining to Allahabad) for 45 min on 10th and 12th day. Similarly, in another set of experiment, seedlings grown in the absence of Cr were exposed to various doses of UV-B (15, 45 and 60 min doses correspond to 0.36, 1.08 and 1.44 kJ m^{-2}, respectively). On 13th day, seedlings from each set were

harvested and photosynthetic activities; levels of oxidative stress, and growth performance were analyzed. UV-B irradiation was provided by fluorescent UV- tube (TL 40 W/12 Philips, Holland) with its main output at 312 nm together with white light (50 µmol m^{-2}s^{-1}, PAR). The radiation was filtered through 0.127mm cellulose acetate (Johnston Industrial Plastics, Toronto, Canada) to remove all incidents UV-C (< 280 nm). The intensity of UV-B irradiation was measured with a power meter (Spectra Physics, USA model 407, A-2).

2.3. Growth and photosynthetic pigments analysis

The plant fresh mass was recorded by randomly selecting 10 seedlings from each set soon after harvest. Chlorophylls and carotenoids from leaves were extracted with 80% acetone. The amount of chlorophylls and carotenoids were estimated spectrophotometrically by the method of Lichtenthaler (1987).

2.4. Measurement of photosynthesis

Photosynthetic O_2 yield in leaf discs was measured with an O_2 electrode (Rank Brothers, UK) in the presence of 5 ml of 50 mM HEPES-NaOH buffer (pH 7.6) containing 20 mM $NaHCO_3$ as described by Kura-Hotta et al. (1987). Four square centimeters of leaves were sliced into 1 mm wide strips in a Petri dish containing 10 ml of 0.5 mM $CaSO_4$. The sliced leaf discs were transferred into the vessel of O_2 electrode, and O_2 consumption (respiration) in dark and evolution (photosynthesis) in light were estimated.

For estimation of photosynthetic electron transport activities, chloroplasts were isolated from healthy seedlings as described by Tripathy and Mohanty (1980). Before monitoring the assay of photosynthetic electron transport activities, chloroplasts were pre-incubated with different concentrations (0.01, 0.1, and 1.0 mM) of Cr for 5 min in dark and then exposed to UV-B (0.4 Wm^{-2}) for 30 min together with white light (20 µmol m^{-2}s^{-1}, PAR). The activity of PSII, whole chain and PSI was determined polarographically by Clark type oxygen electrode (Rank Brothers, UK). The rates of PSI (DCPIP/ASC® MV), whole chain (H$_2$O® MV) in terms of O_2 consumption and PSII (H$_2$O'!p-BQ) as O_2 evolution were estimated. Assay mixture consisted of 10 µM DCMU, 1 mM sodium ascorbate, 50 mM DCPIP, 50 mM sodium azide (NaN$_3$) and 50 mM methyl viologen (MV) for PSI; 50 mM NaN$_3$ and 50 mM MV for whole chain; 1 mM p-benzoquinone (p-BQ) for PSII measurements. In each case chloroplasts equivalent to 10 mg (Chl) ml^{-1} were suspended in the reaction mixture containing 0.5 M sucrose, 20 mM HEPES – NaOH buffer (pH 7.5), 10 mM NaCl and 10 mM MgCl$_2$. Spectrophotometric assay of PSII activity as DCPIP photoreduction in the presence and absence of artificial electron donors (MnCl$_2$: 0.05mM DPC: 5mM and NH$_2$OH: 5 mM) was monitored by measuring changes in absorption at 600 nm in reaction mixture containing 30 mM DCPIP.

3. Results

3.1. Growth characteristics and pigments analysis

Exposure of the seedlings to excess chromium (0.1 and 1.0 mM) or

UV-B (15, 45 and 60 min) caused a dose dependent decrease in growth measured as fresh mass (Tables 1 and 2). Simultaneous exposure of Cr and UV-B (45 min) further declined the growth, which was less than the additive effects, caused by both stresses separately. Interestingly, Cr at low concentration (0.01 mM) produced stimulatory effect on growth parameters. UV-B induced negative effect was lowered significantly, when 0.01 mM Cr treated seedlings were exposed to UV-B irradiation.

Similar to growth, a significant decrease in Chl *a* and Chl *b* contents was observed in response to individual treatments of UV-B and Cr (0.1 and 1.0 mM) and the contents further reduced following combined treatments. However, the deleterious effect on chlorophylls following combined treatments was found to be less than the additive effects, produced by both stresses singly (Tables 1 and 2). The contents of Chl *a* and Chl *b* in plants receiving 0.01 mM Cr increased by 9 and 5 %, respectively over the values of untreated control, but 0.01 mM Cr treated seedlings when exposed to UV-B exhibited a marginal decline in Chl *a* and Chl *b* contents. Excess Cr (0.1 and 1.0 mM) and UV-B (45 min), singly and together, caused greater decrease in Chl *b* contents than Chl *a* showing increased ratio of Chl *a* to Chl *b*. Bulk carotenoids showed almost a similar pattern to that of the chlorophylls, however, the relative decrease in total chlorophyll content was significantly more than carotenoid contents. Thus, a lower ratio of Chl to Car was noticed.

3.2. Photosynthetic electron transport activities

PSII, PSI and whole chain electron transport activities in isolated chloroplasts were inhibited at each tested dose of Cr and the inhibition was concentration-dependent (Table 3). Results also revealed that in isolated chloroplasts even growth stimulatory dose (0.01 mM) of Cr inhibited the electron transport activity significantly. Compared to PSI, Cr as well as UV-B caused strong inhibition on PSII and whole chain activities. Simultaneous exposure of both stresses declined the activity synergistically; however, the inhibition appeared to be less than the additive effects produced by both stresses individually. Exogenous electron donors (NH_2OH, DPC and $MnCl_2$) completely restored the PSII activity in chloroplasts exposed to 0.01 mM Cr (Table 4). The chloroplasts exposed to 0.1 mM Cr exhibited partial restoration in PSII activity showing 54, 36 and 25% recovery with DPC, NH_2OH and $MnCl_2$, respectively. In chloroplasts exposed to excess Cr (1.0 mM), $MnCl_2$ failed to restore the PSII activity, while DPC and NH_2OH still showed marginal (4-6%) recovery. Chloroplasts exposed to UV-B (30 min) exhibited 20, 19 and 12% recovery in PSII activity with NH_2OH, DPC and $MnCl_2$, respectively, and almost a similar restoration was recorded, when chloroplasts were simultaneously treated with UV-B and 0.01 mM Cr. These electron donors in chloroplasts pre-treated with 0.1 and 1.0 mM Cr in combination with UV-B, restored PSII activity marginally as shown by 8-13 % and 2-5% recovery, respectively.

4. Discussion

Ultraviolet-B irradiation (15, 45 and 60 min exposure) and high doses (0.1 and 1.0 mM) of Cr (VI) declined the growth of maize seedlings considerably (Tables 1 and 2), which could possibly be due to impaired physiological and biochemical activities in seedlings, particularly in leaves. Our results are in agreement with earlier findings, where Cr (VI) was shown to decline the growth in *Brassica juncea*, *Ocimum tenuiflorum, Salvia sclarea* and *Triticum aestivum* (Corradi et al., 1993; Sharma et al., 1995; Rai et al., 2004; Pandey et al., 2005; Ali et al., 2006). UV-B induced reduction in growth and biomass accumulation in maize and soybean seedlings was also reported by earlier workers (Correia et al., 1999; Prasad et al., 2005). Though, the toxic potential of Cr (VI) is quite high but its phytotoxicity varies with its concentration and target plants as *Pistia stratioites* showed 100% death after three days of 0.4 mM Cr (VI) treatment (Sen et al., 1987), whereas 0.5 mM Cr (VI) caused 50% reduction in growth of *Triticum aestivum* (Sharma et al., 1995) after 45 days of treatment. Further decline in growth due to simultaneous exposure of Cr and UV-B could occur as a result of interaction. The role of Cr (III) in animal and human nutrition as trace element is recognized but to date there is no evidence indicating any potential biological role of Cr (III) and Cr (VI) in plants. However, in the present study Cr (VI) at low dose (0.01 mM) stimulated the growth of maize seedlings, thus supports the earlier observations with Cr (VI) (Pandey et al., 2005) suggesting the possibility of stimulation in nutrient intake. Maize seedlings pre-treated with low dose of Cr (0.01 mM) and then exposed to UV-B showed comparatively less reduction in growth than that of seedlings exposed to UV-B alone. This might have occurred as a result of activated antioxidant systems.

UV-B or Cr caused considerable loss to chlorophylls and further decline in contents after simultaneous exposure of both stresses could have occurred due to accelerated breakdown of pigments (Teramura and Sullivan, 1994). Furthermore, Cr as suggested for other heavy metals might have replaced the central magnesium from the head of chlorophyll molecule and thus, declined the photostability of chlorophylls (Kupper et al., 1998). Both the stresses individually produced greater damaging effects on Chl *b* (Table 2) as reported for UV-B in *Vigna unguiculata* (Lingakumar and Kulandaivelu, 1993) and for Cr in wheat (Sharma et al., 1995), and as a result of interactive effects, the contents of Chl *b* declined more rapidly. The greater effect on Chl *b* probably occurred as a result of either rapid break down of Chl *b* or conversion of Chl *b* to Chl *a* (Fang et al., 1998). Thus, increased Chl *a/b* ratio seems logical as PS II is well known to be sensitive to UV-B and Cr (Table 3), and chlorophyll *b* is mainly associated with PS II. The enhanced levels of chlorophylls following 0.01 mM Cr treatment might have resulted due to increased biosynthesis and/or stabilization of pigments in the thylakoid membrane. Decreased Chl/Car ratio in the present study supports the view

that chlorophylls are more affected than carotenoids under stress conditions. In photosynthetic apparatus carotenoids protect chlorophylls from photooxidative destruction by scavenging singlet oxygen, and the considerable reduction in carotenoid contents in leaves owing to individual and simultaneous exposures could result in serious consequences on chlorophyll causing substantial loss to light harvesting ability of plants.

Elevated doses (0.1 and 1.0 mM) of Cr and UV-B, singly and together, caused substantial reduction in growth (Tables 1 and 2). This reduction might have resulted due to direct interaction of both stresses with photosynthetic electron transport activity and / or through indirect effects on CO_2 assimilating ability caused by increasing proton gradient across the membrane as a result of less utilization of reducing power (NADPH and ATP) in Calvin cycle. Metals as well as UV-B irradiation have been shown to inhibit CO_2 assimilation by slowing down the synthesis and/or activity of rubisco enzyme (Nedunchezhian and Kulandaivelu, 1991; Prasad et al, 1991). Tested doses of chromium (0.01, 0.1 and 1.0 mM) and UV-B (30 min) substantially inhibited PSII and whole chain mediated electron transport activity in isolated chloroplasts, and inhibitory response was more intense with combined doses (Table 3). This inhibition was probably due to damage caused by low dose (0.01 mM) of Cr at the oxygen-evolving complex as revealed by complete restoration of PSII activity following the addition of exogenous electron donors (DPC, $MnCl_2$ and NH_2OH). The damaging site further extended to electron transfer ability of PSII reaction center and plastoquinone (reducing side of PSII) with excess Cr (0.1 and 1.0 mM), UV-B and combined doses of UV-B and Cr (0.01, 0.1 and 1.0 mM), as evident from partial or little recovery of PSII activity by artificial electron donors (Table 4). Furthermore, the restoration ability of different electron donors was found to vary with degree of severity of stress, as in 0.1 mM Cr treated chloroplasts DPC appeared to be more efficient followed by NH_2OH and $MnCl_2$, while in chloroplasts treated with UV-B singly or in combination with 0.01 mM Cr, the restoration ability of these donors showed the order: $NH_2OH > DPC > MnCl_2$. Similar inhibition in PSII activity has also been reported in higher plants and cyanobacterium with Cr (Prasad et al., 1991; Sharma et al., 1995; Ali et al., 2006) and UV-B (Prasad and Zeeshan, 2005) individually. Chromium as well as UV-B may cause the change of turnover of PSII- D_1 protein and the alteration of 24 and 33 kDa proteins of the oxygen evolving complex as shown in earlier observations (Ali et al., 2006; Strid et al., 1990). Besides this, loss in PSII activity may also be partially contributed by substantial decrease in light harvesting components (Table 2) and energy transfer efficiency of antennae pigments to the reaction centre (Strid et al., 1990; Prasad et al., 1991). Compared to PSII, Cr at low dose (0.01 mM) and UV-B exposure alone caused little effect on PSI activity, which was in consonance with earlier findings (Almog et al., 1991; Prasad et al., 1991). The extent of inhibition increased with excess Cr singly and in

combination with UV-B, which was probably due to toxic effect exerted on photosynthetic reaction center complex (P700) and iron-sulphur complex at the reducing side of PSI. The marginal increase in photosynthetic efficiency in 0.01 mM Cr-supplemented seedlings could be correlated with the enhanced pigment contents (Table 2) and probably due to increased activity of Calvin cycle enzymes as shown by activation of rubisco enzyme with micromolar concentrations of other metals in *in vitro* condition (Stiborova et al., 1988). Though 0.01 mM Cr stimulated the growth and photosynthetic oxygen yield, but its toxic effect on photosynthetic electron transport activity was probably due to direct exposure of chloroplasts to 0.01 mM Cr.

In conclusion, high doses of hexavalent Cr and UV-B irradiation individually caused significant reduction in biomass accumulation of maize seedlings. The simultaneous exposures to both stresses produced more intense effect on growth. Furthermore, UV-B-induced negative effect appeared to be modified significantly in low dose (0.01 mM) Cr-pre-exposed seedlings.

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Table1
Effect of different doses of UV-B on fresh mass (FM), chlorophyll (Chl) and chlorophyll *a/b* ratio of maize seedlings

Treatments	FM [g plant^{-1}]	Chl *a* [mg (g FM)$^{-1}$]	Chl *b* [mg (g FM)$^{-1}$]	Chl *a+b* [mg (g FM)$^{-1}$]	Chl *a/b*
Control	1.38 [a]	0.80 [a]	0.36 [a]	1.16 [a]	2.22 [d]
15 min UV-B	1.30 (-6) [b]	0.73 (-9) [b]	0.32 (-11) [b]	1.05 (-9) [b]	2.28 (+3) [b]
45 min UV-B	1.28 (-7) [c]	0.68 (-15) [c]	0.30 (-17) [c]	0.98 (-16) [c]	2.26 (+2) [c]
60 min UV-B	1.20 (-13) [d]	0.65 (-19) [d]	0.27 (-25) [d]	0.92 (-21) [d]	2.40 (+8) [a]

Values in parenthesis are per cent decrease (-) or increase (+) with reference to respective controls. Values with different superscripts are significantly ($P < 0.05$) different from each other (Duncan's multiple range test**).**

Table 2
Effect of UV-B and different concentrations of chromium, singly and in combination, on fresh mass (FM) [g plant^{-1}], chlorophyll (Chl) and carotenoid (Car) [mg (g FM)$^{-1}$] contents of maize seedlings

atments	FM	Chl *a*	Chl *b*	Chl *a/b*	Car	Chl/Car
rol	1.33 [b]	0.78 [b]	0.37 [b]	2.11 [f]	0.30 [c]	3.83 [a]
mM Cr	1.46 (+10) [a]	0.85 (+9) [a]	0.39 (+5) [a]	2.17 (+3) [d]	0.34 (+13) [a]	3.65 [b]
nM Cr	1.28 (-4) [d]	0.67 (-14) [d]	0.31 (-16) [d]	2.16 (+2) [ed]	0.31 (+4) [bc]	3.16 [f]
nM Cr	1.18 (-11) [g]	0.61 (-22) [f]	0.27 (-27) [f]	2.25 (+7) [c]	0.26 (-13) [f]	3.38 [e]
in UV-B	1.24 (-7) [e]	0.65 (-17) [e]	0.30 (-19) [ed]	2.16 (+2) [e]	0.27 (-10) [ef]	3.52 [d]
mM Cr + 45 min UV-B	1.30 (-2) [c]	0.76 (-2) [c]	0.36 (-3) [c]	2.11 (0) [f]	0.31 (+4) [bc]	3.61 [c]
nM Cr + 45 min UV-B	1.21 (-9) [f]	0.60 (-23) [gf]	0.26 (-30) [gf]	2.30 (+9) [b]	0.28 (-7) [d]	3.07 [g]
nM Cr + 45 min UV-B	1.12 (-16) [h]	0.51 (-35) [h]	0.22 (-41) [h]	2.32 (+10) [a]	0.25 (-17) [g]	2.92 [h]

Values in parenthesis are per cent decrease (-) or increase (+) with reference to respective controls. Values with different superscripts are significantly ($P < 0.05$) different from each other (Duncan's multiple range test**).**

Table 3

Effect of UV-B and chromium, singly and in combination on photosynthetic electron transport activity in chloroplasts isolated from maize leaves

TREATMENTS	Photosynthetic activity		
	PSI	PSII	WHOLE CHAIN
Control	290 [a]	137 [a]	116 [a]
0.01 mM Cr	281 (3) [b]	123 (10) [b]	99 (15) [b]
0.1 mM Cr	261 (10) [e]	96 (30) [d]	75 (35) [d]
1.0 mM Cr	240 (17) [g]	70 (49) [e]	50 (57) [f]
30 min UV-B	275 (5) [c]	99 (28) [c]	79 (32) [c]
0.01 mM Cr + 30 min UV-B	270 (7) [d]	96 (30) [d]	75 (35) [d]
0.1 mM Cr + 30 min UV-B	255 (12) [f]	67 (51) [f]	53 (54) [e]
1.0 mM Cr + 30 min UV-B	229 (21) [h]	52 (62) [g]	40 (69) [g]

PS I (DCPIP/ASC®MV) and whole chain (H_2O ® MV) as mmol O_2 consumed (mg Chl)$^{-1}$ h^{-1}, and PS ll (H_2O ® p -BQ) as mmol O_2 evolved (mg Chl)$^{-1}$ h^{-1} was measured. Values in parenthesis are per cent inhibition with reference to respective controls. Values with different superscripts are significantly ($P < 0.05$) different from each other (Duncan's multiple range test**).**

Table 4

Effect of various exogenous electron donors on restoration of PS ll activity in isolated chloroplasts of maize seedlings exposed to different doses of Cr alone and together with UV-B

TREATMENTS	PS ll activity [µmol DCPIP reduced (mg Chl^{-1}) h^{-1}]			
	WITHOUT DONORS	WITH DONORS		
		DPC	MnCl$_2$	NH$_2$OH
Control	164 [a]	218 [b]	174 [b]	198 [b]
0.01 mM Cr	151 (-8) [b]	222 (+2) [a]	176 (+1) [a]	200 (+1) [a]
0.1 mM Cr	118 (-28) [d]	190 (-13) [c]	137 (-21) [c]	162 (-18) [c]
1.0 mM Cr	82 (-50) [g]	113 (-48) [g]	85 (-51) [g]	105 (-47) [g]
30 min UV-B	122 (-26) [c]	172 (-21) [d]	134 (-23) [d]	158 (-20) [d]
0.01 mM Cr + 30 min UV-B	115 (-30) [e]	166 (-24) [e]	127 (-27) [e]	156 (-21) [e]
0.1 mM Cr + 30 min UV-B	85 (-48) [f]	126 (-42) [f]	97 (-44) [f]	113 (-43) [f]
1.0 mM Cr + 30 min UV-B	57 (-65) [h]	81 (-63) [h]	63 (-64) [h]	75 (-62) [h]

Values in parenthesis are per cent decrease (-) or increase (+) with respect to respective controls. Values with different superscripts are significantly ($P < 0.05$) different from each other (Duncan's multiple range test**).**

Role of socio-economic & technology changes in emerging rural leadership

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SAMPLING METHOD

For the present study to discuss about the sample of the study i.e, the studied areas where these hypotheses would be empirically tested at Gram Panchayat level and Block level. The study was designed and carried out according to the plan, to study the objectives. Target was to cover at least 1/3rd of the total Gram Pradhan, BDC members and Zilla Panchayat Members. Though the task was very difficult, but multi-stage cluster sampling has been followed. The sampling was done in the following stages:

1. Purposive selection of the Blocks from the District.
2. Random selection of Gram Pradhan, BDS Members, Zilla Panchayat Members
3. Participant observation and Interview also made with these three tire members.

Out of 15 Blocks of Agra districts 5 Blocks namely, Shamsabad Block, Barouli Aheer Block, Akola Block, Sainya Block, Edmadpur Block have been selected on the basis of following reasons:

1. Different types of ecological conditions have been covered
2. Welfare measures taken up by the government differ to some extent
3. Level of socio-economic empowerment of rural political elites and rural leaders also varies
4. Different culture and political practice are there
5. Different caste dominated population blocks have been covered
6. A comparison is also possible

SAMPLE OF STUDY

From Shamsabad block 19 Pradhans out of 55, 28 BDC Members out of 84, from Barouli Aheer block 19 Pradhans out of 56, 36 BDS Members out of 108, from Akola block 11 Pradhans out 35, 23 BDS Members out of 70, from Sainya block 13 Pradhans out of 39, 23 BDS Members out of 68, from Edmadpur block 13 Pradhans out of 38, 22 BDS Members out of 66 have been taken and 15 zilla panchayat members also have been taken from these 5 blocks out of 42 members. So total number of 222 elite respondents have been selected out of 661

15
6.76%

Respondents

75
33.78%

■ Pradhan

■ BDC

■ District Members

132
59.46%
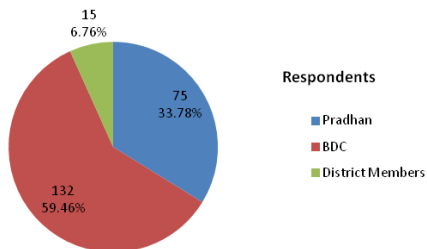
SOCIO-ECONOMIC PROFILE OF RURAL POLITICAL REPRESENTATIVES

Social and economic changes take place in society, they also have an impact on rural politics. Financially prosperous individuals join the political elite. Data has been collected based on the indicators that determine the social and economic level for the presented study. The study of the social and economic status of the rural political elite has been presented through various charts.

Chart 1 : Distribution of Respondents over the Age

3
1.35%

23
10.36%

Age Group

36
16.22%

■ 25-35

■ 36-45

65
29.28%

■ 46-55

■ 56-65

95
42.79%

■ 66 & Above
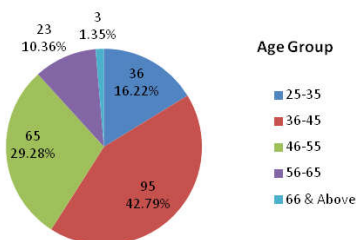
Chart 2 : Distribution of Respondents over the Gender

25
11.26%

Gender

■ Male

■ Female

197
88.74%
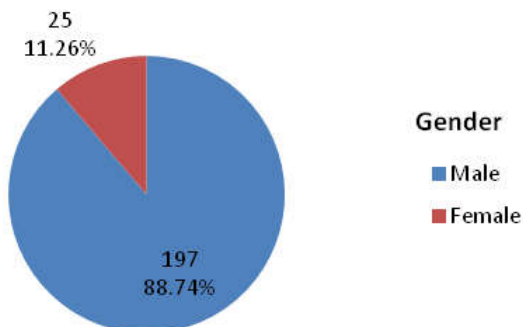
Chart 3 : Distribution of Respondents over the Category
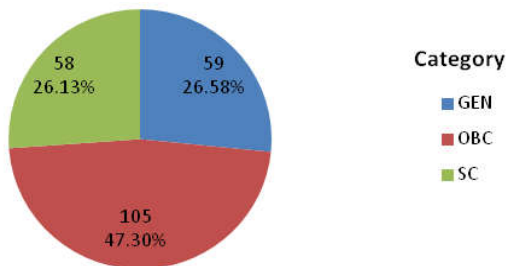
Chart 4 : Distribution of Respondents over the Education
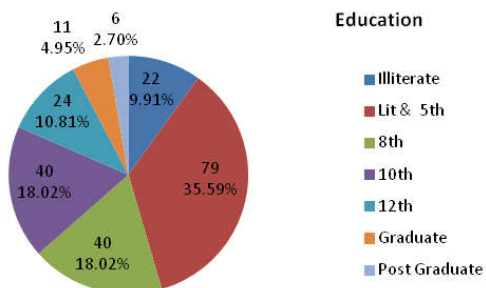
Chart 5 : Distribution of Respondents over the Occupation
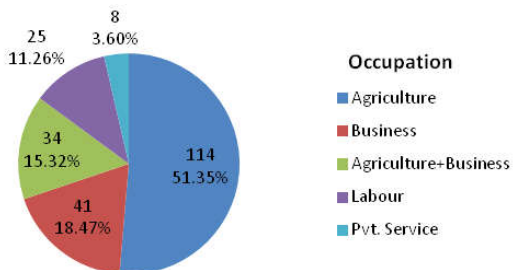
Chart 6: Distribution of Respondents over the Per Months Income
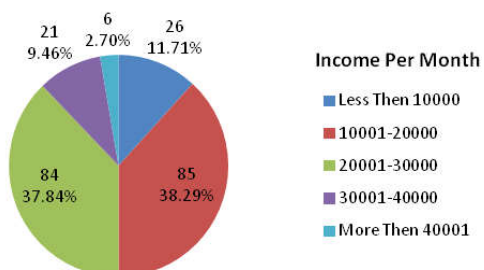
Chart 7 : Distribution of Respondents over the Family pattern

Family Pattern
- Joint
- Nuclear

146
65.77%

76
34.23%
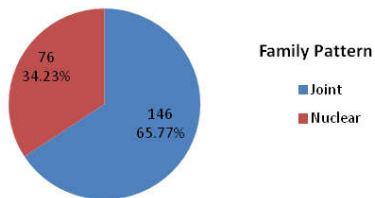
Chart 8 : Distribution of Respondents over the Residence

Residence
- Village
- City/Town
- Both

48
21.62%

8
3.60%

166
74.77%
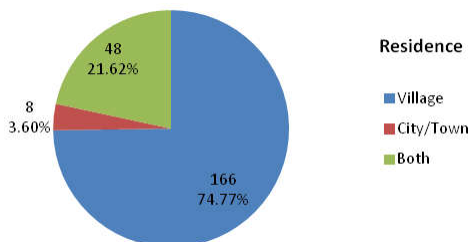
Chart 9 : Distribution of Respondents over the keeping Vehicles

Vehicles
- Four Wheeler Only
- Two Wheeler Only
- Both

0
0.00%

85
38.29%

137
61.71%
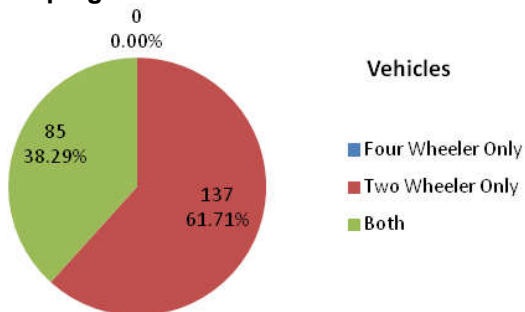
Chart 10 : Distribution of Respondents over the keeping Weapons

Weapons
- Yes
- No

107
48.20%

115
51.80%
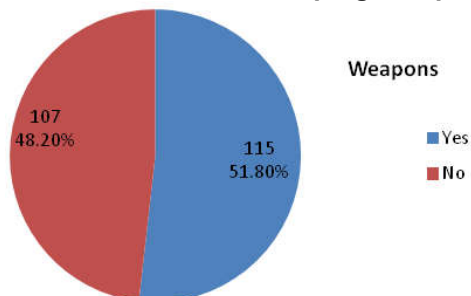
Chart 11 : Distribution of Respondents over the Agriculture Land
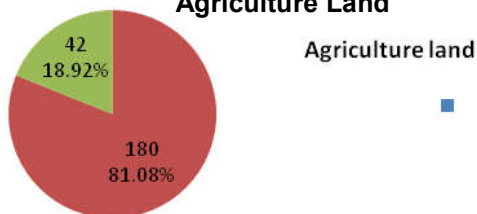
Chart 12 : Distribution of Respondents over the Use of Social Media
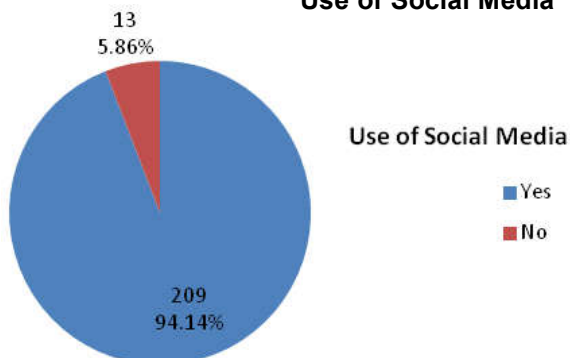
IMPACT OF SOCIAL & ECONOMIC CHANGES ON RURAL POLITICS:

It has been found by the study that social and economic factors are very important in determining political leadership in rural areas. As a result of social change, new alliances are being established between different castes for their own interests. As a result of reservation in panchayats, there has been an increase in political awareness among women, backward classes and scheduled castes and their effective leadership is emerging. Financially prosperous individuals are trying to establish themselves in rural politics. It is seen that economic prosperity in rural areas is emerging as a very important factor in determining political leadership. The new economically prosperous youth are presenting a challenge to the pre established traditional political system of the rural area. The new alliance of castes in rural areas is seen as an effective factor in panchayat elections. There is not much improvement in the status of women in rural political leadership. Women are definitely coming out winning the elections but their work is being done only by other male members of the family.

IMPACT OF CHANGES IN TECHNOLOGY ON RURAL POLITICS :

Use of technical resources is having a significant impact in emerging new configurations of rural political leadership. Computer, smart phone, Internet users are moving towards rural leadership. The social media has also given its knock in completing the functions of the panchayat from the panchayat elections. Social media has paved the way for the rise of new pressure groups in rural areas. Social media has evolved into a monitoring tool for these pressure groups. The functioning of various competitive groups of panchayats is being looked after and discussed through social media. Various online portals are being used well by panchayat representatives. Mobility and transparency in the work of panchayats is increasing through social media.

CONCLUSION :

India is a predominantly rural society. The role of rural elite for rural reconstruction and development is highly significant in India. The 73rd constitutional amendment and establishment of modern panchayati raj system has strengthened the roots of democracy at the grass-root level. It has also influenced the composition and nature of rural elite in modern India. In the study it was observed that rural leadership from poor, scheduled castes and backward castes of society too, is emerging through panchayati raj system.

According to this study, new political elite are being prepared by changing the social, economic level and using technical resources. Determination of leadership in panchayat elections is dependent on social and economic factors. Through this study, it has been known that the youth who are getting financially prosperous are emerging as political leadership of rural areas through the use of technological resources. New pressure groups are emerging through the use of technology. Caste system are breaking down to some level, but caste is still influential in elections.

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Postcolonial Themes and Issues in Ruth Prawer Jhabvala' Novels

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Ruth Prawer Jhabvala is one of the finest and most distinguished women novelists of the post colonial era who is internationally recognized for her masterpiece *'Heat and Dust'* published in 1975. Her works portray women's predicament in male-dominated society and their quest for identity. Jhabvala was born in 1927 in Germany to Jewish Polish parents. She was a Polish-German by birth, English by education, Indian by marriage and American by domicile. At the age of twelve, she emigrated to England. In 1951 she left England for India as the twenty four year old wife of Cyrus Jhabvala, an Indian architect. India has provided her a plenty of subject-matter for writing.

'Esmond in India' (1958) is the third novel of Jhabvala. The novel unfolds the racial discrimination and marital discord. It portrays how an Indian woman follows the traditions blindly and considers her husband like God. The novel deals with clashes and adjustments through an interracial marriage of Esmond and Gulab. Esmond marries an Indian girl, Gulab who loves her Indian life-style. The marriage of Esmond and Gulab fails because their basic altitudes towards life are different. The main cause of their dissonance is not only racial and cultural gap but also only temperament differences. The whole novel revolves around the life of Esmond and his wife Gulab. Esmond has a good knowledge of India and Indian culture. He teaches the wives of ambassadors and also works as a guide for them to the historical places.

According to Esmond, Gulab does not know the value of English life style. She is foolish and uncultured girl for him. Gulab is not his wife for him, she is a slave and he is a master. He does not like Gulab's meeting with her mother. Whenever she visits her mother's house she has to give explanations to him. She fears as if she has done any crime to going there. He abuses her to calling animal and grabbes her arm and begins to twist the flesh when she goes to her mother's house while he told her to stay at his flat. He tortures her not only physically but mentally also.

"He shouted aloud, 'Animal!' and then grabbed her upper arm and began to twist the flesh. 'You animal' he muttered through clenched teeth, ' why did you go away when I told you to stay at home', but he was hardly thinking what he was saying because all his consciousness went into twisting the flesh of her arm. He felt it soft and full in his hand and he twisted harder and harder. She had given only one cry of pain, which shock had forced out of her. After that she kept quiet; she did not want to frighten Ravi." (P. 164)

Esmond has extra marital affairs with Betty and Gulab knows about it still she tolerates all without any complaint. Like a typical Indian wife Gulab never raises her voice against her husband. Esmond expects her to stay at

home and engages herself in house hold activities while he himself enjoys with European women. Gulab is just a maid for him whose duty is only to clean his house. He is so cruel that he never allows Gulab to hug and kiss her son though he is just three and a half years old. Whenever Esmond gets chance he criticizes Gulab and imposes his disciplines on Gulab. It is very difficult for her to change her life style. Though she tries to adjust with Esmond. Despite her disliking of western life style she tries to follow Esmond's life style because she regards her duty to obey her husband.

Esmond is a typical Englishman who considers himself superior to his wife. Neither he respects his wife nor his mother in law. They have no importance for him. Gulab's mother constantly keeps asking her to leave him but Gulab considers Esmond her lord who can treat her as he likes. He never takes her outside. Gulab stays at home and he enjoys outside with fashionable women of upper class families. He has no feelings for Gulab only Gulab loves him. He always wants to get married to a rich girl who can provide him financial support. When he realizes that his marriage with Gulab cannot improve his social status he begins torture and criticize her.

Gulab loves him whole heartedly and does not want to leave him. She tries her best to make him happy. Gulab feels uncomfortable with his friends so she likes to stay at her home with Ravi. When Esmond's friend makes fun of Gulab, he does not react this shows that he has no respect for his wife. In the absence of Esmond, Gulab and Ravi love each other and do whatever they want to do. They eat Indian oily and spicy food and uses scent. In his absence they enjoy a lot. One day when Esmond goes out to meet his friend, his servant finds Gulab alone and molests her. She feels humiliated and realizes that Esmond is responsible for this situation because he never respects her and he always abuses her publically even in front of his servant. She feels that she is being ill-treated by the servant because her husband never gives respect and loves her. She says-

"It was a husband's right, so her instinct told her, to do whatever he liked with his wife. He could treat her will or badly, pampers her or beat her that was up to him, and it was not her place to complain. But in return there was one thing, only one, that he owed her, and that was his protection. It was his duty to see that she was safe in his house and that no stranger could cast insulting eyes on her. Esmond had failed in that duty; so now he was no more her husband. Nor she his wife : since she considered herself defiled, she could not remain in his house any longer but had to return, as was the custom, to her own people." (P. 200)

Gulab knows very well that Esmond never feels any need to say sorry to her. After her molestation she takes decision of leaving Esmond and his flat she could bear any kind of roughness from her husband but she did expect him to protect her chastity.

Her another novel *'Heat and Dust'* tells the story of Olivia Rivers and

the narrator, Anne. Both are main characters of the novel who travel to India. Olivia comes to India in the traditional role of a wife to the sub-collector of Satipur. She is beautiful, young woman. She wants her husband's love and his company but fails because of his official duty. Douglas has little time to spare for his wife who is all the time waiting for him. Olivia loves Douglas very much but she feels suffocated in her house because of her loneliness. This kind of loneliness increases her sufferings.

"She (Olivia) had by that time been in Satipur for several months and was already getting bored…… Olivia was alone in her big house with all the doors and windows and shut up to keep the heat and dust. She read and played the Piano, but the days were long, Very long…." (P. 14)

Olivia hopes that a baby will solve her problems but finds it more difficult to become pregnant. She fully regrets and feels sad that Douglas cannot make her pregnant. On the husband's wedding day, she feels drawn to the Nawab by strength a magnetism that she has never yet in all her life experienced with anyone when she meets the Nawab, she falls in love with him. A sensual relationship eventually develops with the Nawab, who seduces and impregnates her. But she dreads to face the future. So she decides to have an abortion. Indian midwives induce a miscarriage, but when she is taken to the hospital, Dr. Saunders recognizes the work of the midwives. After her recovery, she goes to the Nawab's palace. She elopes with the Nawab and never returns to Douglas. Thus, from the beginning till her death, she experiences only suffering and in struggle alone, she experiences her existence. Her tragedy is due to her marriage with Douglas without love and her love with the Nawab without marriage.

The second story is that of the narrator, a grand daughter of Douglas. She comes to India to discover more about the mystery surrounding her grandfather's first wife, Olivia. She had a collection of letter that Olivia had written to her sister, Marica. She tries her best to discover what motivates Olivia to change her life so drastically. Anne stays in the town where her grandfather and Olivia fifty years before. Like Olivia, she too falls in love with an Indian man. He is a meek clerk named Inderlal. He belongs to lower middle class. He is married and Ritu is his wife yet he develops ill-legal relationship with the narrator. He makes her pregnant as the Nawab made Olivia. Both Olivia and Anne, the narrator lead the same life. But unlike Olivia, she decides to have child of Inderlal.

Jhabvala shows women's condition and their survival for existence. By her another woman character Ritu, Jhabvala shows her miserable condition, Ritu is a wife of Inderlal who spends most of her time alone. She is psychologically affected because of this loneliness. She does not eat properly. The narrator tries to speak with Ritu but she does not allow anyone into her room. She needs a doctor but her husband and mother-in-law do not believe in modern medical treatment. Instead of taking Ritu to doctor, they

treat her by mantras and applying holy ash on her head.

In this way Ruth Prawer Jhabvala has made a significant contribution to the Indian English fiction. The female consciousness gets reflected in her writings which presents the problems of women in a realistic way. Her aim is to create awareness among women folk about their condition and instrumentalize equality and better understanding between the sexes. She has presented India in different shades and her own response towards India and Indians has changed with the passage of time.

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Economy and Environment: Competitors or Partners?

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The market cannot resolve environmental problems and that there is a need to find a solution that embraces the ethical dimension of environmental protection in the sustainable development debate. In the late 1960s and early 1970s, a powerful social movement emerged in affluent countries arguing that economic growth caused environmental decline and could not be sustained forever. A computer model of the world economy had been used to show that existing population and economic activity growth rates could not continue indefinitely on a planet that had limited resources and limited ability to deal with pollution.

But critics argued that even if notional limits were identifiable they could be extended through scientific and technological innovation and that economic growth was necessary to finance and motivate such innovation. The focus of early limits to growth writings on the depletion of resources such as oil and minerals, left them particularly open to this criticism and the lack of global shortages in subsequent years served more than anything else to discredit their arguments. Growth provided increasing living standards for many people in affluent countries and it was seen to be necessary to provide similar benefits for the remaining poor in those countries and for the populations of developing nations. Those who argued for limits to growth were accused of being elitist and of emphasising the environment at the expense of the quality of human life. Many did not differentiate between economic growth in affluent countries and economic growth in developing countries. Nor did they recognise that population growth in affluent countries could be far more environmentally damaging than population growth in poorer countries where resource use per person was low. Sustainable development seeks to make the competing goals of economic growth and environmental protection compatible. Is this possible? And does it represent an eclipse of the ethical and political dimensions of environmental problems by economic interests and priorities?

Sustainability in the 1980s: Partners?

The renewed interest in sustainability in the 1980s moved away from the original conception that economic growth cannot be sustainable to a new formulation which seeks to find ways of making it so. The limits-to-growth model has been replaced with the sustainable development model, and the 'gloom and doom' scenario has been replaced with 'win-win' solutions. In 1982, the British Government began using the term 'sustainability' to refer

to sustainable economic expansion rather than the sustainable use of resources. In the mid-1980s the World Commission on Environment and Development popularised the term 'sustainable development' in its Brundtland Report (1990). The Commission defined sustainable development as: 'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' In October 1987, the goal of sustainable development was largely accepted by the governments of 100 nations and approved by the UN General Assembly.

Sustainable development recognises that economic growth can harm the environment but argues that it does not need to. For more conservative environmentalists and for economists, politicians, business people and others, the concept of sustainable development offers the opportunity to overcome previous differences and conflicts, and to work together towards achieving common goals rather than confronting each other over whether economic growth should be encouraged or discouraged.

The Supposed Ethics of Economic Growth

One of the most pressing arguments for continued economic growth, is that it is necessary to meet the needs of poor people. Jim MacNeill, the secretary-general to the Brundtland Commission, argues that:The most urgent imperative of the next few decades is further rapid growth. A fivefold to tenfold increase in economic activity would be required over the next 50 years in order to meet the needs and aspirations of a burgeoning world population, as well as to begin to reduce mass poverty. If such poverty is not reduced significantly and soon, there really is no way to stop the accelerating decline in the planet's stocks of basic capital: its forests, soils, species, fisheries, waters and atmosphere.

The Brundtland Report also argued that economic growth was necessary for poorer nations to meet their needs but used this argument to support economic growth in all nations. However, economic growth does not necessarily eliminate poverty. The economic growth that has occurred worldwide over the last 20 years has not decreased the poverty in many developing nations; and the richest nations in the world still accommodate some of the poorest people**.** Such poverty results from distributional problems rather than from a nation's lack of wealth. Environmentalists Winin Pereira and Jeremy Seabrook (1991) also dispute the idea that high living standards, which they define as 'the widespread consumption of large volumes of goods and services,' can be sustained. No matter how much recycling and reuse occurs, the energy component in all manufactured goods and services cannot be recycled and inevitably creates pollution. They say: 'Economic growth can be made compatible with environmental enhancement only if the emission of pollution is less than that which can be assimilated and transformed by the natural environment. In order that resources may be conserved, all articles must be manufactured so as to be fully recyclable. Further, they must be

manufactured, transported, used, and recycled with energy from renewable sources only.'

Incorporating the Environment into the Economic System

The sustainable development approach claims to be able to avoid the environmental degradation that has previously accompanied economic growth by integrating economic and environmental decisions. As a component of the economic system, the environment is seen to provide raw materials for production and to be a receptacle for its wastes.

Traditional model of an economic system.
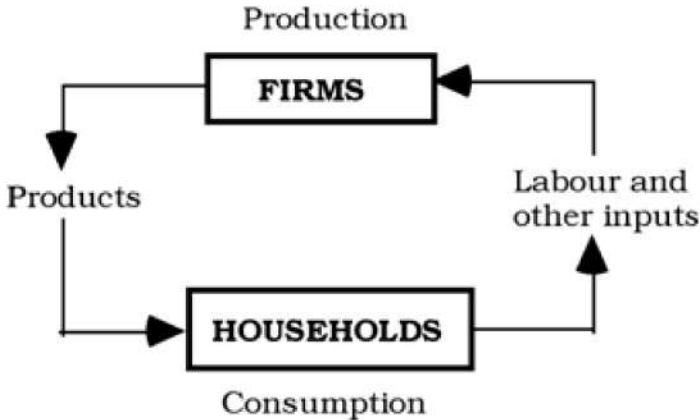
Modified to include environmental resources
Modified model of an economic system
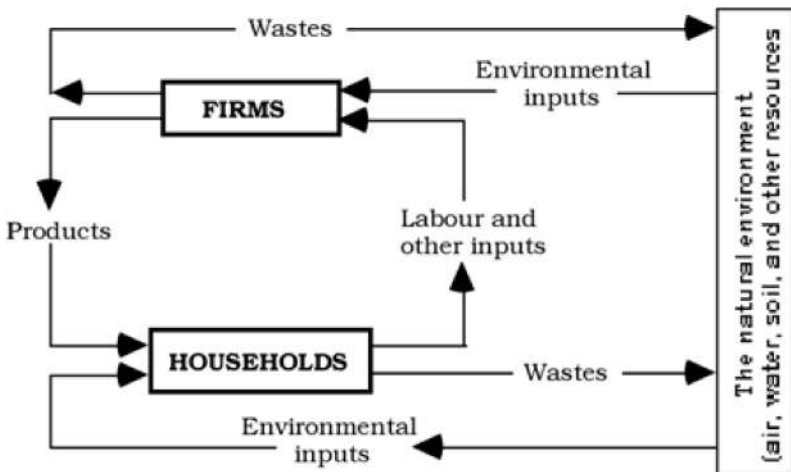
It is clearly seen, the natural environment is an important component of the economic system, and without the natural environment the economic system would not be able to function.

Putting a Price on the Environment

Environmental economists argue that environmental degradation has resulted from the failure of the market system to put any value on the environment, even though the environment serves economic functions and provides economic and other benefits. The solution offered is to put a price on the environment so that it can be incorporated into the economic system and taken seriously by those who make decisions. Environmental values will then be integrated into economic decisions, market failures will be repaired and sustainable development assured. Cost-benefit analysis or CBA is one of the key ways in which environmental values are incorporated into economic activities. Another is through economic instruments. Economic instruments include taxes and charges on polluters that aim to internalize environmental costs into the decisions of companies and individuals and therefore provide an incentive to curtail environmentally damaging behaviour.The measurement of environmental gains and losses is assessed in money terms. Direct costs and benefits are the easiest to estimate. These might include estimating the value of production foregone because of environmental damage, the value of earnings lost through health problems associated with air and water pollution, health care costs, and the value of decreased growth and quality of crops because of soil degradation.These direct monetary costs tend to underestimate the full costs and benefits provided by the environment. For example, improved health resulting from a cleaner and safer environment is worth more than just the medical bills saved. Similarly, a clean beach is worth more than the just the value of having healthier beach goers.

Conclusion

The sustainable development advocates of the present similarly want to avoid the ethical issues by falling back on economic calculus to make decisions as if values can be determined by doing the sums correctly. They also avoid the distributional issues by advocating economic growth for all in the hope that this will solve the problem of equity.We need to find ways of ensuring the fruits of this development are more evenly distributed within populations. This cannot be done if decision-making is based on the premise that any development that provides a net monetary benefit to a nation should be approved. Even if the calculation of the benefit incorporates measures of environmental damage, environmental amenity is likely to decline and equity issues will still be ignored. We need new forms of social decision-making that integrate the ethical dimension - neither limits to growth nor sustainable development offer the answers.

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Theoretical Breakdown of the Concept of Indian Nationalism

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Nationalism is essentially, the violent child of the Romantic movement. Born in the cradle of the French Revolution of 1789 and build on the ideals of liberal and democratic traditions, it was radicalised over time to serve the state power and political domination of Conservative forces of Europe after 1848.

It is quite common within the academic field to misconstrue this whole process as a contortion and abdication of the original ideals of liberal democratic tradition and juxtaposing it with the diametrically opposite ideals which served the interests of the political regime. To a certain extent such a construction cannot be discarded in toto. However, it is fallacious on their part, to attempt to track the historical discourse of a concept which lacks a precise and rational definition. A concept which owes its origin in abstract realms of romanticism and was essentially a 'sentimental' concept, was bound to be modulated to serve different masters and agendas, often for political hegemony and legitimacy. On an individually subjective level, nationalism for a peasant will have an altogether different connotation for a monarch. Therefore, what constitute a nation may not necessarily qualify the same for another. A soldier may have political and geographical demarcations determining the boundaries of his conception of a nation while a sportsman may consider the Olympics as his manifestation of a nation of sportsmen. The concept therefore is essentially a 'sentiment' of 'solidarity' which has a tendency to materialize (as it often does) in the form of a movement. This solidarity can be a manifest of a singular or combination of the political, cultural, religious, economical or other vested interests. Feminism and anti-colonial movements were consequently and essentially nationalist movements.

An illusion and misconstruction which has gained the status of 'carte blanche' is that nations as well as national identities are exclusive, i.e., a person can belong only to one tribe or nation (which are essentially homogeneous). The academia on the subject, notably Ernest Gellner, Elie Kedourie and Benedict Anderson, though, acknowledges this 'exclusivity' principle. It is in fact, never so. To elaborate: an Indian Muslim in a foreign land can have affinity towards members of Muslim community (not necessarily Indians) as they share a common religious and to an extent traditional heritage. While at the same time he shall also appreciate a sense of solidarity with

other Indians he may come across, not necessarily of Islamic faith. Ascribing himself to one solidarity exclusively in such a situation entails a conundrum which clearly points the fallacy of this 'Exclusivity principle'.

A person can be a member of different nations all at the same time. A Hindu Brahmin orphan girl born in Gazipur and later adopted by a Sikh family of Bhopal, can recognize different regional, religious, caste, class, gender and social affinities all at the same time. As a matter of fact, the forerunner of all nationalist movements, the French Revolution itself had two concurrent nationalist movements running simultaneously and coherently: the mass movement to establish a Republic on liberal democratic principles as well as a Women's Suffragette movement (precursor of the Feminist movement). Therefore, the modern connotation of it being essentially an exclusivity doctrine defies its very own historical origin. To label an abstract sentimental concept on 'Exclusivity principle' is neither practically tenable nor logically coherent. Benedict Anderson was therefore right in his attribution of nations as 'Imagines Communities'.[1]

In his 'Theory of Imagined Communities', Anderson claims that in a nation, all its members are tied together to form a homogeneous lot based on one or certain parameters. *"It is imagined because the members of that particular community might have never seen, heard or met but the idea of all of us belonging to a particular territory, as nation instils the idea of community and the feeling of togetherness."*[2] Therefore it more or less likely is determined by the subjective solidarity and belief of the individuals.

It relevant to point it out at this juncture, that all the noted academicians, examined and limited the concept of 'nationalism' as on parameters of 'political and territorial integrity'. However, it operated on a canvas far wider than this enclosed ambit. Dipesh Chakrabarty in his article 'Nation and Imagination'[3] while acknowledging the other facets of the concept therefore suggests a need to infuse and acknowledge into the concept 'a plurality to make it globally useful'[4].

In fact, it is rather the widescale acknowledgment of the 'Exclusivity Principle' by both the academia and the general perception of the world which renders 'nationalism' vulnerable to drive a conflict insurrection, both internationally and domestically (hereafter referred in the essay as 'Exclusive Nationalism'). As often the project of creating a nation state goes hand in hand with preventing others from doing the same, at international level, nationalism drives the State to averse other States and often leading to wars and colonisation tendencies. On the domestic level, an uncompromising and ruthless call for cultural, racial, religious, territorial, ideological and at times economical homogeneity may result into suppression and extermination of dissent and minorities. Nationalism therefore, has built a notorious reputation to have a habit of thriving on conflict.

The essay shall be confined to the latter dimension: the operation of

exclusive nationalism in domestic sphere of a State. Exclusive nationalism when afforded the wheels of propaganda, dogma and force get radicalized to give way to 'radical nationalism'. Notably, the Zionist movement founded by Theodor Herzl, the Hindutva movement of Savarkar, the Fascism movement of Mussolini and Hitler as well as Jinnah's Two Nation theory, are all radical incarnations of exclusive nationalism, which were (and still are) directly responsible for establishment of mobocracy in their respective territories. So, when Ramchandra Guha summarizes the (European) model of 'nationalism' as adopted by Pakistan and the Hindutva brigade into a catechism of—"a single language, a shared religion, and a common enemy"[5], he is in fact referring to the radical model. India however, invented a diametrically opposite model.

Emergence of Mobocracy in India: Over the years India as a nation has served a paradox to the western mind. Prior to India's independence, the national movement was subject to ridicule by the western scholars as a mere fantasy, owing to the country's diverse socio-cultural and religious heritage. Sir John Strachey in fact reiterated many a times in his lectures at the University of Cambridge, that there was no such country as India. It was rather "a name which we give to a great region including a multitude of different countries"[6]. Drawing a parallel with Europe, he writes that was more similarity between an Englishman and an Italian than between Bengali and a Punjabi. Therefore, negating any possibility of India surviving as a united nation. Theoretically if we adjoin their analysis with that of the European model of nationalism (Exclusive model), their conclusion doesn't seem irrational. Their analysis even hitherto the 1980s, decades after the Independence predicted the disintegration and balkanization of the country.

But as of 71 years after independence, the nation has not yet shown any strong subscription of disintegrating or rise of regional nationalist movements (with a brief stint of the Khalistan movement of 1980s and the North-East disturbances prior to 1990s). The national solidarity can be attributed to the reinvented model of nationalism of Gandhi, 'Swaraj', which was strictly opposed to the European model.

Partha Chatterjee in his 1986 theoretical discourse[7] into Indian nationalism, elucidates the initial relocation of the concept by Bankim Chandra Chattopadhyay on the touchstone of modern and rational lines and not as a blind relegation of backward looking, regressive and conservative institutions of the Indian society. It was radically reinvented into the concept of 'Swaraj' by Mahatma Gandhi, an all-inclusive model which explicitly refuted the European exclusive model. Swaraj was neither identified with a single religion nor with a particular language.Even more remarkably, it refuted hatred towards the British and instead preached the path of non-violence. Rather than showing propensity towards homogenizing of the population, the doctrine thrived on the principle of "Unity in Diversity". Instead of being driven on competitive

lines to implant a national hegemony it rather sought for a politics of accommodation, tolerance and cooperation.

On the other end of the spectrum, the European model of nationhood and nationalism which was profoundly injected by the Muslim League in the years preceding the independence were amputated from the mainstream discourse, to let thrive in a new state of Pakistan. Its radical Hindu counterpart, the Hindutva brigade (RSS and its affiliates) was politically insignificant to the whole Indian nation during initial days of post-independence era. However, they were quite active in the social sphere. In the line of Jacobin clubs of revolutionary France, it rather focused on expanding its social base by setting up shakhas throughout the country. Their number already exceeding 55,000 in the year 2016 with a membership of above 5 million.

An ardent ideologue of radical nationalism to the extremities of fascism, the Hindutva brigade endorsed a jingoist form of nationalism with a xenophobia towards the religious minorities, diametrically opposed to the 'Swaraj' model. It pursues a policy of homogenizing the country on the lines of radical Hinduism ideology and establishing a non-secular 'Hindu Rashtra' of 'Hindus' exclusively, quite contrary to the 'Swaraj' envisaged by Gandhi and Nehru. Its core nationalist ideology 'Hindutva'[8] by Vinayak Damodar Savarkar excludes minorities such as Muslims, Christians, Parsis and Jews from the definition of 'Hindu' and advocated the restoration of the 'Manusmriti', caste system and the 'Hindu way of life'. The outfit is well documented both in the past and present to vehemently oppose the Indian Constitution.[9]

The emergence of the mobocracy characterised by ostracism and violence against lower castes and religious and ideological minorities after the 2014 Lok Sabha win by the Bhartiya Janta Party, the political affiliate of RSS and Sangh Parivar, disrobes the underlying tussle between Swaraj and the Hindutva model of nationalism.

Best elaborated in the words of Ernest Gellner, "nationalism (essentially) is a theory of political legitimacy"[10], the Hindutva forces thereafter under the BJP rule of 2014 acquired a political validity to promulgate and direct their actions (with violence and harassment) towards minorities. The hate propaganda schemes such as love jihad, cow vigilantism, anti-nationals, urban-naxals, Pakistan sympathisers etc were all directed with dual motive of instilling terror in the minorities and at the same time instigating contempt in the minds of the majoritarian Hindu community against such minorities. Propaganda slogans such as *"Dash, bahu aur gai ko bachana hai toh Narendra Modi ko lana hai (Bring Narendra Modi to save the country, women and cows)"*[11]were openly endorsed by the ruling government, while incidents of violence met with latent endorsement by the State.

State, as defined by Max Weber, is that agency within society which possesses the monopoly of legitimate violence.[12] The direction of legitimate violence rests but on the arbitrary discretion of the state. Therefore, when

the state resorts to exercise legitimate violence on victims of crime and refuses the exercise on alleged perpetrators, it serves as an accomplice to the crimes of the perpetrators. With reported commemoration of honour and open support to the perpetrators of cow vigilantism by the ministers of ruling party to framing of false charges against the victims of such violence as well as dissenting intellectual, a string of pattern emerges post 2014 which point towards a state endorsed protection and immunity to such perpetrators. This strongly validates a connivance between the perpetrators and the State, which share a common ideological adherence: a state-sponsored mobocracy. The strategy employed contrasts the Nazi Germany's anti-Semitic propaganda of 1930s under Paul Joseph Goebbels, 'Minister of Propaganda and Public Enlightenment' which demonized the Jew community through mass media.

The constant inaction of the State authorities forced intervention by the honourable Supreme Court. The 3-judges bench in **Tehseen S. Poonawalla v. Union of India**[13] which in its order dated 17th July, 2018 took strict cognizance of the rising incidents of mob-lynching, mandating all State governments to take stern measures to stop mob lynching violence and asked them to submit a report in this regard. A recommendation was made to the Parliament to create a special law to address the mob lynching and providing adequate punishment for the same. Prior to this, the Supreme Court also intervened to negate the state sponsored false propaganda of 'love jihad' in the case of **Shafin Jahan v. UOI**[14] (the Hadiya case).

To understand mobocracy, it is essential to understand the forces authorizing and encouraging such a state of affair. Mobocracy as a norm cannot survive without a socio-political support. Such a support cannot be manoeuvred without a parent ideology, which in Indian context is well imputed to the Hindutva model of nationalism, and its propagation.

Mobocracy is the perversion of democracy. On a normative front, it can be repressed by restoration of law and order in the society by the State. But its proclivity to re-emerge can be neutralized only by abrogating its ideological roots. In Indian context it calls for re-enforcement of the 'Swaraj' model which was manifested in the form of constitutional morality in the Indian Constitution and total abdication of Hindutva model and its proponents, which is contrast conflict to the Fraternal, Secular and Just tradition of the Preamble. The Hindutva model expressly propagates exclusivity on the grounds of religion, race, caste, sex and place of birth. All the ground which have been explicitly renounced by Article 15(1)[15] of the Constitution.

On an ideological front the Swaraj Model in essence needs build a wider outreach and socio-political support for itself. The Supreme Court needs to re-examine and correct its erroneous construction of Hindutva by conflating it with Hinduism in **Prabhoo v. Kunte**[16]**,** to afford the State a normative ground to proceed against the propagation of the said ideology. Any alternate exclusive model of nationalism aimed to abnegate the Constitution, need be

prohibited to operate in the public sphere and examined by the Supreme Court on the touchstone of the Constitution and Section 124, 124-A, 153B of the Indian Penal Code.

Conclusion: Dichotomy between concept of Nationalism and Democracy

Symbolism is important: "Ram se bada Ram ka naam hota hai": This proverb clearly foretells the relevance and profound importance of symbolism in the human affairs. A nation is constructed on the proportion and quantum of symbolism, it is able to command. We had many great national leaders, but we have always counted Gandhi ji at the helm of the lot. Why? Gandhi ji was more than a national leader, he was the NATIONAL SYMBOL OF UNITY, an umbrella figure under whose name the entire country was united. It was the different dimensions of symbolism, which united all the different regional and socio-cultural groups in the subcontinent during the freedom struggle under a single identity: India and to be an Indian. So when we have a debate on the relevance of standing in movie theatres over National Anthem, on chanting of 'Bharat mata ki jai', on building a 3000 crore 'State of Unity', they may be vociferous improvidents but they are certainly not without a rationale. But how far such an investment in a scheme of nationalist sentiment must be prioritized over nation building is a point of contention. The constitution afterall has made provisions for symbolism: With the President serving as the symbolic head of the nation state, with the provision of a national flag, a national anthem, and many such examples which serve as symbolic emblems to our nation. So do we really need new dimensions of symbolism in the current state of affairs? How important is symbolism today after it achieved its purpose of building and uniting a nation back in 1947 when Indian came into existence as a solemn united national entity. And how so relevant it is in a state which has pledged itself to be a democracy, is a major question.

Democracy after all strives to attain a perfect public sphere where as Mill says we can have free combat and clashes between different ideas: a true marketplace of ideas. To concretize one idea or principle perhaps runs contrary to the spirit of democracy. Looking closely what we find is that the very nature of democracy runs somewhat contrary to the idea of nation. Whereas Democracy believes in accommodating new and diverse ideas, nationalism on the other hand adheres to only one idea and conceptualizes a static set box of its adherences and is intensely chauvinistic about it.

So can we be a democracy and a nation at the same time? : a question which has its sinister manifestation in the form of a Secular Democracy v. Hindu Rashtra debate in present day.

The answer lies in the question itself. What amongst the two is easier to build and sustain? A healthy democracy requires clash of ideas, but for the ideas to clash, first there must be ideas. The ideas must be crafted and nurtured and only then we can talk about a vibrant democracy. However

when it comes to a program to construct a nation, you do not need such diverse ideas, you only need one sentiment or idea which can supplant itself above all other prevailing ideas. As an ideology, a plus point of nationalism is that it has the capacity to attract followers who do not necessarily understand the complexities within the ideology in an articulate manner. Rather, these followers are drawn owing to a simplified rhetoric of unity that privileges the collective over the individual. Ashish Nandy therefore writes, "Nationalism, thus, is more specific, ideologically tinged, ardent form of "love of one's own kind" that is essentially ego-defensive and overlies some degree of fearful dislike or positive hostility to "outsiders". So the NRC program, the refusal of Rohingyaas into the Indian territory, the proposed Citizenship amendment bill with all their criticism, whether they is right or wrong, they can definitely be undemocratic and against our heritage composite culture, but we can be at a consensus that such initiatives do fall into line with the nationalist agenda.

Now coming to the most important aspect. Education. Do we really need education? No, not at all if we are planning to construct a nation. After all India came into existence as a nation state in 1947 with only 18% of a literate population. So was education the dominant factor, the statistics point the other way. On 26 November, 1949 when we announced that we were going to be a parliamentary democracy, the Western world laughed at us. They believed India, and rightfully so, that Indians do not have a temperament or intellect to grasp into a democratic model of governance. John Strachey, like many western writers predicted that we would balkanize into small fragments, for India was never a nation but a collective of nations. Dr. Ambedkar in his address to the Constituent Assembly while presenting the Draft Constitution on 4 November 1948 would remarked on this aspect, " Democracy in India is only a top-dressing on an Indian soil, which is essentially undemocratic."

But thankfully due to his efforts and of many great men of the past, it has been 72 years and we have sustained it. Maybe not in spirit but in form nonetheless. But what if we were to build a democracy out of a nation? Would the hollow sentiments be sufficient? No. We need EDUCATION.

In that very same address Dr Ambedkar would again remark, "Constitutional morality is not a natural sentiment. It has to be cultivated." And we cannot understand constitutional morality unless we are educated enough to understand the Indian demograph, its society, the delicate nuances of its composite culture and moreover the spirit of the constitution and principles it embodies. So you need an educated society for a democracy to be sustained in its true spirit. Naom Chomsky, in his book Manufacturing Consent said "What violence is to dictatorship is propaganda is to democracy." If we do not have an educated and thinking population, democracy becomes just a power-play of propaganda. The throne is won by charlatans and sweet-talkers rather than men of merit, as Socrates pointed out in his contempt for

democracy. This explains why we have Atishi Singh lose to Gautam Gambhir in Delhi, and Sadhwi Pragya win in Bhopal and Rahul Gandhi being a stronghold in Amethi for many years until recently. This explains why a constituency votes for a man who threatened to curse them if the people did not vote for him. So what we are witnessing is just the logical culmination of the big Indian joke.

But what is this big Indian joke? We brought in democracy in 1949, but we laid the foundation for it only in 2002, when we brought in the 86th Constitutional Amendment. Article 21A which guarantees free and compulsory education to all children of the age 6 to 14 and Article 45 which provides for early childhood care and education for all children below the age of 6, was added 53 years after we "SOLEMNLY RESOLVED TO CONSTITUTE INDIA INTO A SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC". And it wasn't until next 7 that the honourable Parliament took cognizance of this provision in the Constitution and decided to give it shape in the form of RTE Act, 2009. The Right to Education Act which commenced on 1st April 2010 is a travesty in itself. The only provision well known in the public domain is about the 25% quota it offers to the disadvantaged groups in private institutions, and that so only after the Irfan Khan starred movie 'Hindi Medium' came out. How much of it is implemented is a different story altogether. The other provisions such as the ones which prohibits (a) physical punishment and mental harassment; (b) screening procedures for admission of children; (c) capitation fee; (d) private tuition by teachers and (e) running of schools without recognition, still reside in the domain of redundancy. Our journey in the domain of education so far itself points to our commitment to democratic principles. The statistics point out that today 72% of the population is literate, but with the increased role of propaganda and hate speech in the national contours, one is left to question the quality of education this 72% population subscribes to. Propaganda cannot be termed as education, though the classroom methodology of education has conflated both these terms to mean the same. In INDIA TO KNOW THE FACTS IS CONSIDERED EDUCATION. Education for the purpose of democratic values, must appeal to the critical analysis of facts and not simply knowing the facts. For as Zizek rightfully pointed out in his lecture on 'Nazi government and Post-modernism" that a lie can be constructed on the basis of facts which are true. So another question which we need to raise: is our education really contributing towards Democracy……or is it just making us a mouthpiece of the nationalism and ruling government's propaganda.

So JNU maybe an anti-national institution, its students maybe anti-national, its protests maybe anti-national, BUT THEY ARE ESSENTIALLY AND THOROUGHLY DEMOCRATIC. The often clampdown of the government to intimidate and suppress the students, is just an exemplification of narrow nationalism trying to suppress India's democratic commitment. This definition

of nationalism, which we have subscribed recently is an offshoot of the sinister 'Two nation theory', which has never served any good purpose but has always brought misery to our subcontinent. So if such a theory of nationalism is the popular and mainstream discourse, it would be much in line with the Indian ethos and Constitution to be ANTI-NATIONAL, than to be ANTI-DEMOCRATIC. The word nation is not there in our Constitution, but the word Democratic occurs in the very first paragraph of our Preamble. Our whole constitution is an ode to Democracy, it was meant to be an instrument to achieve, build and advance democratic values, in such a light can we afford to discard them for the sake of an obsolete notion of nationalism? If that be the case, our allegiance to the Constitution stands betrayed, and perhaps it lies somewhere else.

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Role of Social Media and Propaganda War

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1. Introduction

Technology builds media. For instance, any sort of book, movie, newspaper etc. form part of media. Without technology, media would not exist however it is also true that technology is more than just the media we are exposed to[1]. Also, change in media landscape is constant and has been radical to the extent of being called revolution in the past century. Earlier, the media landscape was mainly about printing press but now with the development in technology not only the media landscape but also the perspective of media has changed a lot.

It is believed that democracy thrives when people and communities are informed and engaged. As more media is becoming increasingly available in digital formats it can be said that it is a positive step towards democracy. Digital technologies have fundamentally altered the nature and function of media in our society, reinventing age-old practices of public communication and at times circumventing traditional media and challenging its privileged role as gatekeepers of news and entertainment.[2]

The explosion of the world wide web during the end of 20th century led to a revolution in the mass communication sector. With it immerged virtual media or popularly referred to as 'New Media' like the Internet, Social media, Video streaming channels and websites, blogs, apps etc. against the backdrop of 'Old Media', such as television, film, radio, photography, and print. New media refers to the application of digital technology to mass communications. Within two decades, two main technological revolutions changed the media landscape. The Internet emerged as the primary communication medium and taking the shape of a virtual world. Its impact on society, commerce, and the government cannot be denied in the past two decades. Today every information regarding every individual to every institution as well as the sum total of all human information is on the internet. Every person has a virtual identity on the web both in the government databases as well as individually monitored profiles and footprints on social networking sites and other websites. Even the digital footprints of an individual are recorded and stored by the Government as well as the Internet Service Providers as well as other private bodies regarding all his activities on the web. Today virtual media has become the primary medium of communication and information for the masses, more so after the advent of the smart phones and tablets. Therefore, internet has rather brought the whole world under one monitored system where the activities of each and every person who has a digital presence of any sort can be

monitored, analyzed, spied as well as manipulated to predict and distort his future actions. The virtual space at best can be described as unruly jungle, as it is beyond the reach of the laws and regulations, or morals or ethics or even accountability. It is too young to be brought under the framework of a regulatory and orderly framework yet too old to cause troubles. Theorists and practitioners alike are still unable to cope with such a technological culture anxiety and are unable to predict the direction of the technology or its effects.

Such radical paradigm shift of the media landscape opens the doors to new opportunities but also brings with it new challenges. The new media landscape in the form of virtual digital space has altered interaction pattern of people as well as processes of opinion formation. Such technology-led and technology-enabled landscape which has brought the world closer has also brought the dangers and challenges of different parts also closer, breaking the earlier boundations of geographical boundaries. India in order to deal with such challenges of digital age brought in the Information Technology Act, 2000 and the Information Technology Intermediary Guidelines Rules, 2011.

The chapter shall deal the prominent trends and issues faced by electorate democracy in the wake of digital revolution.

Shreya Singhal v. Union of India

The Supreme Court, in **Shreya Singhal versus Union of India**[3], though affirmed the value of free speech and expression, quashing, as unconstitutional, Section 66A of the Information Technology Act, 2000 (IT Act), thereby rendering it virtually teethless. Section 66A reads,

"Punishment for sending offensive messages through communication service, etc. -Any person who sends, by means of a computer resource or a communication device,-

(a) any information that is grossly offensive or has menacing character; or

(b) any information which he knows to be false, but for the purpose of causing annoyance, inconvenience, danger, obstruction, insult, injury, criminal intimidation, enmity, hatred or ill will, persistently by making use of such computer resource or a communication device; or

(c) any electronic mail or electronic mail message for the purpose of causing annoyance or inconvenience or to deceive or to mislead the addressee or recipient about the origin of such messages,

shall be punishable with imprisonment for a term which may extend to three years and with fine. Explanation. -For the purpose of this section, terms "electronic mail" and "electronic mail message" means a message or information created or transmitted or received on a computer, computer system, computer resource or communication device including attachments in text, image, audio, video and any other electronic record, which may be

transmitted with the message."

Section 66A had attained particular infamy after the arrests by the Mumbai police in November 2012 of two women who had expressed their displeasure at a bandh called in the wake of Shiv Sena chief Bal Thackeray's death. Since then, several arrests have been made by different State police, of various individuals, for the most benign dissemination of online content.

The latest in the slew of pernicious cases reportedly booked under Section 66A was the arrest of a class 11 student in Uttar Pradesh for posting, on Facebook, "objectionable" comments apparently attributable to a State Minister. These arrests, aimed at checking even the most harmless cases of contrarianism and dissent, were made possible mostly by the sweeping content of the law. The provision, as is by now well documented, had criminalised the broadcasting of any information through a computer resource or a communication device, which was "grossly offensive" or "menacing" in character, or which, among other things, as much as caused "annoyance," "inconvenience," or "obstruction." Further, the petitioners' argued that Section 66A produced a chilling effect that forced people to expurgate their speech and expressions of any form of dissent, howsoever innocuous. In a judgment authored by Justice R.F. Nariman, on behalf of a bench comprising himself and Justice J. Chelameswar, the Court has now declared that Section 66A is not only vague and arbitrary, but that it also "disproportionately invades the right of free speech."

In the judgment, Justice Nariman discusses Justice Oliver Wendell Holmes's notion of "marketplace of ideas" as expressed in his dissent in Abrams v. United States[4]. In effect, Justice Nariman's claim is that the Internet is a dominant platform for the "marketplace of ideas" and the role of free speech laws is to regulate the efficiency of this market. The judicial history of the concept takes us back to Justice Holmes, who in turn derives his justification for the principle from John Stuart Mill's defence of free speech in On Liberty. The argument is basically that in the marketplace of ideas, good ideas (truth) will displace bad ideas. Wrong opinions will yield to more rational and factual ones. J.S. Mill therefore suggests an absolute freedom of speech, where even hate speech ought not to be banned because such a speech will be tested by the standards of rational arguments and will eventually be refuted. Hence, Justice Nariman's invocation of the marketplace of ideas, following Holmes and Mill, is a claim that free speech is necessary in a liberal democracy because it will eventually ensure a public discourse driven by truth, honesty and rationality. The principle may have several implication on jurisprudence, such as, that truth will eventually prevail in the marketplace of ideas; or that the best remedy for bad speech is more speech; or that content-based judgment of speech is not a good idea etc.

Although attractive, the idea is too optimistic. First, there is little evidence to show that good, just and rational arguments always triumph over

bad and unjust arguments. Psychological research shows that we are quicker to agree with views that we already hold or prefer, rather than change it on purely rational grounds. Second, the principle is too teleological and does not consider the play of power in liberal politics (the marketplace is after all an economic-model based on rational, self-interested subjects). So, sexist, casteist, class ideologies will dominate a society, not on the strength of its truth but on the strength of its hegemony over that society.

Though in quashing Section 66A, in Shreya Singhal where the Supreme Court gave a fresh lease of life to free speech in India, it also opened the floodgates to trolls, online hate, abuse and other forms of online hate and intimidation tactics and propaganda in the future, which we face today on the internet and social media. Even the Government and political actors and parties have employed their own IT cells to troll and abuse their opponents and to further their party agenda and selfish motives through such trolls and false news. The lacunae of a provision similar to Section 66A is greatly felt in today's times and has emerged the biggest problem in the electorate democracy.

In order to counter such a trend, the Union Ministry of Home Affairs (MHA) has recommended the strengthening of sections 153A and 505 of the Indian Penal Code (IPC) instead of modifying section 66A of the Information Technology Act, 2000. Section 153A of the IPC prohibits hate speech and punishes any form of action or communication that leads to disharmony or feelings of enmity, hatred or ill-will among people. The maximum punishment is three years in jail. Section 505, on the other hand, punishes statements that amount to public mischief. Both sections have the ramifications similar to section 66A, but unlike it, are non-bailable offences.[5] This step was reportedly taken after complaints from intelligence agencies that, they were no longer able to counter online posts that involved national security matter or incite people to commit an offence, such as online recruitment for ISIS.[6]

Internet, Social Media and Electorate Democracy

With advent of news channels and the 1990s revolution of the world wide web, the world of media is constantly going through a radical upgrade and widening of its ambit to each and every person even in the remote corners of the world. The revolution in information technology and the era of smartphones has made sure that all persons on the planet are connected to the common platform of internet and can easily share and receive information.

One of the advantages of the internet is that any news or information can be updated more quickly on this platform. The earlier examples of internet media basically consisted of online versions of print media. But the scene rapidly changed with the advent of blog dedicated to politics, video libraries such as YouTube having channels primarily focusing on politics as well as sites dedicated to political information, which many a times owe allegiance or inclination to one or more political party or ideology. With the explosion of

social media, we saw crowding up of all political actors to the social networking sites. Almost all politicians today have a twitter and facebook page. Even political parties and government institutions such as the Indian PMO also have their own respective spots in such virtual spaces. Smt. Sushma Swaraj, the Minister of Foreign Affairs, has most efficiently put to use this platform to help Indians in other countries. Prime Minister Modi and President Donald Trump are notoriously known in this regard to reach out to their audience. We have countless examples of a new variety of politicians whose climb to power is best attributed to their stardom on social media and the internet. Shashi Tharoor, the Congress MP, owes most of his popularity amongst the youngsters due to his social media presence. The rise of AAP party to Kanhaiya Kumar, student union leader of JNU, we know of political phenomenon which have their roots in social media.

These political actors have full-fledged staff and IT Cells to maintain their online presence. From advertisement of the candidate to their policies to a set ideology, social platform has now become the battleground for political scores and rivalries.

An important reason why internet has become so popular amongst political actors is that it is the cheapest source with an ever-stretching audience base. A serious complaint about broadcast and print journalism is that, because they are primarily financed by advertising, news organisations have an incentive to not report on stories that are critical of their parent organizations or advertisers. It is easier and cheaper for political actors to make their presence felt and create a public image.

Social media entered the political space in the West about a decade ago. Most prominent in the 2008 United States presidential election where Barrack Obama used Facebook to campaign, bypassing the previous traditional methods of canvassing. In India, that inflection point came in 2014, with the Bharatiya Janata Party marshalled an online army to push the candidature of Narendra Modi. Now even small organisations such as the Ambedkarite groups that organised the bandh are employing social media to make a real impact on the ground.

The 2nd April 2018 Bharat Bandh against the Supreme Court's verdict in **Subhash Kashinath Mahajan v. State of Maharashtra**[7], did not comprised on any central leadership. The protests throughout India, most prominently in the Northern States, resulted into 22 deaths. The marches and demonstrations were organised locally, strung together through social media, specifically the messaging app WhatsApp. The federated nature of the protests is another example of the transformative impact social media has had on Indian politics.The strike had almost negligible organised backing from political parties and was instead led by small local Dalit groups. In Rajasthan's Hindaun city, a message exhorted Dalits to change their WhatsApp display pictures to that of a bandh poster for 24 hours. The

mobilisation in Hindaun – a place with little history of Ambedkarite politics – was so successful the organisers were unable to control the crowd; the protest descended into caste clashes in which the houses of two Dalit leaders, including the sitting legislator, were burnt down.[8]

On a global level, internet though bringing the world together as a global village has also made it susceptible to spread of one propaganda of a region to affect the socio-cultural dynamics of another region. Before the advent of internet, the effect of print media as well as radio or television was localised and limited within the boundaries of the state, often crossing borders to neighbouring countries, but with its diffused version. The new breakthrough in communication technology has broken the geographical barrier and now a propaganda can travel to even the most remote corner of the world with same or even alleviating intensity.

For example: The 9/11 terror attack at the Twins towers in New York ushered in the wave of Islamophobia and hate attacks on Muslims across the world. One notable example was the publishing of some cartoons published in JyllandsPosten in Denmark depicting the Prophet with a bomb in his turban, another one showing him standing on a cloud greeting dead suicide bombers with a message "Stop, stop, we have run out of virgins!" These cartoons created a furore, sparking violent protests in different parts of the world. In India, there were violent protests and clashes in several cities and one Muslim minister from U.P publicly offered a reward of Rs.51 crore for beheading the cartoonists.[9] Criminal investigations were initiated against the editors and journalists responsible for reprinting the content. The Danish Prime Minister though refused to apologize even in course of international pressure, on the ground that Denmark has free press and thus the government is not responsible or rather have a right to intervene their constitutional right of free speech.

Another prominent example in the recent past would be the controversy around the movie "Innocence of Muslims" which went viral on YouTube in 2012. The movie which portrayed muslims in the negative light and instigated a hate propaganda against them unleashed outrage and violence throughout the Muslim dominated countries. The U.S Ambassador to Libya was murdered by protestors in retaliation as the movie was made in U.S.A. The potential of the harm which could be unleashed by internet and its users under the garb of freedom of speech and press, was realised for the first time in this episode.

Propaganda

Noam Chomsky has very well said that "What violence is to dictatorship, is propaganda is to democracy." In his book with Edward S. Herman, **'Manufacturing Consent: The Political Economy of Mass Media'**, he dissects the media's nexus across the political spectrum, where both of them join hands to create an illusion to the public called propaganda and further their own interests. The propaganda model suggests that society

is only a receiver of information strictly conditioned by politics and economic elite often working in collusion. Chomsky claims that in actual situation in a democracy, public is barred from managing their affairs and information is highly controlled.[10] Such a propaganda is propagated so as to influence the public opinion or rather brainwash them towards believing and acting in the direction in which the political elites want. He argues, the mainstream press is corporate owned and thus is only concerned of its corporate priorities and interests. Thus the choice of topics and issues featured in the mass media, the unquestioned premises on which that coverage rests, and the range of opinions that are expressed are all constrained to reinforce the state's ideology. He states that, although the mass media will criticize individual politicians and political parties, it will not undermine the wider state-corporate nexus of which it is a part. As evidence, he highlights that the U.S. mass media does not employ any socialist journalists or political commentators.[11] He points to certain examples of important news stories that have been ignored by U.S. mainstream media because reporting on them would bring disrepute upon the U.S. state: For instance, the massacres perpetrated in Nicaragua by the U.S, and the constant reporting of Israeli deaths to create mainstream public sympathy for the state of Israel while ignoring the mass scale Palestinian deaths carried out by Israel.

Chomsky and Edward S. Herman in their work described five distorting filters through which all media reports have to pass before being reported to the public. The first filter relates to size, ownership and profit orientation. The second filter is interests of the advertising clients. As the maximum share of the revenue of major media outlets is derived from advertising and not from sales or subscriptions. Media therefore has to cater to the political prejudices and economic desires of their advertisers. The third filter comes from preferential treatment to the sources of big and inside news. The fourth filter includes flak and the enforcers. Flak are the negative responses to a media statement or program such as negative reviews, complaints, lawsuits, or legislative punishments. And the last filter according to them for U.S media was anti-communism. However, after the end of Cold-War, Chomsky replaced anti-communism with "War on Terror" as the fifth filter.

AraniBasu in his article studied the application of 'Propaganda model' in Indian context, and concluded that *"To begin with, majority of the newspapers in India today are privately owned. Therefore, they thrive in free market economy in tune with the model espoused by Chomsky. Next, privatization of media implies presence of big corporates owning the media houses. Many of them also have political ambitions. As a result, a certain interaction between the economic, political, and media elites emerge in the Indian media market. As opined by Chomsky, such interrelationships have potential for editorial compromise of news dissemination."[12]*

AraniBasu however added a sixth filter, i.e., anti-Islam also worked

along with the other five filters espoused by Chomsky and Herman in Indian context. According to him, Anti-Islam was a growing sentiment in India before the General Election in 2014 has been epitomized in the mediated buzzwords popularized by the newspapers under consideration, e.g., NaMo, Hindutva, Minority Appeasement, and Gujarat Riot (these were popular buzzwords during the 2014 General Elections).[13]

In the past couple of years, after the explosion of world wide web and the hegemony of digital media, the wings of the 'propaganda' assumed new and dangerous dimensions. They can be best predicted from the whistleblowing affairs in recent years of Edward Snowden to Wikileaks to the recent Cambridge Analytica scandal, the picture in the light of digital media shows a dangerous trend.

Wikileaks

Wikileaks is an international whistleblowing non-profit organisation founded by an Australian Internet activist, Julian Assange that works in the field of analysis and publication of highly classified information;news leaks; classified media and large datasets of censored or restricted official materials involving war, spying and corruption. The Founder of Wikileaks, Julian Assange defines WikiLeaks as, "a giant library of the world's most persecuted documents"[14]

The website is involved in many controversial and prominent leaks most of which target US government policies and strategies like Collateral Murder, Afghan and Iran War logs, Guantanamo files NSA World Spying etc. It released a video in 2010 of AH- 64 Apache helicopter attack of 2007 during Iraqi insurgency[15] where some people including 2 Reuters Iraqi journalists were shot dead by US Army Apache helicopter gunmen. This video was given the name of Collateral murder.

Then in 2007 it also published a video of Guantanamo Bay detention camp Standard Operating Procedures as to how the US Army dealt with prisoners kept in Camp Delta. Guantanamo Bay Detention Camp is a US military prison which is located in Guantanamo Bay in Cuba. The prisoners are detained there without any trial and the video leaked by Wikileaks showed hardship and violation of Human rights inside the prison. After the release of the video the Human rights groups were also found that prisoners were even denied to access the Red Cross for upto four weeks after detention.

Trafigura Pte Ltd is a Singaporeantrading company that trades in base metals and energy, such as oil. A scientist, John Minton wrote a report based on confidential data about the cheap and dirty chemical process the company was using to try to reduce the sulphur content of a consignment of contaminated gasoline it had bought cheaply[16] and the health effects (such

as severe burns to the skin and lungs; permanent ulceration; corneal damage and even death) of the same on the people of Ivory coast where the waste is being dumped. He in his report also mentioned that such waste dumping permission could never have been dumped legally obtained without the treatment of the waste by an expensive chemical treatment known as "wet air oxidation" to make it safer. A newspaper, The Guardian obtained possession of the report but Trafigura gained a secret injunction against the newspaper from the court in 2009 to not allowing them to publish the report. Thereafter the report got leaked to Wikileaks too which released the report on its website. It was also revealed by it that how The Guardian was legally prevented through a secret injunction from publishing the report[17].

2. Digital Media and Hate Propaganda

The subject of Hate Speech has gain prominence in recent years not only in India but the tremors of its effects can be felt throughout the world. The communal, racial and ethnic conflagrations have found their most profound proponent in election campaigns based around hate speech. Going on the dictates of George W. Bush's words, "Either you are with us or against us", we have found a new propaganda where all sort of opposition or contesting parties are portrayed as dangerous, disastrous, absolutely corrupt or incompetent by the campaigning party. Since most the times these parties are a political representation of a class of people, the targeting of such class which it represents forms the main subject of the election campaign. Media in the recent times have played an important role in the propagation of hate speech.

The concept of Hate Speech is though not new. The most infamous of all hate campaigns was Hitler's anti-semitic propaganda in Nazi Germany in 1930s. Hitler appointed Paul Joseph Goebbels as his 'Minister of Propaganda and Public Enlightenment'. Paul's genius lay in orchestrating propaganda through the mass media which he systematically used to whip up hysteria in favour of the Nazis and the Third Reich and against the Jews. During this time, newspapers actively participated in the hate campaigns against the Jews.

Der Strumer, for instance, described in close detail the alleged sexual assaults of Jews on gentile girls, always blonde and blue-eyed. Its cartoons featured thick-nosed, blubber-lipped Jews, often in lavatory situations and carried on its front page the rubric: "Die JudensindunserUngluck" (the Jews are our misfortune). For its editor, Julius Streicher, Jews were lower than animals. They were excreta- Scheiss-judein or the JudenScheisser. Newspapers of the time were not restricted to the recording of events. They

were actual instigators and instruments of hate propaganda. German editors claimed that they had special access to public opinion. In the name of the people, they would call for stern measures by the government against the Jews, being apprised well in advance that the measures were on the anvil. Thus, the government was made to appear as though it was only responding to public demand. Murders were engineered and reported to have been carried out by Jews. The press would then whip up stories of mass indignation and predict that it would turn on the Jews. Series of riots followed such stories. This was part of organised anti-semitism in Germany and Goebbels played an active role in it.[18]

The most notable and one of the foremost instances of media instigated hate propaganda in India was the 'Gujarat riots of 2002.' The Indian media came under sharp scrutiny for its coverage of the 2002 communal violence for its provocative reporting in an already incensed and communally charged atmosphere. The Editors' Guild Report indicts sections of the vernacular press, notably the Sandesh and the Gujarat Samachar for its depiction of grisly coloured photos of Godhra victims and slanted reports, which were said to have played a role in the violent aftermath of Godhra.[19] Use of headlines to provoke and communalise, for instance, the front page in the Sandesh on 28th February 2002 carried the headline, "Avenge Blood with Blood". This was apparently a quote from a statement issued by a VHP leader. On 1st March 2002, a headline claimed that a "mini Pakistan" was in existence in a Muslim dominated area of the city. On 6 March 2002, a headline read, "Hindus Beware: Haj Pilgrims return with a Deadly Conspiracy". One local paper, 'Madhyantar' carried an eight-column commentary on the front page headlined "Muslims will have to prove they are fully Indian".[20] Local TV channels telecasted inflammatory speeches by the local leaders. The licences of some cable operators were suspended for a couple of days after they showed live coverage of rioting in the sensitive Macchipith area. Cable channels telecast aggressively nationalistic, anti-Pakistan films, such as Gadar, Border and Ma Tujhe Salaam.[21] This was the first time that the electronic media was used to fuel the fire. Rioters and looters were given directions on mobile phones. SMS messages were sent out with the rumour that milk supplies has been poisoned, Email was used to threaten, intimidate and send out hate mail.[22] The Press Council of India taking cognizance of the issue was anxious about the whole state of affairs and issued statements condemning the role of media to fuel the communal tension.

In January 2013, Akbaruddin Owaisi, MLA from Hyderabad was arrested over charges of inflammatory speeches.On 22 December 2012, Owaisi

addressed a rally at Adilabad district of Andhra Pradesh, where he made multiple comments against Hindus, Hindu deities, RashtriyaSwayamsevak Sangh, Vishva Hindu Parishad, Bharatiya Janata Party and Narendra Modi. In his speech, Owaisi said that the 250 million Indian Muslims (although correct figure is 172 million Indian Muslims as per 2011 census) needed only 15 minutes without the police to show one billion Hindus who is more powerful.[23] He described Hindus as "impotent" and the Indian Police as an impotent army. .[24] Several cases were filed against AkbaruddinOwaisi of the Majlis-e-Ittehadul party for anti-Hindu comments he allegedly made in the speeches. Some of the comments were recorded in December and were posted online. Police has charged him with threatening the security of India and with promoting hostilities between Hindus and Muslims. Though he has been arrested but his videos are still available online and are used to propagate the hatred even today both at Watsapp groups and social networking sites.

The Muzaffarnagar riots of 2013 which left close to 100 people dead as well as several thousand displaced was also instigated by fake news and propaganda on Watsapp groups.

Another notable and horrific incident was reported in December, 2017 when Mohammad Afrazul, a migrant worker from West Bengal was hacked with a cleaver and then set on fire by a man in Rajsamand, Rajasthan. The alleged assailant identified as ShambhulalRegar, who apparently suspected that Afrazul was in a relationship with a Hindu woman, filmed the whole incident and circulated it on social media. Videos of the murder, as well as the killer's speech justifying the act, went viral on social media. In one of the videos, Regar is seen warning Muslims by bringing up the bogey of 'love jihad' and saying: "This is what will happen to you if you do 'love jihad' in our country." Regar is seen declaring that he killed to save a woman from 'love jihad'. "If I have to die, I will kill some and die," he says, making references to Ayodhya, the Padmavati film controversy and the Hindi film PK, which featured a romance between an Indian and a Pakistani. Apparently referring to Hindu-Muslim relationships, he threatens to "find each one of them and kill."[25] It was reported that Shambhulal was subject to a lot of communally radical material through internet, which played the major role in distorting his views to lead to such heinous hate crime. In the follow up access to the internet was suspended in Rajsamand for days.

The social platform Facebook was used by Satish Mylavarapu, a radical right-wing individual in January 2017, to post a list of 100 Hindu-Muslim couples throughout India with their details so as to facilitate right wing radical elements to attack them physically as well as target them online. Facebook

took down Mr Mylavarapu's threat page a few days after his 28 January post caused an uproar on social media, but took longer to track and remove hundreds of duplicate versions posted by others. However, the list is still in circulation and has caused much harassment to enlisted couples.

In India, a March study by the Observer Research Foundation, a think tank based in New Delhi, showed that religion is increasingly used as a basis of hate speech on Facebook, a jump of 19 to 30 per cent between 2016 and 2017. The Civil society groups have alleged that Facebook has not acted quickly enough in such instances to curb the hate speech that inflamed tensions throughout Asia, including Muslim-Buddhist riots in Sri Lanka and Myanmar's exodus of more than 850,000 Rohingya Muslims into Bangladesh. Facebook was dubbed the "beast" in that crisis by a United Nations monitor.[26]

Facebook has however, assured that maintaining a safe community for people to connect and share on their platform is critical to them and they have framed several policies that prohibit hate speech and credible threats of harm as well as a user complaint redressal system where any user can complaint about any user or post for its review by the facebook team, which if found in violation of their policy shall be removed. During his appearances before Congress regarding Cambridge Analytica scandal, Facebook chief executive Mark Zuckerberg said the company was working on policies to remove hate speech within 24 hours of its appearance and adding dozens of new language content monitors.

Germany has taken the foremost legislative step to deal with such problems of hate speech and fake news on the internet by enforcing Netzwerkdurchsetzungsgesetz (NetzDG) law that demands social media sites move quickly to remove hate speech, fake news and illegal material. The Act was passed at the end of June 2017 and came into force in early October. The immediate need for such a legislation arose after several high-profile cases in which fake news and racist material was being spread via the German arms of prominent social media firms.[27] Under the said provisions, concerned citizens could use to report content on a government forum that violates NetzDG or has not been taken down in time by the social network. The NetzDG requires social networking sites to draft a comprehensive complaints structure and gives them 24 hours to act after they have been told about law-breaking material or face fines up to 50 million euro.

In India, 'Hate Speech' does not find a place in **Article 19(2)** as a specific exception. It has to be read into Article 19(2) through a conjugation of other specified exceptions such as *"Sovereignty and integrity of India"*, *"Security of the State"*, *"Incitement to an offence"* and *"defamation"*.

However, the Indian statutes contain provisions that are wider to curb 'Hate Speech' than its counterparts in United States and United Kingdom where a **"clear and present danger"** test is needed to be established. Some of these provisions are:

1. **The Cable Television Networks (Regulation) Act, 1995** requires that all programmes and advertisements telecast on television conform to the **'Programme Code'** under **Section 5** and **'Advertisement Code'** under **Section 6** respectively.
   Rule 6 of the Cable Television Network Rules, 1994 lays down the programme code and prohibits the carrying of any programme on the cable service which:
   a. Contains an attach on religion or communities or visuals or words contemptuous of religious groups or which promotes communal attitudes;
   b. Is likely to encourage or incite violence or contains anything against maintenance of law and order or which promotes anti-national attitudes,
   c. Criticises, maligns or slanders any individual in person or certain groups, segments of social, public and moral life of the country;
   d. Contains visuals or words which reflect a slandering, ironical and snobbish attitude in the portrayal of certain ethnic, linguistic and regional groups.[28]
   The Cable Television Networks (Regulation) Act, 1995 empowers the authorised officer under the Act to prohibit the transmission of a programme or channel, if it is not conforming to the 'Programme code' or the 'Advertisement code' or if it falls under any of the restrictions under Article 19(2).

2. **Section 69 of the Information Technology Act, 2000** allows the interception of information by the authorities in the interest of public order, or the sovereignty and integrity of India, or for the purpose of preventing incitement to the commission of a cognizable offence. **Section 79 of the Information Technology (Intermediaries Guidelines) Rules, 2011** penalises the sending of offensive messages which cause insult, injury, enmity, hatred or ill-will.

3. Under **Section 5-B of the Cinematograph Act, 1952**, a film can be denied certification on various grounds. The Section reads, *"**Principles for guidance in certifying films**. – (1) A film shall not be certified for public exhibition if, in the opinion of the authority competent to grant the certificate, the film or any part of it is against*

the interests of [(Ins. by Act 49 of 1981 (w.e.f. 161983) the sovereignty and integrity of India] the security of the State, friendly relations with foreign States, public order, decency or morality, or involves defamation or contempt of court or is likely to incite the commission of any offence."

4.   The Press Council of India issued guidelines in 2010 titled **'Norms of Journalistic Conduct, 2010'** which provide for objective and restrictive reporting of sensitive issues such as communal incidents.

5.   The Indian Penal Code, 1860 has certain provisions to curb hate propaganda. **Section 153-A** penalises the promotion of class hatred. **Section 295-A** penalises insults to religion and to religious feelings of another. **Section 505** makes it a penal offence to incite any class or community against another. **Chapter XXII** of IPC punishes criminal intimidation.

6.   **Section 3(1)(x) of the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989** punishes an intentional insult or intimidation with intent to humiliate a member of a scheduled caste or tribe in any place within public view.

In the 2017 judgment of **Abhiram Singh v. C.D Commachen**[29], the seven judge constitutional bench with a 4:3 majority held that seeking votes in the name of religion, caste or community amounts to corrupt practice under Section 123(3) of the Representation of People Act and the candidate who indulged in it can be set aside. The bench said, *"Election is a secular exercise and therefore a process should be followed…the relationship between man and God is an individual choice and state should keep this in mind."* The judgment ruled out any possibility for the political parties from invoking religion and religion driven hate propaganda in the public sphere. But this did not prevent the politicians from employing such agenda. A BJP legislator from Madhya Pradesh went on record to say that he supports early marriages because child marriages, because this helps prevent 'Love Jihad'.[30]

Again the judgment prevents only the political actors and that so for canvassing of votes and not other people such as party workers from engaging in such propaganda. There is no judicial notice of the menace caused by such propaganda, and in this judicial vacuum and lack of convictions under above mentioned provisions of law, a full-fledged campaign has been set out by Hindu fundamentalist groups against the minority. The Supreme Court must take note of such developments especially the role of media in it, as they have already dented the secular nature of Indian society and if not

restricted in time such propaganda has the potential to shatter it for ever.

Former chief election commissioner S.Y Quraish expressing concerns over the trend wanted the Election Commission's guidelines for the media for politicians and political parties during elections to be extended to social media as well. He argues that the funding limit for candidates and political parties should hold true for social media too. He believes the content used by political parties in advertisements ought to be cleared by the EC to ensure that no sections of the Indian Penal Code, including communal incitement and Section 150 (hiring, or conniving at hiring, of persons to join unlawful assembly) are violated.[31]

Today all political parties in India have their own IT cells and a team of trolls. One of the prominent reasons for the political parties to shift their focus on social media is that expenditure by them on digital media is so far not covered within the ambit of scrutiny by Election Commission. In the absence of any legislation or regulation in this regard, the future does not point towards any possibility for it to stop.

The **Press Council of India** in its meeting held on 27th August, 2012, at New Delhi passed the resolution for amendment of the Press Council Act, 1978 to bring the electronic media (both broadcast and social media) within the purview of its authority as well renaming the Council as the 'Media Council.' However as of January,2020, these recommendations are yet to be considered by the government.

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Gendering Politics of India in Perspective of Postcolonial Feminism

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Gendering Politics in Postcolonial literature as critical discourse have enriched the understanding and explanatory postcolonial of international relation. It could argue that Gandhian period. At the same time, Gandhi's critique of modernity could be problematic for women, for whom the politics of modernity were more advantageous. Many characteristics of modernity, in fact were themselves the invention of women. Modernity is defined by both by its technology and its political concepts of equality and democracy, which necessarily involve the end of patriarchy and the institution of equal rights for women. For many male nationalists, on the other hand, modernity was a matter of re-orienting the economy, the state, the public sphere, Even today, as the Indian novelist Arundhati Roy has acerbically pointed out, the Hindutva quest for authentic Indianness would not go so far as dispensing with the mobile phone, the railways, aeroplanes, or rockets that deliver atomic bombs, Gandhi was in fact much more redical than modern Hindutva ideologuers in extending his critique of western civilization to science and technology, rejecting the railways and other aspects of colonial modernity in Hind Swaraj ('Indian Home Rule', published in 1909) His ideas were the forerunner of contemporary notions of ' sustainable development', the are of the possible.

When nationalism moved from reform movements to cultural revival, feminists began to part company from it, while continuing to appropriate elements of modernity for their own political goals. Cultural nationalists tended to define themselves not against modernity in term of technology, but against its implications for women. Women are often taken to represent the mainstay of the cultural identity of the nation, retrieved for the present from the society of the past. For macho-nationalists, home and the domestic sphere, relatively free from colonial control, was the best guardian of the traditional values, culture, and identity of the new phenomenon they were creating on the European model against their European masters, 'the nation'. Women and modernity came to be regarded as antithetical entities, with the result that the goal of national emancipation involved a betrayal of all prospect of progressive change for women. This was spectacularly dramatized in India and Africa on the occasions when the colonial government attemped to outlaw practices such as child marriage, widow-burning, and female genital mutilation. The preservation of these practices became celebrated causes for nationalist resistance (though not by Gandhi or Nehru,)

These interventions by the colonial state against social practices that oppressed women have been described as 'colonial feminism', that is where

the colonial government intervened on behalf of women, claiming it was doing so on humanitarian grounds. Sometimes these measures operated simultaneously as forms of colonial control. The colonial authorities were often sympathetic to those interventions that they regarded as a way of transforming the values of societies whose traditions resisted their rule. This was clearest with respect to the French colonial policy of forced unveiling in the Maghreb. In all cases, it was entirely predictable that such legislative acts would become the focus for nationalist resistance. Yet paradoxically, for women colonial ideology could represent new forms of freedoms. As a result, women were much more ambivalently placed in relation both to colonialism and anti-colonial nationalism. This has also meant that while women struggle with the legacies of colonialism in the postcolonial era, they are repeatedly accused of importing western ideas. Well-meaning interventions by western feminists, human rights groups, and Ford Foundation-funded non-governmental organizations can at times end up by making life more complicated for local feminists. Development of all kinds comes best from below rather than being imposed from above.As eample, Trin T. Minha quoted in her book "Woman, Native and Other(1990)", 'Thus to simply denounce The Third World woman's oppression with notions and terms made to reflect or fit into Europian American woman's criteria of equality is to abide by ethnographic ideology which depends on the representation of the coherent culture and reduces every genderd activity to a se role stereotype. Feminism in such a contet may well mean 'westernization'.

At the same time, if you argue that feminism is western idea then you would have to claim that modernity itself is exclusively western. Historically, it is true that feminism was a western political movement that began in the 18th. Century. Its beginnings were indistinguishable form those of modernity itself. Modernity, we would now argue, was not a western invention as such but itself a product of the west's interacton with the rest of the world including the economic exploitation of colonialism which first provided the surplus gold that was the motor for modern capitalism. Since then modernity has developed in different ways and according to different temporalities in different places, and the same is true of feminism. Like other aspects of modernity, its development over the past two centuries within non-western worlds has transformed and nuanced its precepts. All political programmes of today, whether feminist or fundamentalist, are products of their own age and therefore very much part of modernity. The debate is not between modernity and its opponents, but rather between different versions of modernity, some of which offer alternatives to what is regarded, not always very accurately, as the western model.

Many of these differences remained relatively suppressed while men and women worked together for the common aims of the anticolonial movements. It was after independence that fundamental tensions emerged

more clearly. "The role of women does not and with peace" was the simple but astute title of an aricle by Amina alsa 'id about Egyption women volunteering for the army in 1956. For all feminists, the transfer of power at independence and the achievement of national sovereignty, though desirable, was not the end. It was simply a stage along the way. Whereas from a masculine perspective, independence ushered in the defining new condition of postcoloniality, for women there was no such break: the struggle continued, now against a patriarchal sphere that no longer required women's support. Independence very often involved a transfer of power not to the people of the newly sovereign country, but to local elites who inherited the whole colonial system of the army, the police, the judiciary and the law, government bureaucracy, and development agencies. In many states, after the bulk of energy had been dedicated to achieving national sovereignty, at independence women's political objectives had to be reasserted and a second liberation struggle begun. For this reason, postcolonial politics has often more in common with women's than men's struggles of the colonial era, with a politics of egalitarianism that supports diversity rather than the cultural uniformity demanded for nationalism.

The striking development of religious nationalisms in the postcolonial era- which in certain respects has even defined the postcolonial era- has actually placed women in a situation comparable to that in which they found themselves during colonialism. Its is not, however, simply that women in Islamic countries are oppressed by fundamentalism or by islam, as liberals in the west often assume. There is no single Islam, nor a single Islamic fundamentalism. Women in Islamic countries are positioned in relation to the specificities of their own relations to the west and to western colonial power, their own struggles over the interpretation of Islam and of Islamic law, and their relation to the role of women in contemporary society.

Conversely, contrary to the violent polemics against it that can be found in many tricontinental countries around the globe, there is no single undifferentiated 'west' either. The fractures within the west were seen very clearly by Gandhi, and he exploited them actively for India's political advantage.

Although Gandhi's influence has now waned dramatically in India. Some elements of his political philosophy continue in a straightforward way. The Chipko movement in India, for example, which is largely organized by women, has been traced back directly by Vandana Shiva to beginnings intiated by Mira Behn, one of the women closest to Gandhi. Shiva has argued that national colonization brought with it a colonization of living natural resources such as the forests, and then a mental colonization in its prescription of technological and market-oriented responses to farming and environmental issues. Resistance by peasants and tribals to the appropriation of forests began in the colonial period, when timber was exploited for military

and industrial purposes without thought to the longerterm effects of deforestation and desertification or for the consequence of the destruction of closely interrelated local economies and ecologies.

In the late 1940s, shortly before Gandhi's assassination, Mira Behn moved to a farm in the foothills of the Himalayas. There she became increasingly concerned with the devastating annual flooding that occurred in the region, the causes of which, as she discovered, were both deforestation and the planting of new kinds of non-indigenous trees, particularly pines. Mira Behn established a new ashram, Gopal Ashram, in order to concentrate on the forest problem. She studied the local environment and, particularly, spent time acquiring knowledge about it from the local people who knew it intimately. Listening to their songs and folktales, Mira Behn noticed the many references to trees and plants that had more or less disappeared. She concluded that the ecological problems experienced in the area were the result of the disappearance of the forests of oak (banj). Whereas oak contributed positively to the ecological environment and the local economy, the pine, which had been more recently planted for purely commercial reasons, was an evergreen theat contributed nothing to the local ecological economy, providing only cash crops of resin and wood pulp. Soon other Gandhians such as Sarala Behn and Sunderlal Bahuguna joined Mira Behn in her work and established new ashrams.

As the movement grew, a significant division developed which was essentially a gendered one. Initially the focus of many local Gandhian organizations was on establishing cooperatives and asserting the rights of local people rather than big commercial firms to exploit the wood of the forest as a commercial cash crop. This, Shiva suggests, was essentially a masculist perspective. The women, who were responsible for cultivation of food crops and for fetching fuel and fodder, were not seduced by short-term advantages of monocultural cash crops. They rather emphasized the need for a sustainable local ecology in which vegetation, soil and water formed a complex interrelated ecosystem. The divisions, therefore, were not only between the outsiders and the locals, but between the women and the men of the villages. The women challenged the principles of the whole system, charging that the men had been ideologically colonized by the short-term commercial values of the market place, trying to take control of nature just as patriarchy tries prospect of immediate gain through employing science to dominate nature but by the objective of a supportive, self-renewing forest system that preserved water and food reasources. Their long standing role of being the cultivators, of producing sustenance enabling their families to survive within this system, meant that the women possessed repositories of intimate knowledge both of husbandry and of the medicinal and nutritional value of a wide variety of plants. About it once Vandana Shiva wrote "As, usual in every scheme that worsens the position of the poor, it is the poor who are invoked

as beneficiaries."

It was therefore the woman, together with men such as Bahuguna who were persuded by the woman's arguments, who provided the foundation of the Chipko Movment. It began in 1972-73 in the Chamoli district of northwest India. Chipko means hugging: the name invoked a method first employed by the Bishnoi community in Rajasthan 300 year before. The Bishnoi, led by Amrita Devi, resisted the felling of their scared Khejri tree by embaracing them, and gave up their lives in the struggule.

Another eample, the Narmada Bachao Andolan's (NBD) etraordinarly brave and persistant populist campaign against the Sardar Sarovar Dam, part of the west narmada velly development project, which has brought publicized support from the writer-activist Arundhati Roy, clearly operates according to similar principales. Other comparable examples would include movments of resistance to the destruction of the Amazon rain forest, or the Greenbelt Movement in Kenya started by Wangari Maathai in 1977 after she had listened to local woman epresing their concerns at the degradation of their environment. Their complaints involved issues all too common for peasant peoples across the world.

Throughout the 20th cen. There were many Dalit political movements contesting the degradation to which they were born, the best known of which was led by the remarkable B.R. Ambedkar, who successfully negotiated for positive discrimination for Dalits in certain areas of Indian institutional practices.

A postcolonial politics is equally opposed to discrimination by caste, or race, and gender, wherever it may be practiced. It seeks to turn difference from the basis of operation into one of positive, intercultural social diversity.

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Role of social media in Higher Education

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Introduction

Social media has gained credibility over the years as a trusted source of information and platform where organizations can interact with audiences. **Social media** statistics from **2019** show that there are 3.2 billion **social media** users worldwide, and this number is only growing. That equates to about 42% of the current population (Emarsys, **2019**).We are seeing education institutions adapting these developments into their systems and relying on group resources and mechanisms to improve the student life. The use of social media in education provides students with the ability to get more useful information, to connect with learning groups and other educational systems that make education convenient. Social network tools afford students and institutions with multiple opportunities to improve learning methods. Through these networks, you can incorporate social media that enable sharing and interaction. Students can benefit from online tutorials and resources that are shared through social network. There is valuable knowledge to be gained through social media such as analytics and insights on various topics or issues for study purposes. Social media is also a medium where students can establish beneficial connections for their careers.

Methodology

To study the usage of social media in higher education we developed online questionnaire with questions of closed type. The survey is anonymous; students indicate only their specialty (Q1) and course of education (Q2). The usage of social media is identified with questions Q3 ("In which social media do you have a profile?") and Q4 ("How often do you use different social media?"). Students should indicate the presence of a specific profile and frequency of use of the 9 most popular social networks (Facebook, Twitter, LinkedIn, Google + YouTube, Reddit, Flickr, Instagram, Snapchat). Added option "other" (free text) and participation in different community forums. Undoubtedly the most used social network is Facebook. The possibility of sharing and communication between groups with similar interests is well realized through Facebook groups. Therefore, a point of interest is to measure the participation in academic related Facebook groups of students from one faculty or specialty (Q5 -"Are you a member of a specialty/faculty Facebook group?"). The application of social media and e-channels of communication is investigated by appropriate questions (Q6 – "Which channels do you use for communication with teachers?" and Q7 –"Which channels do you use for communication with students/colleagues?"). For identification of various media

used in the process of creating and sharing content, and for additional training in the various disciplines are included questions such as "Which of the following e-media resourcesand do you use for content creation (Q8)/content distribution and sharing (Q9)/learning process (additional preparation for exams, test, course projects, etc (Q10)". Respondents (378 total) of the survey were randomly chosen amongst students from different bachelor and major programs and courses of education (from I to VI). Responses have been collected from May till June 2017. Results have been processed using Excel and SQL Analysis Services. Statistical methods include descriptive statistics, association rules, distribution, etc

Results

There's nothing new with that fact… just look at the graph above: It breaks down how the average number of social shares per blog post has been dying year over year.

But the reality is you can't ignore platforms like Facebook, Twitter, LinkedIn, Instagram, YouTube or any other new contender that comes out and gains traction.

These social sites command so much traffic, that we have no choice but to be on them.

Just look at the Similar Web numbers for Facebook… *they get an estimated 19.2 billion visits a month*.

That's ridiculous! And it's not just Facebook either… according to Similar Web, all of the big platforms get tons of traffic:

♦   LinkedIn – 917 million visitors a month
♦   witter – 3.62 billion visitors a month
♦   YouTube – 22.77 billion visitors a month
♦   Pinterest – 722 million visitors a month
♦   Instagram – 2.86 billion visitors a month

In other words, whether you like their algorithm tweaks or not, you have no choice but to be on these platforms as they attract so many eyeballs.

For students Facebook has established itself as the undisputed leader in social networks. Almost all of respondents (97.4%) declare they have a profile on this social network and 88% use it daily. The hypothesis that one of the most common tools used in the educational process is the Facebook group is confirmed by the answers to the corresponding questions. Almost all students (95.5%) participate in the Facebook group of specialty/department. The usage of the Facebook group may be illustrated by the high percentage of application of this media in communication between students and teachers, and in the process of creating and sharing content. The Facebook group is the preferred channel of communication between the students, used by 95.5% of students. For comparison, Facebook group is used only 40.5% in communication with teachers. Most students (85.2%)

use the features of the Facebook group for sharing content, including collaboration on team projects. Expectedly low is the percentage of usage of the Facebook group in the process of content creation (47.4%) and additional learning (45%). Analysis of answers regarding used communication channels show different patterns in communication with teachers and students (colleagues). As shown in figure 1 the most popular communication channel with teachers is email used by 83% of respondents. At the same time, nearly all (96%) from students use Facebook group as their primary and preferred communication channel when communication with their colleagues. These figures reveal that communication Student-Teacher (S2T) is carried through "traditional" e-channels such as email, while communication Student-Student (S2S) is a natural extension to the communication with Facebook friends, well established in the social network. As a second preferable channel to communicate with teachers students point out the E-learn platform (42%), which in the University of Economics is a Moodle-based Learning Management System (LMS) with many features of a social media such as chat, instant messaging, wikis, forums, collaboration tools and activities, etc.

A notable difference between the two forms of communication (T2S and S2S) lies in the number of simultaneously used channels. In T2S communication 62% from respondents use 2 or more channels, while in S2S communication this percentage is 82%. To reveal which are the most used combination of channels an association analysis was performed. The model was created using Microsoft Association Rules in SQL Server Analysis Services and Visual Studio 2015 (SSDT). Association Rules from the model were with low importance, but useful knowledge was extracted from itemsets ordered by support (figure 1). For students using two or more channels of communication the most popular combination of communication channels was E-Learn and Email for S2T communication (33%) while the preferred couple of channels (58%) for S2S communication was Facebook group and chat application such as Skype, Viber, Messenger, Snapchat and similar. When answering questions about application of different social media and e-resources in the process of content creation, content distribution and additional preparation for exams, course projects, thesis, etc, students had to check one or more from the following answers: Wikis, Scientific databases (full-text bases such as Scopus, Web of Science, Emerald, JStor, EBSCO, etc), E-learn platform, Forums (specialized community forums for example), E-books, Facebook groups, YouTube, Slideshare, LinkedIn, or provide their own answer. The most used media and resources for content creation is undoubtedly Wikis, and especially Wikipedia, marked by 67% from respondents, followed by Scientific databases (50%), Facebook groups (47%), E-learn platform (42%) and Forums (31%). Association rules algorithm was implemented to identify top 10 combinations of media and resources

(itemsets) ordered by support (figure 3). Two-size itemsets with greatest support include Scientific databases + Wikis (37%), E-books + Wikis (37%), and Ebooks + Scientific databases (33%).It's worth mentioning that on average respondents use 3 different media and resources for content creation, as calculated by median value of count of media per student. Facebook group is not only the main channel for S2S communication. It's the preferable channel for content distribution and sharing, including team work on projects, tasks, seminars, etc. pointed out by 85% of respondents (figure 3). This media is used nearly 4 times more than the next in the list – E-learn (23%) and Google+ (19%).When asked about resources used for additional learning and training for exams, seminars, course tasks, etc, 60% from respondents points Wikis as their most preferable resource (figure 4). This corresponds to the first place of Wikis as a primary tool in the process of content creation (figure 2). The next three frequently used resources for additional learning are E-Learn (48%), Facebook groups (45%), Scientific databases (42%). The popularity of Facebook groups is obvious not only in communication and content distribution as it was expected, but also as a popular resource for additional learning along with more traditional ones as Wikis, E-Learn and Scientific databases. Students use various media and resources for additional learning. The median value of number of resources used by a student is 3, with 83% from the respondents using 2 or more resources and 61% using 3 or more resources and media. The itemsets support as a result from association rules algorithm shows that the most frequent combination of media and resources are E-Learn + Wikis (31%) and E-books + Wikis (28%).

Conclusion

♦ Results from the online survey reveal some notable trends in using social media in higher education. Some of the main findings can be summarized in the following list:

♦ Students proactively use various social media and channels in communication regarding educational process. However there are different communication patterns when comparing S2T and S2S communication. Students use Facebook groups and chat-based applications (Skype, Viber, etc) when communicati with their colleagues, and for a communication with teachers the most preferable channels are Email and E-learn platform;

♦ Wikis are the most used social media for content creation and additional learning such as an exam preparation, course tasks and seminars;

♦ Facebook groups are dominant media for S2S communication and content sharing and distribution. More than 95% from students participate in Facebook groups of specialty/faculty and use it

frequently not only for communication and sharing but also in the process of content creation and additional learning;

♦ LMS platforms with social media features are in the top used media for content creation, sharing and additional learning;4th International Multidisciplinary Scientific Conferences on Social Sciences & Arts SGEM 2017

♦ Social media (especially Wikis and LMS platforms) are more or at least equal used as Scientific databases and E-books as a source for content creation and additional learning.

The mentioned results reveal that students use extensively various social media in higher education. The communication patterns in S2T communication and usage of Facebook groups and Wikis as preferable media for content creation and sharing suggests that the usage of social media is mostly student-initiated. This means that a further research is needed as to identify the role of the teachers in the process of adopting and application of social media in each aspect of educational process.

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Is social media a boon or bane for higher education?

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Introduction:

All Humans are by nature social beings. Being social creatures, humans have been interacting from the very beginning of time in one form or the other. The outline of communication kept evolving from time to time as and when society structure changed by way of external influences in form of technology advancement or meeting ends of new requirements. The very foundation of education system that exists today is based on this basicblock of communication by way of imparting knowledge to those who seek it. In this modern era, one of the prominent platform by which people communicate, interact, exchangeideas, thoughts, beliefs and information is the internet. The internet, rather than being a one to one connectivity and single broad cast delivery system, can be more aptly described as many to many connectivity platform in contrast to the past state where only few content providers existed. A fair share in the transformation process can be attributed to social medias which contributed to internet being driven by activities of ordinary users.In short, social media refers to websites and applications that allow users to share content quickly, efficiently, and in real-time. The number of persons using social medias have been increasing over the past decade. It is estimated that by the year 2021, number of social networks users will rise from less than a billion in 2010 to above 3 billion worldwide, which accounts for around more than 45% of the world's population.Also, when broken down by generation, it was found that the segment of generation that used the social media the most were the millennial and new generation. The following image give the clear picture of age distribution by social media choice.
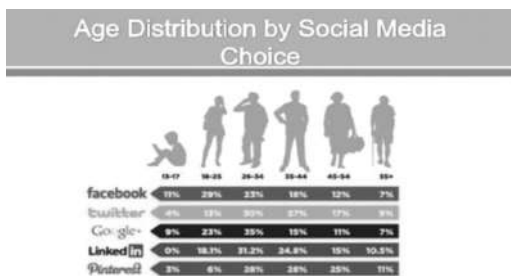
Social media in higher education offers a vital resource to students

and alumni — not to mention the school itself. While the term social media is often used interchangeably with social networks such as Facebook, instagram and Twitter, it is an umbrella term that comprises 13 different subtypes, including blogging tools, business and social networking tools, forums, photo sharing tools, business collaboration tools, service and product reviews, research networks, video sharing tools, and virtual worlds. The rapid burst in such social media provides a wide spectrum of possibilities to the educational institutions and entities within to adopt new and innovativemethods to further their learning as well as teaching endeavors. Besides this, a new area of social media is increasing in popularity that is focused on building relationships outside of the classroom. Further, educators and administrators alike can leverage social media marketing to enhance their programs, grow their student body and improve their enrollment procedures. Statistics show that 96% of the students that have internet access are using at least one social network. What's even more extraordinary is that, even though some of the students use the social networks for entertaining and other purposes, there are a lot of them that actually use it to promote a lot of positive and useful activities.

What is social media?

Social media are forms of electronic communication through which users create online communities to share information, ideas, personal messages and other various contents. Social media provides a way for people to connect to other people using the Internet and a host of services. Information can be exchanged, collected, aggregated, and disseminated in a split second or a one click.

Some major and popular social media sites:

1) Facebook:

Facebook is the one of the biggest social media network on the Internet, both in terms of the total number of users as well as by name and recognition. Facebook came into existence on February 4, 2004, Facebook has within 16 years managed to collect more than 2.50 billion monthly active users and this makes it one of the best mediums for connecting people from all over the world and also make it a popular online platform which people use to build social network or social relationship with other people who share similar personal or career interests, activities, backgrounds or real-life connections,

2) Instagram:

Instagram is a photo and video-sharing social networking service owned by Facebook, Inc. It was launched in October 2010 exclusively on iOS. A version for Android devices was released a year and half later in April 2012. The site has more than 1 billion monthly active users and it is abruptly

increasing after owned by facebook.

3) Twitter:

Twitter was founded on March 21, 2006, and has its headquarters in San Francisco, California. We think that to restrict our posts to 140 characters is no way to advertise our business, but we will be shocked to know that the twitter social media platform has more than 321 million active monthly users who can build use of the 140 character limit to pass on information.

4) YouTube:

YouTube was established on February 14, 2005, by three previous PayPal workers and was later purchased by Google in November 2006. In the field of education YouTube is a major player. YouTube has more than 1.9 billion site guests for every month and is the second most well-known internet searcher behind Google.

5) WhatsApp:

Launched in January 2010, WhatsApp Inc. and was purchased by Facebook on February 19, 2004, for about $19.3 billion.WhatsApp Messenger is a cross-platform instant messaging client for smartphones, PCs and tablets. This application facilitates the sharing of images, texts, documents, audio and video messages to other users that have the app installed on their devices. Today, more than 1.5 billion persons make use of the administration to speak or communicate with their companions, teachers, friends and family and even clients.

Impact of social media on higher education:

The use of social media in field of education provides students with the ability to get more useful information, to connect with learning groups and other educational systems that make education convenient. Social network tools afford students and institutions with multiple opportunities to improve learning methods.

In a survey by Babson survey research group and Pearson, 4,000 teaching faculty from all disciplines in higher education, representing U.S. higher education professors, examined both the personal and professional impacts of social media. According to the report, key findings were:

- ◆ 64.4 percent of faculty use social media for their personal lives, 33.8 percent use it for teaching.
- ◆ 41 percent for those under age 35 compared to 30 percent for those over age 55 reported using social media in their teaching.
- ◆ Faculty in the Humanities and Arts, Professions and Applied Sciences, and the Social Sciences use social media at higher rates than those in Natural Sciences, Mathematics and Computer Science.
- ◆ Blogs and wikis are preferred for teaching, while Facebook or LinkedIn are used more for social and professional connections.

♦ 88 percent of faculty, regardless of discipline, reported using online video in the classroom.

A new area of social media is increasing in popularity that is focused on building relationships outside of the classroom. But as we know that every coin has two faces, in similar way social media also have good and bad effects.

Advantages of social media in highereducation :

Though social medias come at cognitive costs as mentioned above, it is beneficial to students, professionals and universities in a number of ways.

1. **Student recruitment and Employment Opportunities:** As we all know that academia gap, is one of the major issues students are facing nowadays. In Spite of a student finishing his/her degree it's very difficult for them to get a job. Social media helps them to grab opportunities. Many companies update about openings in their social media accounts. Students following these companies on social media can apply by sending them their resumes. LinkedIn is one such social media platform where students apply for internships and jobs extensively.

2. **Alumni and student engagement:**Social media is the most convenient and the quickest way to connect with your alumni. Alumni engagement should not be just about class reunions conducted once every year. If it has to be a long-lasting association based on trust and affection then the relationship must extend beyond seasonal events. Simply spending time and money on engaging alumni through events will not serve any good. Universities should come out with innovative ideas to bring alumni on board. For achieving this, universities should use various social media platforms because majority of people using social media platforms thought the world or the universities should create a culture of building a support system for its alumni network. This innovation will then act as a propellant to fuel organic bond between the alumni and the university that will remain alive always.

3. **Communication with parents:**Digital technology is providing a growing variety of methods for universities to connect with parents anywhere, anytime—a tactic mirroring how technology is used to engage students.*Today's teachers are increasingly turning to a variety of digital technologies to make communication with parents easier and more current. Social-media tools, such as Facebook and Twitter, are helping teachers keep parents and other community members informed. Teachers are encouraged to go where the parents are; more parents are apt to be on Facebook or Twitter every day, whereas they might check the class webpage only once in a while or when*

reminded.

4. **Sharing and exchanging of knowledge:** Social media provides an easy and an effective way by which students can share and exchange knowledge. Through the social media platforms students can simply and easily access the information, study, transform and share. Hence, the flow of knowledge becomes smooth and simple.

5. **Promoting Research Endeavors:** Social media offers various audience and subject monitoring tools that are useful and it is one of the best platforms to extract and collect data. Through social media students can easily find out how the majority people feel about a particular topic or how experts perceive and advice on specific issues. This can help students compile and produce useful content for research. Whether students are working on an assignment, working on a project or trying to gain more insight on a subject, some of the best information and results can be extracted from social media.

6. **Enhanced Learning management systems:** Learning management systems is a networking software that delivers educational programs and gives institutions other administrative activities. Social media learning in LMS can include instant chat functions, video, forums to share info and other lesson resources to help students.Most LMS's come with built in social media integration and this drives instant interaction between the users and the system. The system strengthens student participation and makes team projects easy to collaborate. Slowly but steady, such system will lead to actual implementation of social media within classrooms. Students also react very positively when a teacher is willing to use their methods and adopt them as a part of the educational process, for example, a biology teacher from Bergen County proposed a challenge to his students. They had to debate over the subject of meiosis on Twitter by using a specific hashtag. This is a great opportunity for students to have fun and learn at the same time.

7. **E learning:** E Learning is a learning methodology which uses electronic resources and technologies to access educational curriculum outside of traditional classroom.It offers a great deal of reward to both the educational institutions and the students. The new social media facilitates e learning.

Gurukulam, which is made up of two words guru and kulam meaning teacher and home respectively is an Indian traditional education system in which students used to live near their teachers. E learning in oppose to the gurukulam system and the current educational institution permits students to gain knowledge and get educated

without having to be near a teacher and even sometimes without having a real teacher. It saves time for the students and helps them to accommodate their schedule as per their convenience. At the same time, it is a more cost effective way for the educational institutions to have a reach to wider range of students and also to the students by way of reduction in travelling, accommodation and other associated costs.It further integrates interactive content as a part of imparting education which makes it fun and engaging thereby increasing the chances of retention by multiple folds.It is consistent, scalable and offers personalization as per student's needs and requirements.

Disadvantages of social media in higher education:

Like every coin has two sides, social media in higher education has its own merits and demerits. In fact, social media itself has some demerits which the students will be exposed to if used in higher education as follows:

1. **Distraction:** Long usage of Internet exposes students to dynamic stimuli which causes constant change to the structure of the brain.Though, the more internet is used, the more the brain gains ability to skim and scan, research shows that it reduces concentration, reasoning and reflection.

2. **Accidental disclosure of sensitive information:** There are always chances of publishing personal and sensitive information that are attributable to a student, educational institution or others related to it. Also such information becomes prone to hacking and misuse.

3. **Cyberbullying:** Social media gives a great way to connect, at the same time; they can be a weapon of malevolent behavior. Social media makes it easier for students to abuse or bully their peers or even their teachers.

4. **Posting or access to unsuitable content:** It is very challenging to keep an eye on how the students use the social media. One of the major reasons as to why social media is not appreciated among students is the possible exposure to unsuitable that they might encounter.

5. **Short of head on Communication:** Students may miss out on valuable life skills which may be observed and gained majorly through social interaction and groupings more than real time online streaming. For personal and social relationship, students need to express themselves and join with others.

6. **Lack of consensus on legal aspects in Social Networks:** On analyzing the jurisprudence of the different countries, it is possible to observe that they do not agree and there are great variances in the legal aspects depending on the country that we are. Also students

may share or access contents which are subjected or copyrights.

7. **Controlling device usage in class:** The educational institution would have to instill a mechanism to continuously monitor and observe how the devices provided to the students are used which may burden additional effort and also may result in additional investment in the form of devices to be provided to the students to access such social media.

Facebook, Google and other web services simultaneously seize and fragment our attention. They can subvert higher-order reasoning processes, including the kind of focus, concentration and persistence necessary for critical thinking and intellectual development. Some researchers have correlated heavy Internet use with greater impulsivity, less patience, less tenacity and weaker critical thinking skills. The need to rapidly shift from object to object online can weaken students' ability to control their attention.

Other impacts of social media:

Impact of social media on medical and health: Social media has become an integral part of many healthcare organizations' marketing and communications strategies.Social media opens up many opportunities for health systems. It allows organizations to build connections, share discoveries, and develop credibility as thought leaders. Through platforms like Twitter and Facebook, physicians and health systems are able to share relevant health alerts, receive patient feedback, and bolster their brand with a focus on creating trust. By communicating with patients online, hospitals and physicians establish the foundation for a positive relationship. In addition to this, precisely targeted ads via social media platforms assist in personalized patient outreach.

Impact of social media on business: Millions of people use social media platforms each day, and with the invention of smartphones, people have almost 24/7 access to social media. The study found that 80% of Instagram users follow at least one business on the platform. The impact of social media on businesses is almost immeasurable. Social media is a fast, inexpensive way for you to reach your potential customers.

Impact of social media on society: As we all are aware of social media to facilitate a massive impact on our society. Social media can be very influential on society in both positive and negative ways. It gives people a way to stay in touch with people who live far away. It lets people share fun, interesting and informative and knowledgeable content. It also gives businesses a way to engage with customers.

There are the following positive effects of social media on society:

1. Education
2. Connectivity
3. Helps in Building Communities
4. Promotion and Advertising

5. Social Help etc.

There are the following negative effects of social media on society:

1. Hacking
2. Cyber Harassing or Cyber bulling
3. The Rise of Fake News Sites
4. Addiction
5. Increase in Fraud and Scams etc.

Conclusion:

In recent years social media has penetrated almost all types of organizations. For learning and teaching, social media is used in a variety of different contexts- language learning, writing development, after-class discussion, effective communication, community building and curriculum tool. Apart from these the use of social media in higher education is changing the nature of the relationships of learner and teachers and adept at the use of online technologies in learning environment. The use of social media in higher education presents many challenges but its importance cannot be ignored. Last but not the least, all the students are advised to adopt the positive aspects of social media and avoid negative effects, so that we can avail the benefits of these latest and emerging technologies.

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Importance of Translation in 21st Century

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In the 21st century, multiculturalism has spread all over the world. Access to the internet has brought distances near. Satellite dishes have bridged both time and space. One can see the events happening around the world while sitting in one's drawing room. Culturally the countries of the world are getting closer. Translation has been described variously by several scholars in different ways. Theodore Savory defines translation as an 'Art', Eric Jackbson says it is a 'Craft', J.C. Catford suggested, "Translation is an operation performed on language: a process of substituting a text in one language for a text in another that is from source language to target language". Translation is neither 'Transliteration' nor 'Transcreation'. Translation is a creative process of reproducing the text from source language to target language. According to Chukovask, "translation is not an Art but a higher Art". The importance of translation lies in the fact that it brings the readers, writers, and critics, of one nation into contact with those of others not only in the field of literature but in all areas of development: science and medicine, philosophy and religion, medicine and so on. Thus, translation helps in the cause of nation building.

The concept of translation has undergone a sea change in the postmodern era. Till, 1963, there was no translation centre, no association of literary translation in the U.S.A. or In India. But in 1980, translation studies have acquired a new dimension. Translation is no longer viewed as a process of change from one language into another language. Translation is seen as an empowering act, a nourishing act, an act of affirmative play that is very close to the Derrida's Position, which sees translation as a life-force that ensures survival of a literary text (Gentzler 1922) In poet, the translator sucks out the blood of the source text to strengthen the target text, as transfusion that endows the receiver with new life. Translation is really an enjoyable act on the basis of the theoretical framework suggested by Devy; we can study comparative literature in India that is Bhakti Movement in Indian literature and Dalit literature. By this way translation helps in the process of nation building in our country. The language of national level is translated into 30 other regional languages so for the administrative benefits translation is necessary in India. In the International fields we need to translate the bilateral talks and other international meetings & deliberations. The translation can bring the readers, writers, critics, of one nation into contact with others. The translation of literatures In India has assumed a special status in our country. The Ancient Indian literary heritage which is found in languages like Sanskrit, Prakrit, can be preserved through translation. Indian literature, which is written in various languages such as Hindi, English, Marathi, Bengali and so on can

reach all the people of India only through translation.

There is Correlation between translation and comparative literature through this national integration can develop. Translation is like literary network of travel, which comprises shared texts, including stories, poems, histories and treatise on broad range of topics. Translation is cultural negotiation. In fact, translation is in venture a cross-cultural communication rather than a more handling of languages. Language is a cultural phemenon and major carrier of culture. So translation is also a process in which cultural intercourse is conducted through the very carrier of language. Every language was born of culture and draws nutrition from it. Therefore, translators should not just concentrate convey the message in one language by the means of another language but should endeavour to display the differences of the two cultures modes of thinking and habits.(Bassent – 1980), the translation of a literary text become a transaction not between two languages, but rather a more complex negotiation between two cultures of any two languages.

In India there is a craze for translation in recent times for two reasons. First writers of regional language want to be translated into English. Secondly when a literature is translated into a target language, it immediately gets the scope of being compared with the literary texts written originally in the target language. In the post 1980, translation has been given a position equal to that of the original by critics and translators like Lambert and Jacques Derrida. In the Post- Romantic period translators like Friedrich Schlemarcher, Carlyle, William Morris, pleaded for a separate sub language for translation. Mathew Arnold, Laid emphasis on the source language text and wanted the translation to be committed to it. In his first lecture on 'Translating Homer' Arnold says, 'Let not the translator then trust to his notions of what the ancient Greeks would have thought of him, he will lose himself in the vague. Let him not trust to what the ordinary English readers thinks of him, he will be taking the blind for his guide. Let him not trust to his own Judgment of his own work, he may be misled by Individual caprices. Let him ask how his work affects those who both know Greek and can appreciate poetry.' (1914: 247). Literal translation has been emphasized by other translators as well; Henry Wadsworth Longfellow speaking of his translation of Dante's Divine comedia underlines that. "The business of a translator is to report what the author says, not to explain what he means, that is the work of the commentator. What an author says and how he says it that is the problem of the translator". (Dante 1964:65) On the other hand, it was Edward Fitgerald well-known for his translation of 'the Rubaiyat of Omar Khyyam (1858) who pleaded for taking liberty with the original text and creating a new text. Translation has to be exotic. "Where Omar asks for a loaf, a Jug of Wine. A sheep's thigh and a pretty boy Fitzgerald omits the meat, substitutes a "thou", and introduces a poetry book, when we see that the translator's first prose shot said "a bit of mutton and moderate bottle of wine." (1968:61)

In the post Colonial era many language writers, in their effort to reach a wider audience and to compete the Indian English writers in terms of national international visibility allowed their works to be translated into English. A.K. ramanujan a great poet and translator who made U.R. Annathanurthy's "Sanskara" famous by translating it into English once said, 'Translation is primarily meant for a reader who doesn't know the original language; the translator's problem is not only to translate the text into the readers' language but to make the reader see into the literary tradition and culture of the original language.' Translations have historically maintained a central role in the diffusion of knowledge, culture, religions, arts, and sciences across national and cultural borders. Although the Globalization process have fostered an International million in which English is increasingly the Lingua Franka in popular culture economic, technology and academic conversations alike, distances and differences among cultures still remain and translations retain a central role in international communication. The landscape is, however evolving at the turn of the 21st century. Bassnett captures the nature of translation as a 'movement across time and space. It is a kind of journey, beginning at one point and moving across the borders, far from innocent or politically neutral activity, and it is a textual process that involves encounters between languages and indentifies, "…the 21st century as the great age of translation" as an unprecedented number of individuals are travelling across the globe because of vastly different circumstances encounter other languages, other cultural frameworks and other belief systems, rendering translation an increasingly human condition."

The complexities of an evolving 21st century, society, shaped by the unfolding phenomena of globalization, brings to the core the necessity of late sense translators, connecting among different networks of knowledge who can bridge existing gaps not only between linguistic landscape but also between different semantic and semiotic environments. In this condition, the importance of translation shifts from being paradigm to a chief negotiator, whose skills are increasingly necessary to navigate a complex, multilayered, global landscape. Given the current situation, we live in a globalised era characterized by constant migration, our aim as translator can only be to find the most appropriate association for the local and the global, for the self and the 'other' through specific cultural experiences which are also related to what is alien and different to us. (Cronin 2006). In this 21 century scenario, the challenge which translation faces is obvious. According to Bauman, (1999-XVII) translating is, at the same time, a process of self –creation, ant of mutual creation. Translation in ongoing, unfinished and inclusive dialogue, which is bound to remain such. In the a century, the translator seems to understand very clearly that the idea of universal words such as 'die' , line, star, mirror, table which are not problematic from the part of view of translation (New mark 1988 :94) is impossible.

Translation is essential for the study of any literature. In a multilingual or multi- cultural country like India, the translation can bring all the people, languages closer, and can equality strenghten, mean of national integration. Even if one wants to develop one's study, translation can play a crucial role in this matter. Translation can help in nation-building, and to bring unity in the society

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Technological Advancements & Indian Banking Sector

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Introduction:

The Banking industry and financial institutions are vital sectors of any economy. Development of these two sections of the economy can impact the growth of the country in an incredible way. In the era of "Digital India", the banking and financial services in India have undergone a massive evolution and the phenomenon continues. The change can be attributed to various components like new regulatory policies and customer expectations. However, the one element that has affected banking and financial services the most is technological advancement. The emergence of innovative financial technology has revolutionized financial services in India as well as the banking sector. It has resulted in the introduction and advancement of several technology trends that have contributed to the radical transformation, growth, and advancement of these industries. The alliance between the innovative technologies of the financial sector and banking services has changed the conventional systems of handling money, and this collaboration is expected to create a massive shift with emerging trends in financial services.

The rise of Fintech companies, internet banking, and mobile banking are some of the classic examples of emerging trends in the banking sector and financial services. In addition to the betterment of traditional systems, these banking and financial services industry trends are a few steps toward creating a cashless society, complete digital transformation, and the rise of Fintech. In this time of change, the only thing that is constant is change.

Few Trends in Banking and Financial Services in India That Are Changing the Entire Scenario:

1. Digitization:

With the rapid growth of digital technology, it became imperative for banking and financial services in India to keep up with the changes and innovate digital solutions for the tech-savvy customers. Besides the financial institutions, insurance, healthcare, retail, trade, and commerce are some of the major industries that are experiencing the enormous digital shift. To stay competitive, it is necessary for the banking and financial industry to take the leap on the digital bandwagon.

In India, it all began not earlier than the 1980s when the banking sector introduced the use of information technology to perform basic functions likes customer service, book-keeping, and auditing. Soon, Core Banking

Solutions were adopted to enhance customer experience. However, the transformation began in the 1990s during the time of liberalization, when the Indian economy exposed itself to the global market. The banking sector opened itself for private and international banks which is the prime reason for technological changes in the banking sector. Today, banks and financial institutions have benefitted in many ways by adopting newer technologies. The shift from conventional to convenience banking is incredible.

Modern trends in banking system make it easier, simpler, paperless, signatureless and branchless with various features like IMPS (Immediate Payment Service), RTGS (Real Time Gross Settlement), NEFT (National Electronic Funds Transfer), Online Banking, and Telebanking. Digitization has created the comfort of "anywhere and anytime banking." It has resulted in the reduced cost of various banking procedures, improved revenue generation, and reduced human error. Along with increased customer satisfaction, it has enabled the customers creating personalized solutions for their investment plans and improve the overall banking experience.

2. Enhanced Mobile Banking:

Mobile banking is one of the most dominant current trends in banking systems. As per the definition, it is the use of a smartphone to perform various banking procedures like checking account balance, fund transfer, and bill payments, without the need of visiting the branch. This trend has taken over the traditional banking systems. In the coming years, mobile banking is expected to become even more efficient and effortless to keep up with the customer demands. Mobile banking future trends hint at the acquisition of IoT and Voice-Enabled Payment Services to become the reality of tomorrow. These voice-enabled services can be found in smart televisions, smart cars, smart homes, and smart everything. Top industry leaders are collaborating to adopt I0T-connected networks to create mobile banking technologies that require users' voice to operate.

3. UPI (Unified Payments Interface):

UPI or Unified Payments Interface has changed the way payments are made. It is a real-time payment system that enables instant inter-bank transactions with the use of a mobile platform. In India, this payment system is considered the future of retail banking. It is one of the fastest and most secure payment gateways that is developed by National Payments Corporation of India and regulated by the Reserve Bank of India. The year 2016 saw the launch of this revolutionary transactions system. This system makes funds transfer available 24 hours, 365 days unlike other internet banking systems. There are approximately 39 apps and more than 50 banks supporting the transaction system. In the post-demonetization India, this system played a significant role. In the future, with the help of UPI, banking is expected to

become more "open."

4. Block Chain:

Blockchain is the new kid on the block and the latest buzzword. The technology that works on the principles of computer science, data structures and cryptography and is the core component of cryptocurrency, is said to be the future of banking and financial services globally. Blockchain uses technology to create blocks to process, verify and record transactions, without the ability to modify it.

NITI Aayog is creating IndiaChain, India's largest blockchain network, which is expected to revolutionize several industries, reduce the chances of fraud, enhance transparency, speed up the transaction process, lower human intervention and create an unhackable database. Several aspects of banking and financial services like payments, clearance and settlement systems, stock exchanges and share markets, trade finance, and lending are predicted to be impacted. With its strenuous design, blockchain technology is a force to be reckoned with.

5. Artificial Intelligence Robots:

Several private and nationalized banks in India have started to adopt chatbots or Artificial intelligence robots for assistance in customer support services. For now, the use of this technology is at a nascent stage and evolution of these chatbots is not too far away. Usage of chatbots is among the many emerging trends in the Indian banking sector that is expected to grow.

More chatbots with the higher level of intelligence are forecasted to be adopted by the banks and financial institutions for improved customer interaction personalized solutions. The technology will alleviate the chances of human error and create accurate solutions for the customers. Also, it can recognize fraudulent behavior, collate surveys and feedback and assist in financial decisions.

6. The rise of Fintech Companies:

Previously, banks considered Fintech companies a disrupting force. However, with the changing trends in the financial services sector in India, fintech companies have become an important part of the sector. The industry has emerged as a significant part of the ecosystem. With the use of financial technology, these companies aim to surpass the traditional methods of finance. In the past few decades, massive investment has been made in these companies and it has emerged into a multi-billion-dollar industry globally.

Fintech companies and fintech apps have changed the way financial solutions are provided to the customers. Besides easy access to financial services, fintech companies have led to a massive improvement in services, customer experience, and reduced the price paid. In India, the dynamic

transformation has been brought upon by several important elements like fintech startups, established financial institutions, initiatives like "Start-Up India" by Government of India, incubators, investors, and accelerators. According to a report by National Association of Software and Services Companies (NASSCOM), the fintech services market is expected to grow by 1.7 times into an $8 billion market by 2020.

7. Digital-Only Banks:

It is a recent trend in the Indian financial system and cannot be ignored. With the entire banking and financial services industry jumping to digital channels, digital-only banks have emerged to create paperless and branchless banking systems. This is a new breed of banking institutions that are overtaking the traditional models rapidly. These banks provide banking facilities only through various IT platforms that can be accessed on mobile, computers, and tablets. It provides most of the basic services in the most simplified manner and gives access to real-time data. The growing popularity of these banks is said to be a real threat to traditional banks.

ICICI Pockets is India's first digital-only bank. These banks are attractive to the customers because of their cost-effective operating models. At the same time, though virtually, they provide high-speed banking services at very low transaction fees. In today's fast lane life, these banks suit the customer needs because they alleviate the need of visiting the bank and standing in a queue.

8. Cloud Banking:

Cloud technology has taken the world by storm. It seems the technology will soon find its way in the banking and financial services sector in India. Cloud computing will improve and organize banking and financial activities. Use of cloud-based technology means improved flexibility and scalability, increased efficiency, easier integration of newer technologies and applications, faster services and solutions, and improved data security. In addition, the banks will not have to invest in expensive hardware and software as updating the information is easier on cloud-based models.

9. Biometrics:

Essentially for security reasons, a Biometric Authentication system is changing the national identity policies and the impact is expected to be widespread. Banking and financial services are just one of the many other industries that will be experiencing the impact. With a combination of encryption technology and OTPs, biometric authentication is forecasted to create a highly-secure database protecting it from leaks and hackers attempts. Financial services in India are exploring the potential of this powerful technology to ensure sophisticated security to customers' account and capital.

10. Wearables:

With smartwatch technology, the banking and financial services technology is aiming to create wearables for retail banking customers and provide more control and easy access to the data. Wearables have changed the way we perform daily activities. Therefore, this technology is anticipated to be the future retail banking trend by providing major banking services with just a click on a user-friendly interface on their wearable device.

CONCLUSION:

These are some of the recent trends in the banking and financial sector of India and all these new technologies are predicted to reshape the industry of business and money. The future is going to bring upon a revolution of sorts with historical changes in traditional models. The massive shift in the landscape has few challenges. Nonetheless, the customers are open to banking innovations and the government is showing great support with schemes like "Jan Dhan Yojana," which aims at proving a bank account to every citizen. Meanwhile, the competition from the foreign and private sector banks have strained the government regulators, nationalized banks and financial institutions to adopt new technology in order to stay relevant in the race.

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Microfinance in India: Issues and Challenges

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INTRODUCTION :

Microfinance is a general term to describe financial services to low-income individuals or to those who do not have access to typical banking services. Microfinance is also the idea that low-income individuals are capable of lifting themselves out of poverty if given access to financial services. .Microfinance allows people to take a loan on reasonable rate of interest for doing business." The term microfinance helps to differentiate these services from those which forma bank provided. Microfinance is not just about giving microcredit to the poor rather it is an economic development tool whose objective is to assist poor to work their way out of poverty. It covers a wide range of services like credit, savings, insurance and non-financial services like training counselling etc.

Microfinance is provided through Microfinance Institutions (MFIs). To be sustainable, MFIs ultimately have to Organise their own resources through savings and equity, enhanced by other domestic resources, Recover their loans, Cover their costs from their operational income and Finance their expansion from their profits .The microfinance industry has a total loan portfolio of rs. 178,547 crore on March 31st 2019 which represents a growth of 40% over a March 31st 2018.

CHANNELS OF MICROFINANCE:

1. SHG- Bank linkage programme
2. Micro Finance institution (MFIs)

1. SHG- BANK LINKAGE PROGRAMME:

This is the bank-led microfinance programme channel initiated by NABABRD in 1992. SHG model the member usually women in village are encouraged to form groups of around 10-15 members who contribute their saving in the group of periodically and from these saving small loans are provided to group members. . The SHG – Bank Linkage Programme started as an Action Research Project in 1989. In 1992, the findings led to the setting up of a Pilot Project. The pilot project was designed as a partnership model between three agencies, viz., the SHGs, banks and Non Governmental Organizations (NGOs). The project objective was to facilitate access of the poor to formal credit institutions.

2. MICROFINANCE INSTITUTIONS:

In India microfinance institution as NGOs (registered as societies) section 25 companies and non banking financial companies. Commercial; bank, regional rural bank , cooperative societies and other lenders have played important role in providing refinance facility to MFIs.

The reasons for existence of separate institutions i.e. MFIs for offering micro finance are as follows:

- High transaction cost – generally micro credit fall below the break-even point of providing loans by banks.
- Loans are generally taken for very short duration periods.
- High frequency of repayment of instalments and higher rate of default.

Sl. No.	Type of MFI	Number	Legal Registration
	Not-for Profit MFIs		
1.	NGOs	400-500	Society Registration Act, 1860 Indian Trust Act, 1882
2.	Non-Profit companies	20	Section-25 of Indian Companies Act, 1956
	Mutual Benefit MFIs		
1.	Mutual benefit MFIs – Mutually Aided Cooperative Societies (MACS)	200-250	Mutually Aided Co-operative societies, Act enacted by State Governments
	For Profit MFIs		
2.	Non-Banking Financial Companies (NBFCs)	45	Indian companies Act, 1956 Reserve Bank of India Act, 1934

Source: NABARD ISSUES RELATED TO MICROFINANCE

PRINCIPLES OF MICRO FINANCE:

Microfinance is considered as a tool for socio-economic development, and can be clearly distinguished from charity. Families who are destitute, or so poor they are unlikely to be able to generate the cash flow required to repay a loan, should be recipients of charity. Others are best served by financial institutions. Some principles that summarize a century and a half of development practice were encapsulated in 2004 by Consultative Group to Assist the Poor (CGAP) and endorsed by the Group of Eight leaders at the G8 Summit on June 10, 2004 are given below :-

- Poor people need not just loans but also savings, insurance and money transfer services.
- Microfinance must be useful to poor households: helping them raise income, build up assets and/or cushion themselves against external shocks.
- Microfinance can pay for itself. Subsidies from donors and government are scarce and uncertain, and so to reach large numbers

of poor people, microfinance must pay for itself.
• Microfinance means building permanent local institutions. • Microfinance also means integrating the financial needs of poor people into a country's mainstream financial system.
• The job of government is to enable financial services, not to provide them**.**

Microfinance includes the following products:

➤ **Micro loans** - Microfinance loans are significant as these are provided to borrowers with no collateral. The end result of micro loans should be to have its recipients outgrow smaller loans and be ready for traditional bank loans.

➤ **Micro savings** – Micro savings accounts allow entrepreneurs operate savings accounts with no minimum balance. These accounts help users inculcate financial discipline and develop an interest in saving for the future.

➤ **Micro insurance** – Micro insurance is a type of coverage provided to borrowers of microloans. These insurance plans have lower premiums than traditional insurance policies.

OBJECTIVES OF MICROFINANCE :

1. **Provide Access to Funds:** Typically, the poor acquire financial services like loans through informal relationships. These loans, however, come at a high cost per dollar loaned and can be unreliable. Furthermore, banks have not traditionally viewed poor people as viable clients and often will reject them due to unstable credit or employment history and lack of collateral. MFIs dismiss such requirements and provide small loans at high interest rates, thus providing MFIs the funds they need to continue operation.

2. **Encourage Entrepreneurship and Self-Sufficiency:** Underprivileged people may have potentially profitable business ideas, but they cannot put them into action because they lack sufficient capital for start-up costs. Microcredit loans give clients just enough money to get their idea off the ground so they can begin turning a profit. They can then pay off their micro-loan and continue to gain income from their venture indefinitely.

3. **Manage Risk:** Microcredit can give impoverished people enough financial stability to cross from simply surviving to accruing savings. This gives them protection from sudden financial problems that could have been devastating. Savings also allow for educational investment, improved nutrition, better living conditions and reduced illness. Microinsurance provides people the ability to pay for health care when needed, so they can receive treatment for health conditions

before they become grave and more costly to treat.

4. **Empower Women:** Women make up a large proportion of microfinance beneficiaries. Traditionally, women (especially those in underdeveloped countries) have been unable to readily participate in economic activity. Microfinance provides women with the financial backing they need to start business ventures and actively participate in the economy. It gives them confidence, improves their status and makes them more active in decision-making, thus encouraging gender equality. According to CGAP, long-standing MFIs even report a decline in violence towards women since the inception of microfinance.

5. **Community-Wide Benefits:** Generally speaking, microfinance institutions seek to reduce poverty worldwide. As they obtain funds and services from MFIs, recipients gain enormous financial benefits which trickle down to others in their families and communities. New business ventures can provide jobs, thereby increasing income among community members and improving their overall well-being. Microfinance services gives hope to people who previously had little or no opportunity to be self-sufficient.

Benefits of Microfinance:

There are literally dozens of benefits for microfinance, but the key pluses involve the role of microfinance in economic development. Vitanna.org and Plan International provide possibly the top benefits of microfinance:

1. **It allows people to provide for their families.** Through microfinance, more households are able to expand their current opportunities so that more income accumulation may occur, says Vitanna.org, a financial services website.

2. **It gives people access to credit.** "By extending microfinance opportunities, people have access to small amounts of credit, which can then stop poverty at a rapid pace," says Vitanna.org. Plan International, a global organization dedicated to advancing children's rights and equality for women, agrees, stating: "Banks simply won't extend loans to those with little or no assets, and generally don't engage in the small size of loans typically associated with microfinancing. Microfinancing is based on the philosophy that even small amounts of credit can help end the cycle of poverty."

3. **It serves those who are often overlooked in society.** About 95 percent of some loan products extended by *microfinance institutions* are given to women, as well as those with disabilities, those who are unemployed, and even those who simply beg to meet their basic

needs, Vitanna notes. Microfinance services can help recipients take control of their own lives.

4. **It creates the possibility of future investments.** Microfinance disrupts the cycle of poverty by making more money available. When basic needs are met, families can then invest in better housing, health care, and even, eventually, small business opportunities.

5. **It is sustainable.** There's little risk with a $100 or loan, says Vitanna, adding: "Yet $100 could be enough for an entrepreneur in a developing country to pull themselves out of poverty." Plan International agrees, stating that a $100 loan can be enough to launch a small business in a developing country that could help the benefactor pull herself and her family out of poverty.

6. **It can create jobs.** Microfinance is also able to let entrepreneurs in impoverished communities and developing countries create new employment opportunities for others.

7. **It encourages people to save.** "When people have their basic needs met, the natural inclination is for them to save the leftover earnings for a future emergency," says Vitanna.

8. **It offers significant economic gains even if income levels remain the same.** The gains from participation in a microfinance program including access to better nutrition, higher levels of consumption, and eventually, growing economies, even in small and impoverished communities.

9. **It leads to better loan repayment rates.** "Microfinance tends to target women borrowers, who are statistically less likely to default on their loans than men. So these loans help empower women, and they are often safer investments for those loaning the funds," says Plan International.

10. **It extends education.** Families receiving microfinance services are less likely to pull their children out of school for economic reasons, says Plan International.

Microfinance, then, may involve very small loans and financial services, but it has a worldwide impact over the last four-plus decades. For a small business that needs just a bit of extra cash or credit to secure a new opportunity, microfinance may be just the ticket. And for a small lending or banking business looking for new opportunities, microfinance literally offers a world of opportunities – one small loan or financial service at a time.

CHALLENGES FACED BY MICROFINANCE AND MFIs IN INDIA:

➢ **HIGH RATE INTREST:** High rate of interest, may prove that

counterproductive and weaken the social and economic condition of poor clients. The applicable average base rate is to be charged by NBFCs- MFIs to their barrowers from July 1 ,2019 will be 9.8% RBI said . while public bank still is interest rates is 5.65%.in 2019. MFIs do not get any subsidized credit for their lending activities and that is why they need to recover their operational costs from borrowers.

➢ **MIXING CHARITY WITH BUSINESS:** Since credit without strict discipline is nothing but charity (Professor Yunus), if microfinance providers fail to protect themselves against loan delinquency, they will, in effect, prioritize social objectives at the expense of financial sustainability. Improper delinquency management is a result of inadequate implementation of corporate governance principles, and formal as well as semi-formal microfinance providers often suffer from this. As a result, looser controls over microfinance deals will lead to higher default rates. Read more about the difficulty in mixing charity with business.

➢ **REGIONAL IMBALANCES:** Microfinance institutions were expected to reach those areas where the formal banking sector failed to reach and the poor people have to depend on the money-lenders in order to meet their financial requirements. But still MFIs activates in some states where banking sector network strong. There is unequal geographical growth of micro financial institution and SHGs in India according to report about 60% of the total SHGs credit linkage in the country are concentrated in southern states.

➢ **FINANCIAL ILLITRACY:** One of the major challenges of growth of micro finance sector is the financial illiteracy of the people. This makes it difficult in creating awareness of microfinance and even this make difficult to serve them as microfinance clients.

➢ **TRANSPARANT PRICING:** Though the concern about the transparent pricings the microfinance sector has been older one. it is gaining significance with the growing size and increasing competition in this sector. Because of unaware of actual price of loan products because they don't know the actual price. Due to lack of understanding of pricing, client borrowing more than their ability to pay back which results in over-indebtedness of the borrower.

➢ **LIMITED SPREAD IN POORER STATES:** The area coverage programme is comparatively low in the states which have larger share in the poor. Unfortunately these Seven states i.e Orissa , Bihar ,

Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Jharkhand are lagging behind microfinance programme

➣ **REGULATORY ISSUED BY MFIs:** RBI is the sole regulator of MFIs in India as it one type of NBFCs only. RBI has controlled and regulated commercial and traditional banks for the many years but MFIs is rather a new institute to regulate. Recently RBI has framed and implemented many revised norms for this industry as in many past many MFIs faced a severe financial crises and failed also.

MEASURES:

■ **TRANPARANCY IN INTREST RATES:** Common practices of charging interest rates should be fallowed by all MFIs so that it makes the sector more competitive and it get benefitted to compare different products before buying.

■ **TECHNOLOGY TO REDUCE OPRTAING COSTS**:   MFIs should use new technologies and IT tools & applications to reduce their operating costs. Microfinance institutions should be encouraged to adopt cost-cutting measures to reduce their operating costs. Also initiatives like development of common MIS and other software for all MFIs can be taken to make the operation more transparent and efficient.

■ **ENCOURAGE RURAL PENETRATION:** Encouraging MFIs for opening new branches in areas of low microfinance penetration by providing financial assistance will increase the outreach of the microfinance in the state and check multiple lending. This will increase rural penetrating of microfinance in the state .

■ **FIELD SUPERVISION:** In addition to proper regulation of the microfinance sector, field visits can be adopted as a medium for monitoring the conditions on ground and initiating corrective action if needed. This will keep any on the performance of ground staff of various MFIs and their recovery practices. This will also encourage MFIs to abide by proper code of conduct and work more efficiently. However, the problem of feasibility and cost involved in physical monitoring of thus vast sector remains an issue in this regard.

■ **SECTOR WISE DEVELOPMENT:** Leading banks and industry developments must be taken into consideration for district-wise and block-wise economic opportunity

CONCLUSION:

Microfinance is not yet the centre stage of the Indian financial sector . The knowledge , capital and technology to address these challenges

however now exist in India , although they are not yet fully aligned . with more enabling environment an surge in economic growth ,the next few year promise to be existing for the delivery of financial services to poor people in India . The supply of microfinance in India is still presently grossly inadequate to filled the gap between demand and supply but it holds the promise to act as a great opportunity for the financial sector and the economy as a whole .

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Global Climate Change and Biodiversity in India: Policy Framework and Implementation

(some concepts, that young creative minds should know)

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From chapters on global warming in school textbooks to mandatory environmental education in different syllabi at higher educational levels; in last few decades, Indian education system has systematically realized the need to educate the young minds to act now and be prepared for future, when the inevitable questions of global warming and biodiversity threats challenge them. From debates on different days related to environment and forests to annual media heats of pollution in national capital; each and every one of us knows the glimpses of problems and symptoms of the menace: but in *bits and pieces*. For simplest comprehension, climate change and loss of biodiversity may be translated as '*evolution backfired*!.It encompasses generations to destroy and generations to redress. Therefore author considers that young creative minds getting shaped in different colleges / universities to become responsible citizens of our future society must know the holistic outlines of policy, framework and ways of implementation. In this way, they can contribute to state's efforts and understand the need of globally concerted actions for a better future.

The present text is largely based on National Biodiversity Action plan 2019 which has been simplified and explained for the target readers with additional inputs for the role they can play for it.

At international level, Convention on Biological Diversity (CBD) is a multilateral treaty among the nations which came into force in December 1993. It has three objectives (1) conservation of biodiversity (2) sustainable use of the components of biodiversity and (3) fair and equitable sharing of benefits arising out of the use of genetic resources.This Convention is implemented through programmes / strategic plans adopted by the Conference of Parties (CoP) to the CBD.They are then incorporated in the National Biodiversity Action Plan (NBAP) by the Parties.Implementation is monitored by the CoP to the CBD through periodic national reports.Preparation of NBAP or equivalent documents and preparation of National Reports are two mandatory obligations of CBD as per Article 6 and Article 26 of the Convention, respectively.Six national reports have been submitted by the Parties so far.India submitted its Sixth National Report (NR 6) to the CBD on 29 December 2018.

When we talk about our country, India became a Party to the CBD in 1993, and prepared its first NBAP entitled "National Policy and Macro Level Action Strategy on Biodiversity" in 1999 (Strategy 1999).Enactment of Biological Diversity Act, 2002 followed this exercise. Section 36(3) of the Act obligates the Central Government to *"as far as practicable wherever it deems appropriate, integrate the conservation, promotion and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies."*The Strategy, 1999 and the BD Act needed sectoral and cross-sectoral programmes. For cohesiveness between Strategy, 1999 and the sectoral policies (i.e. National Forest Policy, 1988; National Conservation Strategy and Policy Statement on Environment and Development, 1992; Policy Statement on Abatement of Pollution, 1992 etc.), following were established (1) National Agricultural Policy (NAP), 2000 (2) National Population Policy (NPP), 2000; and (3) National Water Policy (NWP), 2002.For other national and international commitments on environment including climate change and desertification National Environment Policy (NEP) in 2006 was introduced.The Strategy, 1999 was revised and updated into NBAP, 2008 to bring the biodiversity agenda in alignment with the NEP, 2006.This second generation of NBAP was further updated with Addendum 2014 to NBAP, 2008 in order to integrate the Strategic Plan for Biodiversity 2011-20 (SPB 2011-20) in NBAP which was adopted by CoP 10, held at Nagoya in the Prefecture of Aichi in Japan.The SPB 2011-20 provides an overarching framework on biodiversity, not only for all biodiversity related conventions including CBD, but for the entire United Nations (UN) system and all partners engaged in management of biodiversity.The SPB 2011-20 includes 20 Aichi Biodiversity Targets (ABTs) covered under five strategic goals to be implemented during 2011-20. Parties to CBD were required to develop National Biodiversity Targets (NBTs) in line with these 20 global ABTs.

As a long term future goal for the planet, CBD Decision X/2 says that - "By 2050, biodiversity is valued, conserved, restored and widely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

India has developed 12 NBTs using SPB 2011-20 as the framework.The "Addendum 2014 to NBAP 2008" contains the details of 12 NBTs with associated indicators and monitoring framework. In another initiative, the UN General Assembly in its 70th meeting in 2015 adopted Resolution 70/1: "2030 Agenda" of Sustainable Development with 17 sustainable Development Goals or SDGs.These goals cover social and economic development issues and have a strong resonance with ABTs which in turn have been integrated into NBTs.The implementation of the NBAP involves:

- ♦ Central Government
- ♦ State governments
- ♦ Local institutions of governance.

¨ Other stakeholders such as NGOs, Civil Society Organizations (Joint Forest Management Committees or JFMCs, Biodiversity Management Committees or BMCs), industry and business, technical and educational institutions, local and traditional communities etc. Gender mainstreaming is a major focus of implementation strategy.

India is one of the recognized megadiverse countries of the world, situated at the tri-junction of Afro-tropical, Indo-Malayan and Paleo-Arctic realm.India has only 2.4 % of the geographical area of the world, but harbours nearly 8 % of the globally known floral and faunal species. It is an acknowledged centre of crop diversity and crop wild relatives. It has:

- ♦ 4,635 ethnic communities;
- ♦ 10 Biogeographic Zones;
- ♦ Sixteen forest types (Champion and Seth, 1968); and
- ♦ 14 physiographic zones;
- ♦ The current forest and tree cover 23.39 % of geographical area.

Four out of 35 global biodiversity hotspots of the world are represented in India viz.

- ❖ the Western Ghats as part of the Western Ghats-Sri Lanka global hotspot,
- ❖ the Nicobar Islands as part of the Sundaland hotspot,
- ❖ parts of Assam and Meghalaya in the North-eastern region as part of Indo-Burma hotspot,
- ❖ the Eastern Himalaya comprising North-eastern Himalayas of India, Bhutan and Nepal.
- ❖ Local solutions for conservation and sustainable use of biological resources based on traditional knowledge (TK) are encouraged in hotspots areas.
- ❖ Ecosystem diversity of India includes:
- ❖ **Terrestrial Ecosystems**
- ❖ **Forests**
- ❖ **Grasslands**
- ❖ **Desert Ecosystems**
- ❖ **Mountain Ecosystems**
- ❖ **Himalayas**
- ❖ **Western Ghats**
- ❖ **Other Mountain Ranges (e.g. Arawalis)**
- ❖ **Aquatic Ecosystems**

- ❖ **Wetland Ecosystems**
- ❖ **Coastal and Marine Ecosystems**
- ❖ **Mangrove Ecosystems**
- ❖ **Seaweed Ecosystems**
- ❖ **Seagrass Ecosystems**
- ❖ **Coral Reef Ecosystems**
- ❖ **Riverine Ecosystems**

Fifteen different agro-climatic zones have been identified in India. The Protection of Plant Varieties and Farmers' Rights Authority (PPVFRA) has identified 22 agrobiodiversity hotspots in India based on the number of species, crop varieties, wild relativesof cultivated crop species, social relevance, ancientness of agriculture, number of speciesdomesticated and the uniqueness of the agroecosystem. India set up its first gene sanctuary in the Garo Hills of Assam for wild relatives of citrus in 1980s. The distinct microclimate of the area having a combination of tropical and temperate seasons and heavy rainfall in the area offers an environment conducive to citrus plants. Rare varieties such as *Citrum acroptera* (Melanesian sour orange), *Citrus aurantifolia* (lemon) and *Citrus grandis* (pummelo) grow abundantly in the region.

Total evaluated fauna as reported in India's Fifth National Report to the CBD (NR5) in 2014 was 4,681 species. Of these 646 were in threatened categories. Evaluated fauna in 2018 increased to 5,507. Of these, 675 species fall under threatened categories. The percentage of threatened species against evaluated species has come down from 13.8% in 2014 to 12.25% in 2018.

There are several different guiding principles and international treaties which form the framework of NBAP e.g.:

- ❖ Ramsar Convention on Wetlands,
- ❖ Convention on the Conservation of Migratory Species of Wild Animals (CMS),
- ❖ Convention on the International Trade Endangered Species of Flora and Fauna (CITES),
- ❖ International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA),
- ❖ International Plant Protection Convention (IPPC),
- ❖ United Nations Convention to Combat Desertification (UNCCD),
- ❖ United Nations Framework Convention on Climate Change (UNFCCC).
- ❖ Actions under NBAP also contribute to implementation of the Sustainable Development Goals (SDGs).

Accordingly, India has implemented several legislative measures in line of the international commitments e.g.:

❖ National Forest Policy, 1988
❖ National Environmental Policy, 2006
❖ National Agroforestry Policy, 2014
❖ National Policy for Marine Fisheries, 2017
❖ Biodiversity Act, 2002
❖ Indian Forest Act, 1927 (last amended in 2017)
❖ Wildlife Protection Act, 1972 (last amended in 2006)
❖ Forest Conservation Act, 1980
❖ Environmental Protection Act, 1986
❖ Wetland Rules, 2017
❖ The Plant Quarantine (Regulation of Import into India) Order, 2003 (PQO, 2003)
❖ The Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPVFR Act, 2001)
❖ The National Green Tribunal Act, 2010 (NGT Act, 2010)
❖ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (Forest Rights Act, 2006)

Horizontal integration of NBAP in all the related line ministries at the Central Government level, including in the institutions under these ministries, developed organically through the process adopted for the preparation of NBAP, 2008 and Addendum 2014. However, most of the field action for implementation lies in the jurisdiction of states/UTs.States formulate their own state annual plans and longer-term plans for their social and economic development goals. State specific legislative and policy frameworks, broadly aligned with national policies and legislations, provide the basic template for these plans. NBAP integration in state plans was secured through the State Biodiversity Action Plans (SBAPs). These were prepared by the states following an extensive process of consultations with stakeholders. SBAPs thus, reflect state specific ground realities in the implementation of NBAP. They ensure an inclusive and decentralized approach to the governance and management of biodiversity. Participation of women and local communities in governance is integral to these SBAPs at the state as well as sub-state level. Institutions that participate in implementation at the local level include institutions of local governance known as Panchayati Raj Institutions (PRIs), JFMCs, BMCs and Gram Sabhas in the areas falling under the purview of Forest Rights Act, 2006 and the PESA Act in their respective jurisdictions.

The implementation basket of NBAP includes:(1)Central sector schemes which are either fully funded by the Central Government or centrally sponsored schemes which are jointly funded by the Central and the state governments and (2)State plan schemes funded by the state governments

including local level initiative by institutions of local governance from own resources or grants received from the state governments and other sources.

SBAPs provide an integrated platform for central and state schemes implementation. Typically, SBAPs include a review of sectoral policies and programmes that affect biodiversity to flag the areas of concern and challenges for implementation. Roles and responsibilities of various levels of administrative machinery and the other stakeholders including women and local communities NGOs and others are identified and assigned. The Central Government schemes are implemented on the ground by the state government agencies, including through the institutions of local governance. Most schemes having a direct connect with biodiversity or its components are implemented through a mission approach to achieve the desired results. Vertical integration of these missions is secured by collaborative mechanisms of the Central and the state governments. Green India Mission (GIM) and National Mission on Sustainable Agriculture (NMSA) are examples.

Objectives: Increased Forest and tree cover, improvement in the quality of forest cover and ecosystem services including biodiversity, hydrological services and carbon sequestration.

National Level:
1. National Governing Council chaired by Minister MoEFCC
2. National Executive Council chaired by the Secretary MoEFCC and cochaired by Directorate General of Forests
3. Mission Directorate headed by a Chief Executive Officer

State Level:
1. State Level Forest Development General Body chaired by Chief Minister/ Environment Minister
2. State level executive committee chaired by the Principal Secretary, Forests.

District Level:
1. District Forest Development Agency chaired by Chairman Zila Parishad
2. District Level Steering Committee chaired by district collector with representation of Integrated Watershed Management Programme (IWMP), National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and GIM.

Village Level:
1. Gram Sabha or the committees mandated by Gram Sabha.
2. Cluster level committees, JFMCs

Objectives: Making agriculture more productive, sustainable, remunerative, climate resilient, optimizing water utilization through the motto

'more crop per drop'.

National Level:
1. National Advisory Committee (NAC) Chaired by the Secretary (A&C)
2. Project Sanctioning Committee (PSC) chaired by the Mission Director, NMSA

State Level:
1. State Level Committee (SLC) chaired by Agriculture Production Commissioner
2. State Standing Technical Committee (SSTC) headed by the official nominated by the State and membership of universities and technical experts

District Level:
1. District Mission Committee (DMC) chaired by the collector or CEO

Zila Parishad:
1. Representation of line departments, Growers' Association and Krishi. The institution of PRIs has mandate over mainly following sectors:
- Agriculture, including agricultural extension
- Land improvement, implementation of land reforms, land consolidation and soil conservation
- Minor irrigation, water management and watershed development
- Animal husbandry, dairying and poultry
- Fisheries
- Social forestry and farm forestry
- Minor forest produce
- Drinking water
- Fuel and fodder
- Non-conventional energy sources
- Maintenance of community assets

Preparation of People's Biodiversity Registers (PBRs) with the participation of people to document comprehensive information on local biological resources and associated knowledge, including their medicinal and other uses; and

❖ Conservation including identifying and recommending new conservation areas as BHSs. Their proactive approach has led to the protection of 941.44 km2 areas as BHSs.

❖ JFMCs and similar subject matter specific committees which participate in governance and implementation in their respective fields.

❖ Mandatory participation of women and marginalised sections is a prime focus for these institutions.

❖ Representation and participation of NGOs, academic and technical

institutions is ensured in the committees at various levels.

Youth and School Students:

   a. Eco-clubs Programme
   b. National Nature Camp Programme
   c. Paryavaran Mitra (Friends of Nature)
   d. Natural Resource Awareness Clubs
   e. Biotechnology Labs in Senior Secondary schools (BLiSS) (in NE)
   f. Youth clubs for developmental Activities
   g. Science Express
   ❖ Industry and Business:
   ❖ Local Communities, Institutions of Local Governance
   ❖ Policy Makers and Government Functionaries
   ❖ NGOs, CSOs, Individuals
   ❖ **Different forest Strategy for conservation of biodiversity:**
   ❖ Rehabilitation of Degraded Areas
   ❖ National Afforestation Programme (NAP)
   ❖ Restoration of Difficult Areas through Eco Task Forces (ETFs)
   ❖ Reclamation of Abandoned Areas
   ❖ Area Based Conservation of Natural Habitats
   ❖ Biodiversity Heritage Sites under BD Act, 2002
   ❖ Eco-Sensitive Zones under EP Act
   ❖ Wetland Rules, 2017
   ❖ Biosphere Reserves (BRs)
   ❖ Sacred Groves/ Community Conserved Areas
   ❖ Ensuring Effectiveness of Management Measures (MEE reports)
   ❖ Ensuring Ecological Representativeness in Conserved/Protected Areas
   ❖ Landscape/Seascape Approach
   ❖ Rehabilitation, Restoration and Conservation of Threatened Species
   ❖ Species restoration after Forest and Water Body Restoration
   ❖ Sustainable Management of Forests
   ❖ Changes in Management Regimes (NWPC 2004/NWPC 2014)
   ❖ Survey & Assessment of Forest Resources' of the NWPC which provides for:
   i.   maintenance, conservation and enhancement of biodiversity,
   ii. maintenance and enhancement of forest resource productivity,
   iii. optimization of forest resource utilization,
   iv. maintenance and enhancement of social, economic, cultural and spiritual benefits
   ❖ FC Act, 1980: Compensatory Afforestation, NPV

- ❖ Alternative avenues: e.g. Pradhan Mantri Ujjwala Yojana
- ❖ Management of Land Degradation
- ❖ Tracking the status of land
- ❖ Reclamation of Sodic Soils
- ❖ Enhancement and Conservation of Agrobiodiversity Plant Genetic Diversity
- ❖ Plant genetic resources:
- o Modern cultivars
- o Breeding lines and genetic stocks
- o Landraces and farmers' varieties
- o Obsolete cultivars
- o Wild relatives
- o Weedy races
- o Potential domesticated/ other wild species
- o Biotechnological cell lines
- o Conservation of plant genetic resources for:
- ◼ Agricultural crops and varieties
- ◼ Raw materials for crop improvement
- ◼ Diversification of cropping and farming systems
- ◼ Adaptation to climate change
- ◼ Food, nutritional and environmental security.

Governance and Management of Agrobiodiversity:
- ❖ Six Bureaux under the ICAR:
- ❖ (i) National Bureau of Agriculturally Important Microorganism (NBAIIM)
- ❖ (ii) National Bureau of Agricultural Insect Resources (NBAIR)
- ❖ (iii) National Bureau of Plant Genetic Resources (NBPGR)
- ❖ (iv) National Bureau of Fish Genetic Resources (NBFGR)
- ❖ (v) National Bureau of Animal Genetic Resources (NBAGR)
- ❖ (vi) National Bureau of Soil Survey and Land Use planning (NBSS&LUP).

Other Measures:
- o Role of Botanical Gardens
- o Genetic Diversity of Indigenous Animal Breeds
- o Measures Instituted to Encourage Indigenous Breeds:

Rashtriya Gokul Mission: works through National Mission on Bovine Productivity. Two of its five components directly serve conservation of genetic diversity through 'E Pashu Haat Portal', by linking farmers and breeders of indigenous breeds and through Establishment of National Bovine Genomic Centre for Indigenous Breeds (NBGC-IB), for enhancing milk production and

productivity through genomic selection among indigenous breeds.

§ **National Programme for Bovine Breeding**: by establishing two National Kamdhenu Breeding Centres, one each in North and South of the country for conservation of Indigenous Bovine Breeds (41 cattle and 13 buffaloes). These will act as repositories of germplasm of indigenous breeds certified germplasm for supply to farmers.

o Important Initiatives for Sustainable Management of Agriculture:

o National Initiative on Climate Resilient Agriculture (NICRA)

o Support and Incentives for Natural/Organic Agriculture through:

§ Paramparagat Krishi Vikas Yojana (PKMY)

§ Participatory Guarantee System (PGS) for organic farming certification

§ Efficient Use of Water (EUW)

§ Promotion of Green Energy in Agriculture

§ Kisan Urja Suraksha evam Utthan Mahabhiyan (KUSUM)

§ Soil Health Management (SHM)

§ Krishi Vigyan Kendras (KVKs)

§ My Village My Pride (Mera Gaon Mera Gaurav)

§ Promoting Women in Agriculture

§ Integrated Pest Management

§ Plant protection, Quarantine

§ Control of Invasive Species and

§ Ecological Equilibrium

National Fisheries Action Plan (NFAP)-2020:

The National Fisheries Development Board under the Department of Animal Husbandry and. Central Institute of Fisheries Technology (CIFT) regularly develops and updates craft, gear and fishing methods for marine, inland and aquaculture fisheries with emphasis on resource conservation and sustainability besides increase in productivity.

Fishery Survey of India:

Undertakes CMFRI which helps maritime states in designing guidelines and practices to ensure sustainable production and management for commercially important fish stocks.

Central Institute of Brackish Water Aquaculture:

Provides R&D support for brackish water aquaculture

Directorate of Coldwater Fisheries Research:

Performs Research on cold water fisheries and aquaculture

Central Inland Fisheries Research:

For inland fishery resources management and conservation

Central Institute of Fisheries Education:

For education and awareness

There are dedicated organizations which work for management of Indian sea waters like (i) National Institute of Oceanography (ii) National Centre for SustainableCoastal Management and (iii) National Centre for Coastal Research. There are specific legislative measures for these areas e.g. Coastal Aquaculture Authority Act,2005; Water Pollution Act, 1974 and Coastal and Marine PAs under WP Act. Coral reefs, their non-sustainable utilization, prevention from damage of Tsunamis and coral reef bleaching are other important issues for these areas.National Plan for Conservation of AquaticEcosystems (NPCA) 2013 and implementation of Wetland Rules, 2017 are some important policy interventions for these areas.

Wetlands:
o   Wetlands have traditionally been an integral part of the rural and urban landscape in India.
o   The first survey to collect the basic information about wetlands was carried out in 1972.
o   Thereafter, a Directory of Wetlands in India was brought out by MoEFCC in 1990.
o   National Wetland Atlas 2013 is the current inventory of the Wetlands in India, prepared through the use of satellite remote sensing technology.

National Plan for Conservation of Aquatic Ecosystems (NPCA) 2013:
o   It is a broad national initiative under which integrated management plans of wetlands are funded on the sharing pattern of:
§   70:30 in respect of all states except North Eastern states
§   90:10 in respect of North Eastern states
Implementation of Wetland Rules, 2017
Conservation of Wetlands falling within the Pas

Ecological Status of Rivers

They are species that grow aggressively and pose a threat to an ecosystem by sheer outnumbering the sustainably residing native species. We need to control their number and spread by different suitable measures. Some of the prominent faunal and floral menace species are:

African apple snail *(Achatina fulica)*
Papaya Mealy Bug *(Paracoccus marginatus)*
Cotton Mealy Bug *(Phenacoccus solenopsis)*
Amazon sailfin catfish *(Pterygoplichthys pardalis)*
Prospis julflora: Vilayti Kikar *(Prosopis juliflora)*
Parthenium hysterophorus (Congress Grass)
Lantana camara
Water hyacinth *(Eichhornia crassipes)*

NBTs related to TK:

o The CBD and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol), obligate that this knowledge is conserved, its wider use encouraged for conservation and sustainable use, including for modern science.

o It is subject to sharing of benefits with creators and holders of knowledge in a fair and equitable manner. NBT 11 seeks to ensure this.

o By virtue of the multidimensional and dynamic nature and value of the TK, this NBT contributes to the entire NBAP by creating a positive sentiment for conservation and sustainable use of GRs amongst conservers and local communities.

Conservation and Protection of Oral TK:

o Oral and undocumented TK faces the threat of loss and extinction as urbanization, modern education, modern systems of health care and medicine, new technologies and lifestyles make inroads in local areas and communities.

o Following measures have been taken as safeguard against this:

§ Section 41 (1) of the BD Act makes BMCs responsible for chronicling of knowledge relating to biological diversity and its uses in their areas of jurisdiction.

§ BD Rules provide for creation of PBRs to implement section 41 (1) of the BD Act.

§ Proforma have been carefully designed by an expert group for BMCs to document TK comprehensively.

§ Taxonomic surveys by BSI and ZSI, technical organisations under the Ministry of AYUSH and NGOs document TK practices ideas and innovations.

The National Innovation Foundation India (NIF) 2010 is involved in it through IPRs**.**

Provisions have been incorporated in relevant laws to check unauthorised use of TK for commercial or IPR purposes. These include:

o **The BD Act** makes access to TK and filling of applications for IPRs for products/ inventions that use TK subject to approval by competent authorities.

o Section 3(k) of **Forest Rights Act** recognises that that forest dwelling Scheduled Tribes and other traditional forest dwellers have the right to intellectual property on TK related to biodiversity and cultural diversity included in the act.

o **The Patents Act**, 1970 disallows TK as invention under section 2(1) (j).

o Section 3 (p) of it provides that an invention which in effect, is TK or which is an aggregation or duplication of known properties of traditionally known component or components is not patentable.

o **Guidelines for processing Patent Applications relating to TK and Biological Material 2012** help Patent examiners in analysing what constitutes novelty and inventive step in TK related inventions.

o **International Access Agreements** have been signed with:

§ United States Patent and Trademark Office,

§ European Patent Office,

§ Canada Patent Office,

§ Germany Patent Office,

§ Japan Patent Office,

§ United Kingdom Patent Office,

§ Australia Patent Office,

§ Malaysia Patent Office,

§ Chile Patent Office and

§ Indian Patent Office to allow TKDL's use by them in patent application examination.

o NBA has the power under the BD Act to oppose grant of patents anywhere which has either used TK unauthorizedly or seek patent on what is already a part of TK.

o NBA files third party observation against grant of such patents.

o It has filed over 50 such third party observations in Patent Offices of US, Canada and Europe.

o **Fair and Equitable Sharing of Benefits for TK:** NBA and SBBs are responsible to ensure that access to TK for any use is approved subject to fair and equitable sharing of benefits with the creators and conservers of TK.

o **Advancement and Wider Use of TK:** With the formation and capacity building of BMCs and establishment of PBRs at the local level, revival of traditional knowhow and practices for conservation has been witnessed.

o BMCs have also engaged themselves in rehabilitation of threatened flora and fauna including recovery and cultivation of landraces and traditional varieties.

o Use of TK is being promoted to find viable solutions for rehabilitation of species and degraded habitats with the active participation, and often own initiatives of local communities.

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o   Value of traditional practices in securing integrated management of water, forests and land in increasingly being noted and used.

o   Various types of resource management practices have been mapped by studies which contribute to local diversity.

National Level: NBA- For facilitative and advisory functions on conservation, sustainable use and facilitative and regulatory functions for ABS.

State Level: SBB- For facilitative and advisory functions on conservation, sustainable use and facilitative and regulatory functions for ABS.

Local Level: BMC- Documentation of genetic resources and associated TK, participation in securing PIC and MAT, implementation for conservation, sustainable use and equitable sharing of benefits at local level.

There are several initiatives which have been taken up by the state to ensure good living conditions in urban areas which essentially include increasing greenery and conserve biodiversity in urban sectors. Some of these initiatives include: Atal Mission for Rejuvenation and UrbanTransformation (AMRUT); Smart City Mission 2015; Nagar Van Udyan Yojana; Indian Green Building Council (IGBC) and concept of Biodiversity Parks.

Above are the comprehensive highlights of different aspects of policy framework and implementation of steps taken for climate change and biodiversity conservation in India. Definitely in above text; there will be several terms, concepts and definitions, new or less known to young minds. The purpose of introducing them to you is simple. If you search them through online/offline sources or even ask questions about them in the classes; your horizon of understanding the subject will expand. And you cannot act, unless you properly understand it !

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2.   **Biodiversity Vision 2050**

3.   **How NBAP is implemented ?**

4.   **Biodiversity of India**

5.   **Agrobiodiversity and Agroecosystems in India**

6.   **Indian wild animals at risk**

7.   **Framework of NBAP**

8.   **Different aspects of Implementation**

9.   **How Green India Mission is implemented ?**

10. **How National Mission on Sustainable Agriculture (NMSA) is implemented ?**

11. Which are the natural resources that Panchayati Raj Institutions (PRIs) manage ?
12. The mandate of Biodiversity Management Committees (BMCs)
13. How you can create awareness for biodiversity?
14. How forests are sustainably Managed ?
15. Biodiversity and its management in agriculture sector: salient points
16. Sustainable Management in fisheries sector: institutional framework
17. Management of Coastal and Marine Ecosystems
18. Conservation of wetlands and riverine ecosystems: salient points
19. Invasive Alien Species
20. Traditional Knowledge and Biodiversity: basic concepts
21. Access and Benefit Sharing for traditional knowledge
22. Biodiversity in urban areas
23. At the end…

"Challenges In Monitoring of Genetically Modified Foods In India"

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Introduction

What is GM food? GMOs means genetically modified organisms which are plants, animals or microorganisms in which their genetic material (DNA) has been modified by the use of technology. That technology is often used known as "biotechnology" or "gene technology or recombinant DNA technology otherwise simply genetic engineering. GM foods are also known as genetically engineered foods or bioengineered foods that techniques helpful in the makeup of new traits in old foods as well as greater control over traits. *First GM Food in India*- In the year, 2010, nationwide protests saw the govern-ment bar commercial planting India's first GM food crop: **an insect-resistant aubergine (brinjal)** as already told the GM have better quality in some cases. After the protest the fields trial banned. However, After Prime Minister Narendra Modi came to power within the year 2014, in some field trials resumed (Kumar, Sanjay, 2017) and therefore the GM mustard (*Brassica juncea*) seemed heft for approval by September 2016, when India's Environment Ministry professed a review that found no safety concerns. Deepak Pental says that the crop raises yields of flavorer by 25–30%, allowing more mustard oil to be produced, which could reduce India's dependence on other, imported food oils (Source : SciPol.org).

The First GM Food in world

World first reported genetically modified animal, a mouse, was created in 1974 by Rudolf Jaenisch, and therefore the primary plant was produced in 1983. Within the early 1990s, Calgene, Inc. developed the world's first genetically modified (GM) food that is a strain of tomato : Flavr Savr. The *Flavr Savr*, has advantage to suppress the polygalacturonase gene to impede the vegetable's softening process after ripening. In 1994 the *Flavr Savr* tomato was commercialized. Firstly in the world genetically modified animal which was commercialized is *GloFish* (2003) and thus the first genetically modified animal to be approved for food use was the *AquAdvantage* salmon in 2015. Nowadays genetically modified organisms, are utilized in laboratory research. The genetically modified animal was introduced into the foodstuff when Massachusetts-based AquaBounty Technologies got the green light to sell their *AquAdvantage* GM Atlantic salmon in 2017. Although major Canadian grocery chains IGA and Costco have publicly pledged their refusals to hold the merchandise the recent approval of GMO apples and potatoes by the FDA, it's attractive to consider genetically-modified organisms as both modern

and scientific. A forsooth, reports NPR's Michaeleen Doucleff, soil bacteria created the primary genetically modified crop 8,000 years ago (*Source :CNBC News*).

There are so many GMO foods nowadays some of them are follows (*Source: www.nature.com* and genetically modified foods information including list of GM foods with DNA changes and pros and cons of GM food. Retrieved 2020-02-21, from https://www.disabled-world.com/fitness/gm-foods.php - Reference Category Number: DW#230-2366; Phillips, T. (2008) –

Rapeseed

Rapeseeds are resistance to certain pesticides and improved rapeseed cultivars to be freed from erucic acid and glucosinolates. Gluconsinolates, which were found in rapeseed meal surplus from pressing, are toxic and had prevented the utilization of the meal in animal feed. "Double-zero" rapeseed was developed in the Canada and that crop was renamed "canola" because of it's to differentiate from non-edible rapeseed.

Papaya

Japan has approved sales of the rainbow papaya as developed and saved Hawaiian papaya agriculture. The papayas was virus resistant and Monsanto, donated technology to Tamil Nadu Agricultural University, Coimbatore, for developing a papaya immune to the ring-spot virus in India.

Honey from GM crops

It is often produced from GM crops. For example in the Canada, some honey comes from bees collecting nectar from GM canola plants. This has pack up exports of Canadian honey to Europe.

Cotton

Bt cotton plants (*bacillus sp.*) that produce a chemical that kills the corn earworm haven't only diminished the incidence of the pest in cotton fields, but also in neighboring fields of corn, soybeans, and other crops.

Vitamins

Vitamin C is usually made up of corn; vitamin E is typically made up of soy. Vitamins A, B2, B6, and B12 could also be derived from GMOs as also vitamin D and vitamin K may have "carriers" derived from GM corn sources, like starch, glucose, and maltodextrin.

Vitamin A Containing Rice

Vitamin A in rice produced when it consisting of human genes grown within the US. Instead of find you on dinner plates, the rice will make human proteins beneficial for treating infant diarrhea within the developing world. The approved commercial GM rice have three genes for the manufacture of beta-carotene, a precursor to vitamin A, in the endosperm of the rice prevent its removal (from husks) during milling.

GM Soybean and its Products

A number of Soy foods including soy beverages, tofu, soy oil, soy

flour, lecithin. Other products of soyabean include breads, pastries and baked products and fried products etc. Herbicide resistance GM Soybean: Glyphosate herbicide (Roundup) tolerance conferred by expression of a glyphosate-tolerant form of the plant enzyme 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS) isolated from the soil bacterium *Agrobacterium tumefaciens*.

GM Sugarcane

Sugar cane made immune to some pesticides. A large percentage of sweeteners used in processed food in fact come from corn, not sugar cane or beets.

GM Tomatoes

Made for a longer shelf life and to inhibit a substance that causes tomatoes to rot and let down.

GM Corn & GM Sweet corn

GM corn made Immune to certain pesticides - Corn oil, flour, sugar or syrup. It may include snack foods, baked goods, fried foods, confectionery, special purpose foods, edible oil products and soft drinks. The approved commercial Corn plant was resistance to insect pests, specifically the European corn borer, through expression of the insecticidal protein Cry1Ab from *Bacillus thuringiensis.* The approved commercial GM maize expressed the Fusion protein (F) from Newcastle disease virus (NDV) in corn seeds induces an immune response when fed to chickens. Like GM Tobacco, the Maize will also act as Oral vaccines. US Food and Drug Administration (FDA) have confirmed that tones of genetically engineered sweet corn have made just for use in animal feed.

GM Canola

Canola oil production and it's also includes edible oil products, fried foods, baked products and snack foods. The approved commercial GM canola have altered fatty acid composition with high laurate levels which was achieved by inserting the gene for *ACP thioesterase* found in the California bay tree *Umbellularia californica.*

GM Potatoes

GM Potatoes may include snack foods, processed potato products and other processed foods consisting of potatoes.

GM Flax

Due to their excellent nutritional qualities seeds and oil got from GM flex.

Red-hearted chicory

Chicory (Cichorium intybus var. foliosum) is famous in certain regions as a salad green, especially in France and Belgium. Scientists developed a GM line of chicory consisting of a gene that makes it male sterile, simply facilitating the assembly of hybrid cultivars.

GMO Tobacco

The Company Vector features a GMO tobacco being sold under the brand of Quest cigarettes within the U.S. This GMO tobacco has low or no nicotine contain. The approved commercial GM Tobacco which produced Hepatitis B virus surface antigen (HBsAg) in transgenic tobacco induces immune response when injected into mice. So, GM Tobacco will as Vaccines.

GM Meat

Animals that have eaten GM food, so their meat and dairy products generally come from them are considered as GM meat.

GM Pea

GM peas created immune responses in mice, suggesting they'll may also create serious allergies reactions in people. The GM peas had been developed by the insertion of a gene acquired from kidney beans, which creates a protein that acts as a pesticide.

GM Plum

The approved commercial GM Plum is virus resistance to plum pox virus conferred by insertion of a coat protein (CP) gene from the virus.

Beneficial impact of GMO

GMO is more competently grow and produces

Some GM crop such as corn can help protect harvests in water-limited conditions and drought-stricken areas. Other GMOs can promote the practice of no-till farming, which helps keep moisture and nutrients within the soil. No-till also means fields require fewer passes with machinery, leading to discount in fuel demands and greenhouse gases emitted (https://www.bayer.com/en/crop-science-innovations-biotech-gmos.aspx).

GMO can fight pests and disease

Several GM crops are modified to be immune to insects and plant-specific diseases which will devastate a field. By the help of GM the plants modified with traits that protect roots from insect damage use water more efficiently than those with injured roots. (https://www.bayer.com/en/crop-science-innovations-biotech-gmos.aspx).

GMO can conserve natural habitats

Genetically Modified seeds can help farmers around the world meet the increasing demand to grow enough by helping them make foremost most of their existing ploughland, therefore enabling them to protect nearby habitats (https://www.bayer.com /en/ crop-science-innovations-biotech-gmos.aspx). Many more are followings -

1. GMO improves production and lift farmer's income also. However, in the India farmers are not properly used traditional process of seeding and cultivation, which required scientific moves for raising their production. Hence, it's one of moves to enforce the farm production.

2. GMO plants reduce the use of pesticide and insecticide during farming which can be great moves for the betterment of the food supply.

3. It can feed a rapidly increasing population because it shows dramatically increased   yields and with good qualities also.

4. It can produce more yields and with good qualities in small area of land.

5. In the India Bt cotton seeds was introduced in 2002. It's greatly reduced the use of toxic pesticides. Bt cotton produces a typical soil bacterium, *Bacillus thuringiensis*. It's a natural pest repelling bacteria that's toxic to many worms and pests which can harm the crop but isn't hazardous to humans. *Bacillus thuringiensis* is now widely sprayed on the crops by the organic farmers which are used as a pesticide. As results of the adoption of Bt cotton, India is now the foremost important cotton producer within the planet. Bt cotton, India is now the most important cotton producer within the world.

6. Many industries stand to profit from additional GMO research as an example, variety of micro-organisms are being considered as future clean fuel producers and biodegrades. Additionally, genetically modified plants may someday be wont to produce recombinant vaccines. In actuality, in GM plants some gene are expressed in plants (fruits and vegetables) for direct consumption by individuals is being examined as a possible solution to the spread of disease in the countries (underdeveloped), one that might greatly reduce the prices related to conducting large-scale vaccination campaigns. Some work is going on to develop plant-derived vaccine in the potatoes and lettuce for the *Hepatitis B virus (HBV), Enterotoxigenic Escherichia coli (ETEC),* and *Norwalk virus.* Scientists also are looking into the assembly of other commercially valuable proteins in plants, like spider silk protein and polymers that are utilized in surgery or tissue replacement (Ma et al., 2003).

7. Genetically modified animals have even been wont to grow transplant tissues and human transplant organs, an idea called *Xenotransplantation.* The rich sort of uses for GMOs provides variety of valuable benefits to humans, but many of us also worry about potential risks.

8. Can be bear extremes weather and fluctuations of environment.

9. Produce good quality and sufficient yields in compare to other.

10. Grow in that area that is not suitable for plant cultivation.

11. GMO should be more immune to unexpected disease problems.

12. Have stronger ability to resist pests and producing greater amounts

of crops or foods.

13. It reducing greenhouse emission emissions, erosion and environmental pollution as reported.

14. GMO plants to become more nutritious in terms of vitamin or mineral contents and plays a big role in fighting against malnutrition in third-world countries.

15. Use of GMO decreased the use of Pesticides by the farmer and save environment and farmers will get more income due to high quality yield and production.

Risks and Controversies from the utilization of GMOs

"Genetic engineering is inherently dangerous, because it greatly expands the scope for horizontal gene transfer and recombination, precisely the processes that create new viruses and bacteria that cause disease epidemics, and trigger cancer in cells." - Dr. Mae-Wan Ho,Geneticist.

In the genetic modification process the genes being transferred occur in the other species, there are unknown consequences to altering the wild organism to others. After all, such alterations can change the organism's metabolism, rate of growth, and/or response to external environmental factors and many more. Thus, GMOs might be causes for unfair growth of the natural environment if the organism is allowed to proliferate. This one causes a potential health risks to humans include the likelihood of exposure to new allergens in genetically modified foods, also because the transfer of antibiotic-resistant genes to gut flora. Major impact on the horizontal gene transfer (which occurs naturally at a really low rate but it causes) of pesticide, herbicide, or antibiotic resistance to other organisms wouldn't only put humans in danger, but it might also cause ecological imbalances, allowing previously innocuous plants to grow uncontrolled, thus promoting the spread of disease among both plants and animals (Ma et al., 2003).One example of Controversy debate over the utilization of a genetically modified Bt corn plant. Bt corn expresses a toxic protein from the bacterium *Bacillus thuringiensis* and protect from monarch caterpillar. Other advantage in the reduction of the use of insecticide by the farmers. Thisrecombinantgene or express toxic proein causes to a non-target organism also within the environmentand it dangerous.However, some of the disadvantages or negative impact of GMO are follows-

1. By the huge used of GMO crop should be caused high risks to the destruction of ecosystem and biodiversity because the GM "better" traits may result within the favouring of an organism. Because they affect the natural selection of gene flow in the nature.

2. Use of GM crops will upset the economy also; it promotes

monoculture practices and if it follows at large-scale by rich farmers will dominate over the range contributed by small farmers who can't afford the seeds developed from GM technology (Demont et al., 2007).

3. GMO increases the value of cultivation and more prone towards commercialization of farming that employment on immoral profits.

4. The GMO foods should be cause problem to a person's health risk due to alter gene.

5. By the excessive production of GM foods could be a factor for developing resistance towards pest.

6. According to studies research data, GMO can pose significant allergy risks to people.

7. GMO can be cause a loss of biodiversity because they are not natural.

8. Not safe to eating due to genetically engineered.

9. Development of dangerous unethical species and risk for human being existent.

Regulatory bodies to monitor GMO in India (from Ahuja, 2018)

Genetically modified organisms (GMOs) as well as related products of gene modification like critical rules and policies are regulated in India, under the "Rules for themanufacture, use, import, export & storage of hazardous microorganisms, genetically engineered organisms or cells, 1989" which was notified under the Environment (Protection) Act, 1986. It also known as "Rule of 1989. Rules, 1989 are implemented by Ministry of Environment, Forest and Climate Change (MoEFCC) jointly with the Department of Biotechnology (DBT), Ministry of Science & Technology and state governments. Six Competent Authorities and their composition have been notified under these Rules that include:

1. RDNA Advisory Committee (RDAC)
2. Institutional Biosafety Committee (IBSC)
3. Review Committee on Genetic Manipulation (RCGM)
4. Genetic Engineering Appraisal Committee (GEAC)
5. State Biotechnology Coordination committee (SBCC)
6. District Level Committee (DLC)

Under the "Rules 1989" the following approvals and prohibitions are follows (from Ahuja, 2018):

1. There is no person shall import, export, transport, manufacture, process, use or sell any GMOs, substances or cells except with the approval of the Genetic Engineering Appraisal Committee (GEAC).

2. Use of GMOs or cells uses for research purpose shall only be allowed in laboratories or inside laboratory specified areas notified for this

      purpose under the EPA, 1986.

3. Any person operating or using GMOs for scale up or pilot operations shall have to obtain permission from GEAC.
4. Experiments for the purpose of education involving GMOs can be undertaken with the oversight of IBSCs.
5. Deliberate or unintentional release of GMOs not allowed.
6. Production in which GMOs are generated or used shall not be commenced except with the approval of GEAC.
7. All approvals shall be for a period of 4 years at first instance renewable for 2 years at a time.
8. GEAC shall have powers to revoke approvals in case of: Any new information on harmful effects of GMOs. Second, GMOs cause such damage to the environment ascould not be envisaged when approval was given and third, Non-compliance of any conditions stipulated by GEAC.

Conclusion

Modified foods (GM) and products can have solved the world biggest problems like hunger and malnutrition problems. They can also save the environment by reducing the huge use of chemical pesticides and herbicides. They increase the yields of crops. However, the regulation needs to be control and monitor time to time for human welfare. Because they have foreign gene that have capability to change the gene expression, which can be cause undesired effects to the environment including human beings. So, before come in the commercially, needs to be proper scientifically trial and also be done its long term effects on safety pharmacology studies for human beings and also for other animals.

Acknowledgment

Conflict of interest

The author declares that there is no conflict of interests.

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Spirituality is the root of all sciences

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Without spiritual wisdom, science can be dangerous. Spirituality gives meaning and value to science. As science needs spirituality, spirituality needs science.Without science, spirituality can easily and quickly turn into blind faith and fundamentalism. Science and spirituality are mutually illuminating, and mutually dependent. We are on a journey: a journey from separation to relationship and from dualism to unity.

Holistic science

The outstanding German poet and scientist Johann Wolfgang von Goethe worked with a profound scientific spirit. In his books *The Metamorphosis of Plants* and *Theory of Colours*, he challenged the narrow and linear view of science. The same is true of Leonardo da Vinci. Everyone thinks of him as a great artist, but hardly anyone recognises him as a scientist. However, our contemporary science of complexity and systems thinking finds its roots in the work of Leonardo because he was concerned with living forms and therefore embraced the science of quality as well as quantity. The moment we think of a science of quality, the word 'spirituality' comes to mind.

Einstein respected the religious dimension of human experience. He said: "Science without religion is lame, religion without science is blind." Einstein was not talking about institutionalised and organised religious establishments - he was talking about religious experience, which is beyond measurement. Bringing spirituality and science together will help to bring meaning and measurement together. These two should not be fragmented or separated. A sense of unmanifested wonder and curiosity, and a sense of intuition and inspiration exist before there is empirical knowledge through experiments, evidence and proof to create a scientific hypothesis and a theory. Dismissing that unmanifest intuition or inspiration, as some materialist scientists do, is a grave folly.

The word 'spirit' simply means 'breath' or 'wind'. We cannot see the wind, we cannot touch it, or measure it, but we can feel it. As trees are moved by wind, humans are moved by spirit. Breath or wind is the invisible and subtle force that makes life possible. The visible is sustained by the invisible.

Spiritual guidance

The outer and material reality is held together through the power of the inner and spiritual reality. Acknowledging one and denying the other is like wanting a bird to fly with only one wing. The reality of wholeness is composed of two interrelated aspects. The Chinese called it the harmony of yin and yang. The Indians called it the balance of Shiva and Shakti: positive and negative, dark and light, silence and speech, emptiness and fullness,

spirit and matter, unmanifest and manifest are part of one single whole.

Uniting science and spirituality has a very practical purpose. Science without spirituality can easily lose the ethical, moral and values-based perspective. Scientists without the guidance of spirituality can engage in the invention of nuclear bombs and other weapons of war, genetic engineering, artificial intelligence, factory farming where animals are reared in cruel conditions, and technologies that create waste, pollution and the destruction of Nature.

Science without the guidance of spiritual values has created many of the problems the world faces today. Science by itself is not benign, value-free or neutral. Therefore, science needs the helping hand of spiritual wisdom in order to maintain its integrity and modify its power. Without spiritual wisdom, science can be dangerous. Spirituality gives meaning, value and purpose to science.

Thus, to understand the fundamental difference between the living and the non-living, we might need to look in the space beyond the known physical universe. We might need to differentiate between 'energy and intelligent energy', 'motion and emotion', 'mind and matter'. Given that the same carbon atom that makes charcoal also makes a human being, it is clear that the science of matter cannot explain the fundamental difference between living and non-living. Several questions arise when we leave known physical dimensions and move into the unknown space of life energies.

What is the composition of soul? Does soul have a periodic table? What needs to be added to solar energy to make it 'soular energy'? How many layers beyond the physical body are we composed of? Are there any scientific means to explore spiritual dimensions? What are the technological innovations needed to capture each layer? Can we photograph mind and soul? What is their address? Does the address remain static or does it change?

We know about DNA, RNA and proteins. We are also familiar with terms like genotype and phenotype, genomics, proteomics, metabolomics and so on. Currently, biological science deals with the space between molecular inventory of an organism and its phenotypic outcome. The trouble is that DNA, RNA and protein molecules are 'practically dead' on arrival. They can be chemically synthesized and crystallised. What is chemically synthesized can be part of the living system but cannot be the 'life giving substance' itself.

Thus, to get a fundamental understanding of life, we must connect chemistry with consciousness and beyond. To do so, it would be important to define relevant terms first. Three terms have been explained below. There could be more, depending upon our perception and experience.

Body is what we experience at the gross level. A chemical analysis of the human body shows that it is made of 28 elements of the periodic table

with carbon, hydrogen, nitrogen and oxygen contributing 96% of the body mass. The question is: what happened to the rest more than 82 elements. Why didn't they participate in the formation of body mass? At what time and how was the chemical inventory of the body frozen?

Life energy is like an operating system that runs the show but remains unknown. The subject of life energy has largely remained unexplored. As of now, the scientific community swims at the cellular and molecular surface, studying waves here and there and calling them path-breaking discoveries. The question is how to scientifically find what runs us? How to see ourselves as operating systems? What kind of preparation is needed? Can we use technology to understand the life giving substance? Logically such technology needs to be equally sophisticated or maybe a little more sophisticated than the life giving energy itself? Can we ever find such a technology? How does it feel like experiencing life in its purest form, without any additional attributes? We do not know.

Mind is what we think of as a buffer between subtle life energies and the gross body. It is like a 'metabolic pathway 'that stays between the 'genotype of life energy' and the 'phenotype of the gross body'. It would be nice to scientifically document the contents of the mind to see its dimensions.

To get a clear understanding of life giving elements, their attributes, their interactions, their structural and functional correlates, the subtle-to-gross pathways, we need to generate additional evidence in the space of existence and extend the intellectual front end of science. People in the spiritual domain use mind as a lab, intent as approach and intensity as the key. People in the scientific world use a reductionist approach to split a system into constituent elements and weave the information into an integrated model. Thus, I conclude the paper and hope to ignite your minds to further read so as to bring the the science and spiritual worlds together, and make spirituality your everyday life.

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Technological Advancements and Human health in Modern India

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Advancement in technology are revolutionizing in the medicine industry all around the globe. Now a days, India is ushering in technological breakthroughs and the growing start-up culture has a lot to do with it. The reach of technological innovation need continues to grow, changing all industries as it evolves. In healthcare, technology is increasingly playing an important role in almost all processes, from patient registration to data monitoring, diagnosis to self-care tools.

India has made enormous strides over the past decades in health sector. As a result, the life expectancy has crossed more than 70 years, infant and under-five mortality rates are declining as is the rate of disease incidence. Many diseases, such as guinea worm disease, polio, skin yaws and tetanus, have been eradicated.

Current trends in development of medicine related to advances in the technological sciences are discussed in this article.

It is believed that of all the ways of technology has improved the lives of humans across the globe, none are as important as the technological advances in medicine. From the invention of X-ray machines to advances in surgical practices, technology has made us healthier and increased life span. As we move further into the 21st century, we continue to develop new technology that cure illnesses and improve our quality of life.

Technological advancements and Human health

How recent advances in technology improve human health is explained here.

Telemedicine and Telehealth

It refers to the dispersion of healthcare services, facilities and information through electronic information and telecommunication techniques. This technology allows long-distance patient and clinician, care, attention, advice, education, intervention, monitoring, and remote admissions.

In this technology electronic information are used for communication to provide health care to distant person. "*Tele*" is a Greek word meaning "distance "and "*mederi*" is a Latin word meaning "to heal".

Telemedicine has a variety of applications in human care, health education, research, administration and public health. Humans around the globe, living in rural and remote areas struggle to approach timely, good-quality specialty medical facilities. Citizens of these areas often have poor access to specialty healthcare, primarily because expert physicians are more likely to be located in areas of concentrated city or town population.

Telemedicine has the potential to bridge this distance and provide health services in remote areas. Various positive points are here why telemedicine is useful.

❖ Monitoring home care and ambulatory monitoring
❖ Critical care monitoring
❖ A tool for public awareness and disaster management
❖ Telemonitored procedures-surgery using hand robots

In spite of it, telemedicine cannot be substitutes for doctors in rural and remote areas especially in developing countries where resources are scarce and public health problems are enormous. So, it is unrealistic to think at this stage of substituting unwilling doctors with this technology. However, it can augment the current health framework in a huge way in most countries.

Remote Patient monitoring

This tool, Remote patient monitoring (RPM) utilizes digital technologies to assemble medical and other forms of health care data from individuals in one location and electronically transmit that information securely to health care providers in a different location for assessment, documentation and recommendations. This type of service allows a physician to continue to track healthcare data for a patient once released to home or a care facility, reducing readmission rates.

mHealth

Mobile health is freeing healthcare devices of wires and cords and empowering health providers and patients alike to check on healthcare processes on-the-go. Mobile phones, electronic gadgets and tablets allow healthcare providers to more freely approach and send information. Physicians and service providers can use mHealth tools for orders, scanning, and documentation and simply to reach more information when with patients.

Portal Technology

Physicians and surgeons use Portal technology to access medical records and interact with patients online. Patients are increasingly becoming active players in their own healthcare, and portal technology is an important tool in helping them to do so.

Electronic health records

EHR (Electronic Health Record), is an electronic version of a patient's medical data and history. And it is maintained by the doctor/nurse during the course of time, and may include all of the important clinical data relevant to that person's care, including demographics, progress reports, difficulties, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports

Wearable Technology

Now days, the wearable medical device market is growing quickly. These devices accumulate data, which assist doctors and patients alike

monitor and assess the health of the wearer.

Genome Sequencing

Whole-genome sequencing is a comprehensive method for analyzing entire genomes of different plants as well as of living ones. Genomic information has been contributory in recognizing the genetic disorders, abnormalities characterizing the mutations that drive cancer progression, and tracking disease outbreaks

The technological progress in the medical field and health sector have allowed for many life saving procedures to become mainstream. A few decades ago, it would have been difficult to believe for visiting a doctor virtually from hundreds or thousands of miles away. From remote monitoring tools and wearable medical technology to the sequencing of genomes, technology is improving health of rich as well as common person at a rapid pace.

3-D printing

3-D printers have quickly become one of the hottest technologies in medical sector now a days. Such printers can be used to create implants and even joints to be used during surgery.

Make use of printers can create both long lasting and soluble items. For instance, 3-D printing can be used to 'print' pills which contain multiple drugs, which will help patients with the organisation, timing and monitoring of multiple medications. This is the best example of technology and medicine working together.

Artificial Organs

To take 3D printing up another level, bio-printing is also an emerging tool in the field of medical technology. Initially it was ground-breaking to be able to regenerate skin cells for skin draughts for burn victims, now this has progressively given a chance to even more exciting possibilities. Scientist has been able to create artificial hand, leg, blood vessels, synthetic ovaries and even a pancreas. These artificial organs then grow within the patient's body to replace original damaged one. The range to supply artificial organs that are not rejected by the body's immune system could be enormous and revolutionary, saving millions of patients that depend on life-saving transplants every year.

Wireless brain sensors

Revolution in medical advancement have permitted scientists and doctors to team up and make/ bio-resorbable/ electronics which can be placed in the brain and dissolve when they are no longer needed./ This medical device will support physician in measuring the body temperature and pressure within the brain. These sensors are able to dissolve; hence they reduce the need for additional surgeries and cost.

Robotic surgery

Robotic surgery is applied in minimally invasive procedures and helps to assist in precision, control and flexibility. With the help of robotic surgery,

surgeons can perform very complex procedures that are otherwise either very difficult or impossible. As the technology improves, it can be merged with augmented reality to permit surgeons to view important additional information about the patient in real time while still doing surgery.

Understanding and connecting all these techniques is going to be profound as it relates to moving forward in healthcare and designing interventions and analyzing patient populations and ultimately improving the lives and health of the population.

Here a question arises in our minds, How Technology Is Changing Health Care in India?

In India, health care faces various challenges including inadequate access, low insurance penetration and a growing chronic disease burden. Simultaneously, traditional business models have found it hard to show attractive returns on investment, except for a few large providers.

In spite of its limitations, India's health care sector has a lot going for it on several fronts. A government led thrust to get health care providers to hold electronic medical records is enabling artificial intelligence (AI) to extract insights from patient data to provide better cure. The telecom bandwidth is making medical facilities reach underserved rural division through telemedicine and tele-consulting programs, delivered over smart phones.

'Make in India' project of Indian government initiates to encouraging domestic manufacture of medical devices and helping lower the prices for products such as stents and implants, which in the past were imported from other countries. At the same time, in India the policy environment, administrators and regulators need to accommodate technological interventions such as the growth of online pharmacies with the requisite controls in place. In India, health care innovation could serve as a global model for a shift from treating the sick to preventive care and wellness.

Upcoming future of healthcare sector is forming in front of our very eyes with advances in digital healthcare technologies, such as artificial organs, artificial intelligence, VR/AR, 3D-printing, robotic surgery or nanotechnology. In order to be able to control technology we have to familiarize with the latest developments and not the other way around. Bright future of healthcare industry lies in working together with technology and healthcare professionals have to embrace emerging innovative healthcare technologies in order to stay relevant in the coming years.

EFFECT OF YOGA ON PHYSIOLOGICAL VARIABLE OF FEMALE ATHLETES

Deep Mala Gautmi & Anoop Kumar

Prana is a Sanskrit word literally meaning "life force" the invincible bio-energy or vital energy that keeps the alive and maintains a state of good health. Dharana is a Sanskrit word which literally means to concentrate or to deeply focus ones attention. It is the practice of intentionally channeling ones thoughts on a certain thing. Whether you are focusing on an important object at work, or you are focusing on every step you take during a run, by concentrating deeply you can reach new levels of awareness in any thing you do. Thus dharana can help to enrich your meditation, and yoga experience.

Prana means breath and dharana means awareness. As pranadharana is concentration on the breathing and the experience of breathing in the different bodies and it is the link which is creating from the physical to the psychic body following the train of breath.

AIM

The purpose of the study will be to determine the effect of YOGA on selected physiological variables of female athletes.

MATHODS AND MATERIAL

The study will be delimited to the female athletes of 12-16 years of age. Total one hundred students will be selected as subject.

The study will be further delimited to the following physiological variables.

a.   Resting heart rate
b.   Resting respiratory rate
c.   Positive breath holding capacity
d.   Negative breath holding capacity

PROCEDURE

A two day program was organized for two groups i.e.(A &B). After oriental program of two days a per-test was taken then, PRANADHARANA practices were respectively continued up to 8 weeks for group A, while group B did not practiced any type of PRANADHARANA practices . After 8 weeks a post-test was taken and data was collected for analysis.

For group "A" duration of each traning session was of 45 mins in the morning from 8:00 a.m. to 8:45 a.m. At the end of 8 weeks post-test was conducted for all the variables. Then the data collected on pre and post –test was subjected to statistical analysis for further studies and inferences.

ADMINISTRATION OF TESTS

RESTING HEART RATE

Resting heart rate was recorded as the number of heart beats per minute during the state of rest.

EQUIPMENT: Stopwatch

PROCEDURE: The resting heart rate of each of the subject was recorded between 8:15 to 9:15 am in the morning. The subject was asked to lie down with the arm that going to be used, support and in the extend position. Then the heart rate by gently pressing the tip of the first three fingers over the radial artery was recorded and counted the total number of heart beats in one minute by using a stop watch.

RESTING RESPIRATORY RATE

Resting respiratory rate was recorded by rate of respiration in unit counts per minute by carefully watching the moment of the abdomen.

EQUIPMENT: Stopwatch

PROCEDURE: The resting respiratory rate of each of the subject was recorded between 8:15 to 9:15 am in the morning. Before recording the resting respiratory rate, the subject was instructed to remain lie down in supine lying position, refraining from any tension or activity. The tester recorded his rate of respiration in unit counts per minute by carefully watching the movement of the subject's abdomen. The total number of respiratory movements per minute was the final score.

POSITIVE BREATH HOLDING CAPACITY

EQUIPMENT: Stopwatch and Nose clip

PROCEDURE: To measure the positive breath holding capacity, the subjects was instructed to place the nose clip tightly. They were asked to inhale through the mouth to the maximum capacity.

As soon as the subjects took a deep breath to the fullest capacity of their lungs and close the lips, the Stopwatch was started.

As soon as the subject opened their lips to exhale, the stop watch was stopped and the time given by the watch was recorded as the score of positive breath holding capacity.

NEGATIVE BREATH HOLDING CAPACITY

EQUIPMENT: Stopwatch and nose clip

PROCEDURE: To measure the negative breath holding capacity, the subjects were instructed to place the nose clip tightly. They were asked to exhale through the mouth to the maximum capacity.

As soon as the subjects exhale and close the lips, the stopwatch was started.

As soon as the subjects opened their lips to inhale, the stopwatch was stopped and time given by the watch was recorded as the score of negative breath holding capacity.

STATISTICAL TECHNIQUE

To determine the selected physiological variables of female athletes descriptive statistics was used.

In order to study the effect of pranadharana on selected physiological

variables, analysis of covariance was applied at 0.05 level of significance.

CONCLUSION

The study provided scientific base to the Ancient Indian Culture and discipline of yoga ,which our ancestors advised for general well being and healthy living. It was useful to improve the physiological standard of the individuals. It helped the female athletes to self assist their physiological standard. It reveled the role of PRANADHARANA in yoga.

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Comparative Study of cardio vascular Respiratory fitness of football , handball and basketball players.

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Introduction

The cardio vascular System is responsible forecast set of adaptation in the body throughout exercise. It must immediately respond to change in cardio output is defend. As the product non heart rate and stroke volume which represents the volume of Blood being pumped by the heart each minute. Cardio output increase during physical activity due to an increase in both the heart rate and stoke volume value. At the beginning of exercises the cardio-vascular adaptations are very rapid "within a second often Muscular contraction, there is a withdrawals of vagal out flow to the heart which is followed by an increase in sympathetic stimulation of the heart. This result is an increase in cardio output to ensure that blood flow to the musle in matched to the metabolic needs" Both heart rate and stroke volume vary directly the intensity of the exercise Performed and many improvement can be made though continuous training.

Cardio is one of most important things you can do for your body. Whether you want to lose weight burn fat or improve your health. The great things. Is there are plenty of choices for cardio exercise. Cardio respiratory fitness refers to the ability of the body to perform prolonged Large muscle. Dynamic exercise at moderate to high levels an important part of overall Physical fitness.

Objective of Study

The Objective of the study was to compare respiratory fitness among players belonging to football , handball , basketball .

Methology:-

Selectionof Subjects:- For the purpose of this study (100 football, 100 basketball, 100 handball)players. Their age range form 17-22 years.

Selection of variables

Cardio Respiratory fitness was Selected as a variables.

Criterion Measure

The cardio respiratory fitness was measured by 20 Minutes steady start jog. The Maximum distance covered by the subject was recorded to

nearest meter.

Administration of test:- Instruct player to jog in 400 m tracks a steady rate the rough out the test. The should be seen on the signal" Ready start" and Jog continuous Discourage. Walking although if player have to walk they should continue moving throughout the 20 min period. It a Player the criterion referenced standard by walking rapidly by a combination of walking and running that is acceptable.

Statistical Analysis:- To compare the means of cardio respiratory fitness belonging to different player descriptive analysis and one way analysis of variance (Anova) was used.

Finding – The data were analysis using descriptive analysis and further in order to find out the significant difference among different player ANOVA was applied .LSD post Hoc mean comparison was applied for variable having significant F-value.

Table-1

Descriptive Analysis of cardio Respiratory Fitness of football, Basketball, Handball players.

Variables	Group	N	Mean	Standard Deviation	Standard Error
Cardio	Football	100	2914.22	399.94	39.98
Respiratory	Basketball	100	2944.12	406.37	40.64
Fitness	Handball	100	2996.22	397.22	38.97

Table-2

One way Analysis of variance of cardio Respiratory fitness of football Basketball, handball player.

Source of variance	D.P	Sum of Sqaure	Mean Sqaure
Beetwan Group	2	59600.668	29800.333
Within group	298	4.8028	161678.420

Significant at Top fu.05 (2.298)-4.70

Discussion of Finding:- The statistical analysis of data pertaining to the cardio respiratory fitness among play football, basketball and handball revealed that there is insignificant difference found . This could be attributed to the fact the subject of this present study are of similar class of age group their growth and development patterns are of similar nature cardio respiratory

fitness basically depends on genetically related frame work and training could not be significantly differentiated involvingretreat physical activities.

Conclusion:- Based on Statistical finding results of the study conclusion have been drawn and presented below.

There is insignificance difference on cardio respiratory fitness among football, Basketball, Handball players.

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Role of Entrepreneurship in Economic Development of India

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CONCEPT OF ENTREPRENEURSHIP :-

Entrepreneurship plays a significant role in the economic development of a country. Entrepreneurship is the most powerful weapon in the hands of one to fight against poverty and unemployment. It is widely accepted by every, big or small country, that well motivated entrepreneurs are must for accelerating the process of economic development.

Entrepreneurial development is a systematic and an organized development of a person to an entrepreneur. The development of an entrepreneur refers to inculcate the entrepreneurial skills into a common person, providing the needed knowledge, developing the technical, financial, marketing and managerial skills, and building the entrepreneurial attitude. Entrepreneurial development programmes may be defined as a programme designed to help an individual in strengthening his entrepreneurial motive and in acquiring skills and capabilities necessary for playing his entrepreneurial role effectively.

An entrepreneur can be regarded as a person, who has the creativity skill and motivation to set up a business or innovativeness of his own and who always looks for high achievements. They are the catalyst for social transformation and works for the common well-being. They look for opportunities, identifies them and seizes them primarily for economic gains. An action oriented entrepreneur is always willing to undertake risks to achieve the desired goals. They have the primary function of monitoring and controlling the business activities. The entrepreneur is usually a sole proprietor, a partner, or the one, who owns the majority of shares in an integrated enterprise.

GOVERNMENT OF INDIA SUPPORT FOR ENTREPRENEURSHIP DEVELOPMENT IN INDIA

The Government of India has undertaken several initiatives and also instituted policy measures to improve culture of innovation and entrepreneurship in the country. Job creation is a foremost challenge facing India. India, however, has immense potential to innovate, raise entrepreneurs and create jobs for the benefit of the nation and the world.

Recognizing the importance of women entrepreneurship and economic participation in enabling the country's growth and prosperity, Government of

India has ensured that all policy initiatives are geared towards enabling equal opportunity for women. Considering these benefits, various initiatives have been taken by the government from time to time for entrepreneurship development in the country:-

1. **Biotechnology Industry Research Assistance Council (BIRAC**): BIRAC is a not for-profit Public-Sector Enterprise, set up by Department of Biotechnology to strengthen and empower emerging biotechnology enterprises. It aims to embed strategic research and innovation in all biotech enterprises, and bridge the existing gaps between industry and academia. The ultimate objective is to develop high-quality, affordable, products with the use of cutting-edge technologies. BIRAC has initiated partnerships with several national and global partners for building capacities of the Indian biotech industry, particularly start-ups and SME's, and has facilitated several rapid developments in medical technology.

2. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY**): A flagship initiative of the Ministry of Skill Development & Entrepreneurship (MSDE), is a Skill Certification initiative that aims to train youth in the industry-relevant skills to enhance opportunities for livelihood creation and employability. Individuals with prior learning experience or skills are also assessed and certified as a Recognition of Prior Learning. Training and Assessment fees are entirely borne by the Government under this program.

3. **Entrepreneurship Development Scheme**: It is currently being developed by Ministry of Skill Development & Entrepreneurship (MSDE). The scheme is being designed around various elements like entrepreneurship education curriculum, web and mobile based networking platform, entrepreneurship hubs network, international linkages, national entrepreneurship day, promotion of entrepreneurship among women and minority sections, social entrepreneurship etc.

4. **Make in India**: Make in India project is designed to transform India into a global design and manufacturing hub, it was launched in September 2014. It came as a powerful call to India's citizens and business leaders, and an invitation to potential partners and investors around the world to overhaul out-dated processes and policies, and centralize information about opportunities in India's manufacturing sector. This has led to renewed confidence in India's capabilities among potential partners abroad, business community within the country and citizens at large. Among several other measures, the initiative has ensured the replacement of obsolete and obstructive frameworks with transparent and user-friendly systems. This has in

turn helped procure investments, foster innovation, develop skills, protect intellectual property and build best-in-class manufacturing infrastructure.

5. **Support to Training and Employment Programme for Women (STEP)**: STEP was launched by the Government of India's Ministry of Women and Child Development to train women with no access to formal skill training facilities, especially in rural India. The Ministry of Skill Development & Entrepreneurship and NITI Aayog recently redrafted the Guidelines of the 30-year-old initiative to adapt to present-day needs. The initiative reaches out to all Indian women above 16 years of age. The programme imparts skills in several sectors such as agriculture, horticulture, food processing, handlooms, traditional crafts like embroidery, travel and tourism, hospitality, computer and IT services.

6. **Stand-Up India**: This programme Launched in 2015, seeks to leverage institutional credit for the benefit of India's underprivileged. It aims to enable economic participation of, and share the benefits of India's growth, among women entrepreneurs, Scheduled Castes and Scheduled Tribes. Towards this end, at least one women and one individual from the SC or ST communities are granted loans between Rs.1 million to Rs.10 million to set up greenfield enterprises in manufacturing, services or the trading sector. The Stand-Up India portal also acts as a digital platform for small entrepreneurs and provides information on financing and credit guarantee.

7. **Trade related Entrepreneurship Assistance and Development (TREAD):** To address the critical issues of access to credit among India's underprivileged women, the TREAD programme enables credit availability to interested women through nongovernmental organizations (NGOs). As such, women can receive support of registered NGOs in both accessing loan facilities, and receiving counselling and training opportunities to kick-start proposed enterprises, in order to provide pathways for women to take up non-farm activities.

8. **National Skill Development Mission:** Launched in July 2015, the mission aims to build synergies across sectors and States in skilled industries and initiatives. With a vision to build a 'Skilled India' it is designed to expedite decision-making across sectors to provide skills at scale, without compromising on quality or speed. The seven sub-missions proposed in the initial phase to guide the mission's skilling efforts across India are: (i) Institutional Training (ii) Infrastructure (iii) Convergence (iv) Trainers (v) Overseas Employment (vi) Sustainable

Livelihoods (vii) Leveraging Public Infrastructure .

9. **Science for Equity Empowerment and Development (SEED**): SEED aims to provide opportunities to motivate scientists and field level workers to undertake action-oriented, location specific projects for socio-economic gain, particularly in rural areas. Efforts have been made to associate national labs and other specialist S&T institutions with innovations at the grassroots to enable access to inputs from experts, quality infrastructure. SEED emphasizes equity in development, so that the benefits of technological accrue to a vast section of the population, particularly the disadvantaged.

10. **SETU (Self Employment and Talent Utilization)-** SETU's meaning in Hindi is bridge, is a Techno-Financial, Incubation and Facilitation Programme to support all aspects of startup businesses and other self-employment activities, particularly in technology driven areas operated from NITI Aayog. An Expert Committee on Innovation & Entrepreneurship for working out the detailed contours of the Atal Innovation Mission (AIM) and SETU was constituted by NITI Aayog. The Expert Committee has identified five major drivers for creating a vibrant entrepreneurial eco system viz; (i) catalytic government policy and regulatory framework (ii) easy access to equity capital and debt (iii) businesses as entrepreneurial hubs (iv) Culture and institutions which encourage entrepreneurship over careerism (v) adequate and effective collaboration forums.

11. **India Aspiration Fund**- A Rs. 2000 crore India Aspiration Fund (IAF) was launched by SIDBI in August 2015 to boost the startups in the country. This fund would invest in various venture capital funds for meeting the equity requirement of MSME start-ups. A SIDBI Make in India Loan for Small Enterprises (SMILE) Scheme of Rs.10,000 crore has also been launched to catalyze tens of thousands of crores of equity investment in start-ups and MSMEs, creating employment for lakhs of persons, mostly educated youth over the next 4-5 years. The objective of SMILE is to provide soft loans in the nature of quasi equity and term loans on relatively soft terms to MSMEs to meet the required debt-equity ratio norm. The 25 sectors under the 'Make in India' programme would be the focus with emphasis on financing smaller enterprises in the MSME sector. There will be concessional terms for the enterprises promoted by (SC) / (ST) / Persons with Disabilities (PwD) and women. The scheme is expected to benefit approximately 13,000 enterprises, with employment for nearly 2 lakh persons.

12. **Micro Units Development Refinance Agency (MUDRA**) : This

Bank has been set up on 8th April 2015 for development of micro units to encourage entrepreneurship in India and provide the funding to the non corporate small business sector. MUDRA Bank provides refinance to Banks, MFIs, NBFCs etc. for loans to micro units having loan requirement from Rs 50000 to Rs. 10 lakh. Under MUDRA Yojana, MUDRA Bank has launched three products named Shishu, Kishor and Tarun to signify the stage of growth and funding needs of entrepreneurs. Rs. 20000 crore has been allotted to MUDRA Bank for the SME sector which will enhance credit facility to boost the growth of small businesses and manufacturing units.

Role of Entrepreneurs towards Economic Development of India

The major areas, where entrepreneurs contribute an important part towards economic development of the country have been stated as follows:

1) **Capital Formation** - Entrepreneurs promote capital formation by organizing the savings of the public. They employ their own as well as borrow resources for establishing their enterprises. Such types of entrepreneurial activities lead to value addition and creation of wealth, which is essential for the industrial and economic development of the country. Entrepreneurs promote capital formation by mobilizing the idle savings of public. They employ their own as well as borrowed resources for setting up their enterprises.

2) **Provide Large Scale Employment Opportunities** - Entrepreneurs provide direct employment opportunities to the individuals on a large scale. With establishing of more and more units by entrepreneurs, both on small and large scale many job opportunities are created for others. As enterprises develop, they provide direct and indirect employment opportunities to many individuals. In this way, entrepreneurs contribute an effective part in reducing the problem of unemployment within the country, which in turn clears the pathway towards economic development.

3) **Promotes Balanced Regional Development** - Entrepreneurs help to remove regional differences, through setting up of industries in less developed and backward areas. The growth of industries and business in these areas lead to a large number of public benefits, like road transport, health, education, entertainment, and so forth. Setting up of more industries lead to more development of backward regions and thereby, promote balanced regional development.

4) **Reduces Concentration of Economic Power** - Economic power is the normal result of industrial and business activity. Industrial development usually leads to concentration of economic power in the hands of few individuals, which results in the growth of

monopolies. In order to redress this problem, a large number of entrepreneurs need to be developed, which will help reduce the concentration of economic power amongst the population.

5) **Wealth Creation and Distribution** - It motivates equitable redistribution of wealth and income in the interest of the country to more people and geographic areas, thus proving to be beneficial to the larger sections of the society. Entrepreneurial activities also produce more activities and give a multiplier effect to the economy.

6) **Increasing Gross National Product and Per Capita Income** - Entrepreneurs are always looking for opportunities. They discover and exploit opportunities, inspire effective resource mobilisation of capital and skill, bring in new products and services and develops markets for the growth of the economy. In this way, they assist in increasing gross national product as well as per capita income of the people. Increase in gross national product and per capita income of the individuals indicates that economic development is taking place in an effective manner. In order to encourage economic development, it is vital to ensure that individuals are not unemployed or facing scarcity of resources.

7) **Improves Standard of Living** – if there is an Improvement in the standard of living of the individuals then it is called as a feature of economic development of the country. Entrepreneurs contribute a crucial part in increasing the standard of living of the individuals, by adopting latest innovations in the production of wide variety of goods and services on large scale that too at a lower cost. This enables the individuals to avail improved quality products at lower prices which results in the improvement of their standard of living.

8) **Promotes Country's Export** – One of the important component of economic development of a country is Export and Entrepreneurs assist in promoting a country's export trade. They produce goods and services on large scale for the purpose of earning large amount of foreign exchange from export to combat the import dues requirement. Hence, import substitution and export promotion ensure economic independence and development.

9) **Effective utilization of resources -** Entrepreneurship is all about putting to better use of resources which are considered to be of low value with an aim of earning income. An entrepreneur comes up with ideas of how to use what others may consider waste. This improves the economy of a country through taxes and creation of jobs which improves the standard of living of the beneficiaries.

10) **Induces Backward and Forward Linkages** - Entrepreneurs take

pleasure in working in a changed environment and try to maximise profits by innovation. When an enterprise is established, in accordance to the changes brought about in technology, it encourages backward and forward connections, which leads to economic development.

11) **Facilitates Overall Development** - Once an enterprise is initiated, the process of industrialisation is set in motion. This unit will create demand for various types of units, required by it and there will be so many other units which require the output of this unit. This leads to complete development of an area, due to increase in demand and setting up of more units.

12) **Creating Innovation** - An entrepreneur is a person, who always look for changes, apart from linking the factors of production, he also presents new ideas and new combination of factors. In the production process, an entrepreneur always makes an attempt to bring in innovative strategies and methods. An entrepreneur promotes economic development through innovation.

13) **Entrepreneurs Create New Businesses** – It generates employment opportunities for the individuals, introduces innovative strategies and methods, brings new products and services for the welfare of the individuals are the factors that highlight the aspect that entrepreneurs create new businesses. In various fields, there have been introduction of advanced techniques, methods and procedures, which have nurtured the lives of the individuals.

14) **Entrepreneurs also Create Social Change** – Through their exceptional contributions of new goods and services, entrepreneurs break away from practice and indirectly sustain freedom by decreasing dependence on traditional and outdated systems and technologies. Complete, this results in an enhanced quality of life, better determination and economic freedom.

15) **Personal Growth** – The contribution of entrepreneurship towards the personal growth of the individual is through two main areas, these are, generation of employment opportunities and enhancement of skills and abilities of the individuals. When individuals are engaged in employment opportunities, when they work with innovative techniques and methods, then their personal growth takes place. On the other hand, this leads to development of skills, proficiency and expertise within them.

16) **Entrepreneurship puts New Business Ideas into Practice** - Entrepreneurship helps to generate new ideas and put them into practice in an appropriate manner. As it has been stated that

entrepreneurs always looks for innovative strategies and methods that may enhance productivity and profitability. Taking ideas, suggestions and guidance from other professionals in the similar field has contributed towards growth and fulfillment.

Conclusion:-

The economic policy in India needs to be encouraging for organizations to achieve efficiencies in the present global market. It should enable the entrepreneurs to make provision of resourcefulness and creativity to the functioning of the organization, whether in public or private or joint sector, and in the achievement of rapid, flexible, innovative, and a strong sense of self-government. The study of entrepreneurship has significance in the present existence, not only because it helps the entrepreneurs accomplish their personal needs but because of the economic contribution of the new undertakings. More than increasing national income by the formation of new jobs, entrepreneurship acts as a constructive force in economic growth by serving as the bridge between innovation and market place.

Being an entrepreneur is not just starting a business, it is about having an approach and one should be motivated to succeed in the achievement of goals and objectives. All successful entrepreneurs have a similar way of thinking and possess several key personal qualities that make them successful in business. Entrepreneurs need to possess the required skills and abilities. They should be well prepared to face the opportunities and challenges within the internal and the external environmental conditions. In the present existence, entrepreneurship has to a large extent contributed towards the economic development of the country and has generated employment opportunities for number of individuals.

Entrepreneurship development programmes (EDPs) helps in solving the problem of unemployment by creating adequate employment opportunities through setting up of small and big industrial unit where the unemployed can be absorbed. Successful EDPs assist in accelerating the pace of industrialisation in the backward areas and helps in reducing the concentration of economic power in the hands of an individual. Entrepreneurial development programmes help in removal of industrial slums as the entrepreneurs are provided with various schemes, incentives, subsidies and infrastructural facilities to set up their own enterprises in all the non-industrialized areas. The entrepreneurs through EDPs are able to achieve economic independence of a country by producing a wide variety of better-quality goods and services at competitive prices. Overall Entrepreneurial Development Programmes will result in increase in per-capita income and thus helps in the improvement of standard of living of the people.

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E-COMMERCE VS SHOPPING MALLS IN INDIA

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INTRODUCTION

Electronic Commerce means, buying and selling of products or services over the internet. E-commerce is also known as internet commerce. There are many services provided online over the internet network as transaction of money, funds, and data. These business transactions can be done in these ways: Business to Business (B2B), Business to Customer (B2C), Customer to Customer (C2C), Customer to Business (C2B). The standard definition of E-commerce is a commercial transaction which is done over the internet. Online stores like Amazon, Flipkart, Myntra, Ebay, Quikr, AJIO, Club Factory, Olx etc. are the examples of E-commerce websites. By 2020, global retail e-commerce can reach up to $27 Trillion.

A shopping mall is a place/building which has many modern things in it such as shops, restaurants, parking area. Shopping malls represent types of merchandisers and many walkways that enable the consumer to go from unit to unit and to purchase some things. Mall fulfils all the outing needs of consumers and provides better shopping experience. Mostly the shopping malls are been made in the urban areas.

India is one of the fastest growing E-commerce market in the world. E-commerce (Electronic commerce) is the activity of buying and selling of goods or services over the internet. At the click of a button, we can buy anything like groceries, apparel, electronics, and almost anything else. Now a days due to the reach of internet and smart phones to every segment of consumer, India becomes fastest growing market for the E-commerce sector. This made our shopping experience great as we don't have any need to go anywhere, get big discounts, offers, better customer services, easier access to credit and payment options, 24-hour accessibility and secured transactions etc. On the other hand shopping malls are not only shopping destination but also the place where we can fulfil our all outing needs like social gathering, gaming, dining, banking, watching movie etc. So both sectors affect each other directly.

OBJECTIVE OF THE STUDY

♦ To identify advantages and disadvantages of E-commerce and shopping mall.

♦ To identify factors attracting consumers towards online shopping or shopping at mall.

· To predict the future of E-commerce and shopping malls.

SCOPE OF THE STUDY

This study focuses on customers, buying through online as well as from malls. Both the shopping modes have their own advantages and disadvantages. So this study will help customers as well as seller (online and mall) to understand the buying behaviour and the future of malls as well as E-commerce.

RESEARCH METHODOLOGY

Secondary data is used to write this paper. The source of secondary data is published books, research papers, journals, news papers, magazines, internet and official documents. The paper is qualitative in nature.

ANALYSIS

Advantages and Disadvantages:

E-commerce made the shopping more convenient as consumers can purchase products or services from the comfort of their own home or work place. They can buy the things without any pressure which they feel in physical stores. They do not have any need to stand in queues for payment, for the products purchased. This is the place where customers can compare the products easily as companies display the complete range of products offered by them to attract customers with different tastes and needs. Sometimes, price comparisons are also available online. Time does not act as a barrier. Customers can buy the things 24 hours. Customers can track their orders and delivery status. To attract customers, online shoppers offer big discounts. Due to elimination of many middle men, maintenance cost, the online shoppers are able to provide big discounts. Apart from this there are some disadvantages like delay in delivery; you can't get product immediately. Customers can't check the product physically at the time of shopping. Online shopping doesn't allow price negotiations between buyers and sellers. The traditional shopping provides lot of fun in the form of show-room atmosphere, sales attendants and music that cannot be experienced through a website. There may be a chance of online fraud also.

In India shopping mall culture is also growing very fast. In weekends huge crowd can be seen in malls as people go there for shopping, dining, watching movies, playing games etc. There are many advantages of shopping malls as customer can get product immediately, check product physically, in case of clothes they can try it before purchasing. In shopping malls people can get a lot of fun and entertainment along with shopping. One of the most irritating factors to every customer who goes to a store is the availability of a parking area. However, customers who go to a mall will not have to face this problem since malls provide a wide space for parking their cars. This would make most customers to choose to shop to a mall rather than in an individual

shop. Inside a shopping mall, you can find all the relevant stores such as the grocery, a movie house, a craft store, an arcade, apparel and shoe stores and even hardware stores. You can even spend a whole day in shopping malls as almost every kind of store can be found here. You can even meet up with your friends. Customers can even dine in different restaurants or in food court. However, there are some major disadvantages of a mall is the excessive crowding which may be a huge inconvenience for customers. The people who might find this as most difficult are the senior citizens with mobility problems. In case a mall is overcrowded, you can find the parking space to be full as well. Another disadvantage is, the people spends too much time in malls as it is entertaining so it kills there useful time, and after purchasing if you want to exchange or return it it will be difficult as this depends upon the policy of the store and you will have to go there again

Growth:

E-Commerce is India's fastest growing and most exciting channel for commercial transactions. The Indian e-commerce market is expected to grow to US$200 billion by 2026 from US$ 48.5billion as of 2018. This growth has been triggered by increasing internet and smart phone penetration. The ongoing digital transformation in the country is expected to increase India's total internet user base to 829 million by 2021 from 560.01 million as of September 2018. India's internet economy is expected to double from US$125 billion as of April 2017 to US$ 250 billion by 2020, majorly backed by ecommerce. India's E-commerce revenue is expected to jump from US$ 39 billion in 2017 to US$ 120 billion in 2020, growing at an annual rate of 51 per cent, the highest in the world[1] .

The Great Indian Mall Boom started innocuously in the early 2000, with just three malls in existence in the country. The rest is, as they say, history as Indian shoppers slowly but surely developed a liking for shopping in clean, vibrant, climate-controlled and highly enabled malls rather than in the usual 'kirana' stores and scattered individual stores. Despite many obstacles, including the recession of 2007-2008 and the arrival of e-commerce businesses, the numbers show that Indian malls are definitely here to stay. By the end of year 2017, there were more than 600 operational malls across the country. Interestingly, more than 30 new shopping malls covering about 14 million sq. ft. of area are expected to come up across top 8 cities by 2020[2].

FINDING

E-commerce and shopping mall, both are modern ways of shopping. In this study I found that both the ways of shopping have their advantages and disadvantages. Some time same person feels convenient shopping online and don't want to go to mall but other time feels convenient in shopping mall. Both the ways are convenient but depends upon situation/factors and person. The growth of both sectors is good.

CONCLUSION

Shopping online and shopping at mall both are convenient, depending upon situation, time, convenience and individual behaviour. If any person doesn't have time to go to mall or do not want to travel or he is in any remote location, he will enjoy online shopping. Online shopping websites provide 24 hour accessibility, discounts, price comparison, huge variety etc. But if person wants to consume product immediately then online shopping is not good. Person wants outing, entertainment, along with shopping then he will prefer shopping mall. In the case of some products customer prefers shopping malls because customer wants to touch, try and feel it. Normally, in holidays and weekends people prefer shopping malls. Both sectors are growing rapidly in India.

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Extreme Weather Events Affect Human Health

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Introduction

Climate Change: India is developing country and most of the population is dependent on sectors related to climate such as forests, agriculture etc. The extreme weather events are likely to have implications on livelihoods, health, food production, biodiversity etc. Extreme events include severe storms, floods, drought which affected lives of thousands during last few years and also causes loss to ecosystem too. Human beings are affected by climate change through changing weather pattern, through changes in water, air and food quality. In addition to this changing climate also affect human health via air or water born diseases or via vector transmitted diseases. In last few decades there's observed a vast variation in climatic conditions such as increase in temperature, heavy rainfall in some areas and drought in another areas. There's also observed change in humidity level of the atmosphere[1,2].

Temperature related impacts include water born diseases are more frequent in warmer climates such as salmonellosis, giardiasis, cholera, diarrhoea. These problems are more common among children. As temperature increases proliferation and survival of bacteria also increases which increases the incidence of diarrhoeal diseases. Since, the availability of fresh water reduces during extreme weather events hence also the incidence of such diseases also increases. Changes in weather events (such as temperature, rainfall, humidity etc.) also affect transmission of some disease such as malaria. These factors influence the development and density of vector responsible for the transmission of diseases. A little increase in temperature increases malaria transmission risk because of increased mosquito numbers. Extreme weather events also affects other vector borne diseases, which include chickengunia, dengue, parasitic diseases such as filariasis, leishmaniasis. These are influenced by change in vector population during climatic conditions. Another example is of bacterial disease plague, transmitted by fleas and carried by rat since temperature and rainfall are important factors for distribution and abundance factor for rodent population[3,4,5,6,7,8].

Change in the severity of extreme weather events also affects the livelihood and population by reducing the availability of pure food and drinking water. It has been also observed that roads and bridges were damaged during extreme weather events which disrupt convince. There's also disturbance in health care services and communication facility because of these extreme conditions of weather. There's also psychological impact such as depression and PTSD (post traumatic stress disorder). Its human behaviour that any

change in a person's surrounding environment or physical health can have serious effects on mental health. In particular, experiencing an extreme weather event can cause stress and other mental health consequences, particularly when a person loses loved ones or their home. "Individuals with mental illness are especially vulnerable to extreme heat; studies have found that having a pre-existing mental illness tripled the risk of death during heat waves"[9].

Conclusion

Projection in future climate change shows catastrophic events causing enormous impact on human life in relation to disease transmission leading to death. Its also universal truth that developed and developing countries is struggling to cope up with the challenges occurred due to climatic changes. Analysing this impact of climate change in human health it is imperative to draw a better understanding about reducing the impact of future extremes weather event because long term social, economic and mental risk makes extreme weather event a global challenge which needed affective response from all over the countries.

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Green initiatives taken by India

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The effects of climate change are now clearly visible with altering sea levels, melting ice caps and changing temperatures. Consequences can be detrimental, quickly fatal, on a large scale if action is not taken right away. The effects of climate change combined with Indian-linked disturbances such as flooding, droughts, pollution and over-exploitation of resources inevitably result in changes in agricultural productivity. This in turn, significantly impacts the Indian economy. In the often grim world of climate reporting, there is at least one upbeat story: India has been aggressively pivoting away from coal-fired power plants and towards electricity generated by solar, wind, and hydroelectric power. This means that the amount of carbon dioxide the country emits into the atmosphere should come down dramatically.

The reasons for this change are complex and interlocking, but one aspect in particular seems to stand out: The price for solar electricity has been in freefall, to levels so low they were once thought impossible. For example, since 2017, one solar energy company has been generating electricity in the Indian state of Rajasthan at the unheard-of, guaranteed wholesale price of 2.44 rupees per kilowatt-hour.

Consequently, with this massive reduction in the cost of renewables, India is able to shift away from the world's dirtiest fossil fuel, and to much cleaner sources. It's a stunning change, and one that could have profound implications on the world energy market. While western countries continue to baulk at reducing their reliance on fossil fuels, India is accelerating its plans to lock in a sustained, aggressive reduction in the carbon emissions intensity of its economy. In fact, India, is targeting a fivefold expansion of the electricity generated from renewable energy sources by 2030—and this from a country that has already doubled its renewable energy in the past three years.

This means that India is committed to more than meeting the goals of its national contributions in the 2015 Paris Climate Agreement; it is going to "overdeliver," in the parlance of economists. This development is all the more astonishing, because just a few years ago India was a villain when it came to coal use; in 2015, India wanted to more than double India's mining of coal, to

1.5 billion metric tons by 2020, despite the risks this posed to the climate and the country.The benefits of this green sea-change are already being felt.

The rapid diversification of India's electricity sector is creating an abundance of jobs and bringing an influx of new investment—needing to reach $500 billion over the coming decade if the targets are to be met—while reducing India's emissions profile.Ahead of the curve? Yes, India has certainly entered the global centre stage. Achievable? Entirely,And this change of course also raises other questions, such as why India, and why now? What are the factors driving this energy transition from coal to renewables?

A perfect storm—in a good way. Several developments have come into play at once, that together have made for this startling, climate-friendly transformation of India's energy policy. They can be generally categorized as coming from two camps; one environmental and one financial. On the environmental side, India had no choice but to deal with its poor air quality and water scarcity. On the financial end, unreliable power supplies—and India's historic and growing dependence on imported fossil fuels—were an ongoing drag on its domestic economic growth.We'll take a look at each category in turn.

The environmental costs of increasing economic growth. Similar to China's growth since the start of this century, India has been on an industrialization path that has pushed the country's economy to grow at over 6 percent annually since 2010. In the coming decade, the Indian government is targeting 6-to-8 percent annual growth.

But such sustained economic growth comes with an ever-increasing environmental cost.Take air pollution. Over the last couple of weeks, residents in the capital of New Delhi have likened their "hazardous" air quality to living in a gas chamber, while flights to the city have been diverted due to poor visibility, reported in the Australian Financial Review. In fact, a recent *New York Times* article used New Delhi as an example of some of the world's worst air quality, noting that at 900 micrograms of fine particulates per cubic meter of air, the city was "blowing past the E.P.A.'s definition of 'hazardous' air (which maxes out at 500) and into extreme territory." While seasonal factors are clearly at play, the deteriorating air quality is an all too powerful symbol of the growing environmental costs of strong economic growth for the people of India, and the right to breathe clean air is gaining traction as a demand among schoolchildren forced to stay locked indoors.

Similarly, clean water is also becoming a critical issue. The electricity sector—still the dominant energy source in India—is still largely based on coal, and this sector of India's economy is one of the largest consumers of the country's scarce water. Meanwhile, increasing economic growth means that the government must meet the burgeoning power demands of the population. But with the overall total water supply slowly declining and pressing agricultural needs (70 percent of India's farming output is irrigation-based),

there are simply not sufficient water resources for a continued expansion of the coal-power sector.

At the same time, India is genuinely committed to overdelivering on its national contributions to the 2015 Paris Climate Agreement, and locking in a sustained, aggressive reduction in the carbon emissions intensity of its economy. Indeed, India is on track to boast just 2 percent growth in carbon emissions in 2019; the country's lowest rate of carbon-emissions growth this century, (assisted in part by the slowing economic growth rate).

In tackling air pollution, water scarcity, and the Paris targets, it might appear that India is driving its energy transformation because of domestic environmentalism. But this is not really the case. Finance is the central driver. India is embracing renewables and new energy technologies due to the compelling economic benefits of the rapid expansion of a cheaper electricity supply.

Creating a low-cost electricity supply. In 2017, India's then-energy minister, Piyush Goyal, introduced online competitive "reverse auctions"—where suppliers can view the current bid and make lower bids if they wish—to win the right to build new renewable energy infrastructure across India. This encouraged each Indian state to compete with others, given that both local and international developers were able to choose sites with the best wind and solar resources. The Indian states of Gujarat and Tamil Nadu offer some of the best sites in the world.

The results of these reverse auctions were staggering; companies collectively bid for more capacity than was being auctioned by up to ten times. This high investor interest allowed the government of India to select the lowest-cost bids, ultimately benefitting India's electricity consumers.

Fearful of missing out, the trend continued in subsequent reverse auctions, with investors bidding aggressively with cheap offers—putting enormous downward price pressure on reverse auction results. This in turn encouraged the state and central governments to encourage this investment boom further, by removing legal and regulatory barriers—lending truth to the adage that the flow of money through a system tends to organize it.

With such powerful forces at work, prices kept dropping. Previously expensive renewable energy prices dropped by some 50 percent over 2017 for both solar and then wind, while investors offered 2.40-3.00 rupees per kilowatt hour. This put domestic renewable energy prices about 20-30 percent below the cost of India's existing domestic coal-fired power generation costs, and even below the cost of plants powered by imported coal or imported liquified natural gas.

Let's look at how India currently uses energy. At present, India's energy is a combination of coal, nuclear energy, hydropower and bio-energy including wind, biogas, bio-diesel, etc.). It is also interesting to note that a significant portion of India's primary energy comes from forest and agricultural waste.

This includes animal waste, wood chips, biofuels, etc. And along with bio-energy, India now also produces the world's cheapest solar power.

Where does India stand in this green race?

There are several ways to measure green competitiveness, scale, innovation, and trade. Countries with larger green sectors today have a head-start: they have already acquired some skills and capital to facilitate the transition. Those that are innovative will be better able to adapt and develop technologies. Trade data can reveal a country's global competitive position. In terms of scale, India is in a favourable position. It has a sizable industry in low-carbon environmental goods and services (LCEGS) and the third-highest LCEGS sales in Asia (second highest in terms of proportion of GDP) . A large existing market for green goods/services has several advantages, from knowledge spillovers to economies of scale and agglomeration benefits. In terms of green innovation, India has room for improvement, but has some important strengths.

It famously engages in frugal innovation, which is immensely useful, but not captured by patent data. If we narrow our focus to high-value, patented inventions, India is in a neutral position. About 13% of the country's high-value patents are related to green tech—in line with the world average. Its patent basket has a higher share of certain green tech when compared to the world average (see accompanying graphic), reflecting an innovation specialisation. These technologies include green buildings, carbon capture and storage, climate change mitigation technologies related to production and processing goods, and water-related adaptation technologies. India's share of patents in water-related adaptation technologies is four times higher than the world average, indicating a distinct advantage, as also a grave need.

India's lower labour costs give it an additional competitive edge. It also has domestic scale in wind, with the fourth largest installed capacity in the world. Tamil Nadu alone produces more wind power than Sweden or Denmark. Such scale in wind signals a maturing market with relevant expertise. Smart grids also present a significant economic opportunity. India can capitalise on its comparative advantage in smart-grid technologies to boost exports. It can also harness innovation in smart grids to address its own efficiency problems.

The Ministry of New and Renewable Energy (MNRE) has taken up the following programmes on various New Technologies, As part of these programmes, research, development and demonstration projects have been initiated at various research, scientific and educational institutes, universities, national laboratories, industry, etc. These projects are helping in the development of indigenous research and industrial base, expertise, trained manpower and prototypes/devices/systems in the country

♦   Hydrogen Energy

- ◆ Chemical Sources of Energy (Fuel Cells)
- ◆ Battery Operated Vehicles
- ◆ Geo Thermal Energy
- ◆ Ocean Energy
- ◆ Biofuels

Green Energy Corridor – India's initiative

For evacuation of large scale renewable energy, Intra State Transmission System (InSTS) project was sanctioned by the Ministry in FY 2015-16. It is being implemented by eight renewable rich States of Tamil Nadu, Rajasthan, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Himachal Pradesh and Madhya Pradesh. The project is being implemented in these States by the respective State Transmission Utilities (STUs).

There is a promising opportunity that India should not miss. Through supportive policies encouraging the growth of green sectors, it can strategically build export markets, attract FDI and leverage its IT prowess to advance smart-grid technologies. The knock-on effects of developing clean industries are large, especially because they can address water and air pollution issues, which are fated to become worse. We strongly believe the narrative is no longer about the costs of green growth, but about the immense opportunities. We need to win the green race, and defy the preordained.

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Prey species dependent weight gain of adults of a Labybird beetle,*Anegleis cardoni*

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Introduction:

Prey quality is an important factor that influences many aspects of the development, survival and reproduction of predators. Interaction of predators with their prey in terms of prey suitability is important to develop pest management strategies. Assessment of prey suitability can increase our understanding about the prey preferences and feeding efficiency of ladybird beetles. Ladybird beetles are predators of aphids, mealybugs, scale insects, whiteflies, thrips, mites and a number of other pest species (Hodek, 1996; Dixon, 2000). Ladybird beetles are important predatory biological control agents having prey specificity, high feeding efficiency and environment friendly properties. Most of the predatory ladybirds are reported to feed on either aphids or coccids, while some feed on adelgids, mites, aleyrodids, chrysomelid larvae and psyllids also (Dixon, 2000). When the natural insect prey is not available, some of these predaceous ladybirds are known to feed on fungal spores, pollen, honeydew and nectar as their alternative food (Lundgren, 2009).

The suitability of a prey species can be determined by evaluating the effect of feeding on prey on the life history attributes of the predator. Life attributes may include development, survival, adult weight and reproduction. Quantitative data on a predator's growth, development, survival and reproduction indicate the suitability of the prey (Kalushkov & Hodek, 2001). The influence of food quality on growth, development and reproductive success is well studied (Stamp & Meyerhoefer, 2004; Ishiguri & Toyoshima, 2006).

Every organism needs certain amount of energy for development and survival. Favourable conditions with proper food and energy resources can maximize the survival of organisms. Organisms must respond in an adaptive manner to achieve higher fitness levels. Organisms are known to alter their behaviour and biology to maximize their fitness (Stearns, 1992). Fitness in terms of weight gain and reproduction define the overall vigour of the organism. The quality of diet is the key factor that influences life history traits of organisms (Blackenhorn, 2000).

Weight as a criterion of evaluating the prey suitability is important to develop the understanding about prey-predator interaction. Weight gained by the immature larvae and the adults is an important factor that can determine that the particular predator feeding on a particular prey species is actually or not benefitted for its growth, development and survival. Ultimate increase in weight can decide the proper size of the predator, which should be correlated with the better performance of the predator to control the aphid pest population

in the field.

Anegleis cardoni (Weise) (Coleoptera Coccinellidae) is a meagerly studied ladybird beetle. Very little information is available on its biology and behavior. Therefore current study aimed to evaluate the prey suitability for this ladybird beetle in terms of weight gained by adults. The current study will help understanding the prey suitability for *A. cardoni* to use it as an effective biocontrol agent in pest management strategies.

Materials and Methods:

Laboratory maintenance

To establish a stock culture, adults of *A. cardoni* were collected from Ashoka (*Polyalthia longifolia*) trees. Adults were allowed to mate and mating pairs formed were kept in Petri dishes (9.0 × 1.5 cm) in an Environmental Test Chamber (ETC) at 27 ± 2°C; 65 ± 5% RH; and a 14L: 10D photoperiod. Adults were supplied with one of the following aphid species: *Aphis craccivora* from bean (*Dolichos lablab* Linnaeus), *Aphis gossypii* from bottle gourd (*Lagenaria vulgaris* Seringe) or *Lipaphis erysimi* from mustard (*Brassica campestris* Linnaeus). The aphid supply was refreshed after every 24 hour. Oviposition was observed twice a day and eggs laid were removed and placed into separate Petri dishes. First instar larvae hatched from the eggs were kept separately in Petri dishes and provided with one of the above mentioned aphids. Larvae were reared till adult emergence. The whole procedure was replicated on the entire three aphid species mentioned above.

Experimental design

Adults emerged were isolated and reared separately in Petri dishes. They were provided with aphid *A. gossypii.* As *A. cardoni* do not exhibit sexual dimorphism. Thus after 10 days, adults were kept together in a large beaker and were allowed to mate. Ten mating pairs formed were removed and kept in Petri dishes. Before transferring them to the Environmental Test Chamber, adults from the mating pairs formed were weighed individually using an electronic balance. Adults were reared on aphid *A. gossypii* for their lifetime. The weight of adults was taken again at 20, 30 and 40 days of their age. The whole procedure was replicated in ten replicates on aphids *A. craccivora* and *L. erysimi* also.

Statistical Analysis

Data about weight of adult males and females obtained were subjected to two-way-ANOVA using aphid species as row and age of adults as column factors. Means were compared using Tukey's HSD test with á = 0.05 using statistical software MINITAB on personal computer.

Results:

Results revealed significant influence of aphid species (F = 541.08, P = 0.000) on weight gained by adult males and females of *A. cardoni.* Weight was found to be highest when adults were fed on *A. gossypii* followed by *A.*

craccivora and *L. erysimi* (Table – 1). Age (F = 141.29, P = 0.000) also significantly influenced the weight of adults fed on different aphid species. Interaction between aphid species and age of adults (F = 15.00, P = 0.000) also significantly influenced the weight of adults. Adults of *A. cardoni* showed increase in weight up to the age of 30 days, after which decrease in weight was recorded, when fed on *A. gossypii* and *A. craccivora* (Figure – 1). However, in case of *L. erysimi*, this decrease in weight was recorded after the age of 20 days. Thus results revealed *A. gossypii and A. craccivora* to be suitable and *L. erysimi* to be unsuitable aphid prey species for *A. cardoni.*

Discussion:

Current study revealed significant influence of aphid species on weight gained by the adults of *A. cardoni.* Weight was found to be higher when *A. cardoni* fed upon *A. gossypii* followed by *A. craccivora and L. erysimi.* Higher weight gained by the adults on *A. gossypii* and *A. craccivora* may be attributed to the better plant quality which in turn influenced the vigour of not only the aphids feeding upon it but also the predators feeding on these aphids. The host plants may provided the nutrients essential for growth and development of *A. cardoni.*

Many studies have proved that host plant quality directly or indirectly influence the fitness of the predators feeding upon aphids. In is not essential that an aphid species feeding upon a particular host plant may be suitable equally for different ladybird beetles. It is also not essential that a preferred aphid prey when migrate on another host plant, can thereby be suitable equally as earlier, because shifting from dietary plant can change the levels or quantity of nutrients gained by the aphids. Obatake & Suzuki (1985) reported that *A. craccivora* fed on *Robinia pseudoacacia* L. (Fabales: Fabacae) was found to be toxic to *Harmonia axyridis*, due to the presence of the amines and ethanolamine sequestered from the host plant.

Weight gained by the adults of *A. cardoni* was found to be lowest when fed on *L. erysimi* in the current study. It may be attributed to the poor host plant quality that resulted into the lowered vigour in terms of weight of *A. cardoni.* Another important finding from the current study postulated that adults of *A. cardoni* were reported to gain weight continuously up to the age of 30 days when fed upon *A. gossypii* and *A. craccivora*. However this was not same in the case of *L. erysimi.* Adults fed on *L. erysimi* were found to lose their weight from the age of 20 days. From this result it can be inferred clearly that *L. erysimi* is not suitable for the fitness of *A. cardoni.* Increase in weight indicates that the organism is getting proper quality and quantity of nutrients for better growth, development and survival. However, decrease in weight may indicate lowered quantity and quality of nutrients gained. Besides this it is also possible that the host plant may bear any toxic substance, which may be harmful for the predators.

Lipaphis erysimi is an aphid that has a pungent smell. It may be

because of the compounds present in its host plant. Allyl isothiocyanates present in its host plant are, to some extent, may be responsible for its reduced suitability as prey for several coccinellids (Williams et al., 1993; Noble et al., 2002). *Coccinella septempunctata* also showed a slower developmental rate when reared on *L. erysimi* (Kumar & Verma, 1996; Joshi et al., 1999). However, *Coccinella transversalis* (Omkar & James, 2004) and *Propylea dissecta* (Pervez & Omkar, 2004) were found to perform better on *L. erysimi* in terms of development, survival and reproduction.

Thus from the current study, it can be inferred that different aphid species do have a significant influence on the behavior and biology of ladybird beetles. Prey suitability is the important factor that can be altered by the specific wide variety of host plant range. These are the host plants that provide the essential nutrients not only to the aphids feeding on them but also the predators feeding on these aphids. Weight is the factor that can be altered by the age of the predator. Any continuous or sudden change in the weight gained may be the result of fluctuation or depletion in nutrient level provided by host plant. Thus current study revealed the two aphids *viz. A. gossypii* and *A. craccivora* to be suitable prey and *L. erysimi* to be unsuitable prey for *A. ccardoni*

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Figure – 1: Mean weight of adults of *A. cardoni*, fed on different aphid species at different age intervals.
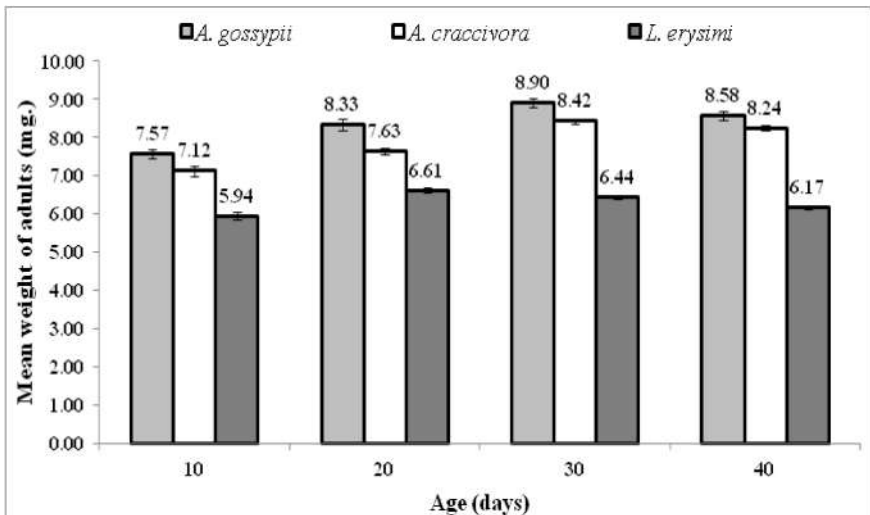
Table – 1: Weight (mean ± S.E.) of adult males and females of *A. cardoni*, when reared on three aphid species and results of Two-way- ANOVA showing influence of aphid species and age of adults on weight of adults of *A. cardoni.*

Aphid Species	Age (days)	Weight of Male (mg.)	Weight of Female (mg.)
A. gossypii	10	7.85 ± 0.08	8.80 ± 0.06
	20	8.70 ± 0.14	9.66 ± 0.13
	30	9.50 ± 0.12	10.25 ± 0.12
	40	9.12 ± 0.13	9.80 ± 0.10
A. craccivora	10	7.22 ± 0.05	8.35 ± 0.07
	20	8.30 ± 0.12	8.80 ± 0.06
	30	9.22 ± 0.11	9.55 ± 0.08
	40	9.10 ± 0.10	9.36 ± 0.09
L. erysimi	10	6.21 ± 0.06	6.90 ± 0.10
	20	7.11 ± 0.04	7.60 ± 0.07
	30	7.01 ± 0.06	7.42 ± 0.05
	40	6.70 ± 0.03	7.11 ± 0.04
Aphid Species	F- value	541.08	862.55
	P - value (df)	0.000 (2, 108)	0.000 (2, 108)
Age	F- value	141.29	83.98
	P - value (df)	0.000 (3, 108)	0.000 (3, 108)
Interaction	F- value	15.00	12.24
	P - value (df)	0.000 (6, 108)	0.000 (6, 108)

TECHNOLOGY IN HEALTH CARE

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INTRODUCTION

Technology is the sum of techniques, skills, methods and processes used in the production of goods and services. Technology is helping to make life better, easier and faster. Technology in health care industry aimed at enhancing life expectancy, quality of life, more safety, diagnostic accuracy and better treatment options as well as the efficiency and cost effectiveness of the health care system. Today clinicians use a wide variety of technologies in diagnosing, treating and assessing the care of their patients. Most of these new technologies are modern magic: new pharmaceuticals that change moods, infusion pumps and robotic keyhole surgery[1]. This review article summarizes on some of the technologies in healthcare.

HEALTHCARE TECHNOLOGIES

♦ **Nanomedicine:** Nanotechnology is the science of small things or the manipulation of matter on an atomic or molecular scale. Nanomedicine is essentially the medical application of nanotechnology to the diagnosis, management, and treatment of diseases. Areas such as disease diagnosis, drug delivery targeted at specific sites in the body and molecular imaging are being intensively investigated. Due to their minute size, nanomedicines can easily target difficult-to-reach sites with improved solubility and bioavailability and reduced adversed effects.[2]

♦ **Artificial intelligence (AI):** AI in health care is the use of complex algorithms and software to emulate human cognition in the analysis of complex medical data. The primary aim of health-related AI applications is to analyze relationships between prevention or treatment techniques and patient outcomes[3]. AI programs have been developed and applied to practices such as diagnosis processes, treatment protocol development, drug development, personalized medicine, and patient monitoring and care.

♦ **Robotic surgery:**Robotic surgery is essentially another way of doing laparoscopic surgery albeit with better technical inputs and technology.[4]It is a type of minimally invasive surgery. In this surgeons make tiny incisions in the body and insert miniature instruments and a high definition three dimensional camera. Then they manipulate these instruments to perform the operation from a nearby console (a large computer). The robotic devices allow the surgeons to

successfully perform delicate surgeries in hard to reach places.

♦ **Regenerative Medicine:** Regenerative medicine has the potential to heal or replace tissues and organs damaged due to age, disease, trauma, or congenital defects. Stem cells have unrestricted potential to divide and this strength is used in regenerative medicine for the regeneration and repair of cells within the body during tissue damage.[5]

♦ **Artiicial Organ:** An artificial organ is a man made medical organ device or tissue that is implanted in to a human to replace a natural organ, or to duplicate or augment a specific function or functions so that patient may return to a normal life[6]. Examples are- artificial limbs, cochlear implant in ears[7], artificial pacemaker in hearts, replacement bones and joints, etc. Scientists are able to create blood vessels, synthetic ovaries and even a pancreas.

♦ **Health Wearables:** With rise in chronic diseases like diabetes and cardiovascular disease, health wearables are helping patients to monitor and improve their fitness. Wearable technology in health care includes electronic devices that consumers can wear, like fitbits, smart watches, quell relief, health patch MD, smart contact lenses, etc.

♦ **Bluetooth enabled smart inhalers:** This device guides and encourages the asthmatic patients for proper use of inhalers. A small device is attached to the inhalers which records the date and time of each dose and whether the dose was correctly administered. The data is then sent to the patients smart phones so that they can keep track and control their conditions.

♦ **Precision Medicine:** Precision medicine refers to a new treatment and prevention method based on understanding of individual gene, environment and life-style.[8] Precision medicine approaches consider proper medication doses, maximise efficacy and minimize side effects, interaction with other drugs patients may be taking, as well as factors from the environment, such as diet and exposure to toxins. Today precision medicine is being used in treatment of cancer, cardiovascular disease, pulmonary disease, renal disease, hepatology and endocrine disease.[9]

♦ **EKG machines:** An electrocardiogram (*'*ECG or EKG) is a recording – a graph of voltage versus time – of the electrical activity of the heart.[10] It is produced using electrodes placed on the skin by a process called electrocardiography. Numerous diagnoses and findings related to heart disorder can be made based upon electrocardiography. Recording an ECG is a safe and painless

procedure. The newer ECG machines are small and handy with ECG analysis facility.

♦ **MRI scanners:** Magnetic resonance imaging (MRI) uses a large magnet and radio waves to look at organs and structures inside the body. Health care professionals use MRI scans to diagnose a variety of conditions, from torn ligaments to tumors. MRIs are very useful for examining the brain and spinal cord. Magnetic resonance imaging (MRI) is one of the most rapidly advancing imaging techniques available recent days.[11]

♦ **High Resolution CT Scan:** A CT scan—also called computerized tomography or just CT—is an x-ray technique that produces images of the body to visualize internal structures in cross section rather than the overlapping images typically produced by conventional x-ray examination. CT scanning is fast, painless, non-invasive and accurate. In emergency cases, it can reveal internal injuries and bleeding quickly enough to help save lives. CT is an essential tool in diagnostic imaging for evaluating many clinical conditions.[12]

♦ **Capsule Endoscopy:** Invention of capsule endoscopy has made a great resolution in diagnosing diseases related to small intestine which were non accessible to conventional endoscopy method.[13]

♦ **Multipara-monitors:** Multipara monitors are widely used for patient's vital parameter monitoring, which makes the task of para-medical staff convenient and easier.

♦ **Infusion pumps** provide better drug delivery system and easy to handle and operate.

♦ **Digital X-Ray:** Digital X-ray machines give better picture quality and lower x-ray exposure than convention X-ray machine. In digital X-Ray the images can be viewed just minutes after exposure via computer networks, to be seen by many people at once, in many different places.[14]

♦ **Internet of Things(IoT):** This allows all entities to be connected to each other through wired or wireless communication means. IoT healthcare is applicable in many medical instruments such as ECG monitors, glucose level sensing, and oxygen concentration detection.

Healthcare information technology supports the maintenance and management of health information in electronic formats. IT in health care increase health care efficiency, prevent medical errors, decrease paper-work, facilitates communication between health care providers, immediate access to patients' medical information, etc. The health care IT has revolutionized the healthcare industry.

BENEFITS AND CHALLENGES:

The benefits that emerging technologies have brought to healthcare includes:

♦ Easy and rapid diagnosis.

♦ Convienient and small sized diagnostic apparatus with easy handling.

♦ Increased efficiency and quality of treatment.

♦ Reduced time of treatment.

♦ Greater patient satisfaction.

While these technologies offer countless benefits, there are some major concerns and drawbacks which include:

♦ Requirement of highly trained clinical operators.

♦ New technology can be complex or expensive.

♦ Increasing cost of therapy.

♦ Some patients may not be savvy with technology.

Implementing a new technology may be a prohibitive and uphill task. When technology fails to work, it can be frustrating. A single mistake in using technology can cause disastrous consequences. New technology can be complex or expensive, causing a slow rate of adoption. Security and privacy risks are of paramount importance. Shrinking budgets inhibits innovations.

CONCLUSION: Although emerging healthcare technologies will not fix all healthcare problems, they can improve the practice, decision making, and management of healthcare. They have been more accurate and speedy when it comes to the diagnostic modality and development of new drugs and drug delivery system has made the treatment options better for the patients.

However, sometimes the availability may come into conflict with medical necessity, social justice and cost effectiveness.

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POPULATION GROWTH AND THE POLLUTION

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INTRODUCTION:

Population growth is the increase in the number of people living in a particular area. Since population can grow exponentially, resource depletion can occur rapidly, leading to specific environmental concerns such as global warming, deforestation & decreasing biodiversity. More people require more resource, which means that as the population increases, the earth's depletion and deforestation & loss of biodiversity as human strip the earth of resource to accommodate rising population number. For visualization, during that same 20th century that saw fourfold population growth, CO_2 emissions increased twelve fold. As greenhouse gases increase, so do climate pattern called climate change. Population growth & environmental pollution has direct relationship to each other because when population increases then pollution also increases. All people have their own wants & desire. When they start to fulfill their wants they used many things which harm the air, water, land etc. People in developing countries tend to feel the impacts of environmental problems more acutely, especially if they live in coastal areas directly affected by sea level rise & the extreme weather events that accompany climate change. The mast vulnerable populations also experience decreased access to clean water, increased exposure to air pollution & diseases – Which may result from decreased biodiversity – and may feel the impact more immediately as local resources including plants & animals deplete. While the inter connected problem of population growth & environmental issues seem overwhelming, it is important to remember that humans can make changes that positively impact the planet.

DISCUSSION:

Effect of population growth on our environment: - Humans have a profoundly adverse impact on the environment. Failure to conduct activities like manufacturing, transportation, large - scale fishing agriculture& waste disposal in moderation impacts the land, air & water. While the full range of long – term consequences of human intervention on environment is uncertain, some consequences like climate change are already apparent. In particular, population density plays the most important role in shaping the socio – economic environment. Its effects are felt on the natural environment also.

1. **Generation of waste**: - Due to his destructive activities, man has dumped more & waste in environment. As the man – made waste is not transformed, it causes degradation & the capacity of environment to absorb more waste is reduced. Further, waste leads to air & water population.

2. **Threat to biodiversity**: - due to his destructive activities, man has extracted more & more minerals from the earth. Animals have been hunted & plants have disappeared. There has been loss of biodiversity. These have led to ecological imbalance.

3. **Urbanization**: - Rapid growth of population has led to urbanization which has adversely affected environment. Due to population pressure, natural resources in the cities are depleted at a fast rate. Moreover population does not have proper sanitation facilities & pure drinking water. As a result, the health of people is adversely affected.

4. **Industrialization**:-Underdeveloped countries are following the policy of heavy industrialization which is causing environmental degradation. The establishment of such industries as fertilizer, iron & steel, chemicals & refineries has led to land, air water population.

5. **Land degradation**: - Intensive farming & excessive use of fertilizer & pesticides have led to over – exploitation of land & water resources. These have led to land degradation in the form of soil erosion, water logging & salivation.

6. **Climate change**: - Climate changes are irregular due to green house gases. Forest is still being degraded by acid deposition generated by faraway industries, & green house gases continue to accumulate in the atmosphere. Urban people are still being exposed to unaccepted levels of toxic pollutants.

7. **Technology**: - Presently, environmental pollution is caused by technology which release gases & pollutants causing chemical & industrial pressure on environment. Air Population & health in the twin cities:- About 6 – 13% of all metro residents who died during the study period & about 2 – 5% of those who visited the hospital or emergency room for heart & lung problem, did so partly because of exposure to fine particles in the air or ground level ozone. Air pollution doesn't affect everyone in the same way. The group most affected by air pollution is people of color, elderly residents, children with uncontrolled asthma & people living in poverty. Vulnerable populations may experience more health affected because these populations already have higher rates of heart & lung conditions.

The risk of living near traffic:- People who live, work, or attend school near major roadways have an increased incidence & severity of health problems including asthma, cardiovascular diseases, low birth weight, pre-term newborns, reduced lung function & impaired lung development in children & pre–mature death. Areas within 1,000 to 1,600 feet from highways & other major roads are most impacted by traffic – related pollution. About 10 – 15% passenger vehicles – older, dirtier vehicle – are responsible for more than hay of fine particle emissions from on – road vehicles. Identifying & repairing or retiring these high – polluting vehicles has positive impact on both local & regional air quality. Population feels most risk of health problems related to air pollution-

1. People with lung diseases, such as asthma, chronic bronchitis, emphysema & chronic   obstructive pulmonary disease.
2. Infants & young children.
3. People who work or exercise outdoors.
4. Adults over 65 years.
5. People with a cardiovascular disease.
6. People in poverty; people who lack access to health care.
7. People working in occupation where there is high exposure to contaminated air.
8. People who spend a lot of time near busy roadways.

Air quality in metropolitan cities currently meets standards, but even low &moderate levels of air pollution can contribute to serious health effects & early death for these groups. Some air pollutants deplete the ozone layer & expose the earth to dangerous radiation from the sun.

Effect of population on water quality: - The most limiting resource is water. As population density increases, the demand for the limited fresh water also increases. Increase in population also accelerates the pollution due to following reasons.

1. Urbanization at an uncontrolled rate as in the case of India.
2. Large amount of waste generated & disposed into the water bodies increases the population in the water bodies.
3. The rising number of industries in India contributes heaviest impact on water bodies are thermal power plants, engineering industries, paper mills, steel plants & textile industries.
4. Cities & towns located on the banks of The Ganga generated a third of the wastewater generated in our country. Availability of fresh water is one of the greatest threats passed by over population.

As population increases, more people are dependent on the polluted

water resources. Water stagnation that occurs around sources is dangerous as it provides a breeding ground for mosquitoes, which can cause diseases like dengue, chikungunya & malaria. Due to the crowded conditions prevalent around the water body, they spread fast. Health risks associated with polluted water includes different diseases such as respiratory diseases, cancer, diarrhea, neurological disorders &cardiovascular diseases. Nitrogenous chemicals are responsible for cancer &blue baby syndrome. Mortality rate due to cancer is higher in rural areas than urban areas because. Urban inhabitants use treated water for drinking while rural people don't have facility of treated of water & use unprocessed water. Poor quality of water destroys the crop production of an area & infects food sources. Clean & treated water can solve the problem of pollution in lakes &water bodies. Some policy measures as given under-

1. **Control of population growth**: - The rate of population growth should be curtailed through effective family planning measures. This is essential because the proportion of total population in the labour force will increase further in the years to come as a result of changes in the age structure of the population. The shifting of labour force from the rural to the secondary sector required agricultural productivity helps in meeting the demand for raw materials of the expanding manufacturing sector. With increased productivity, fewer workers are required to produce raw materials for industry & food – grains for the pollution.

2. **Economic development**: - The aim of population control is not only to bring about a decline in fertility rates but also to improve the quality of life of the people. These are possible through rapid economic development. It is not an illusion to believe that a reduction in population growth will automatically raise living standards. In fact, an effective family planning policy should be integrated with measures to accelerate economic development.

3. **Improving health & nutrition: -** Guarantee of good nutrition & absence of hunger is not the same thing. Our first afford should be towards removing hunger of the poor, but our long – term goal should be to provide maximum nutrition to our people. Nutrition security includes making our food base wider & varietals.

4. **Removing subsidies:** - To reduce environmental degradation at no financial cast to the government, subsidies for resource use by the private & public sectors should be removed subsidies on the use of electricity, fertilizer, pesticides, diesel, petrol, gas, irrigation water

etc. Lead to their wasteful use & environmental problems. Subsidies to capital intensive & highly polluting private & public industries lead to environmental degradation. Removing or reducing subsidies will bring both economic & environmental benefits to the country.

5. **Regulatory policies**: - Regulatory policies also help in reducing environmental degradation. Regulators have to make decision regarding prices, quantity & technology. In making decisions, they have to choose on or resource use of technologies.

6. **Economic incentives**: - Like regulatory policies, economic incentives relate to price, quantity & technology. Incentives are usually in the form of variable fees to resource users for the quantity of pollutants in air, water & land use. They are given rebates if less waste or pollution is generated than the emission standards laid down.

7. **Public participation**: - Public awareness & participation are highly effective to improve environmental conditions. Conducting of formal & informal education programs relating to environment management & awareness programs can go a long way in controlling environmental pollution.

Urban Drainage Systems: Considering the Climate Change, A Study of Lucknow

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Introduction:

Climate change involves increase in average temperature, snowfall, rainfall, wind and increase in level of sea that indirectly or directly affect human life. As global mean temperature has increased during last 100 years, the hydrological cycle has also changed (Inter Governmental Panel on Climate Change IPCC, 2007). for example intense rainfall occurrence takes place. The study of this research paper is divided into 3 parts each one resulting into an assessment 1). Urban Water System Relationship, 2). Climate, 3). Impact and Consequences of drainage System.

Study Area:

Lucknow, the capital of Uttar Pradesh in India. The increasing population has laid a burden on water resources of the city. The city of Lucknow is situated at an altitude of 26.8467° N and 80.9462° E. It is located at 123 m elevation above sea level. It is surrounded by Sitapur, Raebareli, Barabanki and Unnao on North, East and West. Its is divided into 4 tehsils Malihabad, Bakshi Ka Talab, Mohanlalganj and Lucknow. Lucknow is divided into two parts: Trans Gomti and Cis Gomti. As per census of India 2011, the population of Lucknow is 2815602 which is an increase of 25:36% to 2001. (Rajnesh Gautam, Chaurasia, P.R.)

Fig.1: Maps of India, Uttar Pradesh and Lucknow.

Existing urban drainage are designed to fight with weather conditions in specific areas. The age and life of drainage system may vary and in some old areas of Lucknow like Chowk, Charbagh, Hazratganj, Alambagh they might be quite old. This shows that these drainage systems were designed for past conditions and might not be opt for current situation.

Methods:

Various parameter were taken to ascertain the impact they have on urban drainage with reference to climate change. The questions undertaken were:

1). Is the parameter relative to water (Yes/No).
2). If Yes. (Is their a clear connection to urban environment (Yes/No)).
3). If No. (Does the parameter effect water (Yes/No).
4). If yes on previous question; what is the impact of this parameter on urban water systems. (direct or indirect).

In order to investigate what type of problems due to climate change may occur in urban drainage the climate parameters will be added as a sort of input to urban water system. A few climate parameters have been chosen to represent the possible influence of climate on urban water in the form of weather. Table below shows the parameters of which the direct impacts are to be chosen for impact assessment.

Table® Climate parameters of affecting water systems directly or secondary.

Direct	Secondary
Temperature	Temperature
Precipitation	Evapo transpiration
Sea Level Changes	Soil Moisture
Rains	

The climate of Luchnow was closely monitored with the help of Meterological department data for one year and it was recorded that climate is mild, generally warm. In winter, there is lesser rainfall than in summer. Average annual temperature is 25.7° C. Precipitation is about 1001 mm i.e. 39.4 inch per year. May is the hottest month of year. Below table explains the weather month by month.

	Avg, Temp. (C)	Avg. Temp. (F)	Precipitation (mm)
January	16	60.8	25
February	18.8	65.8	13
March	24.4	75.9	9
April	29.9	85.8	4
May	33.8	92.8	14
June	33.6	92.5	95
July	30.0	86.0	296
August	29.1	84.4	305
September	28.9	84.0	174
October	26.2	79.2	57
November	20.9	69.6	2
December	16.9	62.4	7
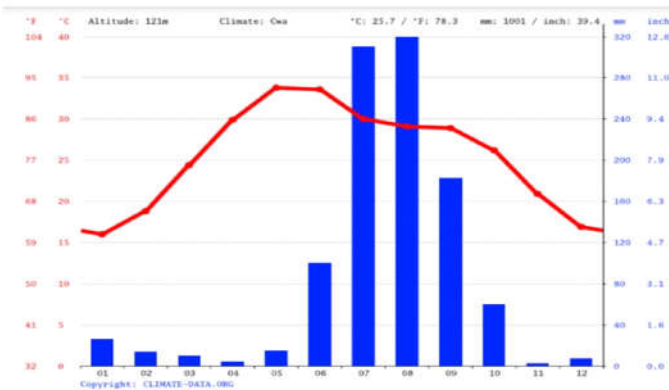
Altitude: 121m Climate CWA °C:: 25.7/F:78.3 MM-1001/inch 39.4

Temperature

From above data analysis we observe that temperature is the driving force for climate change but in urban drainage precipitation is the driving force. Extreme weather conditions can be included in all parameters.

Urban drainage are somewhat complex but sometimes apart from climate changes many more factors are also responsible for creating havoc in drainage. These include-

1). System Design
2). Cross Connection
3). Roots, Sediments, Damage

4). Infiltration
5). Exfiltration
6). Pollutants and Nutrients

Rainfall:

We observe that water crisis has become a matter of grave concern. However rains are create havoc. Intermittent rains result in water logging. Continuous rains in July and August effect areas adversely which include Faizullaganj, Gomtinagar, Aliganj, Charbagh and Mahanagar. Apart from excessive rainfall increasing temperature and depleting groundwater levels are also some major impacts of climate change.

Problem of increasing waterlogging and soil sodicity and pollution of groundwater are also emerging threat to the sustainability of resources. Climate change effects rainfall and increasing evaporation which puts increasing pressure on ecosystem. Rainfall in changing its character when rains it pours.

We also observe that the drainage system in the city of Lucknow is included with drinking water, wastewater, Storm water and drainage water.
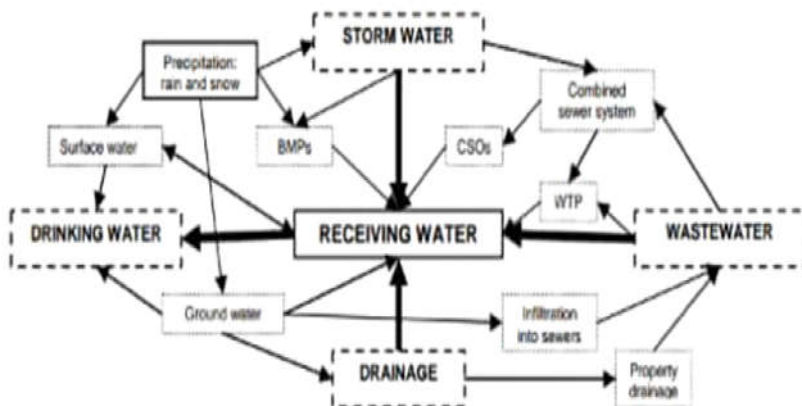
Urban Drainage System with receiving water in centre.

This above diagram gives an insight of usage of urban drainage water.

Groundwater Levels:

Various areas were surveyed for groundwater study of which Gomti Nagar, Indira Nagar, Vikas Nagar, Aliganj, Nirala Nagar and Mahanagar were among the areas that were mostly effected by lowering groundwater level. Out of above mentioned areas maximum decline was recorded in Gomti Nagar (6m) and second in Mahanagar as 3.25m. (Resource: C4WB) Four major problems were also pointed out related to groundwater–

a). Over exploitation and extraction of groundwater in both urban and

rural areas cause significant decline of groundwater.

b). Non-conjunctive use of canal water and groundwater especially in canal commands leads to problem of water logging, also leading to decline in agriculture productivity.

c). Contamination/Pollution Hazards related to groundwater.

Groundwater Decline in Lucknow City

Between Pre Monsoon 2015-2019
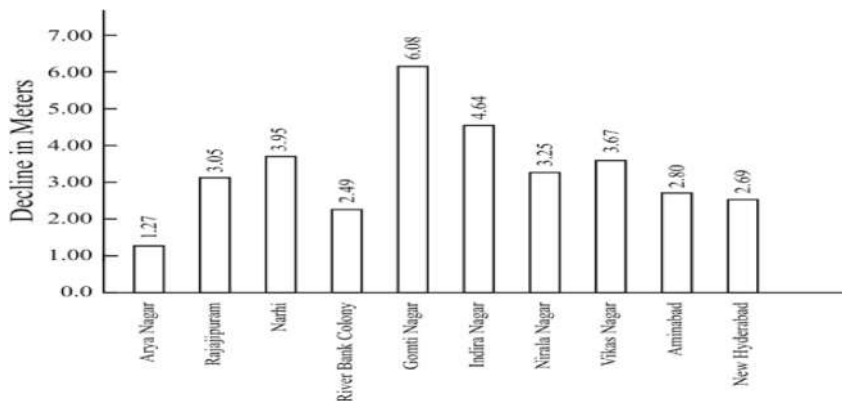
Groundwater is being excessively exploited–

Drinking Water Tubewells (Jal Sansthan) - 470

♦ Tubewells of Private or Other Agencies - 600 or more

♦ Handpumps (Public) - >6000

♦ Mine Tubewells - 65

♦ Domestic Boring - Unaccounted

♦ Commercial Industrial Activities - Unaccounted

♦ Expected Groundwater Withdrawl - 500 Mld or more

In both Trans and Cis Gomti areas water level is going down at a rate of 60-80 cms per year.

Conclusion:

The climate factor have an impact on urban water drainage. Out of which the direct impacts include precipitation, temperature and secondary impacts include temperature, evapotranspiration and depletion of water resources. The relationship diagram is used to show the water relationship. Precipitation is set as driver of system and centre point is receiving water.

Precipitation has an effect on urban drainage and on storm water, drinking water, waste water. Increased amount leads to flash floods while decreased amounts leads to high pollutant loads in storm water during rainfall.

Temperature is although not clearly related to urban drainage but it relates to quantity of drinking water and receiving water and treatment process

of water.

Remedies and Solutions:

Govt. of Uttar Pradesh has initiated Rain Water Harvesting and Groundwater Recharge Program in the State. Groundwater Department is declared as the Nadal Agency for monitoring of RWH and GW (Groundwater) Management. 10th June is declared as Groundwater Day. Changes in Cropping Pattern, Promotion of Low Water Crops, adoption of Sprinkler and Drip Irrigation for efficient water use are undertaken. Conjunctive use management of surface water and groundwater is needed for judicious management of water and balanced use in irrigation an urban sector of state. Improvement in waterlogging is to be done by implementation of the above measures we would be able to cope up with existing adverse climate conditions and thereby help out are environment to be more friendly.

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Excised root culture method for germplasm conservation of *Azadirachta indica* A. Juss. (Neem)

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Introduction

Azadirachta indica A.Juss. (Neem), the green gold is known for its medicinal and biopesticidal properties. In nature, it is represented by a large number of genotypes differing in contents of their active principles (Schmutterer, 1995). The conventional methods of propagation of A. indica, both sexual as well as vegetative, are beset with constraints that restrict large-scale multiplication of selected trees and its commercial exploitation (Schmutterer, 1995). The main limitations in sexual propagation are the recalcitrant nature of seed with short span of viability and high heterozygosity (Ezumah, 1986, Sacande et al., 2001). Therefore, preservation of its varied genotypes under field conditions is virtually impracticable. It is, therefore, imperative to develop *in vitro* methods for preservation of its different genotypes of proven qualities at a place, distant and climatically different from their natural habitats in the form of a 'Gene Repository'. There are many reports of multiplication of a mature neem tree through tissue culture but few efforts have been taken for its germplasm conservation. In view of this background, an innovative method for germplasm conservation of elite neem trees was established.

Materials and methods

Establishment of excised root cultures

Healthy twigs, 20-30 cm in length were excised during the months of March-April from fresh growth of a 40-year-old mature tree of *Azadirachta indica* A. Juss. and cultures of *in vitro* proliferating shoots were produced, employing nodal stem segments (Arora et al., 2010). Well-developed shoots 3-4 cm long were excised from 30 days old cultures of proliferating shoots and were rooted on Murashige and Skoog (MS; 1962) medium supplemented with indole-3-butyric acid (IBA). Roots measuring about 3 cm in length, excised from such *in vitro*-grown plantlets were used as explants for initiating root cultures. For root cultures MS basal liquid medium was modified for amino acids and vitamins and supplemented with IBA. Incubation period for root culture was 60 days.

Regenerantdifferentiation from root segments taken from established root cultures

Regenerant differentiation in segments of roots, taken from root cultures was induced in agarified modified MS medium supplemented with different cytokinins, namely, BAP, N6-(2-isopentenyl) adenine (2iP), zeatin (Z) and thidiazuron (TDZ, N-phenyl-N'-(1, 2, 3-thiadiazol-yl) urea) individually as well as in different combinations along with indole-3-acetic acid (IAA) and adenine hemisulphate. Further, in order to minimize intervening callus formation during regenerant differentiation, BAP at different concentrations in combination with different concentrations of 2iP along with IAA and adenine hemisulphate was incorporated in medium. In addition, root explants were given pulse treatment in which explants were first cultured on higher concentration of BAP, 2iP and IAA along with adenine hemisulphate for durations of 1, 2, 3, 4 or 5 days then transferred to one-tenth concentrations of BAP, 2iP and IAA along with adenine hemisulphate. Putrescine was supplemented at both the steps of pulse treatment to improve the response. For production of plantlets, about 3 cm long shoots, excised from 30 days old cultures of proliferating shoots, were rooted in MS medium supplemented with IBA. The isolated *in vitro*-rooted shoots were transplanted to soil in pots after being acclimatized.

RAPD (Random Amplified Polymorphic DNA) analysis of mother plant and root-regenerated plants was carried out to ascertain genetic fidelity.

Result and Discussion

Initially during establishment, cultures of excised roots showed the problems of browning and callusing which could be controlled to a good extent by modifying the MS medium for major salts, amino acids and certain vitamins (Fig. 1 a). IBA was found most effective for initiating new growth in excised roots, whereas NAA was found to be effective in Populus for root growth (Vinocur et al., 2000). Pulse treatment of 2 days was found to be optimum for inducing direct regenerant differentiation from root explants. Incorporating putrescine to the optimum treatment further augmented the regenerant differentiation (Fig. 1b). The positive effect of polyamines on shoot regeneration has also been reported in Soybean (Arun et al.,2016). Differentiated shoot buds developed into shoots and such root-regenerated shoots proliferated further (Fig. 1c). Shoots of about 3 cm length, excised from cultures of proliferating shoots, were rooted 100% in presence of IBA (Fig. 1d). In case of strawberry, IBA was found to be effective for *in vitro* root initiation (Bishnoi et al., 2016). The *in vitro*-rooted shoots — plantlets — were hardened and transplanted in the field (Fig. 1e). The process developed is important for establishing 'Gene Repositories' of this tree of immense medicinal and biopesticidal value by conserving its different genotypes growing in different agroclimates in terms of regenerative excised root cultures. RAPD analysis of mother tree and its progenies, showed monomorphic banding pattern of bands in RAPD profiles (Fig. 1f) ascertained the genetic fidelity.

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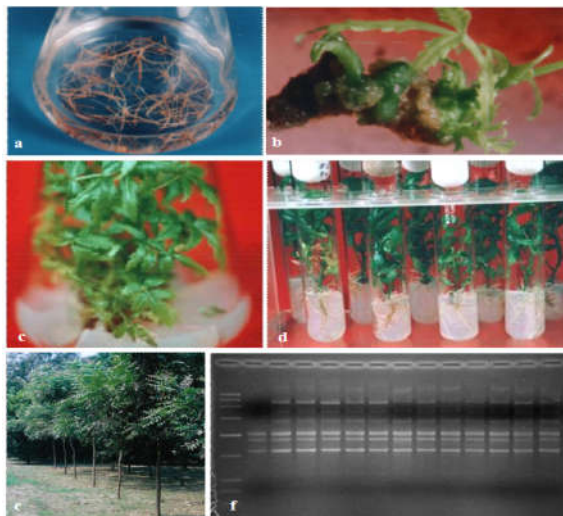
Figure Legends:

Fig. 1 (a-f) Germplasm preservation of *Azadirachta indica* A. Juss. through excised root culture.

a. **Sustained growth of excised roots in prolonged culture (2 years).**
b. **Direct differentiation of shoot buds/ shoots in root segment taken from established excised root culture.**
c. **Proliferation of shoots regenerated from segments of roots taken from established excised excised root culture.**
d. **Rooting of isolated shoots obtained from cultures of proliferating shoots raised from segments of roots of excised root culture.**
e. ***In vitro*-raised plants, regenerated from root segments of excised root cultures, as seen after 2 years of transplantation under field conditions.**
f. **RAPD profile of field-grown plants of neem regenerated from root segments taken from excised root culture.**

EFFECTS OF CLIMATE CHANGE ON BIODIVERSITY

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INTRODUCTION

Biodiversity is the variability among living organisms, including genetic and structural difference between individual and within and between individual and within and between species. The world biodiversity has a total of 1,263,500 species of plants and animals while India has only 51,828 species. It provides us with all the necessities of life and sustains and nourishes us. Biodiversity plays a direct role in climate regulation. Climate always changes resulting in evolutionary changes in the species.

GLOBAL WARMING AND CLIMATE CHANGE: DRIVERS AND IMPACTS

Global warming is the increase in the world's average temperature occurring due to increasing emission of the greenhouse gases (GHGs) which results in an enhanced significant change in either the mean state of the climate or in its variability persisting for decades or longer. Climate change results due to both; natural and anthropogenic drivers.

Natural drivers: It involves the contribution of plants, animals and humans naturally by processes of respiration, death and decomposition. Earth's climate variability is also caused by changes in the solar radiations, Milankovitch cycle, volcanic eruption, plate tectonics, ocean circulations, earthquakes and so on .

Anthropogenic drivers: It involves the human activities leading to climate change. The concentration of CO2 has increased from pre-industrial concentration of 280ppm to392ppm in 2010. It is all due to the burning of fossil fuel to generate the electricity in power plants, industrialization, deforestation, mechanization of agricultural practices, increasing vehicular transportation (In India, vehicles have increased from350 million to 40 billion since 1947) , land use changes, urbanization, industrialization and the disposal of subsequent waste generated out of it all.

Impacts: Millennium Ecosystem Assessment (MEA) predicts climate change to be the principal threat to the biological diversity . The average global temperature has increased by0.6°C since mid 1800s and is predicted to rise by 1.4-5.8°C by the year 2100. The global mean sea level has risen

by 10 to 20 cm and may further rise to 88 cm. Thickness of Arctic ice has decreased by about 40%. Many areas are facing problem of water shortage. Alaska's boreal foresthas moved about 100 km for every 1°C rise in temperature.

PREVENTION OF CLIMATE CHANGE

Mitigationdeals with the causes of climate change, while adaptationtackles its effects. Global warming mitigation involves reducing the intensity of radiativeforcings so as to reduce the effect of global warming and it can be made possible by two aspects; Geo-engineering and Carbon sequestration. Geo- as to decrease the impact of global warming from the greenhouse gas emission. It comprises of Sulphur dioxide spraying, artificial trees, cloud seeding ships, iron and limestone fertilization of the oceans and space mirrors. Environment Impact Assessment (EIA) of the industrial areas, checking vehicular pollution by the use of biofuels and using the clean technology, reducing over-exploitation of resources (over- fishing, land-use-changes); preventing poaching of rare, endangered and endemic species; preventing habitat fragmentation.

CONCLUSION

The increase in the greenhouse gases is leading to climate change at a faster rate and impacts the people and ecosystems. Every change in the ecosystem process works on the principle of Newton's law of motion (Every action has an equal and opposite reaction) which may be damaging or complimentary. Even a small change in the climate can lead to the extinction of some vulnerable and sensitive species. Climate change results in the impact on the biodiversity like change in their distribution pattern, migration of species, invasion of invasive species, change in the phenologicalbehaviour like breeding period, migration time etc, increase in the forest fires and pest attacks. To maintain the balance of ecosystem,interaction between the plants, animals and biodiversity needs to be understood, hence promoting its conservation and protection by designating the hotspots as biosphere reserves, increasing afforestation reforestation and agroforestry practices.

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Nanotechnology and Its Novel Application in Multidisciplinary Areas

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The origin of word "Nano" originates from the Greek word dwarf. But in the scientific mean word nano is abbreviated to one billionth of any unit (i.e. 10^{-9}). The basic idea of Nanotechnology was pointed by the famous American theoretical physicist "Richard Feynman" in his lecture of titled "There is a plenty of room at the bottom" in the annual meeting of the American physical society in 1959. Before start we should know about the difference between nanoscience and nanotechnology [1-3]. In general, Nanoscience and Nanotechnology are the distinct branches of science. The accepted definition of Nanoscience is the study of fundamental principles of and the structures with at least one dimension roughly in between 1 to 100nm whereas, nanotechnology is the application of different nanostructures in the development of useful nanoscale devices. According to Drexler, Nanotechnology is the principle of manipulation atom by atom through the control of matter structure at molecular level. It entails the ability to build molecular systems with atom by atom precision. On the basis of the ratio of structural dimensions or charge confinements nanomaterials are classified in to three different dimensional groups as named as zero dimensional (0D), one dimensional (1D), and two dimensional (2D). at nanoscale the characteristics of materials completely modified comparative to their bulk counterpart. The most remarkable effect which attributed to change in the properties of materials at nano level dimension is the "Quantum Confinement Effect". The potential of nanotechnology have been recognized by many industrial areas and also the commercial products are being manufactured. It is experimentally recognized that the physical, chemical, mechanical, electrical, thermal, magnetic, modified surface properties surface area to volume ratio and optical properties of solid materials are changed dramatically on reducing the size of matter to nanometer that is also known as quantum size effect. These are not actually apparent in the bulk form of materials [4]. These changes are due to the large surface area to volume ratio, special confinements, considerable change in surface energy, and reduced imperfections. The main regimes of nanotechnological applications owing to exist the fascinating properties at nanoscale are in electronics, photonics, pharmaceuticals, and cosmetics, food and finishes for the surfaces and textiles, food, transportation, and material constructions. In automobile and machinery fabrication sectors nanotechnology introduced many drastic changes. At nanoscale various changes in mechanical properties of materials like higher hardness, super elasticity at higher temperature, improved breaking

strength, and increase fracture toughness, considerably improved the durability of machines used in automobiles and also furnished very effective lubrication system and light weight materials which is very impressive automobile sectors from engine working efficiency purposes. Nanostructured ceramic coatings exhibit much greater toughness and conventional wear resistant for machinery parts. Nanotechnology enabled lubricants and engine coils also reduce wear and tear, which significantly extend the life time of mechanical parts of machines [5-6].

In medical field nanotechnology also played very crucial roles. The application of nanotechnology to the medicine is termed as nanomedicine. Nanomedicine in actual subsumes three mutually overlapping and progressively more powerful molecular technologies: nanostructured materials and devices, medical nanorobots; genomics, proteomics and artificial engineered microbes. It also holds tremendous potential as an effective drug delivery system. By manipulating drugs and other materials at nanoscale, the fundamental properties and bioactivity of material can be changed. Nanoparticles can be used in targeted drug delivery at the site of disease to improve the uptake of poorly solvable drug, targeting of drug at the specific site, and increasing the drug bioavailability. The properties of nanoparticles such as small size, large and effective surface area, surface charges and ability to functionalize to make them as a potential delivery system for effective therapies [7]. The merging of nanotechnology with molecular imaging provide a very versatile platform for the novel design of nanoprobes that will have tremendous potential to enhance the sensitivity, specificity, signaling capabilities of various biomarker in human diseases like as in magnetic resonance imaging (MRI).

There are some other examples which reveal the changes in material properties at nanoscale and illustrated the impact of quantum size effect.
1. Opaque substances become transparent
2. Stable materials turns to be combustible.
3. Insoluble materials become soluble.

There are other plenty of novel applications of nanotechnology in building nanoscale devices but few important one, I tried to include in below:
1. Nanomaterials are used in everything from sunscreen to chemical catalysts to anti bacterial agent.
2. The doping of gold nanoparticles in DNA used to detect bacteria in person's bloodstream and also determines whether a patient has infection and of what kind.
3. A clear nanoscale coating on eye glass, computer, camera display, window and other surfaces can make them water and residue repellent, antireflective, self-cleaning, resistant to ultraviolet or infrared light, antifog, antimicrobial, and scratch resistant.
4. Nano engineered materials in automotive products include high power

   rechargeable battery systems, thermoelectric materials for temperature control, tire with low rolling resistance, high efficiency and low coat sensors and thin films smart solar panel.

5. Nanoparticles are used increasingly in catalysis to boost up the rate of chemical reactions.

6. Researchers are developing wires containing carbon nanotubes that will have much lower resistance than high tension wire currently used in electric grid, thus reducing the transmission power loss.

7. Nanotechnology can be incorporated in to solar panels to convert sun light in to electricity more efficiently, promising inexpensive solar power in future. Newer research suggests that future solar converters might even be paintable.

8. Nanotechnology is already being used to develop many new kinds of batteries that are quickly chargeable, more efficient, have high power density and hold electric power longer.

9. The most noticeable application of nanotechnology is to get affordable clean drinking water through rapid and low cost detection and treatment of impurities in water. At present Molybdenum disulphide (MoS_2) membrane filtered two to five times more water than current conventional water filters.

   There are other plenty of extremely important applications of nanotechnology, which make us able to tackle the most of the difficulties those appeared impossible to resolve.

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GST: Boost for Indian Economy

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GST is an Indirect Tax which has replaced many Indirect Taxes in India. The Goods and Service Tax Act was passed in the Parliament on 29th March 2017. The Act came into effect on 1st July 2017; Goods & Services Tax Law in India is a **comprehensive**, multi-stage, destination-based tax that is levied on every value addition.In simple words, <u>Goods and Service Tax</u> (GST) is an indirect tax levied on the supply of goods and services. This law has replaced many indirect tax laws that previously existed in India.

GST is one indirect tax for the entire country.

Amidst economic crisis across the globe, India has posed a beacon of hope with ambitious growth targets, supported by a bunch of strategic undertakings such as the Make in India and Digital India campaigns. The Goods and Services Tax (GST) is another such undertaking that is expected to provide the much needed stimulant for economic growth in India by transforming the existing base of indirect taxation towards the free flow of goods and services. GST is also expected to eliminate the cascading effect of taxes. India is projected to play an important role in the world economy in the years to come. The expectation of GST being introduced is high not only within the country, but also within neighboring countries and developed economies of the world.

Benefits of GST to the Indian Economy

♦ Removal of bundled indirect taxes such as VAT, CST, Service tax, CAD, SAD, and Excise.

♦ Less tax compliance and a simplified tax policy compared to current tax structure.

♦ Removal of cascading effect of taxes i.e. removes tax on tax.

♦ Reduction of manufacturing costs due to lower burden of taxes on the manufacturing sector. Hence prices of consumer goods will be likely to come down.

♦ Lower the burden on the common man i.e. public will have to shed less money to buy the same products that were costly earlier.

♦ Increased demand and consumption of goods.

♦ Increased demand will lead to increase supply. Hence, this will ultimately lead to rise in the production of goods.

♦ Control of black money circulation as the system normally followed by traders and shopkeepers will be put to a mandatory check.

♦ Boost to the Indian economy in the long run.

These are possible only if the actual benefit of GST is passed on to the final consumer. There are other factors, such as the seller's profit margin, that determines the final price of goods. GST alone does not determine the final price of goods.

How will GST Boost the Indian Economy?

♦ Reduces tax burden on producers and fosters growth through more production. The current taxation structure, pumped with myriad tax clauses, prevents manufacturers from producing to their optimum capacity and retards growth. GST will take care of this problem by providing tax credit to the manufacturers.

♦ Different tax barriers, such as check posts and toll plazas, lead to wastage of unpreserved items being transported. This penalty transforms into major costs due to higher needs of buffer stock and warehousing costs. A single taxation system will eliminate this roadblock.

♦ There will be more transparency in the system as the customers will know exactly how much taxes they are being charged and on what base.

♦ GST will add to the government revenues by extending the tax base.

♦ GST will provide credit for the taxes paid by producers in the goods or services chain. This is expected to encourage producers to buy raw material from different registered dealers and is hoped to bring in more vendors and suppliers under the purview of taxation.

♦ GST will remove the custom duties applicable on exports. The nation's competitiveness in foreign markets will increase on account of lower costs of transaction.

Read more: GST Impact on SMEs

Current slab of GST (The figures will changes as per Govt of India)

The GST council has fitted over 1300 goods and 500 services under four tax slabs of 5%, 12%, 18% and 28% under GST. This is aside the tax on gold that is kept at 3% and rough precious and semi-precious stones that are placed at a special rate of 0.25% under GST. 7% goods and services fall under this category

A Brighter Economy (Boosted Economy)

The introduction of the Goods and Services Tax will be a very noteworthy step in the field of indirect tax reforms in India. By merging a

large number of Central and State taxes into a single tax, GST is expected to significantly ease double taxation and make taxation overall easy for the industries. For the end customer, the most beneficial will be in terms of reduction in the overall tax burden on goods and services. Introduction of GST will also make Indian products competitive in the domestic and international markets. Last but not least, the GST, because of its transparent character, will be easier to administer. Once implemented, the proposed taxation system holds great promise in terms of sustaining growth for the Indian economy.

An overview of GST and Its impact on different sectors If talk about impact of GST on manufacturers, distributor and retailers It is believe GST is expected to boost competitiveness and performance in India s manufacturer due to tax structure. High infrastructure spending and declining export are just some of the concerns of this sector. Single tax system will decrease the administrative costs for manufacturers and distributors and this sector will grow more strongly. If thrown glance on impact of GST on Service Providers it is observe that most of the tax burden is borne by domains such as telecommunication services, Insurance industry, business support services, Banking and Financial services , IT services etc. Introduction of GST willdecrease burden The Logistic industry forms the backbone of the economy. We can fairly assume that a well-organized and mature logistics industry has the potential toshoot ahead the "Make In India" initiative of the Government of India and has positive impact on economy. Simultaneously GST will help the e-com sector s growth but the long-term effects will be particularly interesting because the model GST law specifically proposes a tax collection at source (TCS) mechanism, If talk about Pharma industry GST is expected to benefit the pharma and healthcare industries. It boost medical tourism withsimplified tax structure. Telecommunications sector prices are expected to come down after GST. Manufacturers will save on costs through efficient management of inventory. Handset manufacturers will find it easier to sell their equipment as GST will negate the need of the state and will also save up on logistics costs. Textile industry generates employment to a large number of skilled and unskilled workers. It contributes about 10% of the total annual export, and this value is likely to increase under GST. GST would affect positively to the cotton value chain of the textile industry which lead economic growth. The real estate sector is also plays important role in the Indian economy, it Plays an important role in employment generation in India. The sector will see substantial benefits from GST implementation. Agricultural sector is the largest

contributor of GDP. It covers 16% of GDP. The major issues faced by the agricultural sector, is transportation of agri products across state lines. It is expected that GST will resolve the issue of transportation. FMCG sector could rise significant savings in logistics and distribution costs as the GST will eliminate the need for multiple sales depots. The GST rate for this sector is expected to be around 17% which is way lesser than the 24-25% tax rate paid currently by FMCG companies. Under the current tax system, there are several taxes applicable on automobile sector like excise, VAT, sales tax, road tax, motor vehicle tax, registration duty which will be subsumed by GST. An analysis on GST and its impact on Indian Economy The implementation of goods and service Tax(GST) coupled with a digitized economy ushered in by demonstration, will make India s economy" look much cleaner and bigger "said union fin ance minister ArunJaitely at the vibrant Gujrat global Summit. Further he said ,it is going to be a major step towards the integration of informal economy and this itself is going to increase the transactions, which are covered within the Banking system transactions and may lead to higher revenue in the

By which way GST Boost Indian Economy- Some Suggestion and the overview of Cuurent Scenerio:-

GST has been a major structural reform of the current government. Replacing multiple taxes and cesses of state and central governments into a single tax has been a major relief to trade and industry. At the same time reduction in overall tax incidence has brought relief to the end-consumers. The IT driven tax filing system of GST has made it difficult for intermediaries in the value added chain to evade taxes.

The movement of goods across the country has become faster and less cumbersome with the help of a single e-way bill carried by the transporter, and because of abolition of state check posts. GST has given a big boost to the manufacturing sector as a whole, which will accelerate the growth of the economy. nitial difficulties faced in implementation of GST were not unexpected. However, they were quickly resolved because of the flexibility shown by the GST council in correcting course. The experience of other countries where GST was introduced shows that all of them faced some teething troubles for the initial two to three years. As compared to Australia and Malaysia, the Indian experience shows that GST has settled down fairly well. The question now is what GST's future course should be in India. So far, the government has gone by the maxim 'the best should not be the enemy of the good'. But we must continue on a quest for the best. Having implemented GST in a vast country like India after taking 31 states on board,

it is time to perfect the system gradually.

In order to move towards an ideal GST, we must set an agenda for the next three to five years. Our first attention should go in the direction of stabilising revenue both for states and Centre. While states are already comfortable because of the compensation mechanism in which 14% incremental growth rate of revenue is assured, the Centre still needs to worry about its revenue.

GST revenue is undoubtedly going to get a major boost when the government implements the new system of return filing in which there will be perfect matching of invoices for availing input tax credit. At present, the total tax liability declared by registered dealers every month is Rs 5 lakh crore, of which approximately a lakh crore is paid in cash and the remaining Rs 4 lakh crore is settled by way of input tax credit. Even if we stop 10% leakage in wrong availment of input tax credit,will econd, an attempt should be made to bring all excluded items into GST one by one in the next three to five years. This includes five petroleum products, electricity, real estate and alcohol in that sequence. Among the petroleum products, the two items which can easily be brought into GST are natural gas and aviation turbine Fuel ATF.

Exclusion of certain items from GST creates distortions such as cascading of tax and reversal of input tax credit. Since tax on diesel and petrol gives substantial revenue to states and Centre, it is obvious that bringing them into the GST net will be a difficult decision. But this is doable with proper tax structuring of petroleum products, divided between GST and cess.

The items of electricity duty and potable alcohol, on which at present only states have the power to impose levies, can also be brought into the GST net by imposing only state GST on them. But inclusion of these items will help in removing input tax credit blockages; it will be both more efficient for industry and more affordable for consumers. By bringing petrol, diesel and potable alcohol into GST, the rate at which these items are sold to consumers will be common across states.

Third, we must try to rationalise the rate structure as and when the scope for revenue sacrifice increases with rising revenues. Initially, we can move from a four slab structure to a three slab structure, and gradually to a two slab structure. Multiplicity of slabs creates classification disputes and duty inversions, necessitating blockage of funds and refunds. Also, modest rates result in better compliance. If we have to move to a three slab structure, no new item should now move from 18% to 12%, or 12% to 5%, or 5% to zero in the interest of revenue neutrality. If we deviate too much from the mean or median rate slab, it will be difficult to then increase GST on these

items when the country aspires to have a single slab GST. We can easily set the goal of having a two slab structure by the end of fifth year from now.

Fourth, in the present GST system there are certain items where input tax credit is not allowed which breaks the chain. Some of these sectors are restaurants (GST rate on restaurants is 5% but without input tax credit), transport vehicles, oil or gas pipelines, telecom tower. Exclusion of items from availing input tax credit results in accumulated credit and has a cascading effect. The attempt here is to suggest a road map. The pace of actual implementation can be based on revenue growth and practical considerations of consumer interest.

NEGATIVE EFFECTS OF PLASTIC ON HUMANS AND ENVIRONMENT

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Introduction

The use and development of plastic have contributed a significant amount of negative effects on the environment from the aspect of human health habituates and space uses. Plastic is an indispensable innovation of the twenty first century, but the system of throwing plastic waste is endangering our ecosystem. The excessive use of plastic material is causing a serious threats to our environment .due to toxic nature of material used in plastic formation it is dangerous to health .some of the plastic pollutants are carcinogenic in nature and there use may be life threatening.

Discussion:

Composition of plastic material:

Plastic is a complex material made up of chemicals namely ethane, vinyl chloride, phenol, formaldehyde, styrene, acetylene, benzene, and urea. Plastics are typically organic polymers of high molecular mass. They are usually synthetic, most commonly derived from petrochemicals but many are partially natural. The vast majority of these polymers are based on chains of carbon atoms alone or with oxygen, sulfur and nitrogen. There is backbone of large number of repeat units together.

Types of plastic:

Broadly there are three types of plastic material, thermoplastic, thermosetting and polyamide. Thermoplastic are those polymer which gets soft on heating and become harder on cooling. Due to this reason this type of plastic can be recycles many times to obtain different desired plastic material. Examples of thermoplastic are polythene, poly vinyl chloride etc. Thermosetting plastics polymer is formed from a reaction between two different types of molecules creating long molecular chains. They are assumed to have infinite molecular weight. Thermo sets can melt, solidify and take shape once. In the thermosetting process, a chemical reaction occurs that is irreversible. Examples of thermo sets are Bakelite, acrylonitrile butadiene styrene (ABS), polycarbonate (PC), polyurethanes. Polyamide (PA) is a polymer produced by the reaction of the amino group ($-NH_3$) from one molecule with the carboxylic acid group (-COOH) from another molecule. The resulting structure in similar to that of a protein. Silk is a natural occurring polyamide and nylon is a synthetic polyamide.

Toxicity of additives of plastic:

Pure plastic have low toxicity due to their insolubility in water and

because they are biochemically inert due to a large molecular weight. Plastic products contain a variety of additives, some of which can be toxic. The amount of additives ranges from zero percentage for polymers used to wrap foods to more than 50% for certain electronic applications. Following additives used in plastic making -

Fillers- improve performance or used as reinforcing agents and or reduce production costs. Fillers are minerals in origin, e.g. Chalk, ground form of thermo sets.

Plasticizers -Theseare added mostly in rigid organic polymers to use them for particular applications. for example plasticizers like phthalate are often added to brittle plastic like polyvinyl chloride to make them pliable enough for use in food packaging, toy and many other items. alkylphenonls chemical is also of potential concern.

Stabilizers -These include fire retardants to lower the flammability of the material. For example hydroquinolines, phenols, bisphenoles are used for increasing resistance to environmental oxygen.

Colorants-These are common additives, although their weight contribution is small. Hydroquinone, chromium and copper are used as colorants. They can cause cancer and many other deceases.

Catalyst-These includes antimony, zinc, cadmium and Mn.

Bisphenol are primary building blocks of polycarbonates. Bisphenol a (BPA) is an estragon-like endocrine disrupter that may leach into food. A more recent study suggests that even low level exposure to BPA results in insulin resistance, which can lead to inflammation and heart disease. Who's international agency for research on cancer (IARC) has recognized vinyl chloride, the precursor to PVC, as a human carcinogen.

Environmental hazards of plastic manufacturing and plastic waste

Chemical bonds of plastic make them so durable tend to make them resistant to most natural processes of degradation. Many of the controversies are associated with the additives used in plastic. Below are mentioned some of the environmental hazards of plastic manufacture and plastic waste. Generally, 10000C temperature is required for production of plastic. Production of plastic from crude oil requires 62 to 108 mg of energy per kg. This is much higher compared to many other materials e.g. Production of paper from timber required 25-50 mg per kg. According to German environmentalist's 17 kg SO_2, CO, Nitrogen, hydrogen gases are released into the atmosphere in the production of plastic. Some toxic elements are also mixed into the water. Workers in the plastic factory are more prone to cancer, eye and respiratory problems. Production of polystyrene contributed to the ozone layer.

The plastic used for packing is a measure threats to environment. In developed countries, about third of plastic is used in packaging. In India, this ratio is reportedly 42% [9]. Most of the food items are marketed in polythene and plastic wrappers. Vegetables and fruits are marketed in polythenes.

Plastic and thermocol cutlery are excessively being used in parties and to arrange feasts.5 traces of toxic additives can leach out of the product. Some compounds leaching from polystyrene food containers have been proposed to interfere with the hormone functions and are suspected human carcinogens.

Recycling of plastic waste

Even at high temperature microorganism like hepatitis b, aids, salmonella, coli are not destroyed. Person who uses plastic may fall ill with various destroyed. Recycle of plastic is possible but this action is expensive due to labor expenses on sorting and energy expenses on sanitizing of recyclable plastic. Recycling certain types of plastic can be unprofitable as well. For example, polystyrene is rarely recycled because it is not cost effective.6 unrecyclable plastic wastes are typically disposed of in landfills or incinerated. Due to this high coast recycling of plastic waste is avoided by countries.

Disposal of plastic waste

1. Throwing of plastic waste on garbage collection place- at garbage collection place, lots of plastic waste is seen. In India about 20-25% of total waste is of plastic. All municipal waste are taken to fields and dumped there. Organic waste mixed with plastic waste is also not in the condition to be recycled for nutrients and use as manure. Organic nature's of garbage becomes toxic due to colorants and plasticizers of plastic. These chemicals react with the acid or basic nature of organic waste and create soil pollution. They will come into the food chain and becomes problematic for human as well as animal health. Fragmented pieces of plastic were observed in the guts of sea birds in the 1960's. In nearby villages of district Saharanpur, pthallic acid was observed in underground water. These areas become now cancer prone.

2. Dumping of plastic bags with kitchen wet waste- in India, people wrap kitchen wet waste in polythene and throw out from home. Methane gas is produced from organic waste due to anaerobic atmosphere under polythene. Methane gas absorbs infrared rays 20 times more than co2 resulting in global warming. Biodegradable plastic have also caused methane emissions.

3. Burning and incineration of plastic waste- burning of plastic waste like plastic wrappers and plastic cutlery is also seen in front of shops and railway lines. Open air burning of plastic occurs at lower temperatures and normally releases toxic fumes of polychlorinated dibenzo-p-dioxins, a carcinogen (cancer causing chemical). Toxic fumes can cause allergy, ache and respiratory problems. Due to petroleum, if plastic material is incinerated, it increases carbon

emissions. Burning of polystyrene releases chlorofluorocarbon which contributed to the depletion of ozone layer.

4. Land fill of plastic waste- if plastic is placed in a landfill, it becomes a carbon sink. Rainwater does not absorb and become the part of aquifer where plastic waste in thrown or landfill. This practice falls down water level.

Measures to safe guard ecosystem from plastic waste

- Instead of using carry bag (polythene) to purchase grocery, vegetables and fruits cloth carry bag should be used. This practice will minimize the plastic waste.
- Instead of using plastic and thermocol cutlery, paper cup plates should be used to arrange parties or at tea stall. This practice will minimize plastic waste.
- The practice of sending paper cottons from institutions to the paper factory must be adopted.
- People must be educated not to throw plastic waste with wet garbage.
- People must be educated not to burn plastic waste.
- Plastic waste of plastic wrappers must be send to plastic factory for remolding into newer products.
- People must be educated for all dangers of plastic pollution.

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FATIGUE MANAGEMENT THROUGH YOGA

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Today, yoga beginning a subject of various interests as gained worldwide popularity. It can serve as an applied science in a number of fields such as education, physical education and sports. Health and family welfare , psychology and medicine and also one of the valuable means for the development of human resources for better performance and productivity, however, there exists controversy in accepting yoga as medicine and therapy because it has generally believed that yoga is a spiritual science having emancipation as goals and hence cannot be treated only as a therapy.

THE EIGHT LIMBS OF YOGA

1. YAMA
2. NIYAM
3. ASAN
4. PRANAYAM
5. PRATYAHAR
6. DHARANA
7. DHYAN
8. SAMADHI

YAMA

Five ethical guidelines regarding moral behavior towards others.

1- Ahinsa –nonviolence
2- Satya-Truthfullness
3- Asteya-Nonstealing
4- Brahmacharya- No lust or sexual activity within marriage .
5- Aparigraha- Don't collect things that are not necessary.

NIYAM

Five ethical guidelines regarding moral behavior towards others.

1- Sauch- clearliness
2- santosh- contentment
3 Tapsya- sustained practice
4 Svadhyay – self study
5 Ishvara prindhan- surrender to god.

ASANA

♦ Practice of yoga postures.

AYAMPRAN

Practice of breathing exercises.

PRATYAHAR

Withdrawl of the senses, meaning that the exterior world is not a distraction from the interior world within oneself.

DHARANA

Concentration , the ability to focus on something uninterrupted by external or internal distraction.

DHYANA

Meditation.

SAMADHI

Bliss building upon dhyana, the transcendence of the self through meditation. The merging of self with the universe.

STRAIN

♦ The wear and tear our bodies experience.

♦ The state of threatened homeostasis.

♦ Stressors cause imbalance.

♦ Body tries to balance.

♦ Yoga can be great help balance the imbalance.

Stressors

♦ Can be positive and negative.

♦ Positive stressors can help compel us to action, can result in a new perspective. Eg. Birth of a new baby, a job promotion.

♦ Negative stressor can result in feeling of distrust, rejection, anger etc. eg. Loosing a job.

Clinical significance of yoga

♦ Reduced stress

♦ Spiritual growth

♦ Sense of well being

♦ Reduced anxiety and muscle tension

♦ Increased strength and flexibility

♦ Slowed aging

♦ Sound sleep

♦ Improve many medical condition

♦ Lower heart rate

♦ Lower blood pressure

♦ Allergy and asthama symptom relief

♦ Smoking cessation help

Strain and healthcare providers

♦ Providing care to others is a rich and rewarding experience

- ♦ Often feel improved self esteem and confidence
- ♦ No wonder they live under tremendous stress.
- ♦ Continuous exposure to suffering
- ♦ Decreased sleep and food
- ♦ Long hours of work
- ♦ Constant worry about law suits

How yoga can help

- ♦ Practicing yoga can be a best thing a provider can do for himself/herself
- ♦ Doing simple pranayam(breathing technique) in breaks can calm their mind.
- ♦ Practicing yoga for ½ hr. a day can make their body fit to takecare of others
- ♦ Yogic thought process will teach not to work only for money.

Conclusion

- ♦ A body with a stressful mind cannot be healthy body.
- ♦ Offcourse , to do so , first they need healthy body without a stressful mind
- ♦ Yoga helps the mind to become clear and pure and clear mind is not affected by strain.

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7. Ms Shivani Chauhan, LLM Scholar, Faculty of Law, Amity University, Lucknow & Mr. Ayush Rahi Ph. D Scholar, Faculty of Law, Lucknow University

8. Mr Shailesh Kumar Pandey, Research Scholar, Deen Dayal Upadhayay Gorakhpur University Gorakhpur

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12. Dr. Anumeha Srivastava, Assitant Profssor in Commerce, Govt. Degree College, Hassaur, Barabanki

13. Mr. Sushil Kumar Singh, Research Scholar, Dr. Anil Kumar Yadav, Professor, Dept. of Commerce, DDU Gorakhpur University, Gorakhpur.

14. Dr. Shalabh Kumar, IFS, Director, Tribal Welfare Cell & Joint Secretary to Honorable Governor, Rajasthn

15. Ms Vimala Bind, Assistant Professor, Department of Zoology and Neha Agrawal, Assistant Professor, Department of Chemistry, Navyug Kanya Mahavidhyalaya, Rajendra Nagar, Lucknow

16. Dr. Anupma Singh, Asst. Prof. (Dept. of Chem.) DDU Govt. PG College., Sitapur

17. Dr. Jyoti, D.D.U. Govt. P.G. College, Sitapur, and Dr. Abnish K. Gautam, Mahamaya Govt. Degree College, Mahona, Lucknow

18. Deep Mala Gautmi and Anoop Kumar, Assistant Professor Govt. P.G. College, Sitapur

19. Dr. Sumant Pandey and Shiv Krishna singh, Assistant Professor , Lucknow University, Lucknow

20. Ms. Purnima Mishra, Research Scholar, Dr. Anil Kumar Yadav, Professor, Dept. of Commerce, DDU Gorakhpur University, Gorakhpur

21. Mr Rahul Visen, Research Scholar and Dr. Shailendra Kumar Verma, Research Guide, Associate professor, Department of Business Management and Entrepreneurship,Dr. R.M.L. Avadh University Ayodhya

22. Dr Neelam Bajpai, Assistant Professor, GDC Kaushambi

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25. Dr. Swati Chaurasia, Asst. Prof. Botany, Mahamaya Govt. Degree College, Kaushambi

26. Dr. Rita Rani, Department of Zoology, Firoze Gandhi College, Raebareli

27. Dr. J.S. Simlai (Retd. HOD, Department of Geography, I T ,College, Lucknow*),* Roli Singh (research Scholar, Lucknow University, Lucknow), Anupma Singh (Asst. Professor, DDU Govt. Degree College, Sitapur.

28. Ms Kavita Arora ·Botany Department, National P.G. College, and A.K.Sharma, Tissue Culture laboratory, National Botanical Research Institute, Lucknow.

29. Dr. Shikha Yadav, Dept. of Chemistry, M.P. Govt. P.G. College Hardoi

30. Dr. Rabindar Kumar Sharma, Department of Physics, DDU Govt. P.G. College, Sitapur

31. Dr. Ankur Singh, Dept. of Commerce, Maulana Azad Institute of Humanities Science & Technology, Mahmudabad, Sitapur

32. Mr Satendra Kumar, (Assistant Professor), Department of Chemistry, Government Degree College, Hempur, Bisalpur, Pilibhit

33. Ms. Aisha Abbasi, Research Scholar and Dr. Kiran Singh, Assistant Professor, Lucknow.

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