SCIENCE AND TECHNOLOGY

SOCIAL SCIENCES

BUSINESS STUDIES

ARTS AND HUMANITIES

The Journal of University of Jammu

From the Desk of Editor........

I take this privilege as Editor of Researcher to pen down on my behalf and that of Editorial team a heartfelt appreciation for all the earlier Editors, authors and reviewers for their invaluable contributions during the many years for the continual improvement of the Journal, which has eventually culminated in making it a UGC approved journal.

In fact, the authors are the key drivers in establishing a reputation of a journal and I thank all the contributors of the current issue for considering and trusting Researcher as the platform for publishing their valuable work and also extending their kind co-operation during the various stages of processing of the manuscript for publication. Beside contributors, reviewers are essential for ensuring qualitative standard of any journal, and therefore the reviewers' contribution deserves sincere appreciation. Special gratitude is also due to all members of the Editorial Advisory Board for providing their valuable advice and academic guidance to develop, and publish research material of such consistent high quality. It would not be appropriate if I fail to mention the tireless efforts of the editorial Team.

Carrying the baton forward, with the objective to provide a specialized academic platform and reference for the dissemination of research, the editorial team is pleased to present the current issue of the Researcher which is divided into the four broad areas of academic disciplines including Science and Technology, Social Sciences, Business Studies and Arts and Humanities.

The first section on Science and Technology includes four research papers covering the diverse and emerging areas of scientific and technological innovations. The first article authored by Sandeep Arya and Rakesh Sharma, involves modelling, simulation and analysis of two different tapered slot antennae for their potential applications in satellite communication systems. The review article by S. K. Verma, S. Anand and Y. Anand, deals with natural gas (NG) as a promising alternative fuel keeping in view the grave environmental concerns of fossil fuel based emissions. The research paper by Jatinder Singh, Pooja Thapper and Shubhnandan Singh, describes machine translation (computer-based) of noun in Dogri language using Linux and Perl. The article by Nidhi Gandral emphasizes the importance and need of the library automation in the fast changing scenario of library services and information technology.

The second section on social sciences is an ecletic compilation of four papers from the disciplines. The first paper of the section by Dr. S.K. Panda explores the effectiveness of ODL as percieved by the teachers-educators of eight colleges of Education across Pathankot and Gurdaspur. The next paper by Asha Rani is an indepth research to comprehend at the micro-level the socio-cultural factors that have traditionally undervalued daughters compared to sons and how such factors are contributing to declining sex ratio in the present area of Kathua district. Third paper by Bipin Kumar researches with deep critical insight the factors influencing the negotiation of environmental provisions in RTAs ; trends in environmental provisions by country ; and, political commitments for environmental provisions in RTAs with benefits and barriers. Concluding paper of the section by Swati Dutt explores the increasing avenues and their

progressive influence culminating in improved status and lifestyle of the Scheduled Caste Women in the Village of Amb in Jammu District.

The third section on Business Studies include four empirical research papers. The first paper jointly written by Dr. Pankaj Kumar and Dr. S.K. Gupta investigates reasons for employee turnover in medium and small size enterprises within the tourism and travel industry with a special focus on Uttarakhand, a developing tourism destination in Himalayas. The second paper by Sarabjeet Kour Sudan examines the role of organisational identification in developing employees' customer orientation in private sector banks operating in northern part of India. The third research paper by Dr. Gaurav Sehgal focuses on studying the SMEs' view on factors that could help integrate the implementation of Supply Chain Management effectively as regards to its perceived benefits. The final paper by Dr. Ankush Ambardar, Dr. Megha Gupta and Mr. Amrik Singh explores the status of Quality of Work Life (QWL) by indentifying the association between dimensions of QWL Practices and demographic characteristics of select hotels in India.

The last section is a compendium of four papers from such diverse fields as Buddhism, Hindi, Sanskrit and Dogri. The first paper in section by Sonam Lamo is an exhaustive explication of the core essence of the highly exclusive theory of Śūnyatā, an understanding of which is cardinal to comprehend its theoretical and practical implications. The second paper is by Sushma Devi Gupta in which the author explores how in the ancient Indian tradition the cosmetic beautification was coupled with concerns for health in the formulation and use of cosmetic products. She takes up 'Anjan' or 'Surma' as a case study and traces its benefits for the eyes as laid down in various ancient Sanskrit texts. The next paper in the section by Ruby Bajyal establishes how Kabir was the poet-seer who very prophetically contested all the social inequalities that continue to riddle the society despite our march into the 21st century. The research establishes literature as a potent medium with strong voices like Kabir to counter the continuing socially retrogressive practices. The concluding article of the section by Parduman Singh is an empirical study which has documented an ethnographical and cultural survey of the Dogra Rajput in the Chanas Village in Udhampur district highlighting how they have attempted to balance their inherited traditions with the march of modernity.

We dream of the tremendous success of Researcher, for which I hope that the reviewers, authors, researchers, colleagues of the teaching fraternity will continue to contribute, guide and support to achieve greater heights.

Vinay Chauhan

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SCIENCE AND TECHNOLOGY

Effect of Cavity Structure on the Performance Parameters of Tapered Slot Antennas

Sandeep Arya*, Rakesh Sharma**

ABSTRACT

In this work, two different tapered slot antennas has been modeled, simulated and analyzed using FEM based COMSOL Multiphysics software. The difference between the two designs lies in their input cavities. One tapered antenna is based on rectangular input cavity while the other possess circular input cavity. Both the designed antenna structures were modeled and analyzed for evaluating their different output performance parameters. The results confirmed their application for satellite communication purposes. The results also showed that the bandwidth of tapered slot antennas can be altered by changing the input cavity structure

Keywords : Tapered slot antenna, Perfectly matched layer, Slotline cavity, Radiation pattern, Insertion losses.

1. Introduction

Vivaldi antenna was proposed by Gibson in 1979 and is also known as tapered slot antenna (TSA) having two symmetric sides with or without a thin layer of dielectric material [1]. The tapered slot can restrict electromagnetic wave and radiate it while the slot widens. Abbreviating the slot has the effect of decrementing the shunt inductance that is the short circuit to the left of the aliment. The exponential flare shape was pristinely acclimated to requisite for a constant beamwidth antenna which could cover the microwave frequency range between 2 GHz and 20 GHz. Hence, the tapered slot antenna sometimes withal kenned as exponentially tapered slot antenna (ETSA).

Fig. 1 Layout of tapered slot antenna and its elements

In theory, tapered slot antennas generally have wide bandwidth, high directivity and are able to engender symmetrical radiation pattern. Because of the wideband characteristics, low cross polarization, and highly directive patterns, the Vivaldi antenna has been widely applied to radio astronomy [2], ground perforating radar [3] [4], ultra-wideband communication systems [5], ultra-wideband imaging systems [6] [7], etc. It possess simple aliment structure, and is facile to fabricate. This type of antenna has been applied to satellite communications, remote sensing,
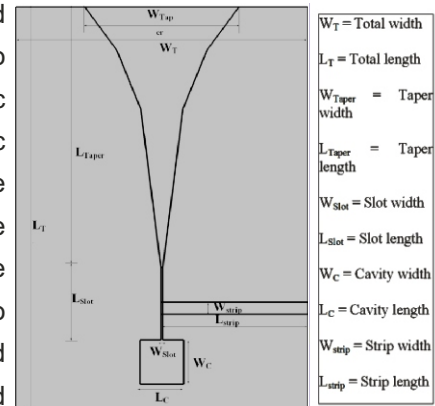
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and radio telescope. A rudimental schematic layout of tapered slot antenna and its elements is shown in Fig. 1. When designing a Vivaldi antenna, sundry design parameters of the stripline-alimented Vivaldi array antennas so that the wideband performance could be ameliorated in a systematic procedure [8]. These parameters are; diameter of the slotline cavity and the stripline stub, input stripline and slotline width, taper profile, and aperture height. The effect of varying these parameter values considerably affects the antenna performance. By optimizing design parameters, the antenna resistance could be incremented and subsequently resulting in a decrementation in the minimum operating frequency of the antenna. With good input impedance matching, the energy can be radiated when final width of the tapered slot is more preponderant than a moiety guide wavelength, and the total length of the tapered slot is more preponderant than one guide wavelength [9]. However, this design parameter is valid only if the antenna has extra width of more than quarter-guide wavelength outside the tapered slot [10], which makes the Vivaldi antenna more sizably voluminous in size and less in application [11-13]. The major factor that affects the low-frequency characteristics of a Vivaldi antenna is the length of the rectangular slots.

In this paper, a change in cavity of the basic tapered slot antenna has been studied. The objective of this paper is to compute the far-field pattern and the insertion losses while changing the input cavity of the tapered slot antenna. The designs are modeled using finite element method (FEM) based Comsol Multiphysics software. The details of proposed antenna designs have been presented in the next section. The methodology and results are discussed in the subsequent sections.

2. Antenna design

In this work, two different Vivaldi antennas are designed. The difference between the two designs is in their input cavity structure. Fig. 2(a) and Fig. 2(b) illustrate the constructional layout of the proposed Vivaldi antenna designs that are modeled by using Comsol Multiphysics software. Both antennas are designed to radiate in the frequency range between 2 to 6.5 Ghz.
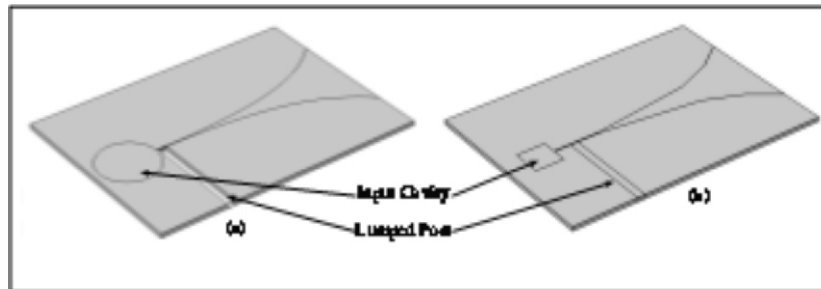
Fig. 2 Design layout of simulated tapered slot antennas

Both the designed rectangular and the circular input cavity based tapered slot antennas structures are enclosed in the spherical domain with diameter 85 mm. as shown in Fig. 3 and Fig.

4 respectively. The layer thickness of the sphere is selected as 20 mm. The material chosen inside the sphere is air. Thus the antennas were designed and analyzed for operating in the air or atmosphere.
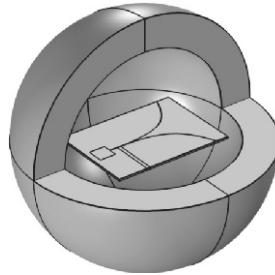
Fig. 3 Rectangular cavity based tapered slot antenna enclosed in spherical domain

This spherical air domain surrounded by a perfectly matched layer (PML) also helps in absorbing the radiation from the antenna with minimum reflection. The dimensions selected for the proposed designs are shown in Table I.
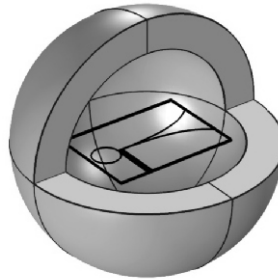
Fig. 4 Circular cavity based tapered slot antenna enclosed in spherical domain

Table 1 Dimensions of proposed antenna designs

This antenna consists of single material. The material selected is Epoxy Resin. This material is chosen due to its low dielectric value. The dimensions are selected as per the relative mathematical calculations and are explained as:

The maximum taper width can be calculated by estimating the value of guided wavelength

Parameters (mm)	Substrate	Stripline	Cavity		Slot	Taper
			Circular	Square		
Length	110	3.2	Radius = 12 mm	12	20	70
Width	80	40.25		12	0.5	42
Thickness	1.5	1.5	1.5	1.5	1.5	1.5

[14]. Hence,

$$\lambda_g = \frac{c}{f_{min}\sqrt{\varepsilon_r}}$$

where,

c = speed of electromagnetic wave in air (3×108 m/s)

f_{min} = minimum frequency (2 Ghz)

ε_r = dielectric constant (3.38)

The maximum opening width,

$$W_{max} = \frac{\lambda_g}{2}$$

Similarly, the minimum taper width can be calculated as

$$W_{min} = \frac{c}{f_c\sqrt{\varepsilon_r}}$$

where, f_c is the center frequency

By using these equations, the tapers of the proposed Vivaldi antennas can be adjusted. The operating frequency range applied to the lumped port is in-between 2 to 6.5 GHz. The length and width of the feed line and the slot is selected in a way to have a minimum reflected power,

1. Results and discussions

The designs are simulated on the computational machine with 3.1 GHz processing speed. The virtual memory used while simulation was 2.4 GB. Relatively higher element size is selected to reduce the computational load and to obtain the convergence plots. Before computing the designs to obtain results, the designs were meshed. Tetrahedral meshing is selected with 29 as the maximum element size. Finer meshing is recommended for obtaining real world results but it requires high end processor based computational machine.

The electric field generated while computing the results for rectangular and circular input cavity are shown in Fig. 4 and Fig. 6 respectively.

f0(10)=6.5E9 freq(1)=6.5E9 Multislice: 20*log10(emw.normE)
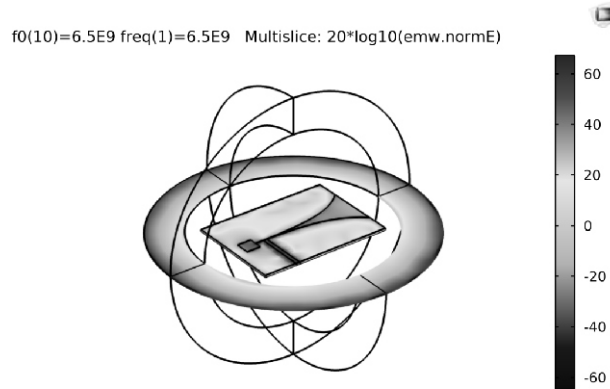
Fig. 5 Electric field obtained for rectangular cavity based tapered slot antenna

f0(1)=2E9 freq(1)=2E9   Multislice: 20*log10(emw.normE)
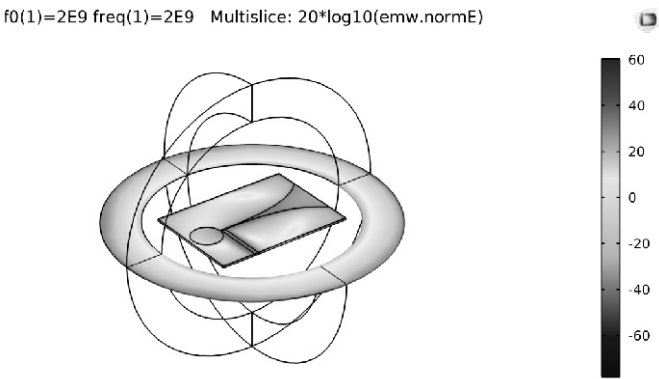
Fig. 6 Electric field obtained for circular cavity based tapered slot antenna

From the bar line adjacent to these graphs it is clear that the surface electric field in a tapered slotted antenna with rectangular input cavity, the maximum value is 65 V/m while for antenna with circular input cavity, maximum value of 60 V/m of electric field is observed.

Fig. 7 and Fig. 8 showed the far field domain for the designed tapered slotted antennas with the rectangular and circular input cavity respectively.
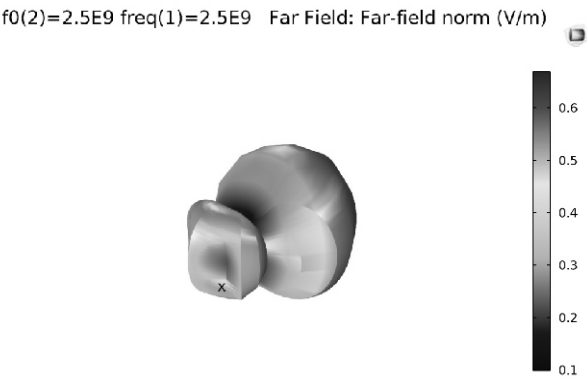
f0(2)=2.5E9 freq(1)=2.5E9   Far Field: Far-field norm (V/m)
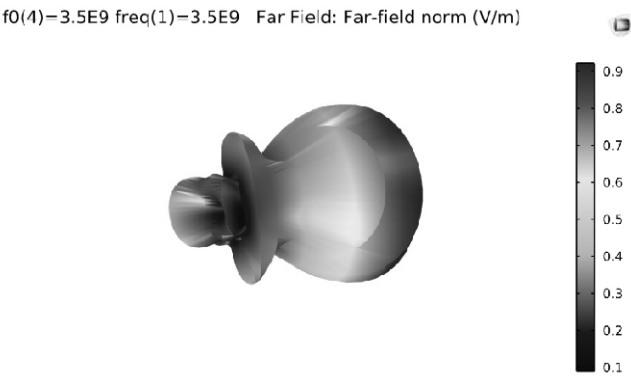
Fig.7(a) Far field domain for rectangular input cavity at frequency 2.5 Ghz.

f0(4)=3.5E9 freq(1)=3.5E9   Far Field: Far-field norm (V/m)

Fig.7(b) Far field domain for rectangular input cavity at frequency 3.5 Ghz.

f0(6)=4.5E9 freq(1)=4.5E9   Far Field: Far-field norm (V/m)

Fig.7 (c) Far field domain for rectangular input cavity at frequency 4.5 Ghz.

f0(8)=5.5E9 freq(1)=5.5E9   Far Field: Far-field norm (V/m)

Fig.7 (d) Far field domain for rectangular input cavity at frequency 5.5 Ghz.

f0(10)=6.5E9 freq(1)=6.5E9   Far Field: Far-field norm (V/m)
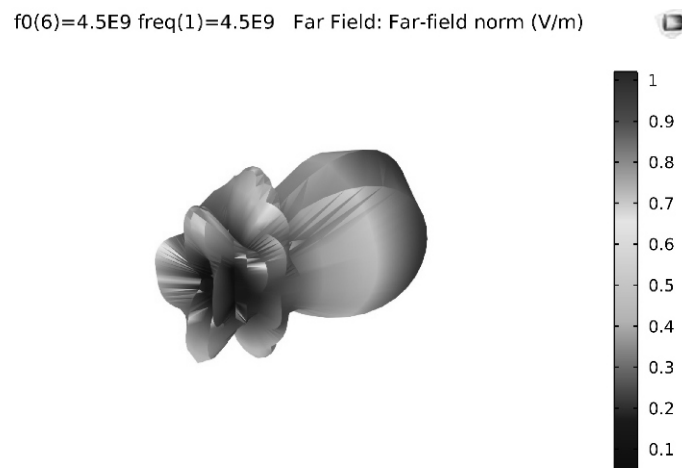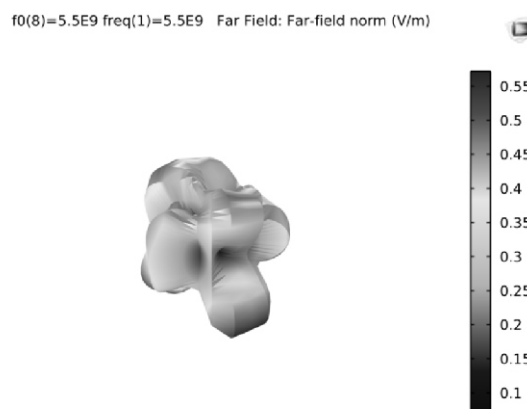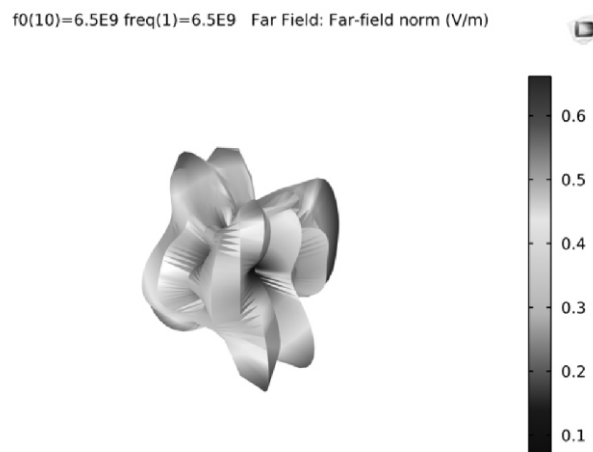
Fig.7(e) Far field domain for rectangular input cavity at frequency 6.5 Ghz.
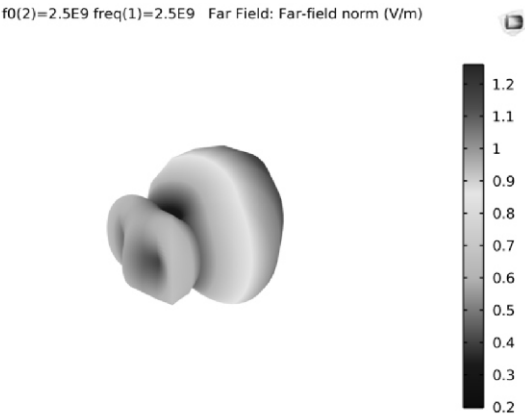
Fig.8 (a) Far field domain for circular input cavity at frequency 2.5 Ghz.
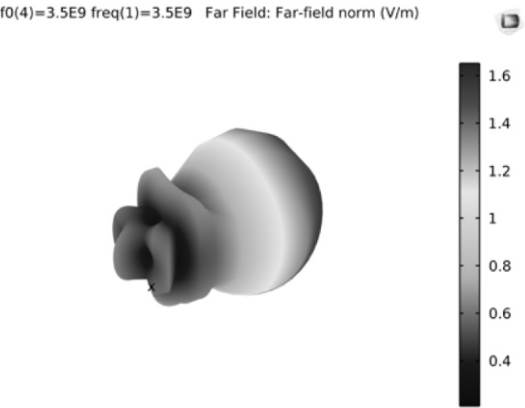
Fig.8 (b) Far field domain for circular input cavity at frequency 3.5 Ghz.
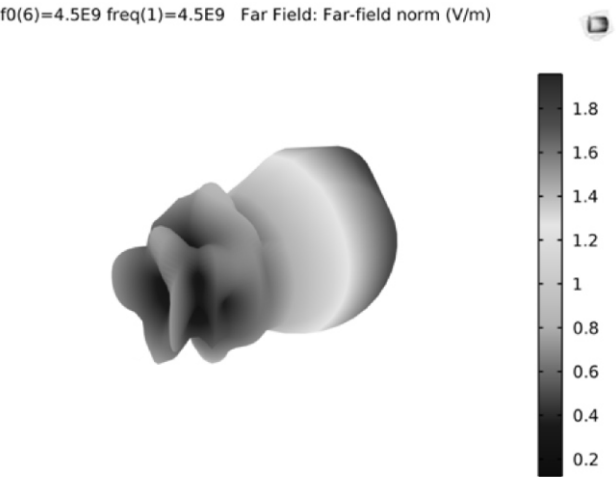
Fig.8 (c) Far field domain for circular input cavity at frequency 4.5 Ghz.

f0(8)=5.5E9 freq(1)=5.5E9   Far Field: Far-field norm (V/m)

Fig.8(d) Far field domain for circular input cavity at frequency 5.5 Ghz.

f0(10)=6.5E9 freq(1)=6.5E9   Far Field: Far-field norm (V/m)
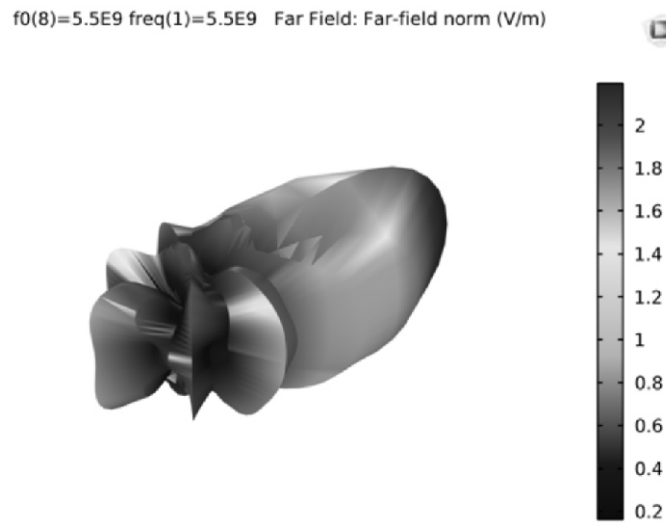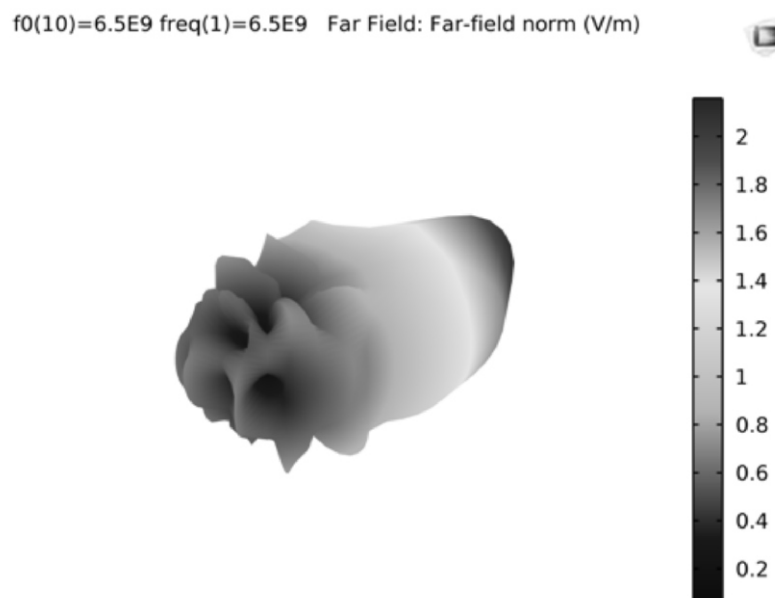
Fig.8 (e) Far field domain for circular input cavity at frequency 6.5 Ghz.

This is clear that the maximum far field domain for the antenna with rectangular input cavity is 0.95 V/m at frequency 3.5 GHz while the maximum far field domain for the antenna with circular input cavity is 2.2 V/m at frequency 5.5 GHz.

Figures 9 and 10 shows the plots of polar graph showing electric and magnetic field radiated in the surroundings for the above mentioned antennas. The beam of the antenna should be very sharp to increase the performance of the propagating signals.

Far Field: Far-field norm (V/m)

—	f0=2E9, freq=2E9
—	f0=2.5E9, freq=2.5E9
—	f0=3E9, freq=3E9
—	f0=3.5E9, freq=3.5E9
—	f0=4E9, freq=4E9
—	f0=4.5E9, freq=4.5E9
—	f0=5E9, freq=5E9
—	f0=5.5E9, freq=5.5E9
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—	f0=6.5E9, freq=6.5E9
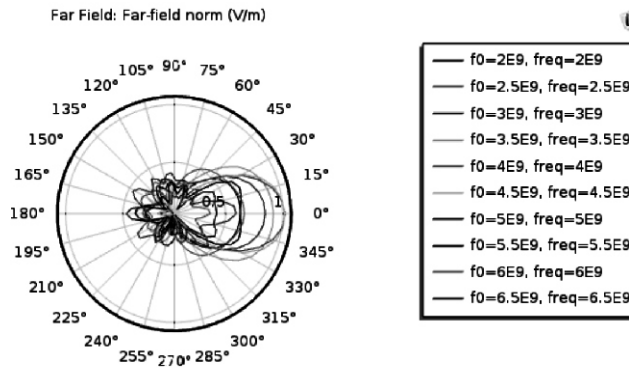
Fig.9 Polar plot for rectangular cavity based tapered slot antenna

Far Field: Far-field norm (V/m)

—	f0=2E9, freq=2E9
—	f0=2.5E9, freq=2.5E9
—	f0=3E9, freq=3E9
—	f0=3.5E9, freq=3.5E9
—	f0=4E9, freq=4E9
—	f0=4.5E9, freq=4.5E9
—	f0=5E9, freq=5E9
—	f0=5.5E9, freq=5.5E9
—	f0=6E9, freq=6E9
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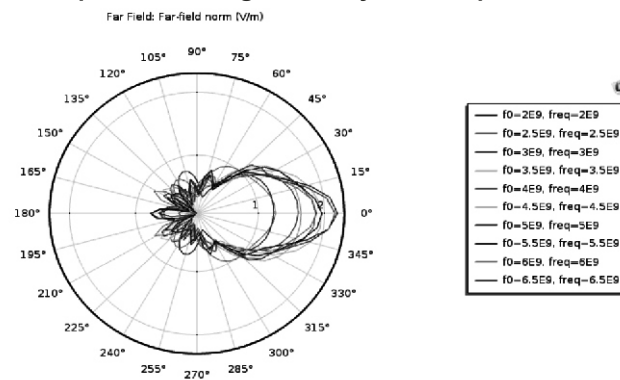
Fig.10 Polar plot for circular cavity based tapered slot antenna

These polar plots show the formation of some standing waves and this leads to the return losses. S-parameters (also known as scattering parameters or return losses) describe the electrical behavior of linear electrical networks when undergoing various steady state stimuli by electrical signals. Figures 11 and 12 show the variation in return losses to the domain of frequencies applied to the designed and simulated tapered slotted antennas respectively.
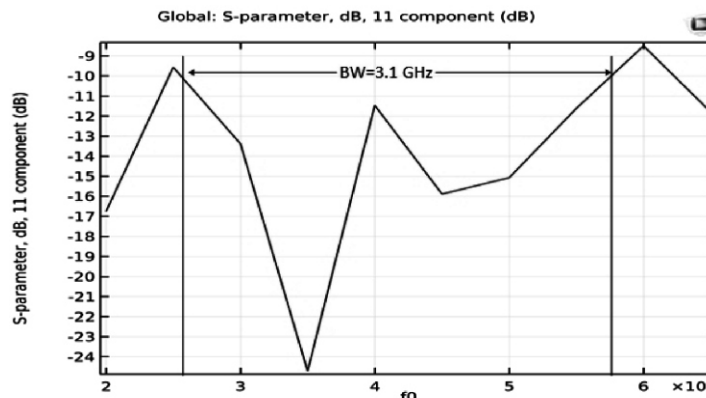
Fig.11 Return losses for rectangular cavity based tapered slot antenna
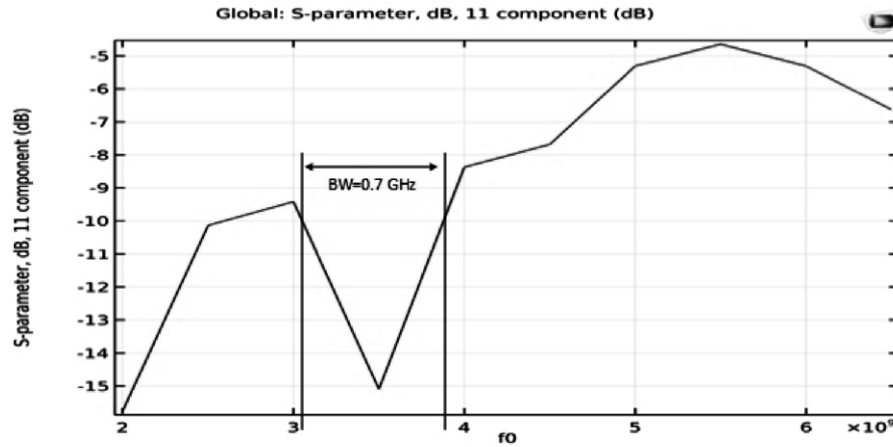
Fig.12 Return losses for circular cavity based tapered slot antenna

From these results, it is clear that both the designed antennas can operate well within the investigated frequency domain. However, both the antennas possess different operating frequency bandwidth as well as the field radiated at different frequencies. The high value of return loss means that the reflection wave return back to the source is very small and the amount of radiation power is very high. S-parameters are always important to estimate as it provides the information about the amount of power radiated by the antenna. The s-parameters graph revealed that the resonant frequency (f0) obtained is 3.5 GHz for both the antennas. The gain and the radiation pattern parameters are also alike and hence they may be applicable for some specific wireless communication purposes. Major difference between the two is in their operating bandwidth. Results showed that the rectangular input cavity based tapered slot antenna has wide (3.1 GHz) bandwidth around its resonant frequency in comparison to the circular input cavity based tapered slot antenna (0.7 GHz). However, the circular input cavity based tapered slot antenna showed more high radiation field and less standing waves as compared to the rectangular input cavity based tapered slot antenna.

Conclusions

This paper proposes two different tapered slot antennas with different input cavity shapes, i.e, rectangular and circular cavity. The results of both the antennas are compared and tabulated under table 2. Both the designs were simulated using COMSOL Multiphysics software. The proposed antennas may be useful for mobile communications especially within the frequency range from 2.5 GHz to 5.5 GHz.   The designs have been simulated for obtaining far-field radiations, polar plots and the insertions losses (s-parameters). The output characteristics of these two simulated tapered slot antennas shows promising features if applicable for wireless communication purposes. Both antennas showed variation in far field gain with respect to change in operating frequency within its acceptable operating frequency bandwidth. Hence, the comparison revealed that the bandwidth of the tapered slot antenna can be altered while

changing the shape of input cavity.

Table 2 Dimensions of proposed antenna designs

Evaluated output parameters	Rectangular cavity based tapered slot antenna	Circular cavity based tapered slot antenna
Electric Field (V/m)	65	60
Far field domain (V/m)	0.7 at 2.5 GHz frequency	1.2 at 2.5 GHz frequency
	0.9 at 3.5 GHz frequency	1.6 at 2.5 GHz frequency
	1.0 at 4.5 GHz frequency	1.9 at 2.5 GHz frequency
	0.6 at 5.5 GHz frequency	2.2 at 2.5 GHz frequency
	0.7 at 6.5 GHz frequency	2.2 at 2.5 GHz frequency
Bandwidth (GHz)	3.1	0.7
Resonant frequency (GHz)	3.5	3.5

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Library Automation and Changing Scenario of Library Services in the New Technological Environment

Nidhi Gandral

ABSTRACT

Library Automation is the use of computers to control processes and replacing human operators. Library without walls is the vision of 21st century. This paper is based on library automation and the changing scenario of library services. This paper deals with history of library automation, functions, acquisition systems, role of computers etc. It also presents the information about some software packages available for automation of library.

Keywords : Automation, Library Computerization, General Functions, Housekeeping operations, OPAC Library software.

1. Introduction

The library plays a very important role in our society and is an important component of any educational institution. Now a day the definition of library has totally been changed and is not limited to only storage of books. In the age of information and communication technology library scenario has been changed in terms of collection, organization and services. Library automation reduces the drudgery of repeated manual efforts in library routine operations. It refers to the computerization or mechanization of all library activities such as acquisition, cataloguing, circulation, serials and an OPAC. Automation is a technique to make a system automated i.e self active. For this electronic machines are used to automate the libraries. Thus library automation means the application of machines to perform the different routines, repetitive and clerical jobs involved in function and services of the libraries. The main purpose of library automation is to free the librarians and library staff and to allow them to contribute more meaningfully to spread of knowledge and information.

Basic Concept of Library Automation:-

The word automation has been derived from the Greek word "Automose" means something which has power of spontaneous motion or self movement. The term automation was first introduced by D.S. Harder in 1936. He defines that "the automation is handling of parts between progressive production processes."

According to Encyclopedia of Britannica, automation is "the name given to an automatic system of working. The difference between automation and mechanization related term is being mainly one of degree." According to Webster's Third New International Dictionary of English

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Language, automation is," the techniques of making a process or a system operate automatically." In other words it is the machinery that mathematically manipulates information storing, selects, presents and records input data or internally generated data. Mechanization of library housekeeping operations predominantly by computers is known as library automation (Gove, 1986).

According to Oxford English Dictionary, automation is "the application of automatic control to any branch of industry or science by extension, the use of electronic or mechanical devices to replace human labor" (Simpson and Weiner, 1989). McGraw Hill Encyclopedia of Science and Technology (1982) defines automation as "a coined word having no precise, generally accepted technical meaning but widely used to imply the concept, development or use of highly automatic machinery or control system. According to Encyclopedia of Information and Library Science automation is the technology concerned with a design and development of the process and system that minimizes the necessity of human interaction in their operations. ALA Glossary of Library and Information Science defines automation as the performance of an operation, a series of operations or a process of self activation, self controlling or automatic means.

Historical Perspectives of Library Automation:-

The whole automation process in our society began with librarian- Dr. John Shaw Billing. Herman Hollerith, a Census Bureau of USA Employees who invented punched card machinery attributes the idea to a suggestion by Dr. Billing, the then librarian of Surgeon- General's Library. The growth of library automation is shown as follows:-

YEAR	GROWTH OF LIBRARY AUTOMATION DEVELOPMENT
1936-60	Punched card for circulation control, use of IBM 402,403 or 407, sorting and retrieval of data. Introduction to the concept of 'Memex' by Vannevar Bush in 1945.
1960-70	Use of general purpose computers, computerized circulation first appeared project 'Intrex' was introduced designed for the evolution of a large university library. Introduction to online interactive computer systems.
1970-80	Minicomputers were introduced to automate circulation, books were bar coded, ISBDs started appearing, OCLC was established, OCLC started the development of World Cat and library networks begin appearing all over the world.

1980-90	Shared copy cataloguing system was established, remote access to online database become a reality, CDROM databases on indexing and abstracting journals started appearing, library automation packages initiated shifting towards relational architecture. OPAC became very popular in the decade and made available on campus wide LANs for accessing.
1990 TO Date	From analog to digital library which points towards a future library in which the most heavily used information resources are digital and in which the most frequent form of access is un-mediated and remote.

Objectives of Library Automation:-

1. To maintain the bibliographic records of all the materials in computerized form.
2. To reduce the repetition in the technical processes of housekeeping operation.
3. To provide access to information at a faster rate.
4. To facilitate resource sharing and cooperative agreement among libraries.
5. To ensure accuracy of information provided.
6. To tap the advantages of online access.
7. To put library spaces in to more efficient use. Millions of records can be stored into few diskettes.
8. To promote and improve budgeting, staff scheduling, collection analysis and development.

Need of the Automation in Libraries:-

The motto of library automation is to provide the right information to the right person in right manner and in a right time. Library automation is needed in the library because of following reasons:-

1. For information explosion.
2. Different approaches and need of the users.
3. Limitation of libraries (time, space and manpower).
4. Duplication in housekeeping operations.
5. Impact of ICT.
6. Increasing number of users.
7. To improve the quality and speed service.
8. Enable participation in resource sharing library networks.

Steps in Library Automation:-

Since automation of libraries is an important and essential step, it should be properly

planned and implemented. Hence following series of steps have to be undertaken while considering library automation:-

1. Feasibility study of the system:-

The aim of feasibility study is to determine if this is achievable, if the benefits outright the disadvantages and to examine alternative solution.

2. Hardware:-

At the time of automation it is necessary to give attention on the hardware also. Librarian must purchase software symmetrical to already existing hardware or that software should be selected for which the cost of the hardware is less. Today different types of hardware are available in the market and due to new ones; the earlier ones are getting outdated soon.

3. Selection of software for library automation:-

Software is the means by which the general purpose hardware of a computer system is made to perform specific tasks. Therefore for doing automation in a library, firstly we need a library software. There are number of software available which are as follows:-

Grouping of Library Management Softwares (LMSs) available

ORIGIN	APPLICATION DOMAIN		
	LARGE SYSTEM	MEDIUM RANGE SYSTEM	SMALL SYSTEM
LMSs of foreign origin	Alice for Windows BASIS plus and TECHLIB plus VIRTUAILS	KOHA	Not Available
LMSs developed over LMS of foreign origin	NG-TLMS.NET (over TLMS packages)	WINSANJAY(over CDS/ISIS)	LAMP (over CDS/ISIS)
LMSs of Indian Origin	LIBSUITE LIBSYS MECSYS NEWGENLIB NEXLIB SLIM21 SOUL SUCHIKA TULIPS ULYSIS WILISYS	AUTOLIB DLMS GRANTHALAYA Krueger Library Manager LIBRA LIBRARIAN LISTPLUS NETLIB NIRMALS SLIM++	ARCHIVES CATMAN E-GRANTHALAYA GOLDEN LIBRA LIBMAN LIBRARY-MANAGER LIBRIS LIBSOFT LOAN-SOFT SALIM

Procedures of Software selection:-

Before selecting the Library Automation Software one should look at the reviews and advertisements related to the software and also ask for the demonstration of the program because before buying any suitable software one must have the complete knowledge as to how to insert the disc and which key is to be pressed next and so on.

General Function of Library Automation Software:-

Software may be viewed as digital version of human skills. LMSs are based on skills, knowledge and experiences acquired by library professionals on the jobs. The whole array of functions carried out by a modern LMS is shown as follows:
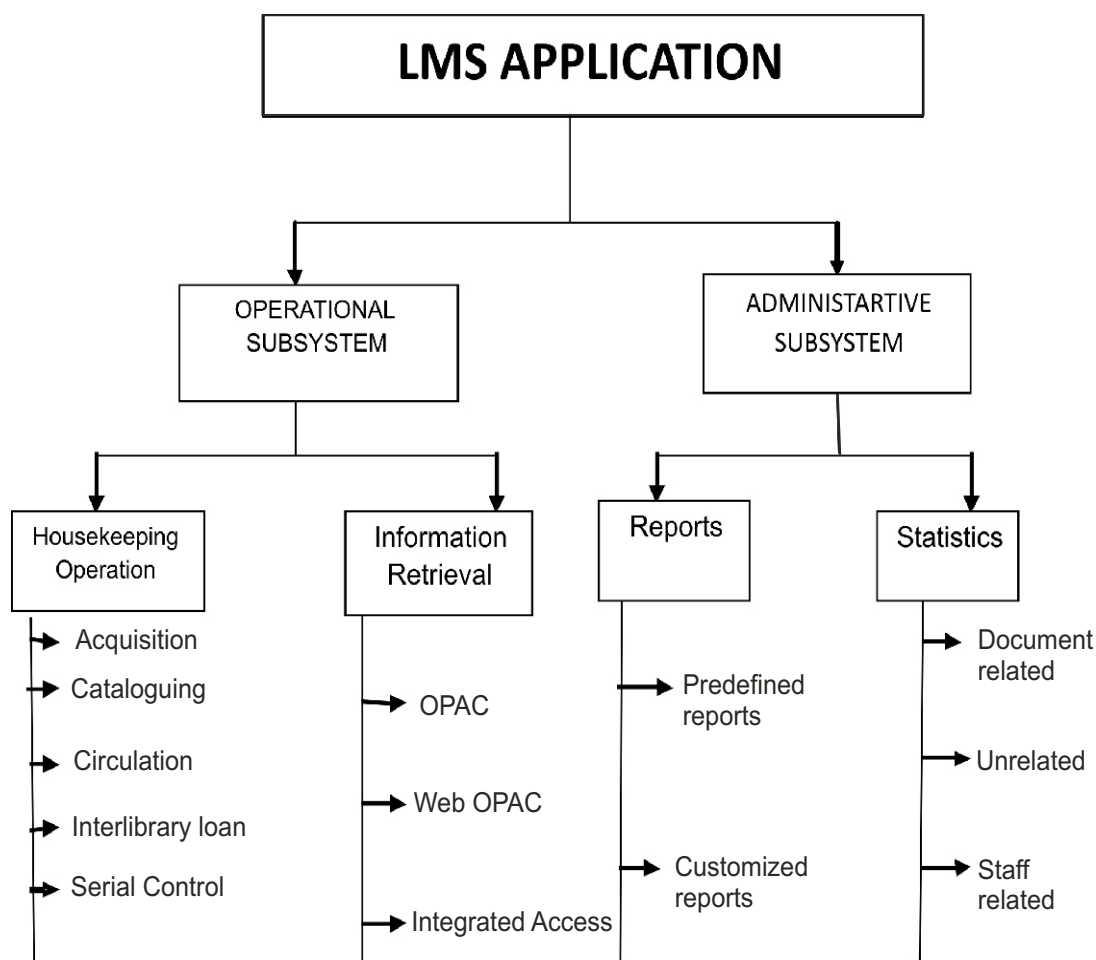
4.   Housekeeping Operations:-

Housekeeping operations of a library include all operations such as acquisition, cataloguing, circulation and serial control. The basic functions related to housekeeping operation in a library

irrespective of type or size may be grouped as follows:-

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                    ┌─────────────────────────────────────────┐
                    │      LIBRARY HOUSEKEEPING OPERATION      │
                    └─────────────────────────────────────────┘
                                        │
        ┌───────────────┬───────────────┼───────────────┬───────────────┐
        ▼               ▼               ▼               ▼
  ┌───────────┐   ┌───────────┐   ┌───────────┐   ┌───────────────┐
  │ACQUISITION│   │PROCESSING │   │   USE     │   │ MAINTAINENCE  │
  └───────────┘   └───────────┘   └───────────┘   └───────────────┘
```

ACQUISITION	PROCESSING	USE	MAINTAINENCE
SELECTION	CLASSIFY	LOCATE	BIND
ORDER	CATALOGUE	LIST	REPLACE
RECEIVE	LABEL	LEND	DISCARD
ACCESSION	SHELVE	RESERVE	
		RECALL	
		INTERLIBRARY	
		LOAN	
		PHOTOCOPY	
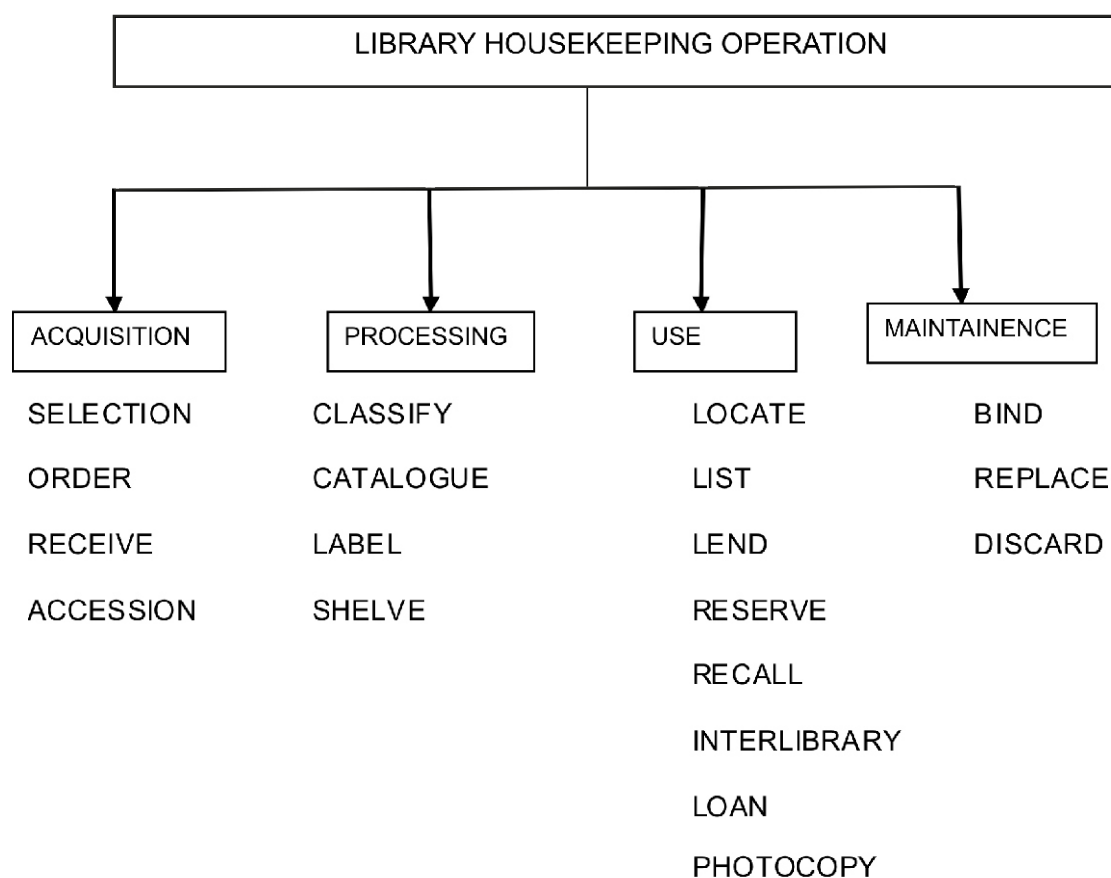
5. Implementing Library Automation:-

Implementation of library automation means steps that are to be initiated for the actual functioning of libraries. This involves the following components:-

⬥ First of all to decide whether to go online or offline which leads to the selection of hardware equipments and software packages?

⬥ To see the untrained and trained staff for their training.

⬥ To decide what type of record to be maintained and for what purpose.

⬥ To check whether the records are of free of charge or charge basis.

⬥ Evaluation procedures to review the overall functioning must be thought off.

Automated Library Services:-

Information services are provided to assist people and enable them in solving their problems and decision making. Modern libraries and information provided a variety of documentation and information services to support research and development, management and all other programs

related to the development of institution. Mahapatra (1985) has given the following automated services as :-

1. Current Awareness Service (CAS)
2. Online Search Service
3. Printed Index
4. Selective Dissemination of Information (SDI)
5. Inter Library Loan
6. Stock Verification
7. Reference Service

1.   Current Awareness Service:-

Any service intended to meet the current approach is known as current awareness service. Therefore it can be defined as a system of service which ensures that all the current information likely to influence the progress of a research worker or research team is made available to them at the right time and in convenient form. By making use of computers the members can be provided Current Awareness Service by sending e-mails, through databases, CD-ROMs etc in a library.

2.   Online Search Service:-

It is a means whereby a researcher at a remote terminal can access and interrogate database containing bibliographical or other data. For this the user should have the password of the concerned database vendor for using the online system.

3.   Printed Index:-

An index is a retrieval tool. It provides various access points through which a user can identify the document of his interest. In information retrieval, computers were used for preparation of in house indexes that is within the library and also for the production f indexes for major abstracting journals.

4.   Selective Dissemination of Information:-

H.P. Luhn designed the mechanism of SDI service. He defined SDI as "It is a service within the organization which concern itself with communication of new items of information from various services to those points within the organization where they usefully serve someone's interests."

5.   Inter Library Loan:-

It is a service where by patron of one library can borrow books, DVDs etc or receive photocopies of documents that are owned by another library. The user makes request with their home library, which act as an intermediary, identifies libraries with desired items place the request, receives the items, make it available to user as well as arranges for its return.

6.   Stock verification:-

The term stock verification is also denoted by other term as 'stock taking', 'stock checking',

'stock inspection' inventory taking etc. The term refers to the process of checking as to what is in stock in relation to what there was. In library content it is the periodic verification of books and other reading materials.

7.   Reference Service:-

The term reference service is defined as the sympathetic and informed personal aid in interpreting library collection for study and research. According to Ranganathan, "Reference service is the establishing of contact between reader and book by personal service."

Problems Associated With Library Automation:-

Libraries are known for collecting and storing information in society. An endless supply of information is continuously generated in these institutions and anyone can readily access it. The successful process of library automation has many issues and challenges as it needs a proper planning, sound budget, lack of awareness of standard format etc. Some problems are explained as below:-

1.   Lack of proper planning:-

The process of library automation requires complete study and planning of the project because no project can be completed without prior planning. The automation system adopted by the library should be based on feasibility study. As new hardware and software are available in the market, it is necessary for the libraries to determine whether the proper resources are available to operate library automation software or not.

2.   Lack of fund or economic resources:-

The main obstacle that comes in the way of library automation is to obtain the necessary funds. For running library automation software smoothly, the expenditure for library automation and its maintenance should be kept in mind.

3.   Lack of resources and technology:-

Most of the libraries feel that library automation work is affected due to insufficient awareness of current technology like hardware and software issues. Proper training is needed to be given for this purpose.

4.   Lack of competent and willing man power:-

Previously the emphasis had been more on traditional librarianship. So there is lack of trained professional with inadequate information technical equipments.

5.   Other problem:-

Other problem encountered includes the absence of committee consultants and computer experts in library automation, poor communication facilities, irregular power supply, poor environment etc.

Conclusion:-

Now day library automation has become the buzz word in library profession and has become a bare necessity for any librarian. The manual library operations are fast vanishing giving way to automated systems. These modern and dynamic innovations are providing library service as

libraries without walls with an ability of free access to world information. But the role of librarian has not diminished in this changed scenario; it is being modified to make him an information specialist.

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Review of the Combustion Emission Characteristics of a Dual Fuel Diesel Engine using Natural Gas

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ABSTRACT

Now days the increase in the population and material transport (raw and/or finished) has made the roads crowded. This has led to the raised concerns regarding the pollutant emissions like Carbon monoxide (CO), Nitrogen oxides (NO_x) and Particulate matter (PM) hasand thus has compelled the researchers to opt for alternative fuels. Natural gas(NG) is proving to be one of the most promising alternatives (in combination with the diesel engine) because of its ease of availability, low cost, and unpolluted-burn qualities despite having high ignition temperature and low cetane number. It has less carbon per unit of energy as compared to other fossil fuels and hence emits less CO_2 for vehicle per kilometer travelled.

This paper reviews the different methods for using NG in diesel engine and critically examines their emission characteristics. Some recommendations are also proposed based on the reviewed work and the problems on the societal, environmental and technological front.

Keywords : Dual Fuel, Diesel Engine, Carbon monoxide, Nitrogen oxides and Particulate matter

1. Introduction

Diesel or Compression Ignition Engines are massively used in the agricultural applications, automotive applications and various industrial applications etc. because of their high efficiency, adaptability, cost-effectiveness and reliability [1]. However, the diesel engines are among the main contributors towards the environmental pollution [2]. There are many pollutants; like Carbon monoxide(CO), Nitrogen oxides(NO_x), Particulate Matter(PM), Hydrocarbons(HC) and Carbon dioxide(CO_2) etc., being released by diesel engines. Out of these the NO_x and PM is considered to be most harmful pollutants. Also, the NO_x emission is the primary cause behind the photochemical smog and acid rain. The PM coming from diesel engines comprises of many types of substance like natural carbon, basic carbon, inorganic particles etc. Many studies have proved that these particles lead to health related ailments like heart problems, neuro-degenerative disorders and breathing problems [3]. Looking to such hazardous effects of the emissions from the diesel engines the World Health Organization on 12th June 2012, has identified these emissions as carcinogenic [4].

As the energy demand is increasing due to raise in the number of vehicles, strict emission

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standards have to be in place to work in the direction of reduction of harmful emissions. So, in order to ease the conflicts between diminishing of energy sources, increasing demands of energy and increasing level of pollutants, we need to explore some other alternatives. The use of a combination of fuel (NG and diesel) is an attractive solution for the stated problems.

1. Natural Gas and Diesel as Fuel

The use of natural gas in spark ignition (SI) engines is well established, however in case of Compression Ignition engines, it is still under development. This is due to the fact that, NG has low cetane number and high auto-ignition temperature. So, this will lead to ignition related problems in CI engines [19]. As there is always a need of ignition source for the initiation of spark in the diesel engine hence, one can say that diesel is used for the initiation of the spark and then process is taken over by the combustion of the NG.

There are many alternatives fuels which can be used along with diesel in diesel engine, but NG is most favorable alternative due to its abundance worldwide at cost effectiveness. It is also used to say that, in US there is almost 27.2 trillion-cubic-feet consumption of NG in 2015 and will rise progressively to 34.7 trillion-cubic-feet by the end of 2040[9]. It has also been estimated that the proven reserves in world are almost 6599.4 trillion-cubic-feet at the end of 2015[10].

1.1 Properties of Natural Gas

Natural gas is a combination of various gasses which involves some lightweight alkanes like methane, ethane, propane, n-butane and iso-butane, and pentanes [3]. The typical Composition of NG is shown below in Table 1.

S.No	Component	Volumetric Range (%)
1	Methane	87.0–96.0
2	Ethane	1.8–5.1
3	Propane	0.1–1.5
4	Isobutane	0.01–0.3
5	n-Butane	0.01–0.3
6	Isopentane	Trace to 0.14
7	n-Pentane	Trace to 0.14
8	Hexane	Trace to 0.06
9	Nitrogen	1.3–5.6
10	Carbon dioxide	0.1–1.0
11	Oxygen	0.01–0.1
12	Hydrogen	Trace to 0.02

So, from the above table we can say that the properties of NG should be very much similar to that of methane as it ranges from 87-96%, of whole composition of NG.

1.1 Properties of Diesel

Diesel is a combination of various components. It holds components like carbon, hydrogen and sulfur [20]. The typical Composition of Diesel is shown below in Table 2

Table 2: Composition of Diesel

S.No	Component	Weight (%)
1.	Carbon	86.82
2.	Hydrogen	13.31
3.	Sulfur	0.52

1.1 Comparison of Diesel and Natural Gas

The chemical properties of natural gas in comparison with diesel are shown in Table 3.

Table 3: Properties of Natural gas in comparison with Diesel [3]

S.No	Fuel Properties	Natural Gas	Diesel
1	Low heating value (MJ/kg)	48.6	42.5
2	Heating value of stoichiometric mixture(MJ/kg)	2.67	2.79
3	Cetane number	–	52.1
4	Octane number	130	–
5	Auto-ignition temperature (°C)	650	180–220
6	Stoichiometric air–fuel ratio (kg/kg)	17.2	14.3
7	Carbon content (%)	75	87

1.1 Methods for using Natural gas in Diesel Engine

There are few methods by which we are able to use natural gas in diesel engines.

2.4.1. Dual Fuel Mode: In this method, natural gas is introduced along with air through inlet and is allowed to mix uniformly with air. After that, ignition is provided by direct injection of fuel (i.e. diesel having high cetane number) through injector [14].The schematic of dual fuel mode system is shown in Fig.-1.

Also Srinivasan et. al.[15] observed that the natural gas substituted the diesel by almost more than 95 %, hence diesel accounts for only 23% of the total injected energy.
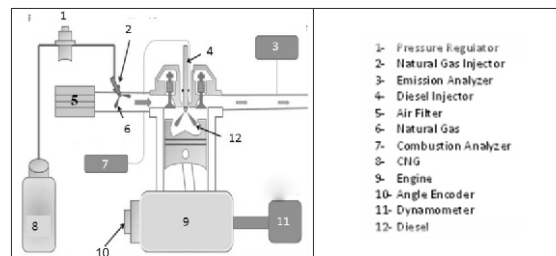
Fig 1: Schematic of dual fuel mode system [12]

Sun et. al.[14] experimentally conducted test on dual-fuel engine fueled with diesel and natural gas. They used a modified four-stroke water-cooled single-cylinder diesel engine in which injection system of diesel fuel was an electronically controlled unit injector. They used exhaust analyzer (Horiba MEXA-554J) for measuring the CO & HC emissions and (Horiba MEXA-720NO$_X$) for NO$_X$ emissions. Quantity of Natural gas and the diesel were measured by using an electronic scale with a resolution of 0.1 g. By installing a feed system for the natural gas, the test engine can be operated on dual fuel or dedicated diesel. During the experiment, they have recorded 200 continuous cycles to analyze the variations cycle-by-cycle, and have used data of mean value of those cylinder pressure to analyze the heat release rate and the other combustion Parameters.

High pressure direct injection (HPDI): In this method, firstly small amount diesel is injected through injector and then natural gas. Diesel is injected, such that it will auto-ignite at some state and will provide ignition source to initiate the natural gas combustion [11].The schematic of HPDI system is shown in Fig. 2.
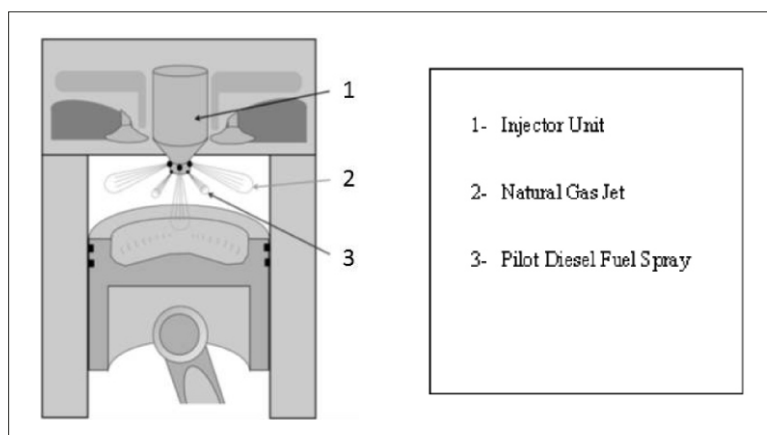
Fig 2: Schematic of HDPI system [3]

McTaggart-Cowan et. al.[11] used experimental set up of single-cylinder research diesel engine for HPDI of natural gas. They used a six-cylinder 15-litre Cummins ISX series heavy-duty diesel engine, which is originally rated at a 1966N-m of torque at 1200rpm along with power of 300kW at 1800rpm which was altered by manufacturer to permit it for single cylinder operation. Dummy injectors were introduced for the non-firing cylinders, the inlet and exhaust ports of cylinder were blocked and the piston rings were evacuated.

Hot surface assisted compression ignition (HSACI): In this type, there is a hot surface (glow-plug) provided near the injector, as Natural gas is injected right into cylinder near to the glow plug at the end of the compression stroke [16-17]. Generally, the temperature range of the glow plug varies from 1200 1400K [18]. The schematic of HSACI is shown below in Fig.-3.
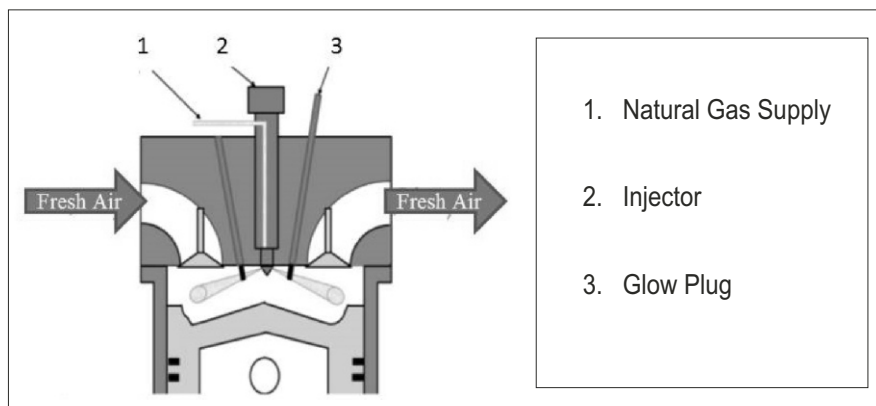
Fig 3: Schematic of HSACI system[3]

Willi et. al. [17] used experimental setup of "Production 3500 Series diesel engine" (170mm bore×190mm stroke) for direct injection of natural gas with HSACI. The injection system had specific delivery and opening and shutting rate necessities distinguished from the 3401 tests. The modification incurred in cylinder head includes accommodation of the gas injector and its oil and gas supply passages and the need to allow glow plug access to the combustion chamber.

So, from the techniques explained, it is clear that dual-fuel mode engine is practically possible as there are no such serious modifications required in conventional engines. Thus, it can be concluded that these are most likely and practical option for using natural gas in diesel engines as a fuel.

1. EMISSION CHARACTERISTICS

Large number of studies has been performed in different conditions and on different test engines to know about their emission characteristics by use of natural gas. These emission characteristics of the dual-fuel engine are analyzed and summarized below.

1.1 Carbon Monoxide(CO)

CO is considered as one of the most harmful emissions emitted by the diesel engines. Formation of CO occurs due to incomplete combustion of fuel in the combustion cylinder. CO generally exists in areas having deficiency of oxygen.

Liu et.al. [20] demonstrated that the carbon monoxide emission under dual fuel mode were considerably higher than that under ordinary diesel mode, even at high load under various pilot diesel fuel amounts and streamlined the pilot injection timing

AbdAllaet. al. [7], observed that the CO emissions have been reduced to some extent by increasing the pilot diesel quantity as well as by the advancement in their respective injection timing.

Papagiannakis et. al. [6] observed that the increase in mass ratio of natural gas along with decrease in the air fuel ratio leads to the formation of CO.

In view of the above review, every author reported clearly, an increased CO emission under dual fuel combustion mode. The following reasons can be credited to build the CO emission in natural gas/diesel dual fuel combustion:

♦ Bulk extinguishing due to blending of more sizzling post-combustion gases with cooler surroundings may prompt CO production.

♦ Natural gas air blend is touched off by the pilot diesel under dual fuel mode and the fire needs to engender through the charge. The blend in some area is excessively lean, making it impossible to maintain the fire proliferation. For this, the neighborhood temperature falls and the response of CO oxidation solidifies. This leads to the increase in carbon monoxide emissions.

1.2 Nitrogen Oxides(NOx)

NO_x is standout amongst the most impeding discharges from diesel engine and it is an assembled emission made out of nitrogen monoxide (NO) and nitrogen dioxide (NO_2). NO is the principle segment and more often responsible for more than 90% of NO_x emission inside the engine cylinder. The development of NO is dependent on two mechanisms, i.e. Thermal-Mechanism and Prompt-Mechanism. As per thermal mechanism, the arrangement of thermal NO is incredibly impacted by cylinder inside temperature and oxygen fixation. NO production happens when the temperature is above 1800 K. As per the prompt mechanism, the process of development of incite NO is shown below [3]:

$$CH+N_2 \rightarrow HCN + N \Rightarrow CH_2+N_2 \rightarrow HCN + NH \Rightarrow HCN+OH \rightarrow CN + H_2O$$

$$NCO+O \rightarrow NO + CO \Leftarrow HCN+O \rightarrow NCO + H \Leftarrow CN+O_2 \rightarrow NCO + O$$

$$NCO+OH \rightarrow NO + CHO$$
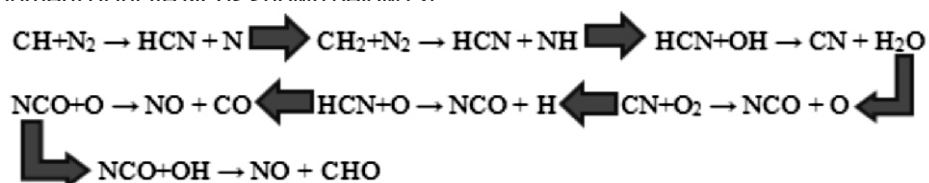
Fig. 4: Formation of NO by Prompt Mechanism

Rahnama et.al. [5] experimentally analyzed that for the low load operation, with the expansion of hydrogen, there is increment in NO_x emissions because of the advanced ignition staging and increment in combustion temperature, which advances the creation of NO_x.

Yousefet. al.[13] observed that increment of the natural gas vitality portion prompts a lessening in the NO_x fixations in contrast to that under diesel operation.

In view of the literary work audited above, variety in results has been. The diminishment of NO_x emission can be clarified by crediting the accompanying following points:

♦ The more drawn out start deferral of natural gas/diesel double-fuel ignition and the low quality of natural gas ignition created by lean premixed condition will lessen the ignition temperature, coming about lessening in NO_x emission.

♦ With the expansion of engine speed, there is less living arrangement time for No_x arrangement, and consequently NO_x emission decreases.

1.1 Hydrocarbon(HC)

Hydrocarbon is likewise the outcome of fragmented burning of hydrocarbon fuel. While the temperature for finishing the oxidation of HC is lower. It has been observed to be around 1200 K with freedom of the original fuel sort.

Abdelaal et.al. Dissected the HC emission of the natural gas-fueled diesel engine. They found the HC emission with traditional diesel burning was low, practically near zero.

Sun et.al.[18] observed that the HC emission diminished directly with the expansion of pilot diesel amount at both low and higher engine loads, however there is increment in NO_x emission.

Liu et.al. [20] observed that in over-rich area where oxygen is lacking prompts the incomplete oxidation whereas in over-lean region where the chemical reactivity is adequately low prompts halfway oxidation or even quench.

From the above review, obviously we can say that dual-fuel ignition delivers a great deal more HC emission then typical diesel burning. There are following reasons which are responsible for the increase of HC emission:

♦ Due to the nearness of valve cover period, little piece of natural gas air-mixture is directly released into the fumes amid the scavenging process which prompts increment in HC emission.

♦ Similar with the development mechanism of CO emission, caught in the crevices and fire extinguishing make the unburned fuel difficult to be touch off in the last some portion of the burning procedure, resulting in increment in HC emission.

1.2 Carbon Dioxide(CO2)

CO2 is a result of hydrocarbon complete sweltering. Hydro carbon fuel is first oxidized to CO during process of combustion. After that, if the in-cylinder temperature is sufficiently high and with the presence of oxygen, CO is oxidized to frame CO_2 consecutively.

Imran et. al. [8] studied the impact of natural gas expansion on CO_2 emission in a single-cylinder compression ignition engine. They found that double fuel operation delivered less CO_2 emission because of lower carbon to hydrogen proportion of natural gas.

Nwafor et. al. [19] demonstrated that a net lessening in CO_2 discharge was seen under natural gas double-fuel operation contrasted with the outcomes gotten under ordinary diesel mode.

In view of the above review, every author reported clearly decrement of CO_2 emission under natural gas/diesel dual-fuel combustion then typical diesel mode. The following reasons are

responsible for the decrement in CO2 emission in dual fuel mode operation:

♦ Natural gas which is for the most part made by methane has one of the least carbon substances among hydrocarbons. The ignition of natural gas has a capability of creating lower CO_2 emission than that of perfect diesel.

♦ Under double-fuel mode, deficient burning is more genuine. A portion of the fuel is deficient oxidized to CO and released into the fumes pipe, which may diminish the CO_2 emission.

1.3 Particulate Matter(PM)

The emission of PM is one of the main problem in the diesel engines. Diesel PM is a mind boggling blend of essential carbon, an assortment of hydrocarbons, sulfur compound and different species. It fundamentally comprises of carbonaceous material known as sediment, some retained natural compound and sulfates.

Papagiannakis et. al.[12] demonstrated that with the increment of engine load, soot emission of typical diesel mode expanded clearly.

Liuet. al. [20] broke down the impact of pilot diesel fuel on the PM emission in a NG-diesel double-fuel engine under different engine loads and speeds. The study revealed the lowering of PM emission of double fuel mode contrasted with that of the ordinary diesel mode.

In view of the above review, every author reported clearly decrement of PM emissions under natural gas/diesel dual-fuel combustion mode in comparison with diesel mode. The following points are responsible for decrement in PM emission in dual-fuel mode operation:

♦ Under double-fuel combustion, the vast majority of diesel fuel has been supplanted by natural gas and the amount of pilot diesel is little. So less diesel fuel is singed in the diffusion mode and most fuel is scorched in the premixed combustion.

♦ Natural gas does not contain C-C bond and is free of aromatics and sulfur. In this manner, natural gas has little inclination to create soot. Also, the combustion of homogenous natural gas air blend adds to the oxidation of the soot shaped from the combustion of pilot diesel. Because of these reasons, PM emission diminishes.

2. CONCLUSIONS AND RECOMMENDATIONS

2.1 Conclusions

In view of the developing condition and vitality issues, natural gas has been considered as promising alternative fuel. Dual-fuel mode is a more practical and ease mean of utilizing natural gas in diesel engine. Consequently, this technique has been given a great deal of consideration by numerous researchers keeping in mind the goal to enhance the engine execution and decrease diesel utilization. Subsequent to counseling and outlining a lot of related written works in double-fuel mode the accompanying general conclusion could be drawn that the double-fuel mode can essentially diminish the NOx, CO2 and PM emissions, however the HC and CO emissions may increment by a few times or much more than 100 times. NOx emission under double-fuel mode is influenced by engine loads and pilot diesel amount; it might increment at

high engine stack. With the expansion of engine load and pilot diesel amount and the advancement of pilot diesel injection timing, HC emission under double-fuel mode reduces however NOx emission increments. While with the increment in amount of natural gas, CO emission demonstrates a diminishing pattern after the primary increment.

2.2 Recommendations

♦ Combustion Temperature should be as low as possible.

♦ Quantity of natural gas should be increased to high level, so mixture becomes rich and the flame propagation is promoted which may result in the complete combustion. However, it has also been reported that if proportion of natural gas is increased over 60% then knocking can be experienced affecting the thermal efficiency of the system. This may lead to reduction in CO emission.

♦ If we increase the pilot diesel quantity, the pilot diesel spray atomization characteristics are improved which strengthens the combustion of natural gas air mixture, resulting in a decrease of HC emission.

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Morphological Analysis of Noun in Machine Translation

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ABSTRACT

The motivation behind this work of Noun identification is to present the design and structure of the construction and Identification of the noun in Dogri language. This design and implementation will further help in the development of the POS Tagger and Chunker for the Dogri language by including strictly contextual rules. In this paper, we have identified and implemented the morphological features of the Noun in Dogri language. Idenl constraints and sequencing that apply to the noun constituents. We have tried to identify the details of grammatical categories, their markers and arrangement. Implementation and testing of the system is done on Linux and Perl. We have achieved an accuracy of 78%.

Keywords : Machine Translation, Dogri, Noun, Morphology, Linux

1. Introduction

Machine Translation (MT) is a process of automatically translating one natural language to another natural language. MT was the first computer-based application related to natural language processing [1]. Weaver and Booth [2] started one of the earliest MT projects in 1946 based on expertise in breaking enemy codes during World War II. Weaver's Memorandum in 1949 had effectively launched research in this field.

MT is a multi-disciplinary field of research; it incorporates ideas from Linguistics, Computer Science, Artificial Intelligence, Statistics, Mathematics, Philosophy and many other fields. Basically MT refers to a subfield of Computational Linguistics that investigates the use of software to translate text or speech from one natural language to another.

The results of MT research could impact major aspects of life, including politics, culture, science, philosophy, and business. If MT can become accurate and efficient enough, it can break down cultural barriers and make communication between users of different languages much easier.

Commercially, MT can allow companies to translate product manuals or other addenda more quickly into the target language*tification of Dogri Noun Groups in a given text is done by using morph tactica* or languages. Thus, MT systems can expand a company's market, save translators time and companies money in the process of translation. Scientifically and philosophically, the results

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from MT can be applied to areas such as Artificial Intelligence, Linguistics, and the philosophy of language.

I. Closely Related Languages

Hindi and Punjabi are closely related languages. These languages have their origin in Sanskrit and have same sentence structure i.e. Karta, Karam, Kria (SOV). In both languages, sentence is comprised of Subject and Predicate. In both languages, the basic elements are Kaaraka. Both have eight numbers of Kaaraka (Karta, Karam, Karan, Sampardaan, Apadaan, Sambandh, Adhikaran, Sambodhan) which by combining with each other create a sentence.

The general sequence for transitive Sentence is Karta, Karam, Kria and for intransitive sentence is Karta, Kriya. In both languages the relation between Kaarka's are shown by postpositions. Total eight parts-of-speech are recognized in both Hindi and Punjabi. Beside this, both have same types of Nouns, Genders, Number, Persons, Tenses and Cases. The close relationship between Hindi and Punjabi is established by a study by Josan and Lehal [3] and Goyal V. et. al.[4]. The authors have also concluded that Hindi and Punjabi are closely related languages from the machine translation point of view also.

II. Different Approaches to Machine Translation

Machine Translation problem is addressed in a number of ways. Thus there are number of techniques for developing machine translation system. Some of the popular techniques are briefly described below:

A. Word-for-Word Translation

Word for word translation approach is useful for syntactically similar languages. Each word in source language sentence is replaced by the corresponding word of the target language. For example a sentence, in Hindi language: राम आज हमारे घर आऐगा । is translated to Punjabi language as : ਰਾਮ ਅੱਜ ਸਾਡੇ ਪਡਿ ਆਵੇਗਾ The basic characteristic of this type of translation is that, it is very simple and one needs to replace a word of source language with a word in target language using bilingual dictionary. This approach generates incorrect result when a word in source language has multiple translations and translation also depends upon its context in the sentence. More over the quality of translation is affected by lexicon size and accuracy.

B. Syntactic Transfer

In this approach the sentence in source language is grammatically analyzed and represented in grammatical representation of target language for translation. In order to do so, rules to convert source text into some structure, rules to transfer the source structure into target structure, and rules to generate target text from it are needed. Lexical rules are needed to be introduced as well.

Usually the rules are formulated manually and involve a great deal of expert human labor and knowledge of comparative grammar of the language pair. Apart from that, when several competing rules can be applied, it is difficult for the system to select the appropriate rule as we do not have standard rule selection criteria.

This approach was frequently used during 1980s and in spite of much research efforts, high quality MT was achieved only for limited domain. [5]

C. Interlingua Approach

In this approach the source language sentence is represented in a language-independent structure named Interlingua. This conceptual language, which needs to be developed, has the advantage that, once the source language meaning is captured by it, in theory we can express it in any number of target languages, so long as generation engine for each of them exists.

Conceptually, it seems appealing but this approach has number of drawbacks making it impractical. First, the creation of conceptual language capable of representing the meaning of sentences in source language is an enormous task, which has only been achieved for a very limited domain. Second, the approach requires that the whole input sentence need to be grammatically understood before proceeding for translation, has proved to make translation engine less robust to grammatical errors in natural language sentences. [5]

D. Example Based Translation

In this approach a sentence is translated using previously analyzed examples of similar sentences. A database of previously analyzed text is stored in the Translation Memory (TMEM) in the form of complete parse tree, complete sentences or phrases. Ideally, the system will search for an exact structural match for the source sentence and replace the example target words with the source target words. However, in case no exact match is found, the system will chunk the source sentence and try to find a match in the example database.   Main limitations of this approach are very large size of text database; semantics based translation failure, and complex sentence translation failure. [6]

E. Statistical Translation

Statistical MT model takes the view that every sentence in the target language is a translation of the source language sentence with some probability. The best translation, of course, is the sentence that has the highest probability.

The key problems in statistical MT are: availability of large parallel corpus, estimating the probabilities of translation, and efficiently finding the sentence with the highest probability. The other problems include sentence alignment, compound words, idiom translation, morphology and out of vocabulary words. The following part of the synopsis provides a detailed introduction to the basic statistical MT model.

Suppose we have a sentence, f, given in Hindi language and we want to find a good Punjabi translation, e. There are many possible translations of f into Punjabi, and different translators will have different opinions about the best translation. We can model these differences of opinion with a probability distribution P(e|f) over possible translations, e, given that the Hindi text was f. A reasonable way of choosing the 'best' translation is to choose e which maximizes the conditional probability P(e|f).

The problem with this strategy is that we do not know the conditional probability P(e|f). In order to solve this problem, suppose we have a Hindi-Punjabi parallel corpus as seed corpus. We will use this corpus to infer a model estimating the conditional probabilities P(e|f).

The standard approach to estimate the conditional probability P(e|f) is to use Bayes' theorem. Using this theorem P(e|f) is rewritten as

$$P(e|f) = \frac{P(f|e)P(e)}{P(f)}$$

Because f is fixed, the maximization over e is thus equivalent to maximizing P(f|e)P(e).

The problem of machine translation is broken into three steps:

(1) Build a language model which allows us to estimate P(e);

(2) Build a translation model which allows us to estimate P(f|e); and

(3) Search for e maximizing the product P(f|e)P(e). Each of these problem is itself a rich problem which can be solved in many different ways. The next three sections describe simple approaches to solve these problems.

The language model

Suppose we break a Punjabi sentence e up into words e=e1e2…em. Then we can write the probability for e as a product of conditional probabilities:

$$P(e) = \prod_{j=1}^{m} P(e_j | e_1, \ldots, e_{j-1})$$

For example, in the sentence fragment "ਇੱਕ ਦਿਨ ਦੀ …… ।", the next word with highest conditional probability can be "ਗੱਲ", certainly much higher than the probability of its occurrence at a random point in a piece of text.

The challenge in building a good language model is that there are so many distinct conditional probabilities that need to be estimated. The following assumptions about the probabilities may simplify the problem.

The most drastic assumption that could be made is to assume that the probability of seeing a word is independent of what came before it, i.e.,

$$P(e_j | e_1, \ldots, e_{j-1}) = P(e_j), \text{ so}$$
$$P(e) = \prod_{j=1}^{m} P(e_j).$$

The probabilities P can be estimated by taking a very large corpus of Punjabi text, and counting words i.e.

Where C(e1) represent the number of times e1 appears in Punjabi corpus, and N is total number of words in corpus. The problem is that this model is not very realistic.

A more realistic model is the bigram model, which assumes the probability of a word occurring depends only on the word immediately before it:

$$P(e_j | e_1, \ldots, e_{j-1}) = P(e_j | e_{j-1})$$

A simple approach to estimate conditional probabilities in the bigram model is to take a large corpus of Punjabi text, count the number of occurrences $C(e_1 e_2)$ of a particular word pair in that corpus, and then set

$$P(e_2 | e_1) = \frac{C(e_1 e_2)}{C(e_1)}$$

More realistic still is the trigram model, which assumes the probability of a word occurring depends only on the two words immediately before it:

$$P(e_j | e_1, \ldots, e_{j-1}) = P(e_j | e_{j-2}, e_{j-1})$$

Similar approach used for the trigram model is to set

$$P(e_3 | e_2, e_1) = \frac{C(e_1 e_2 e_3)}{C(e_1 e_2)}.$$

The problem with this procedure is that there are a lot of bigrams. If we assume that there are 50,000 words in Punjabi, say, then there are 2.5 billion possible bigrams. Even if you take a large corpus of training data (say, a billion words), it's reasonably likely that there will be some bigrams which don't appear in the corpus, and thus are assigned zero probability, yet they are likely to appear in translations of some Hindi sentences. That is, this kind of training procedure is likely to underestimate the probability of bigrams which don't appear in the training set, and overestimate the probability of those which do. The problem is even worse for trigrams.

There's no obvious best solution to this problem. Many different ad hoc solutions have been tried, and a quick survey of the literature suggests that there's as yet no broad agreement about the best way of solving the problem. The two basic approaches used in the literature are given here.

The first approach is to move away from a pure bigram model, and instead to use linear interpolation between the unigram and bigram models. A large and diverse enough corpus of text is likely to give pretty good estimates for nearly all single-word probabilities $P(e_1)$. So one way of estimating $P(e_2|e_1)$ is as:

$$P(e_2 | e_1 = \lambda \frac{C(e_2)}{N} + (1 - \lambda) \frac{C(e_1, e_2)}{C(e_1)}$$

Here N is the total number of words in the corpus. $0 < \lambda < 1$ is a parameter in the range which needs to be determined. This can be done using a second corpus of text, and setting so that the average probability of the bigrams in that corpus is maximized.

A second approach is to apply a discount factor to the conditional probabilities for the bigrams which appear in the training corpus, essentially reducing their probability. The easiest way to proceed is simply to multiply them all by some constant k in the range $0 < k < 1$, and then to spread the remaining probability 1-k uniformly over all bigrams (e_1, e_2) which don't appear in the corpus.

The Translation Model

In this section a simple translation model is constructed to compute P(f|e). Intuitively, when we translate a sentence, words in the source text generate words in the target language. In the sentence pair (यह हमारा गांव है। | ਇਹ ਸਾਡਾ ਪਿੰਡ ਹੈ।) we intuitively feel that यह corresponds to ਇਹ, हमारा to ਸਾਡਾ, and गांव to ਪਿੰਡ. Of course, there is no need for the word correspondence to be one-to-one. Sometimes, a word in Punjabi may generate two or more words in Hindi; sometimes it may generate no word at all.

Despite these complications, the notion of a correspondence between words in the source language and in the target language is so useful that it is formalized through alignment. Consider the following aligned sentence pair (बेरोजगारी के कारण युवकों में नशे की आदत विकसित होती जा रही है।| ਬੇਰੋਜਗਾਰੀ(1) ਦੇ(2) ਕਾਰਨ(3) ਜਵਾਨਾਂ(4) ਵਿੱਚ(5) ਨਸ਼ੇ(6) ਦੀ(7) ਆਦਤ(8) ਵੱਧਦੀ(9,10) ਜਾ(11) ਰਹੀ(12) ਹੈ(13)। In this example, the numbers in parentheses tell us that ਜਵਾਨਾਂ corresponds to the 4th word युवकों in the Hindi sentence. However, ਵੱਧਦੀ corresponds to not one, but two separate words in the Hindi sentence, the 9th and 10th words, विकसित and होती. And so on.

One notion derived from alignments, particularly useful in building up our translation model is fertility. It is defined as the number of Hindi words generated by a given Punjabi word. So, in the example above, ਜਵਾਨਾਂ has fertility, 1 since it corresponds to only one word in the Hindi sentence. On the other hand, ਵੱਧਦੀ has fertility 2, since it generates two separate words in the Hindi sentence.

The other notion is distortion. In most of the sentences, the Punjabi word and its corresponding Hindi word or words appear in the same part of the sentence near the beginning, perhaps, or near the end, such words are translated roughly without distortion, while words which move a great distance have high distortion. Since Hindi and Punjabi are closely related

languages and have same sentence structure so problem of distortion can be ignored without affecting the accuracy of translation.

Translation model can be created with following parameters:

♦   The fertility probability $P(n|e_i)$, the probability that the Punjabi word has fertility n.

♦   The translation probability $P(n|e_i, a|e)$, one for each Hindi word f_i and Punjabi word e_i with alignment a.

A translation model is defined as the probability $P(f, a|e)$ that the Hindi sentence f is the correct translation of Punjabi sentence e, with a particular alignment a.

What remains to be done is to estimate the parameters used in constructing the translation model the fertility, and translation probabilities.

2.1.3 Decoding

It was explained in the beginning how translation from Hindi to Punjabi can be viewed as the problem of finding e which maximizes P(e|f), and that this was equivalent to maximizing P(f|e)P(e). Considering the above translation model based on alignment, the problem is reformulated as: search for a pair (e,a) which maximizes P(e,a|f). Using Bayes' theorem this is equivalent to finding (e,a) which maximizes

$$P(e,a|f) = \frac{P(f,a|e)P(e)}{P(f)}$$

Because f is fixed in the denominator can be omitted, so the search is equivalent to finding a pair (e,a) which maximizes $P(f,a|e)P(e)$

Our translation problem is to find (e,a) maximizing above expression. Unfortunately, there are far too many possibilities to do an exhaustive search. But there are some heuristics which work pretty well. One is to use a greedy algorithm which gradually builds up partial translations and alignments. Using the translation and language models described earlier, the probabilities for each of these partial alignments can be computed to find the product $P(f,a|e)P(e)$

F. Procedure for Noun Group Identification

The root and the affixes, which are constituents of a simple word, are not independent words and cannot occur as separate words in the text. Constituents of a simple word are called morphemes or meaning units. The overall meaning of a simple word comes from the morphemes and their relationships [7]. Morphological Analysis is the process of finding the constituent morphemes in a word like cat +N +PL for word cats [8]

The Noun Group identification is done by isolating the basic non-recursive NG that includes

only head, specifiers and modifiers. The Distinct 'words' like खागा, खांग with essentially the same 'sense' but each occurring in a different syntactic context with distinct morphological realization are subsumed under the concept called 'LEXEME'. On the other hand, words like खाऊ (ओह्‌ बडा खाऊ दोस्त ऐ।) ,खाना (खाना खादा?) are different lexemes, because they refer to two or more different kinds of entities'खाऊ as adjective' and 'खाना as noun' . The set of processes that derive the former kind are called 'INFLECTIONAL', while those of the latter are called 'Derivational' or 'Word-Formational Rules'. Compounding is a process of derivation of new words that involves combining two or more words into a single compound form. e.g. (खानापूर्ति एह्‌ सही मेहनत नहीं ऐ बस खानापूर्तिऐ।)

G. Inflection and Paradigm

Thus, the morphology of the word 'जागत' is {noun, masculine, singular, 3rd person}

1. जागत खा करदा ऐ।
2. जागतै रुट्टी खाद्धी।
3. जागता इद्धर आ।
4. जागत जा करदे न।
5. जागतें रुट्टी खाद्धी।
6. जागतो इद्धर आओ।

e.g: words like पुत्तर, देर, जेठ, थाल, बाल, नौकर ते कबूतर follow Paradigm 'जागत'

Lexeme (Root): jAgawa ((जागत)

Function	Singular	Singular
Direct (d)	j Agawa (जागत)	j Agawa (जागत)
Oblique (o)	j AgawE (जागतै)	j AgawM (जागतें)
Vocative (v)	j AgawA (जागता)	j Agawo (जागतो)

Table 1: Inflections of jAgawa paradigm

Function	Singular	Singular
Direct (d)	0/0 (0/0)	0/0 (0/0)
Oblique (o)	a/E (अ ⁄ ऐ)	a/eM (अ ⁄ एं)
Vocative (v)	a/A (अ ⁄ आ)	a/o (अ ⁄ ओ)

Table 2: Derivation of Inflections from Root word jAgawa

H. Implementation and Observations

The input to the system is the cleaned and running corpus. The input text is given to the morphological engine implemented in Perl on Linux platform. The output of the engine is generated on machine in the form of text file which is analyzed for is accuracy of correct identification of Nouns. Out of 100k words (approx.), 85,200 words are tested which gives identification of 78 % words.

```
933   jAgawa           <fs af='jAgawa,n,m,pl,3,d,0,0'>|<fs
af='jAgawa,n,m,sg,3,d,0,0'>
934   jAgawE           <fs af='jAgawa,n,m,sg,3,o,0,0'>
935   jAgawA           <fs af='jAgawa,n,m,sg,3,v,0,0'>
936   jAgawa           <fs af='jAgawa,n,m,pl,3,d,0,0'>|<fs
af='jAgawa,n,m,sg,3,d,0,0'>
937   jAgaweM          <fs af='jAgawa,n,m,pl,3,o,0,0'>
938   jAgawo           <fs af='jAgawa,n,m,pl,3,v,0,0'>
```

Fig 1: Paradigm Implementation

```
1     ciwwara          <fs af='ciwwara,v,any,any,any,,0,0'>|<fs
af='ciwwara,n,m,pl,3,d,0,0'>|<fs af='ciwwara,n,m,sg,3,d,0,0'>|<fs
af='ciwwara,v,any,sg,2,,AM,AM'>
2     jE-jEkAra        <fs af='jE-jEkAra,unk,,,,,,'>
3     02/17/19         <fs af='02/17/19,num,,,,,,'>
4     kaviwA-racanA        <fs af='kaviwA-racanA,unk,,,,,,'>
5     kannE        <fs af='kannE,psp,,,,,,'>|<fs
af='kanna,n,m,sg,3,o,0,0'>|<fs af='kanna,n,m,sg,3,o,0,0'>
6     kohlI        <fs af='kohlI,n,f,sg,3,d,0,0'>|<fs
af='kohlI,n,f,sg,3,d,0,0'>|<fs af='kohlI,n,f,sg,3,o,0,0'>|<fs
af='kohlI,n,f,sg,3,o,0,0'>
7     jvalaMwa         <fs af='jvalaMwa,adj,any,any,,any,,'>
8     rahasyeM         <fs af='rahasyeM,n,m,pl,3,d,0,0'>|<fs
af='rahasyeM,n,m,sg,3,d,0,0'>|<fs af='rahasya,n,m,pl,3,o,0,0'>|<fs
af='rahasya,n,m,pl,3,o,0,0'>
9     waraKAneM        <fs af='waraKAneM,n,m,pl,3,d,0,0'>|<fs
af='waraKAneM,n,m,sg,3,d,0,0'>|<fs af='waraKAna,n,m,pl,3,o,0,0'>|<fs
af='waraKAna,n,m,pl,3,o,0,0'>
10    rOhnnA           <fs af='rOh,v,m,sg,any,,nA,nA'>
11    walASawA         <fs af='walASawA,n,f,sg,3,d,0,0'>|<fs
af='walASawA,n,f,sg,3,o,0,0'>|<fs af='walASawA,n,f,sg,3,v,0,0'>
12    manna        <fs af='manna,v,any,any,any,,0,0'>|<fs
```

Fig 2: Unknown Noun Identification

I. Conclusions

We have identified the features for the implementation of the Noun for Dogri language. These features are categorized and implemented on Linux platform using Perl programming. The input is the running text supplied to the engine and the output is generated in the form of text file. 78% of the accuracy is obtained for the identification of the Noun and we improving the categorization so that more level of accuracy can be obtained. The actual target is to achive an accuracy of 95%.

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SOCIAL SCIENCES

PERCEPTIONS OF TEACHER-EDUCATORS TOWARDS OPEN AND DISTANCE LEARNING

S.K. Panda*

ABSTRACT

Open and Distance Learning (ODL) has emerged as an effective mode in related to teaching-learning process, generally in education particularly in the field of teacher education. The objectives were (i) to study the perception of teacher-educators (both male and female) towards distance education, (ii) to study the perception of teacher-educators towards the effectiveness of Distance education on the teaching-learning process. For the sample of the present study, in the first phase, out of 22 districts in Punjab, two districts were selected randomly. These districts were Pathankot and Gurdaspur. In the second phase, eight Colleges of Education (four from each district) were selected randomly from these districts. Thus, finally, 40 (male 12, female 28) teachers-educators (5 from each college of education) were selected randomly from these colleges of education. In order to collect the required data, a self-made questionnaire for teacher educators was used. The main findings of the study were: the majority of teacher educators opined that ODL did not enhance the quality of learning, cognitive development of students whereas the majority of teacher-educators opined that the girl students, backward/rural students are getting proper advantages of ODL.

Keywords : Teacher-educators, Open and Distance Learning.

Introduction

In India, ODL has experienced dramatic growth both nationally and internationally since the early 1980's. It has evolved from early correspondence education using primarily print based materials into a worldwide movement using various technologies. This conception is argued for by information driven society- a society which demands other means than the existing traditional medium of instruction adopted by educational institutions today. The term "Distance education" refers to an educational approach in which there is a quasi-separation of the learner and the teacher in time and space in distance education, the instructor and the instructional strategy/ methods are sub-summed into the learning material broadcast television, computer conferencing electronic mail, interactive video, satellite telecommunication and multimedia computer technology are all used to promote student teacher interaction and provide necessary feed back to the learner at a distance.

The first example of a distance education practice which was called 'correspondence education' was done through the exchanging of learning materials between the student and

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the teacher by email. As success stories of the correspondence education students were heard, the pioneer practices of distance education at universities were initiated in 1856 in Europe, in 1873 in the USA. In the era of continuing and lifelong education a new class of learners has emerged and for them, education does not terminate at the end of formal schooling. In the last decade, distance education has developed in two major directions: "The individual flexible teaching mode and the extended classroom mode. Due to the rapid development of ODL programmes using a variety of methods are being delivered to students in various locations in an effort to serve the educational needs of growing populations. In many cases, development in technology allows ODL to provide specialized courses to students in geographically remote areas with increased interactivity between students and teachers.

Importance of Open and Distance Learning:-

These ODL institutions play a crucial role in promoting the education in a knowledge society by leveraging different methodologies:-

♦ Access and reach

♦ Equity and gender

♦ Quality and effectiveness

♦ Cost-effective education for all

♦ Bringing quality education to the door step of millions.

The growth of ODL has been exponential over the last four decades in our country beginning. With the establishment of Dr. BR Ambedkar Open University, Hyderabad in 1982, a new chapter in the distance education system began when fully fledged Open University with the mandate to provide distance education was established. This was followed by the establishment of Indira Gandhi National Open University (IGNOU) in 1985. The idea of having institutions imparting open distance learning was accepted by many states and 1987 saw the emergence of two more Open Universities, namely, Nalanda Open University (NOU) Patna, Bihar and Vardhman Mahaveer Open University (VMOU), Kota, Rajasthan. Subsequently, Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik, Maharashtra was established in 1989. The 17 Open Universities till date have a strong network of about 11000 study centers and about 70,000 academic counselors to support the learning needs of students. Previously, ODL programmes in dual mode Universities started with the Delhi University which started offering programmes as correspondence courses in the year 1962. As on 29th June 2017, in India, there are 803

Universities (365 State Universities, 122 Deemed to be Universities, 47 Central Universities, and 269 private universities) and out of that, about 200 distance education institutions in the dual mode universities and institutions which are offering programmes through ODL. There are about 22 lakhs students who have enrolled in the DEIs of dual mode universities. The table given below reflects the year wise growth of ODL Institutions in the country.

Year	Dual Mode of Universities/Institutes	Single Mode OUs	Total Distance Education Institutions
1962	1	-	1
1975	22	_	22
1982	34	1	35
1985	38	2	40
1990	46	5	51
2000	70	9	79
2005	106	13	119
2010	242	14	256

Source: Distance Education Bureau, UGC

During the initial years, the student enrollment increased slowly - from 1,112 students in 1962 to 29,500 students in 1970-71. It increased during the next two decades to about six lakh in 1990-91. In 2000-01, there were about 14 lakhs students studying through distance mode which further went up to about 18 lakhs students in 2005-06. The student enrollment further increases about 37 lakhs in the year 2009-10. Thus, with fresh enrollment in ODL programmes at approximately 40 lakh annually, the share of distance education in the GER is about 22-23%, which is significant.

Year	Conventional Universities/ Colleges	CCIs/DEIs/ Open Universities	Percentage Share of DE	Total
1962-63	7,52,095	1,112	0.147	753207
1975-76	24,26,109	64,210	2.578	2490319
1980-81	27,52,437	1,66,428	5.701	2918865
1985-86	36,06,029	3,55.091	8.964	3961120
1990-91	42,24,868	8,03,176	11.611	6917105
1995-96	65,74,005	10,03,000	13.237	7577005
2000-01	83,99,443	13,78,000	14.094	12861544
2009-10	124,68,560	37,36,744	23.35	16000000 (Approx.)

Source: Distance Education Bureau, UGC

Justification of the Study

The enrolment of students in a particular programme depends on the perceptions of the concerned teachers about the programmer as well as their attitude towards them. ODL will create opportunities for a large number of teachers who require further and continuous education. Teacher education and ODL are separately complex and critically important fields of endeavour. ODL has been used for the initial training of in-service and pre-service teachers who enter programmes with primary, secondary or higher qualifications. The role of the distance education in the 21st century can be summarized as that distance education programmes catch the huge popularity in the educational world with having and spreading discussable sides. Worldwide use of distance education for teacher training is a signal success. To cope with the problem of shortage of teachers, a large number of teachers are trained through this system. The students and the faculty are the key stakeholders in the process of education. ODL has opened up new frontiers for all the stakeholders in education. However, it appears that the perceptions of the teacher-educators about ODL are not studied in depth. Such a study is essential as it can reveal the reasons and the concerns that the teacher-educators have about ODL. If properly addressed, it will help make the ODL programmes gain more acceptances among the teacher educators. ODL has emerged as an effective mode in related to teaching-learning process, generally in education particularly in the field of teacher education. As per latest National Council for Teacher Education (NCTE) Norms and Standards and Distance Education Bureau (DEB) guidelines, for the academic session 2016-17, only 118 universities granted recognition for running ODL courses by the DEB-UGC. Keeping in mind, the importance of ODL in teacher education, the present study, perceptions of teachers-educators towards ODL was undertaken.

Objectives of the Study

1. To study the perception of teacher-educators (both male and female) towards open and distance learning.
2. To study the perception of teacher-educators towards the effectiveness of open and distance learning on teaching-learning process.

Methodology

For the Present study, Descriptive Survey method was used. For the sample of the present study, in the first phase, out of 22 districts in Punjab, two districts were selected randomly. These districts were Pathankot and Gurdaspur. In the second phase, eight Colleges of Education (four from each district) were selected randomly from these districts. Thus, finally, 40 (male 12 and female 28) teachers-educators (5 from each college of education) were selected randomly from these colleges of education. Thereafter, keeping in view the nature and sample of the present study, a self-made questionnaire was considered most appropriate tool by the investigator for the collection of data. Then, the questionnaire was administered to the respondents and the filled up questionnaire were collected from the teacher-educators personally on the spot by the

researcher. In order to interpret the data and to draw a meaningful conclusion, the data were analyzed with the help of simple percentage.

Main Findings

Main Findings are presented in the following sequence.

◆ Majority of teacher-educators opined that open and distance learning did not enhance the quality of learning.

◆ Majority of teacher-educators opined that open and distance learning did not increase the curiosity among the students to learn.

◆ Majority of teacher-educators opined that open and distance learning facility did not lead to the cognitive development of students.

◆ Majority of teacher-educators opined that open and distance learning did not motivate the students to learn.

◆ Majority of teacher-educators opined that open and distance learning never becomes difficult for students to learn.

◆ Majority of teacher-educators opined that open and distance learning was not difficult for counselors to provide feedback to students.

◆ Majority of teacher-educators opined that they were not satisfied with policies regarding open and distance learning.

◆ Majority of teacher-educators opined that distance education is the most effective way to continue education for dropouts, women and poor/backward people.

◆ Majority of teacher-educators opined that open and distance learning was the cheapest means of education.

◆ Majority of teacher-educators opined that open and distance learning involves a variety of style of learning.

◆ Majority of teacher-educators opined that they were aware regarding rules and regulations of distance education.

◆ Majority of teacher-educators opined that the girl's students, backward/rural students are getting proper advantages of open and distance learning.

◆ Majority of teacher-educators opined that distance education helps in reducing the rate of unemployment.

◆ Majority of teacher-educators opined that they were satisfied with the present norms and standard of open and distance learning.

◆ Majority of teacher-educators opined that the degree/ diplomas obtained through open and distance learning are not valued as those through the formal system in some cases.

◆ Majority of teacher-educators opined that open and distance learning was more useful for working people to upgrade their qualification.

◆ Majority of teacher-educators opined that generally weak students were joining open and distance learning courses.

◆ Majority of teacher-educators opined that Distance mode of education was not suitable for professional/technical education.

◆ Majority of teacher-educators opined that due to lack of sophistication of admission procedure in distance education many students were pursuing different types of courses at a time.

◆ Majority of teacher-educators opined that the self-instructional material provided in distance mode was easy to understand.

◆ Majority of teacher-educators opined that the activity included in the self-instructional materials were promoting the habit of self-study.

◆ Majority of teacher-educators opined that interaction with the counselors was helping the development of new insights among students.

Conclusion

The present study reflects that the present scenario of the Perception of teacher-educators towards ODL is not very encouraging; it will not be possible to attain equity and access to the higher education, which is the need of the hour. In order to make the students aware and inculcate a healthy attitude in them, the ODL institutions and the policy makers should come forward with an open mind. Different awareness programmer may be organized at the micro level, especially in the rural areas. Multimedia are though good means of keeping the people aware regarding ODL. Authorities may allow a sizeable amount of fund for promoting ODL among people, the ODL institutions also spend a portion of their earning for making the people aware and developing a healthy attitude in them. Highlights of the achievements of the students of ODL system needs to be made. In order to achieve the target set by the planning commission of India to achieve the target set by the upcoming fifth-year plan, the proper implementation of the ODL in India is very much essential as the target could not be achieved through conventional mode alone.

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DECLINING SEX RATIO: A SOCIO-CULTURAL STUDY IN DISTRICT KATHUA

Asha Rani

ABSTRACT

Son preference has been one of the most evident manifestations of patriarchal society. In India right from her birth, a girl child is treated by the society, including her parents as a burden because of various traditional beliefs and misconceptions of the society. The reaction of the family members is different towards the girl's rights right from the birth. All over the world, the ratio of female-male population is favorable for women except in developing countries like India where males outnumber females. The sex ratio in India has declined drastically since 1961 from 976 to 927 in 2001. It aims to throw light on valuable information about declining sex ratio in some districts of Jammu and Kashmir particularly in reference to the provisional data released by Census 2011 while looking more specifically at the trends in Kathua district which had shown a decline compared to 2001 census. Kathua has shown a decline from 898 in 2001 to 877 in 2011. Kathua ranked at 12th position in 2001 while it has now dipped to 14th position as far as the district wise sex ratio in the state of J&K is concerned. The present paper is an attempt to understand at the micro level the socio-cultural factors that have traditionally undervalued daughters compared to sons and how such factors are contributing to declining sex ratio in the present area of Kathua district in J&K.

Keywords : Patriarchal, Sex-ratio, Discrimination, Neglected, Socio-cultural

Sex Ratio : World Scenario

Sex ratio is understood as the number of females per thousand males. All over the world, the ratio of female-male population is favorable for women except in developing countries like India where males outnumber females. The sex ratio of almost all other countries in the world tends to gradually diminish as a result of increased life expectancy favorable to women, the proportion of boys in Asia's population of children started to rise during the late 1970s and a trend that was not identified immediately for lack of proper data. Initially, the huge gap observed between the number of men and women represented, to a large extent, the legacy of mortality conditions that had been unfavorable to women during the past century. But it emerged that a new, unexpected phenomenon was also underway: sex ratio at birth was tilting towards boys in a way that had never before been recorded in demographic history. A description and comparison have been made about the recent birth statistics in Asia in order to identify commonalities in the gradual demographic masculinisation observed from Armenia to South Korea. This comparison

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provides the basis for identifying the specific transitional patterns of current trends in birth masculinity (Christophe, 2005)1.

Overall, the world is suffering today from the problem of notable decline in the female population. The total population of Africa is 1,037,694,509 persons including 5,186,360,010 males and 5, 190,584, 99 females. More than half of the African countries have sex ratio less than one i.e. they have more number of females than that of males. But India has more number of males than females. The overall sex ratio i.e. the number of females per 1,000 males is falling across the world. Thus, the future indication is that most of the nations of the world will be seen without women.

The total population in Asia is 4,175,332,754 persons which includes 2, 131,947,122 males and 2,043,385,632 females. The sex ratio of total population is 1.043 males/females and sex ratio at birth 1.098 males/females. Historically, most Asian countries have had a strong son preference. The South Asian countries have declining sex ratio. In the beginning of the 20th century, the sex ratio in the colonial India was 972 women per 1000 men, it declined by -8, -11, -5 and -5 points in 1991, 1921, 1931 and 1941 respectively. During 1951 census, it improved by +1 point. During 1961, 1971, 1981, and 1991 it declined by -5, -11, -4, -7 points respectively. Even though the overall sex ratio improved by +6 points, the decline in the sex ratio (0-6 age group) is of -18 points which are alarmingly high. Among the Asian countries as seen in the below figure, only six of them have an equal number of males and females. The United Arab Emirates has highest sex ratio whereas Russia has the lowest (Patel, 2005)2.

Sex Ratio in India

The first population census in British India was conducted in 1872. After India's independence in 1947, a census has been conducted every 10 years; the first occurring in 1951. India has completed its second census of the 21st century. This is the 15th census after independence in a series of census taking in India. Sex ratio in India's population worsened through the twentieth century reaching a low of 927 females per 1000 males (or 107.9 M/100F) in 1991. Some improvement was seen in 2001 and the 2011 census shows a further rise to 940 (106.4 M/100F). This ratio is still more masculine than the global level but has moved in the direction of balance.

India is a country of striking demographic diversity. It exhibits a relatively high but declining fertility and uneven economic development with marked regional disparities by social group, age group, and levels of prosperity. The Northern and Southern states exhibit considerable differences. While the North has lower levels of literacy and relatively higher level of agricultural development, the South generally exhibits higher literacy levels and better health facilities. The Southern states have lower levels of infant, child and female mortality rates and lower fertility rates. The Northern states, on the other hand, have considerably higher rates of infant, child and female mortality and fertility (Jeffery and Jeffery, 1997)3.

The declining sex ratio is the most distressing factor reflecting the low premium accorded to a girl child in India. As per the census of India, juvenile sex ratios were 971, 945, 927 and 940 for 1981, 1991, 2001 and 2011 respectively. In 2001, India had 158 million infants and children of which 82 million were males and 76 were females. There was a deficit of 8 million females. In 2011 census there are 62.4 million men and 58.3 million women. There is a deficit of 3.8 million women in 2011. This is the result of the widespread use of sex-determination and sex-pre-selection test throughout the country (including Kerala), along with the high rates of female infanticide. In the BIMARU (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh.) states, rural Tamil Nadu and Gujarat, millions of girls have been missing in the post independence period. According to UNFPA (2003), 70 districts in 16 states and union territories recorded more than 50 points decline in sex ratio in the last decade (Desai and Thakkar, 2001)4.

The sex ratio in India has declined drastically since 1961 from 976 to 927 in 2001. The provisional data released by the census office 2011 shows that the sex ratio has further declined to 914 girls for every 1000 males as compared to 927 in 2001.

Sex Ratio in Kathua District of Jammu and Kashmir

Declining sex ratio is an issue of grave concern. The sex ratio in India has declined drastically since 1961 from 976 to 927 in 2001. The provisional data released by the census office 2011 shows that the sex ratio has further declined to 914 girls for every 1000 males as compared to 927 in 2001. Jammu & Kashmir has shown a fall of 9 points as compared to 2001 census with its child sex ratio falling to 883 as compared to 892 in 2001 making it the third worst state after Haryana and Punjab. Some districts have shown improvement while the others have shown a decline. Kathua has shown a decline from 898 in 2001 to 877 in 2011. Kathua ranked at 12th position in 2001 while it has now dipped to 14th position as far as the district wise sex ratio in the state of Jammu and Kashmir is concerned (Daily Excelsior, 2011)5.

Jammu and Kashmir have seen the most precipitous drop; the overall sex ratio has increased from 933 females for every 1,000 males in 2001, to 940 in 2011, indicating that a girl child's chance at life greatly improves once she crosses the age of 6. Only three major states have shown a decline in sex ratio: Jammu and Kashmir, Bihar, and Gujarat. In 2001, Jammu and Kashmir had a better sex ratio than the Indian average (Times of India, 2011)6.

It can be clearly seen the situation worsening day by day thereby calling for the immediate attention of the society as a whole and the social scientist community, in particular, to probe into the matter with urgency. The present research is an attempt a step towards the same to see the trends of sex-ratio and the sociocultural causes behind the declining sex ratio in Kathua district.

Methods of Data Collection

The data for the study was collected from both primary and secondary sources. Data refers to the facts from which other facts may be deduced. Primary sources of data are original

sources from which researcher directly collects data that have not been previously collected i.e. primary data was directly collected by the researcher from their original sources. The secondary sources were included the books, journals, reports, news papers, census reports and other government documents. For the collection of the reliable first-hand information, field work was carried out in the study area.

The primary collection of the data has been done through field work in which interviews have been conducted with the help of the interview schedule that contains both open ended and closed ended questions along with the observation, interview schedule, and personal interview method.

Observation is a deliberate study through the eye and may be used as one of the methods for scrutinizing collective behavior and complex social institutions as well as the separate units composing of totality (Young, 1939)7. Observation yields a treasure of data on nonverbal behavior and what people's action means. But there is also a need to know why people do what they do, what they did in the past when the observer was not there, what they do in the situations that are not accessible to the observer, and what their views are about various social issues (Good and Hatt, 1989) 8. The study had made use of Non-participant observation method to gather the information from the field.

The 'Interview Schedule' was used to record the first-hand information given by the respondents and will consist of both open and closed ended question. With the decision of applying structured or formal interviewing technique, the construction of interview schedule was also required.

A personal interview is a technique for gathering information through face-to-face contact with individuals. It was decided to take up the interview as one of the primary tools to gather data from the field. The objective of the interview method is to have the exchange of ideas and experiences, eliciting of information pertaining to a wide range of data in which the interviewee may wish to rehearse his past, define his present, and canvass his future possibilities.

FINDINGS OF THE STUDY

In India, right from her birth, a girl child is treated by the society, including her parents as a burden because of various traditional beliefs and misconceptions of the society. The reaction of the family members is different towards the girl's rights right from the birth. Often, the girl is born and brought up in an atmosphere where the family would have rather preferred a boy in her place. This attitude of acceptance to large extent affects her existence. Those who survive are also discriminated against and neglected in numerous ways.

This bias is rooted in a complex set of religious, economic, social and cultural factors. The mortality rate of young girls of different age groups is much higher than young boys because of the preference for male children, resulting in the neglect of girl children. The hatred towards a

girl child has grown up so much and brought into the system of eliminating the girl child - the vulnerable and unwanted gender, in the womb before she sees the world. The sex ratio is already precarious owing to the discrimination against daughters. Abortion of unborn daughters is bound to accelerate the downward slide of a female along the demographic ladder.

In India, the cultural factors such as kinship systems and religious traditions also tend to value males more highly than females. For example, traditional matrilineal kinship systems require women to marry outside their families of origin and after marriage not provide financial or even emotional support to their parents. Over the last decade, the births of nearly two million Indian female fetuses were prevented as a result of female foeticide. A study from the North Indian Kathua-district - including the conflict zones Kashmir and Jammu - revealed that 71 percent of all induced abortions are being performed on female fetuses. With a 21 percent increase in the overall induced abortion rate, between 1998 and 2003, the imbalance in the sex ratio in this district has increased significantly. Researchers say that these figures represent the abortion situation in many parts of India9.

During the field observation, the maximum number of the respondents argued that there is nothing wrong in having sex-selective abortions. There were some who had gone for repeated abortions. In a particular case, a woman had five abortions. Most of the women who were aborted the girl child not much qualified. While others who did not abort the girl child was more qualified i.e. post graduate and above. Thus, from the above discussion, it shows that the education also affects the perceptions of women.

As observed during the fieldwork some of the girls were not healthy. They were discriminated in nutrition and looked weaker than their male siblings. Their parents also admitted that they did not find it important to feed their daughters at par with their sons because they did not have to work as hard as the boys. And it was also useless to water your neighbors' plants. The girls were seen as a plant in their homes that had to be uprooted and given to someone else after some time. So they were the 'praya dhan' and needed not to be fed at par with their own wealth, their sons.

They were also discriminated in terms of provision of education. Girls were sent to the nearby government schools and boys were sent to private schools. Girl children were not allowed for higher education, they were at the home for doing household chores as the respondents argued that it was more important for a girl to learn the ABC of cooking and other household work rather than the ABC of academics. It was also seen that they were neglected by their family members in almost all the aspects including their love and blessings that were all reserved for the sons.

As often said that it is mainly a woman who discriminates between a boy and a girl but let me quote a surprising fact here that majority of the men as discriminate between a boy and a girl. The reasons put forward by men for such discrimination were- it is a burden to have a daughter as

they have to bear the expenses of their marriage which include a huge stock of dowry as a mark of status and honour for the girl. Moreover, there is always a threat of a girl bringing a bad name to the family by having love affairs with boys and also if she has been sexually exploited by someone. So there is always a sort of nervousness in the family to keep the girl protected from all sorts of dangers. Another interesting fact that should be relevant to be mentioned here is that though all the people were suffering because of this practice of dowry yet most of them wanted to have dowry at the time of their son's marriage.

Nearly all the respondents; males, females, and mother-in-laws maintained that it is important to have sons in the family as a family cannot be run without a son but not without a daughter. While boys are taken due care of, are considered as the apple of the eye or Cynosure, or khandaan ka chirag, this is not in the case with girls. In the eyes of the society, to have a son is a symbol of status. This mentality of the society is reflected in regional saying like beta mare kambakht ka; beti mare bhagyanwan ki, and Kun jage beti or baap. Delivering a male child bestows upon the woman a high social status and those delivering daughters are looked down upon. Owing to this, many women become instrumental in committing such heinous crimes like aborting the girl child before they are born. In many cases, a woman aborts her female fetus in response to societal pressure but there are also instances when the woman herself makes the decision. Majority mother-in-laws forced their daughter-in-law for a son.

Son preference is thus deeply embedded in our socio-cultural practices that find relevance in our religious literature. Even after attaining a good literacy level, we have not been able to get rid of our old practices. It was observed that majority of the male respondents told that tradition encourages for a son because a son is compulsory for the last rites, to continuous family lineage, for the inheritance of property while the girl marries and go in her in-laws so a son is compulsory.

The women though had the same reasons too behind not preferring to have a daughter; they had another important reason as to who will carry their name forward if they did not have a son. A son was seen as the 'kul deepak'.

With all these substantive observations, we can clearly see that the girls are first not let to take birth and those who are given their right to see this world is further given another kind of death every day by discriminating them in all walks of life and comparing them with boys' who are considered superior to girls and thus 'achhi cheez' (blessing). It can often be heard by the elderly people blessing the expecting mothers to have an 'achhi cheez' (son) or cursing someone to have a daughter. In such a situation where a girl is given birth, she is deprived of many opportunities.

Apart from the opportunities like access to education, nutrition etc. there were many other occasions when they were discriminated against right from the birth. In many cases, it was noted that the mother did not even like to breastfeed the new born just because she was a girl.

There were no celebrations at the time of the girl's birth. Majority of the families performed lavish ceremonies at the time of a son's birth while only a few performed it at a girl's birth but the celebrations were not that lavish. It was just a part of their ritual which they have to perform in any case.

Even the hospital staff does not demand 'badhai' at the birth of a girl child who would otherwise ask for thousands of rupees. They never dare to congratulate the parents on a girl's birth. Even the "khusras" do not come to ask for their share if they know the new born is a girl.

During the field work one of the Dais expressed that when a boy baby is born, people are happier. On the birth of the baby boy, people give her money, jewellery, and clothes. She informed that in her whole carrier most of the deliveries she has helped in, were a boy and lesser were girls. She informed that there are the various rituals performed by women like special puja, hawan (fire rituals), mannat (seeking a boon), visiting the temple and observing fasts which are considered as done to please the deities who in turn grant a boon, vis-à-vis, a son.

Many women become instrumental in committing such heinous crimes like aborting the girl child before they are born. In many cases, a woman aborts her female fetus in response to societal pressure but there are also instances when the woman herself makes the decision. Social practices like lavish marriages of daughters, dowry, providing safety to girls from sexual harassment even inside the home continue to rule the roost.

Thus, the various factors such as son preference, reluctance towards having daughters and other sociocultural factors are the main reasons for declining sex ratio in the Kathua district of Jammu and Kashmir.

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Environmental Provisions and Regional Trade Agreements: Emerging Trends and Policy Drivers

Bipin Kumar

ABSTRACT

One of the most perplexing and complex problems relating to the world trading system presently is the proliferation of a wide variety of regional trade agreements. In recent years, we have witnessed a massive rise of regional trade agreements across all regions of the world. The present paper examines the contemporary trends in the use of environmental provisions in regional trade agreements and identifies factors which may explain the presence or absence of these provisions. Analysis of the environmental provisions in RTAs reveals an encouraging upward trend. While basic provisions remain the most common types found in RTAs, the incidence of more substantive provisions has increased significantly in recent years. Among these, environmental cooperation has been the most common type. This paper further deals in detail with factors influencing the negotiation of environmental provisions in RTAs, trends in environmental provisions by country, political commitments for environmental provisions in RTAs with benefits and barriers.

Keywords : Environment Provisions, Regional Trade Agreement, Policy.

Introduction

In recent years, we have witnessed a massive rise of regional trade agreements across all regions of the world. The coverage and depth of preferential treatment differ from one RTA to another. There is, however, a large number of RTAs that goes beyond tariff-cutting and provide for complex regulations on intra-regional trade in goods (standards, safeguard provisions, customs administration, etc.) and preferential treatment for intra-regional trade in services. A select group of RTAs goes beyond traditional trade rules and provides rules on investment, competition, environment, and labour. Countries decide to form an RTA for various reasons. All countries are embracing some form of regional trade agreements. Nearly every country belongs to at least one such bloc. A hotly contested issue in the context of RTAs is that whether RTAs are merely second-best alternatives to multilateralism, or are stumbling blocks for multilateralism, or are valuable building blocks for multilateralism. In the recent past, there is a significant increase in the number of RTAs which are having environmental provisions. The majority of the RTAs contain a general exception similar to Article XX(b) of the GATT, 1994, enabling the parties to adopt measures necessary to protect human, animal or plant life or health subject to the requirement that such measures are not applied in a manner which would constitute arbitrary or unjustifiable discrimination or a disguised restriction on trade. These measures can be divided

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into two broad categories i.e measures to protect or enhance the environment, cooperation on environmental matters including specific provisions, and citizen's participation in trade related environmental activities. Most RTAs have some type of institutional arrangements for implementing the provisions either as a separate activity or as part of the general implementation procedures.

After the 1992 Rio conference, much of the effort on trade and environment focused on the action at the multilateral level, through the completion of the Uruguay Round, the formation of the WTO and the launch of the Doha Round in 2001. However, only limited progress was made at the multilateral level, and much of the effort on trade liberalisation shifted to the bilateral or regional level. In consequence, the incorporation of environmental provisions in RTAs has assumed increasing importance (through the first of the policy drivers) in the global effort to achieve sustainable development.

RTAs with substantive Environmental Content

The concern about RTAs in trade terms is that the economic and social benefits of equal, most favoured nation treatment for all trading partners through a single set of rules under the WTO will be diminished or dissipated in the complex network of differing rules and special preferences for one trading partner or another across multiple RTAs. For environmental policy, the corresponding concern about RTAs has two distinct elements. First, would uniformity of environmental rules and practices throughout the world have similar theoretical benefits to the uniformity of trade law? In other words, is the WTO, or an environmental counterpart to the WTO, the "first-best" approach to international environmental policy, at least insofar as it is linked with international trade in goods and services? Or do regional environmental agreements have advantages over a worldwide set of rules and practices? The second element of concern for RTAs is whether, in principle and in practice, environmental policy coordination between countries can be effectively achieved or enhanced by linking bilateral or multilateral agreements and cooperation on environmental policy to the trade policy impetus behind RTAs.

The North American Free Trade Agreement (NAFTA)

Among the many RTAs, NAFTA has probably been analysed more than any other regional agreements both at the institutional level as well as by individual scholar's level. NAFTA is a trade agreement between Canada, Mexico, and the United States, which entered into force January 1, 1994. NAFTA has side accords (separate non-trade agreements) on labour and the environment, without which it is doubtful the U.S. would have accepted the Agreement. Under the environmental side agreement, a citizen submission is lodged with the secretariat of the body administering the agreement (the Commission for Environmental Cooperation) and may lead to that body preparing a factual record of the issue.

The environmental agreement created the Commission for Environmental Cooperation, which promotes environmental cooperation among the three countries, and by which dispute

settlement provisions can be invoked if a country persistently fails to enforce environmental laws that have conferred a trade benefit. Note that the CEC itself does not set standards in the various countries, though part of its mandate is to help harmonize them upward. Rather, its role in such disputes is to see that enforcement of existing laws takes place. It is also charged with, among other things, monitoring the environmental effects of NAFTA.

Investment: Chapter 11

In NAFTA's Article 11 the parties promise that they will not try to attract investment by relaxing or ignoring domestic health, safety or environmental regulations. This is a laudable promise, but there is no enforcement mechanism to ensure that it is kept. Other parts of Chapter 11 strive to ensure that foreign NAFTA investors will be safe from harassment by host governments. They do not allow expropriation without due process, for example, and in general oblige host governments to follow the same standards for foreign investors as they do for domestic ones.

Standards: Chapters 7 and 9 of NAFTA

NAFTA deals with sanitary and phytosanitary (SPS) measures in Chapter 7, and all other standards-related measures (SRM), including environmental standards, in Chapter 9. The two chapters outline how the parties should establish their respective levels of protection, set the standards which achieve those levels of protection, and base those standards on science. For both kinds of standards, NAFTA gives parties the right to establish the levels of protection they find appropriate. But with SPS measures on non-human health issues, the parties must do a sort of cost-benefit analysis of the problem and the solutions, and are bound to enact the most cost-effective solution. All SPS measures must also avoid differences in levels of protection in different cases, where those differences result in discrimination against foreign-produced goods. A party could not, for example, set low levels of protection on the fruits that it grows, and high levels on those it must import. NAFTA also specifies that the parties' standards should be "based on scientific principles." The NAFTA standards text seems to incorporate a precautionary approach; Articles 907.3 of the SRM text and 715.4 of the SPS text allow parties to enact environment, health and safety measures even where scientific evidence is inadequate to assess risk.

International Environment Agreements: Chapter 104

NAFTA Article 104 lists seven international environmental agreements and agrees that they will trump NAFTA in the case of disagreement. The seven IEAs are the following:

♦ The Montreal Protocol;

♦ The Basel Convention (when all three parties have ratified);

♦ CITES; and

♦ Four bilateral treaties.

This seems a step in the right direction how to deal with IEAs is a topic of great

controversy in the WTO. But NAFTA parties are all signatories to these agreements, and much of the WTO controversy is over disputes between signatories and non-signatories. And then there is the fine print. The domestic laws resulting from these IEAs must be those "least inconsistent with the other provisions of [NAFTA]." So a party would have to show that a challenged measure could not have been somehow "better," or more consistent with NAFTA. But the more NAFTA consistent alternative does not need to be politically or economically feasible.

The European Union

The European Union has developed extensive environmental legislation. As the shape of markets changes, essential market disciplines, including environmental requirements, must be adjusted to reflect the structure of integrated European markets. EU environmental legislation has more than 300 items, covering every aspect of environmental policy. Directives cover emission standards and quality objectives for water; managing hazardous and domestic waste; packaging; atmospheric emissions from plants and vehicles; air quality standards and the stratospheric ozone layer; all aspects of toxic substances control; nature protection, migratory birds, endangered species; wildlife; noise; and climate change. Furthermore, EU legislation addresses impact assessment, freedom of information, eco-labeling, eco-management and auditing, and has established financial and economic instruments for environmental management. The EU's Common Agricultural Policy provides substantial sums of money for the protection of nature in rural areas. Environmental management is a responsibility shared between the EU and member states, whereas trade lies exclusively with the EU. This asymmetry has rendered the balancing of environment and trade interests more difficult since the functions of key actors are different in the two areas of policy.

Mercusur

The Mercosur structure, though still evolving, provides several environment related innovations. More explicit environment and trade linkages are made through various legal mechanisms that combine elements of a developing regime. Several resolutions have touched upon issues such as pesticides, energy policies and transport of hazardous products.

As a result, the Canela Declaration of 1992 created an informal working group to study environmental laws, standards and practices in the four countries. This body has been involved for over two years in negotiating a new environmental protocol, which is being added to the Treaty of Asuncion of Mercosur. A comprehensive stand-alone treaty, this draft agreement provides for upward harmonization of environmental management systems and increased cooperation on shared ecosystems, in addition to mechanisms for social participation. It includes provisions on instruments for environmental management, including quality standards, environmental impact assessment methods, environmental monitoring and costing, environmental information systems and certification processes. It also includes a section on protected areas, and one on conservation and sustainable use of natural resources, including

biological diversity and proposed language on bio safety, wildlife, forests, soil, atmosphere and water conservation.

Implementation of Regional Trade Agreements with Environmental Requirements

The Checklist for Negotiators of Environmental Provisions in Regional Trade Agreements provides useful guidance to negotiators on the different models for specifying the scope, content and institutional arrangements of environmental provisions in the text of an RTA. With a large number of RTAs in force and more than a decade of experience in the implementation of provisions on the environment, taking stock of this experience and providing guidance on future implementation issues, such as the question of —what works and what does not? could be valuable.

There have been many ex-ante assessments of the need for environmental provisions in RTAs. These ex-ante assessments have become extensive formal studies, incorporating large data surveys and economic modeling, but rarely physical modeling. However, the ex-post analysis is still rare. Within the OECD, a discussion on methods for undertaking ex-post assessments was initiated before the surge in RTA negotiations, and no further work was envisioned on this issue following the workshop held in 1999 due to the complexity of the issue and the political stakes, especially in the absence of definite objective measurements of outcomes.

Points to be Incorporated in "Implementation"

Different approaches can be used to incorporate environmental provisions in RTAs. In some trade agreements, particularly early ones, the environment is merely mentioned in the preamble of the agreement. While environmental issues are sometimes addressed in separate side-agreements, there is a growing trend to address them in relevant sections of the main text of the trade agreement and to include specific chapters on trade and environment in the agreements. In some recent EU agreements, environmental and social issues are combined in a separate sustainable-development chapter. The way environmental considerations are incorporated in RTAs can be important when it comes to implementation.

In addition, a number of RTA's reproduce the exceptions provisions in GATT 1994 Article XX that include exceptions to the trade liberalization provisions of the RTA were necessary to achieve an environmental objective (e.g. conservation of a scarce natural resource). These clauses contribute to the definition of the scope of the agreement.

Institutional Arrangements

Most RTAs with environmental provisions that commit the parties to work together, through cooperation or capacity-building activities, or through engagement on enforcement of and compliance with environmental laws, also provide for the designation of national contact points to facilitate communication and the establishment of governing bodies to oversee and manage the relationships. The forms and functions of such bodies vary among RTAs depending

on the number of parties and the nature and purpose of the ongoing engagement.

Co-Operation Activities

Most regional trade agreements with environmental provisions require cooperation between the Parties to achieve the objectives of the agreements, and in particular for technical assistance transfers. Forms of cooperation may include the development of common actions; the exchange of information and experts; the joint organisation of events; and the facilitation of partnerships, including with the private sector.

Public Participation

Several RTAs provide for public access to implementation processes for environmental provisions, including by allowing for citizen submissions to joint committees on environmental matters or the publication of documents on disputes. Although providing for public access is common in the agreements, the degree of public access seems to vary greatly, in particular, according to existing laws, regulations, practices, tradition and joint institutions between the parties.

Dispute Settlement and Consultation

Some mechanisms exist to address the need to settle disputes among the parties such as those concerning the provisions on environment embodied in the RTAs and side agreements. Citizens or firms of each party may have access to the disputes procedures. The United States-Chile FTA provides an example of comprehensive provisions establishing these private rights. Some countries use binding dispute-settlement processes, while others use a range of options from binding treaty status outcomes with prescriptive consultative mechanisms (e.g. New Zealand-China, New Zealand-Philippines) to non-binding arrangements (e.g. New ZealandThailand).

Commitments and Environmental Law Standards

Regional trade agreements with environmental provisions sometimes include commitments or obligations that require the parties to recognise particular principles or abjure from particular actions. Some examples include commitments not to weaken or fail to enforce environmental laws in order to secure a trade advantage, and commitments not to use environmental standards as disguised barriers to trade. Some RTAs recognize that the parties to an agreement have the autonomy to determine their own levels of domestic environmental protection. The Australia-United States free trade agreement is an example. The EU's Economic Partnership Agreements (EPAs) with developing countries in Africa the Caribbean and the Pacific make almost identical provisions. Similar provisions not tied explicitly to trade obligations can be found in the RTA side-agreements negotiated by the United States and Canada: NAAEC, Canada-Chile, Canada-Costa Rica.

Promoting the development of environmental goods and services

The promotion of trade in environmental goods is another element to be considered in

this framework. Article V of the USA-CAFTA-DR Environmental Cooperation Agreement, for example, includes among its work program and priority areas for cooperation facilitating technology development and transfer and training to promote the use, proper operation and maintenance of clean production technologies [subparagraph (g)], and developing and promoting environmentally beneficial goods and services [subparagraph (h)]. The agreement between Japan and Mexico for the Strengthening of the Economic Cooperation provides another illustration. Article 147 on cooperation in the field of environment makes reference to cooperation activities including —exchange of information on policies, laws, regulations, and technology related to the preservation of the environment, and the implementation of sustainable development. Chapter 4 of the CARIFORUM agreement also stipulates the parties'resolution to —conserve, protect and improve the environment and —to promote trade in environmental technologies, renewable- and energy-efficient goods and services.

Provisions on Relationship to MEAs

Several recent RTAs, or environmental side agreements to RTAs, specifically address the relationship with environmental and conservation agreements. NAFTA states that, in the event of inconsistency between its provisions and specific trade obligations under certain specified environmental and conservation agreements, the latter shall prevail to the extent that there is an inconsistency provided that, where a Party has the choice among equally effective and reasonably available means of complying with such obligations, the Party chooses the alternative that is least inconsistent with the provisions in NAFTA. The Chile-Mexico agreement contains a very similar provision. Bilateral agreements between Georgia and various countries in the region preserve the right of a Party to implement measures concerning the protection of human health, animals, plants and the environment that are necessary for the fulfillment of international agreements.

Technical Cooperation on the Environment

Many RTAs contain side agreements or statements of intent to facilitate technical cooperation in the area of the environment. These have become particularly commonplace in bilateral free-trade agreements between OECD Member countries and non-member countries and usually, focus on capacity building in the less-developed of the two countries. The United States-Jordan Joint Statement on Environmental Technical Co-operation, for example, focuses on strengthening human and institutional capacity and improving management of Jordan's water and other natural resources upon which the country's development depends. In the agreements signed by Canada, the commitment to environmental cooperation is spelled out in detail. While the framework of objectives and obligations provides a focus for implementation of the agreements, the associated co-operation activities form a major focus of ongoing implementation. The side agreements create an ongoing environmental partnership which parallels the economic partnership created by the trade agreement and deepens the overall relationship. In the context of the CCFTA, there has been a considerable amount of support

provided to Chile for capacity building and cooperation, focusing on such areas as compliance and enforcement of environmental regulations, environmental certification, and environmental assessment of trade negotiations. Even more of the same is envisioned under the CCRFTA.

Under the ACP-EC Partnership Agreement (Cotonou Agreement), sustainable management of natural resources and environment shall be applied and integrated at all levels of the partnership. A number of provisions focus specifically on the environment and provide for cooperation in this field, including institutional development and capacity building. The Short and Medium Term Priority Environmental Action Programme (SMAP) for the Mediterranean, adopted in 1997, provides a framework for environmental protection in the region. It aims to guide investments to a number of specific environmental priority areas (e.g., waste and water management, coastal zone management, desertification and biodiversity loss) and calls for the adoption and implementation of legislation and regulatory measures, in particular preventive measures and appropriate environmental standards, while discussions continue over a proposed Mediterranean Free Trade Zone.

The Japan-Singapore Economic Partnership Agreement contains a chapter on cooperation in the field of science and technology, including life sciences and environment. The forms of cooperative activities specified in the Agreement are an exchange of information and data; joint seminars; workshops and meetings; visits and exchange of scientists, technical personnel or other experts; and implementation of joint projects and programmes.

A few RTAs contain provisions relating to cooperation in the management of natural resources. Chapter 16 of the COMESA Treaty, for example, provides for cooperation in the development of natural resources, environment, and wildlife. In the COMESA Treaty, Parties commit to accede to relevant international environmental and conservation agreements.

They also make provision for collaboration between member states to achieve the objectives of international agreements applicable to the conservation and sustainable use of wildlife. In addition, SADC's Protocol requires that member states ensure that activities within their borders do not cause damage to the wildlife resources of other states or areas beyond the limits of national jurisdiction.

Conclusion and Suggestions

The numbers of regional arrangements, both at the bilateral and regional level have increased many folds in recent years. NAFTA led the way to include the environmental provisions in the RTAs. After NAFTA the trend to include the environmental provisions has increased. Most of these RTA are having similar provisions quite similar to Article XX of GATT, 1994. As mentioned above they consist of three type's i.e measures to protect or enhance the environment, cooperation on environmental matters including specific provisions, citizen's participation in trade related environmental activities and some type of institutional arrangements for implementing the provisions either as a separate activity or as part of the general implementation procedures. There is no doubt that these inclusions have resulted into

the better administration of environmental laws and their enforcement, although the enforcement part is still often weak. The cooperative action among the agencies dealing with the environment in the countries which are the members of these RTAs has increased as well. The fund is sometimes the real problem. But still, the expenditure on funding cooperative activities have resulted in the greater expenditure by the countries on environment protection.

The weaknesses in international environmental policy and the difficulty of engaging the WTO's serious interest in environmental matters reflect the general imbalance between economic and environmental policy seen in governments around the world. RTAs may well be the better vehicle to enhance environmental protections. A commitment on the part of two or more governments to negotiate an RTA provides an excellent political opportunity for environmental interests within each country to press their governments to pay attention to common environmental interests as they are discussing closer economic coordination and mutual economic benefit through the RTA. At the regional level, it is easier to identify specific issues that should be addressed and to devise and agree on specific solutions or specific mechanisms for addressing those issues collaboratively.

End Notes:

Article 32 of the Cotonou Agreement. A Joint Declaration on Trade and Environment (Declaration IX) and an ACP Declaration on Trade and Environment (Declaration X) are annexed to the Agreement.

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Social Mobility and Scheduled Caste Women: A Study of Amb Village in Jammu District.

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ABSTRACT

The present paper is about the social mobility of Scheduled Caste women. The present study was conducted among the Scheduled Caste women of Amb Village in Jammu district. Social mobility may be understood as the movement of people from one social status to another status. The Scheduled Caste women who constitute a sizeable population of Indian society suffer from dual disadvantages: (a) of being Dalits, i.e. socio-economically and culturally marginalized group, and (b) of being women, i.e. share the gender-based inequalities and subordination. After independence, the constitutional provisions, acts and regulations safeguarding the interest of Scheduled Caste and more specifically Scheduled Caste women, have been enacted. Governmental efforts, new socio-economic developments and equal opportunities for education have created new attitudes and aspirations among the Scheduled Caste women as well as the status and style of life of the Scheduled Caste women has improved a lot. In Amb village, it is observed that Scheduled Caste women have improved their educational and occupational status when compared to earlier periods. Based on these variables, the present paper explains in detail the socio-economic development among the Scheduled Caste women of Amb Village in Jammu District. Other indicators of social mobility like age at marriage, participation of Scheduled Caste women in political activities etc. have also been taken into account.

Keywords : Social Mobility, Scheduled Caste women, Education, Occupation

Introduction

The status of women in a society is the true index of its cultural, social, religious and spiritual levels. The social standing of any society is determined by the social status of women. The status of women in the society depends on the role played by them and how others look at their role. It is one of the most important criteria for estimating with precision the degree of civilization attained by a particular society in various periods of its history (Devendra, 1994). Indian society from the very beginning has been a dynamic one and has seldom spurned spontaneous changes from outside (Kuppuswamy, 1993). Any attempt to assess the status of women in a society should ideally start from the social framework. Social structure, cultural norms, and value systems are important determinants of women's roles and their position in society.

The caste system, in Indian society, is still the most powerful factor in determining a

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person's dignity. Caste is the most outstanding disability that affected Scheduled Caste women in the past and continues to undermine their position at present. The caste system is the result of the Hindu belief in 'Reincarnation and Karma' (Anand, 2005). The caste system in its entirely constitutes a hierarchy of status with the Brahmins at the principle and the untouchables or dalits or Scheduled Castes at the base (Saxena, 2009). The word "Dalit" which is a self-designation for a group of people, traditionally means 'ground', 'suppressed', 'crushed' or 'broken pieces'. There are many different names proposed for defining this group of people including 'Panchamas' (5th varna) and 'Ashprush' (Untouchables). The term was used by Joytirao Phule in the 19th century in the context of oppression faced by the erstwhile "Untouchables caste of the twice born Hindus" (Zelliot, 1996). The term Untouchables was created by the Maharaja of Baroda in 1909 to describe the stigma (untouchability) attached towards Dalits. This practice of 'Untouchability' did a great injustice to the members of such castes as they were deprived of basic rights like education and equality, and were discriminated in every sphere which resulted in their socio-economic deprivation. (Rachna, 2013)

The significance of the present paper lies in an attempt to study inter-generational change and the process of mobility among the Scheduled Caste women. As the research is an attempt to study the process of mobility among the Scheduled Caste women, the study would be helpful in highlighting the existing social and economic status of Scheduled Caste women in Jammu district.

Social Mobility and Scheduled Caste Women

The present paper deals with intergenerational mobility among Scheduled Caste women of Amb Village in Jammu district. Social mobility has been defined as the movement of people from one status category to another status category (Raksha, 2012). The term 'social mobility' refers to the process by which individuals move from one position to another in society-positions which by general consent have been given specific hierarchical values. (Wankhede, 1999)

P.A. Sorokin in his book 'Social Mobility' has defined it as the movement of people from one social stratum to another either upward or downward. Sociologists have categorized social mobility into several types: horizontal, vertical, intragenerational and intergenerational. The first is known as horizontal social mobility, which refers to change in the occupational position or role of an individual or a group without any change in the position in the social hierarchy. The second, i.e, vertical social mobility refers to the process in which the position of an individual and group change in the social hierarchy. The third type of social mobility may be referred to as intra-generational mobility, which means a positional change in the individual over a period of time. The fourth type of social mobility is intergenerational mobility, which is measured by comparing the occupational status of parents with that of children. (Sorokin, 1927)

The Scheduled Caste women are singularly positioned at the very bottom of Indian

society. The Scheduled Caste women who constitute the sizeable population of India are subjected not merely to gender bias, but also to indignities arising out of the age old tradition of untouchability from which incidentally the entire social group of Scheduled Caste suffers. The deep rooted social discrimination has compelled this section of India's population to lead a life of bare subsistence level, both in economic terms and human values. (NCW, 1998)

The bulk of SC women are engaged in agriculture labour and cultivation in rural areas, and miscellaneous services, domestic labour, work in a factory and household industry in urban areas. The financial position of Scheduled Caste women is adverse. In rural areas, SC women are closely identified with their caste status and ensuring social disabilities. Therefore, these women suffer all deprivations which their caste group as a whole suffers. Besides, they have to undergo additional hardships because of their gender. Both caste and patriarchy hence work to determine SC women's conditions (Sharma and Sharma, 2006). In rural areas, the hardships of Dalit women have increased over the years. Though there are some hopeful signs of upward improvements in health, housing and education of dalit communities, such instances are comparatively fewer. (Jogdand, 1995)

Over the last few decades, development in India has served to enhance the opportunities of many upper-class, urban women. These women now have greater access to education and employment, and as a result, are able to participate in the economy on an equal basis with men. (Karlekar 1982; Liddle & Joshi 1986)

Since the last century, in India, winds of change have been blowing over many traditional institutions and concepts (Saxena, 2003). After independence attempts have been made by the government of India to deal with the problems of Scheduled castes. The constitutional provisions, acts and regulations safeguarding the interest of scheduled caste and more specifically scheduled castes women, have been enacted with three broad objectives: a) to provide reservation in education, employment, state assemblies and parliament, b) to give them protection from social injustices and from all forms of exploitation, and c) to raise their overall standard and remove social disabilities from which they suffer (Ram, 1988). After independence in 1960's and 70's the Dalit movement and women's movement also emerged to demand their rights against caste and gender respectively. However specific problems of Dalit women were not acknowledged by these movements. Hence in 1990's, there were special, independent and autonomous assertions of Dalit women's identity- National Federation of Dalit Women (NFDW), All India Dalit Women's Forum (AIDWF), and Maharastra Dalit Mahila Sanghatana (MDMS) was formed in 1955. In December 1996, at Chandrapur, a Vikas Vanchil Dalit Mahila Parishad (VVDMP) was organized. These organizations have come together on several issues such as the celebration of Bhartiya Stree Mukhti Divas and on the issue of reservation for OBC women in Parliament bodies. India Association of Women Studies (IAWS) network with Dalit feminist

across different regions had brought special issues on problems and identity of Dalit women. (Rege, 2003)

Indian society has undergone the process of social transformation since long. In fact, the people belonging to different castes and communities had witnessed mobility of one type or another in their social status in ancient and medieval times. During the latter half of British rule, many lower castes made various efforts and claims for getting their ranks elevated in the local social hierarchy (Ram, 1988). M.N. Srinivas discussed the changes in the caste system. He has argued that changes in caste system among the Coorgs of Mysore are taking place in the shape of Sanskritization and Westernisation. While observing the process of cultural mobility in the traditional social structure of Coorgs, he argued that lower caste in order to raise their position in the caste hierarchy have adopted some customs of the Brahmins and gave up some of their own which are considered to be impure by the higher caste and he calls it the process of Sanskritization (Srinivas, 2003). The Scheduled Castes have been found to raise their status in North India by adopting some of the practices of the orthodox Brahmans- by making their caste panchayat active, by imposing restrictions on eating, drinking, diet, dress, occupation, and by having a desire for more education (Cohen, 1955). The present paper has focused on the process of social mobility and the level of socio-economic development among the Scheduled Caste women of Amb Village of Jammu District.

After independence more systematic attempts have been made to deal with the problems of Scheduled Caste women. Governmental efforts, new socio-economic developments and equal opportunities for education had created new attitudes and aspirations among the Scheduled Caste women. As a consequence of the welfare measures provided by the government in the form of educational facilities and job opportunities, the status and style of life of the Scheduled Caste women have improved a lot, when compared to earlier periods. (Viswanath, 1993)

The Amb village in Jammu district was selected for the study to examine the mobility among Scheduled Caste women. The village was selected, keeping in mind the predominance of SC population. For the collection of data, the interview schedule was used to record the first-hand information given by the respondents. It consisted of both open and closed ended questions related to their socioeconomic background and certain other responses for the study. The parameters which were undertaken to study the process of social mobility among the Scheduled Caste women of Amb village are explained as under:

+ Educational status,
+ Occupational status,
+ Age at Marriage,
+ Bringing of Dowry at the time of marriage,
+ Political Participation of Scheduled Caste women.

- Educational Status: Education remains an important factor responsible for the low status of Scheduled Caste women in society. The Scheduled Castes have been deprived of education in the past and this has also been reflected among the Scheduled Caste women of Amb village. When compared the educational status of three generations among Scheduled Caste women of Amb village, it is seen that majority of the respondent's grandmother's generation was almost illiterate whereas only a very few among the respondent's mother's generation were educated up to middle standard. However, the situation seems to improve in the respondent's generation where the majority of them are educated up to higher-secondary, graduation and post-graduation whereas some of the respondents are still getting an education even after their marriage. This shows a shift in the educational level of three generations among Scheduled Caste women of Amb village.

- Occupational status: Occupation, another important variable, in understanding the mobility among Scheduled Caste women, has also been analysed. It is observed that majority of the respondent's grandmother's generation were unemployed because of lack of education whereas the majority of the respondent's mother's generation were either unpaid family workers or served as domestic workers in nearby houses of upper castes. In case of respondent's generation, it is seen that majority of them are employed (either government employee or self-employed). When asked about the nature of the employment, it is seen that majority of them are a government employee (out of which one respondent is a teacher and the rest are Anganwadi workers or helpers) whereas some of the respondents are self-employed as a tailor.

- Age at Marriage: Age at marriage is one of the important factors in determining mobility among Scheduled Caste women. The difference in age at marriage has been observed between three generations (grandmother, mother, and respondent) among Scheduled Caste women of Amb village. It is seen that majority of the respondent's grandmother got married below 15 years of age. While there is little change in mother's generation where the majority of them got married at the age of 15-20 years. In case of respondent's generation, it is seen that majority of them got married at the age of 21-25 years. Thus the difference in age at marriage clearly shows a change between three generations of Scheduled Caste women.

- Bringing of Dowry at the time of marriage: Dowry refers to the property or things which a man receives from his wife's side in his marriage. It is found that all the grandmothers and mothers of the respondents of Amb village have brought dowry at the time of marriage whereas in case of respondents the maximum have brought dowry and very few have not brought dowry in their marriage. On the question regarding the giving of dowry to their daughters at the time of marriage, it is found that maximum of the respondents are not in favour of dowry and do not want to continue the tradition of giving dowry at the time of marriage. This shows that at least some such marriages have taken place where women have not brought a dowry with them

and this change in the attitude of women has taken place due to education.

- ◆ Political Participation of Scheduled Caste women: The political participation of the Scheduled Caste women of Amb village have also been taken into account. The constitutional privileges associated with the reservation of Scheduled Castes in politics in India bring about social awakening for their political participation. The reservation policy for the SCs, STs, and women (also belonging to SC/ST) has resulted in an increase in the voting percentage and the participation of the people in general and Scheduled Caste people in particular, as well as, their representation in political activities. When compared the political participation of Scheduled Caste women of Amb village, it is seen that respondent's grandmother's generation do not participate whereas very few from mother's generation participate in political affairs because of lack of awareness but in case of respondent's generation maximum of them actively engaged in political activities and their active participation has grown. The representation of Scheduled Castes in politics has been growing stronger from election to election. The political reservation has initiated a power shift at the local level.

Suggestions:

- ◆ Women need equivalent status in society to men. Education plays a vital role in the life of women. With the help of education, women in general and SC women, in particular, can improve their socio-economic status.
- ◆ SC women should have equal access to education in all disciplines and at all levels. Education brings political, economic and social consciousness and prosperity. Educated women are aware of their rights and it also helps them to become economically independent.
- ◆ The programmes related to the women empowerment can be strongly implemented. This can also help SC women to become socially and economically independent and strong which ultimately leads to the mobility of SC women.

Conclusion:

The present paper has focused on the social mobility among the Scheduled Caste women of Amb village in Jammu District. The educational and occupational status of the three generation of Scheduled Caste women of Amb village shows that there occurs a great change in the perceptions of the SC women respondents as compared to their mothers and grandmothers. The other indicators of social mobility like participation of Scheduled Caste women in political activities have also been focused. It can be said that Scheduled Caste women have started participating actively in the elections at grass-root levels and are contributing to the decision-making process. No doubt, a certain amount of change and mobility has occurred among the Scheduled Caste women over a span of time. Such change and mobility in educational, occupational and political spheres have been regarded as channels utilized by the Scheduled Caste women to raise their status in the caste hierarchy.

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BUSINESS STUDIES

A STUDY OF EMPLOYEE RETENTION IN TOURISM & TRAVEL TRADE ENTERPRISES

Pankaj Kumar* and S.K. Gupta**

ABSTRACT

Medium and small size enterprises are dominating the tourism and travel trade industry especially at developing tourism destinations in Himalayan state Uttarakhand, India. This study was done with the hypothesis that the industry is facing low employee retention and high employee turnover. Through this research paper, the researchers have examined the employees and employers attitudes towards the reasons of leaving or changing the job of employees working at various positions in these tourism and travel trade enterprises. The analysis reveals that seasonality of job, followed by inappropriate division of works; low salary and poor growth are the main reasons.

Keywords : Employee retention, Employee Turnover, Medium and small enterprises, Tourism and Travel trade industry, Uttarakhand

Introduction

Travel and tourism is one of the largest industries in India. Its total contribution to the country's economy is significant. Travel and tourism's contribution to world GDP has grown for the sixth consecutive year in 2015, rising to a total of 9.8% of world GDP (US$7.2 trillion). This sector now supports 284 million people in employment i.e. 1 in 11 jobs (directly or indirectly), (WTTC Annual report, 2016).It is being driven by employment, economic-development, poverty alleviation, community development, heritage conservation and sustainable development and motivated by the further human demand for a variety of activities like religious, adventure, recreation, education, and entertainment. Tourism and travel trade organizations promote destinations, prepare tour packages and offer it as a product to the tourists. Travel agent helps travelers by providing them travel related information by which tourist opts the best possible destination and tour package as per interest and budget. They provide advice on demand and make arrangements for transportation, accommodation, ground handling, escorting, etc. for tourists at tourist generating region and tourist destination region.

Tourism and travel trade sector is diversified from larger organizations to medium or small enterprises. Even after huge share in terms of providing total employment and overall contribution to GDP, a multitude of small and medium sized, private or public owned and

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operated businesses have been felt difficult to co-ordinate and legislate (Cohen 1993; Mukul Guha, 1981; and Clifford, 1987). According to   Lattin, G.W, (1979) and Lanfant, (1980) tour operators or travel agents are the intermediaries, who can package even the most remote, unexplored or dangerous destination and attract the tourists. Success of any industry strongly depends on the experienced and quality manpower staying in the same organization for longer period of time. Being a service industry experienced and skilled employees are the main asset of the tourism and travel trade organizations, whether enterprises are large, medium or small. Only competent and motivated employees deliver high-quality service and achieve competitive advantage for their firms and tourist destinations (Szivas & Riley, 1999). Effective deployment and management of people as critical resources within tourism organization does not happen without considering planning, development and support at the level of the enterprise, the destination and the country (Baum & Szivas, 2003).

Employee retention refers to the capability of the organization to retain its employees for a year or a set period of time. It is measured in terms of rate of retention. If an organization retains its 70% of the employees in next year; the employee retention rate of the organization is considered as 70%. Employees leave organizations for a number of reasons that may vary from individual to individual. Many of the employees quit involuntarily as a result of dismissal, retirement, inefficiency in work assigned, getting better opportunity in terms of position, salary and other intrinsic benefits, employment security etc. in other competitive organization or sometimes even in other industry. Tourism & travel trade industry is continuously growing since last 4-5 decades especially in developing countries. But due to poor human resource management practices in small and medium sized travel trade enterprises, employee turnover is very high. It is highly challenging for the sustainable existence of these enterprises.

Retaining the employees for a longer period is significant for the success of any organization. In order to keep employees associated with the same organization for a longer period, it becomes essential to first understand the reasons behind the turnover of employees. Cost of losing a trained and experienced employee is many times larger than recruiting a new and inexperienced employee. Turnover may be voluntary or forced turnover. The issue has become crucial to the tourism and travel industry. The industry faces high levels of labor turnover and low levels of employee retention (Pankaj, 2015).

Employment in Tourism and Travel Trade

According to Ministry of Tourism, Government of India, more than 1,25,000 people were employed in the year 2012 in the tourism and travel trade units in India. Each travel agency, on an average, employed 9 people. The employment intensity of tour operators and tourist transport

operators were 14 and 21 respectively.

Figure: 1

Number of Employee in per 100 Travel Trade Entities
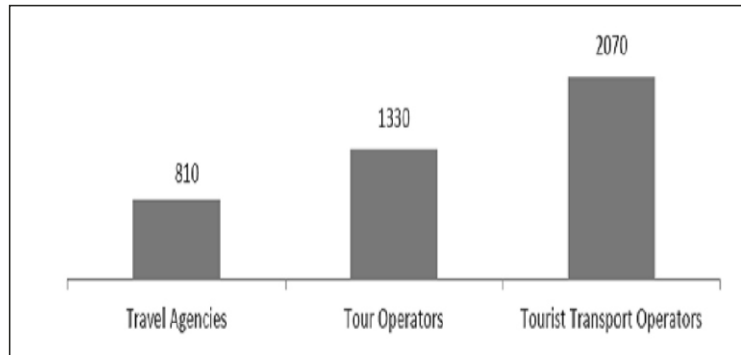
Source: Ministry of Tourism, Government of India

As per the combined study of Market Plus and Ministry of Tourism, Government of India (2010), more than 8,000 tourism & travel trade entities were there in India, spreading across the four geographic regions. Travel agencies and tour operators accounted for 38% and 43% of them. North and South accounted for almost two-thirds of all tourism and travel and tour entities in India.

Table- 1

Employment in Travel Trade Units in India

	East	North	South	West	N East	All India
Number of Travel & Tour Firms in 2010	983	2799	2611	1556	129	8078
Average Growth Total Employment	8054	31597	35792	20370	410	2 96223
Average Employment Intensity Annual Demand for Manpower in 2010	10.5 -	12.6 402	14.0 5989	14.0 7817	2.0 -	12 14213
Trained Manpower Output (students who graduated in 2009-2010)	-	-	-	-	-	17473

Source: National Skill Development Corporation (NSDC)

On the basis of growth in the number of tourism and travel trade enterprises registered by the Ministry of Tourism statistics, the total employment in this sector has been forecasted to touch 250,000 in 2017 and 450,000 by the year 2022.

FIGURE: 2

Employment Forecast in Travel Trade
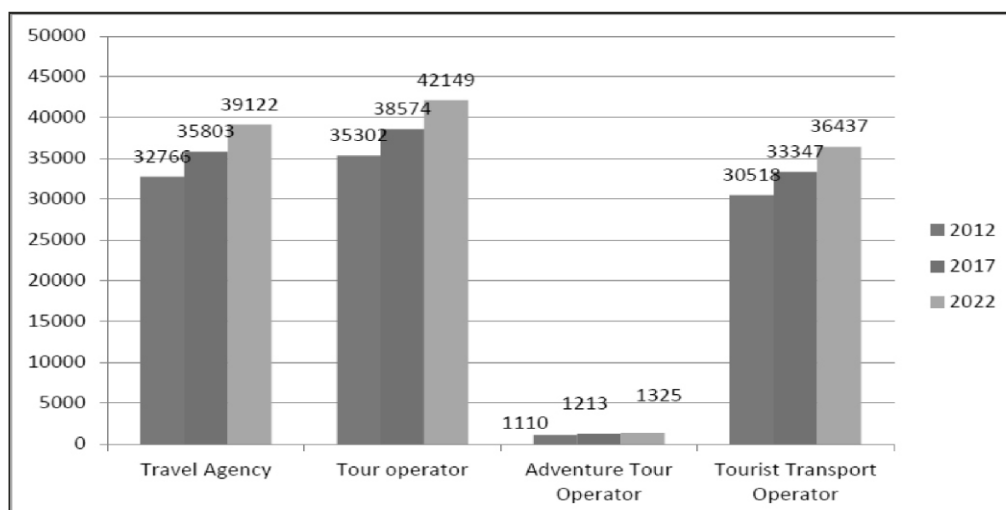
Source: Ministry of Tourism, Government of India

According to the study of Ministry of Tourism, Government of India, rate of employee turnover in travel trade is high at 50%, particularly among tour operators. Sales and marketing function in travel agencies and facilitation in tour operators witness the highest attrition rates.

TABLE: 2

Employee Turnover Percentage in Travel Trade in India

Functional Domain	Travel Agency	Tour Operator	Tourist Transport Operator
Administration/ Operations	31	35	28
Ticketing	23	54	30
Foreign Exchange	29	62	-
Tours	30	46	3
Sales & Marketing	53	53	-
Accounts	48	49	17
Facilitation	8	61	-
Total	32	50	17

Source - Ministry of Tourism, Government of India

Literature Review

Employees also called as human resources are the source of competitive advantage and Human Resource (HR) practices should therefore be central to the strategy in any organisation (Laursen & Foss, 2003). Khandekar & Sharma (2005) in their study highlight the significance of recognition, development and utilization of the capabilities embedded in the collective knowledge of the firm's employees. The literature on the contribution of human resource practices to competitive advantage emphasizes generic practices such as empowerment, incentives and flexibility (Habir & Larasati, 1999). These practices are aimed to reduce labor turnover. Kang et al. (2007) point out that once employees are valued, it becomes a way of conceiving how the organization actually works, creating differentials and structure, which lead to enhance competitiveness of the organization.

Employee retention, one of the important human resource management practices (HRMP) is a series of integrated decisions that form the employment relationship (Milkovich, 1997). The human resource (HR) mix includes the activities viz. staffing, training and development, compensation, employee relations, and work structure (Goldsmith & Nikson, 1997). Providing effective incentive , training and opportunity of career development would make employees, feel involved, as well as valued (Jerris, 1999). Hinkin & Tracey (2010) identified six categories of innovative human resource (HR) practices used by hospitality and service companies such as : a culture of caring for employees and open communication; flexible scheduling to meet the needs of a changing workforce; innovative methods to attract, select, retain a loyal and competent workforce; training programs viewed as investment in people emphasizing career tracks and promotion from within; performance management systems aligned with organizational objectives; and compensation programs reflecting the organizational values and linking pay to performance.

Employee retention refers to sustaining the employees in an organization for the achievements of further proposed goals for longer periods. It is inversely proportional with the employee turnover in the organization or industry which means, if the employee retention rate is high, the employee turnover will be low and vice-versa. But it is directly proportional to the sustainability of the success of organization or industry. If the employee retention rate is high the sustainability of the organization or industry success will be high. It is for this reason, every organization, practices number of supportive employee's policies and continuous assessment for employee retention.

Tourism and hospitality industry has often struggled with negative perceptions about high employment turnover and low employee retention practices. Keep and Mayhew (1999) in their review of the skills issue in the tourism and hospitality industry suggest that industry has a number of personnel related problems like; low wages, unsocial hours and shift patterns. Recognizing this reality of poor HRM practices, Riley et al., (2000) argue that economics is the key determining factor for HRM policies and practices in tourism and hospitality industry.

Employee retention rate also depends on job satisfaction and is indicated as a feeling, both positive and negative like loyalty and absenteeism (Spector, 1997). If people are satisfied, they will be highly motivated to stay in the same organisation and ultimately performance will improve (Sweney & McFarlin, 2005; Armstrong, 2006; and Christen, Iyer & Soberman, 2006). Job satisfaction helps the employees to achieve recognition, income and promotion (Kaliski, 2007) and they remain in the same organization for longer period.

The study region Haridwar- Rishikesh- Dehradun in Uttarakhand is the center of tourism business. The tourism and travel trade enterprises here are providing large number of employment in travel agencies, tour operator companies, rafting companies and others organizations and are contributing in promotion and development of domestic, inbound and outbound tourism in the state Uttarakhand. But, with respect to the human resource management practices in general and employee retention in particular tourism and travel trade organisation in study area have poor reputation. So, this study is focused particularly on the employee retention status in specially medium and small sized tourism and travel trade enterprises existing in Haridwar-Rishikesh-Dehradun region of the Himalayan state, Uttarakhand in India.

Objective

◆ To study the tourism and travel trade enterprises status in the study area Haridwar-Rishikesh- Dehradun in Uttarakhand, India.

◆ To study the employees and employment status in tourism and travel trade enterprises.

◆ To find out employee retention rate and reasons for leaving and changing jobs.

Research Methodology

The present study is based on both primary and secondary data. Secondary data were collected from Uttarakhand Tourism Development Board (UTDB), other reports and review of literatures. Primary data were collected through scheduled and structured questionnaires from 210 respondents which include 70 employers/ managers and 140 employees from travel trade enterprises of the study area i.e. Haridwar- Rishikesh- Dehradun in the Garhwal region of Uttarakhand. Out of available total number of tourism and travel trade enterprises of the study area forty employees from twenty enterprises of Haridwar, sixty employees from thirty enterprises of Rishikesh and forty employees from twenty enterprises of Dehradun were selected as sample for this study. Stratified random sampling technique was used for this. Recognizing the importance of human resource management in general and specially the employee retention rate and the reasons for leaving and changing the jobs in tourism and travel trade enterprises in particular the recorded data were analyzed using SPSS 17. Statistical techniques like Frequency, Percentage, mean, S.D and ANOVA have been used for the analysis. The feedback of the respondents were assessed using a 5 point Likert scale ranging from 5= strongly agree to 1= strongly disagree.

Data Analysis and Interpretation

More than 200 travel trade enterprises exist in the study area, including travel agencies,

tour operators, transporters, rafting and trekking agencies etc. The study reveals that the majority of the travel trade enterprises located in the study area is partnership companies followed by the sole proprietorship whereas mere 7.1% are Private Ltd. Companies. Most of the travel trade enterprises in Haridwar are sole proprietorships while most of those in Rishikesh are partnership. Only 20% of the enterprises have other branches. The travel trade enterprises have been classified as Travel Agent, Tour Operators, Transporters and Rafting Operators on the basis of their function, products and services provided by them. Further, majority of these enterprises are small in size having number of employees ranging between 1 to 6 and an average annual turnover between Rs. 20-30 Lakh. As far as the source of finance used to establish the enterprises, self-finance followed by loan from banks were the sources of finance, However, a small number of these enterprises have used these two sources together and a few have also taken assistance from the government financial schemes. The study has statistically proved that the sources of finance used by these travel trade enterprises vary along their type of business entity. Most of the travel agent opted self-finance as their source of finance while loan from the banks was the popular source of finance among the rafting operators.

TABLE : 3

Place-wise Distribution of the Employees

Place of Interview	Frequency	Percent	Cumulative Percent
Haridwar	40	28.6	28.6
Rishikesh	60	42.9	71.4
Dehradun	40	28.6	100.0
Total	140	100.0	

Source: Primary Data

A brief profile of the employees surveyed is displayed in the Table: 4. Out of the total 140 employees surveyed, 114 (81.4%) were male, while the remaining 26 (18.6%) were female. The majority of the employees 88 (62.9%) belonged to the age group of 21 to 30 years, followed by 40 (28.6%) from 31 to 40 years, 10 (7.1%) from age group more than 40 years and 2 (1.4%) from the age group below 20. In case of the educational level, 67 (47.9%) employees were intermediate (10+2), 60 (42.9%) were graduate whereas a mere 11 (7.99%) were post-graduate and 2 (1.4%) were matriculated. Further, half (70, 50%) of the employees associated with these travel trade enterprises was having diploma/ professional education in tourism. In case of the designation of the employees surveyed 10 (7.1%) were managers, 54(38.6%) were tour executives, 24 (17.1%) were marketing executives, 35 (25%) were supervisors and 17 (12.1%) were helpers.

TABLE : 4

Profile of the Employees

Factor	Frequency	Percentage	Factor	Frequency	Percentage
Gender			**Diploma in Tourism**		
Male	114	81.4	Yes	70	50.0
Female	26	18.6	No	70	50.0
Age in Years			**Designation of Employee**		
Less than 20	2	1.4	Manager	10	7.1
21-30	88	62.9	Tour Executive	54	38.6
31-40	40	28.6	M. Executive	24	17.1
More than 40	10	7.1	Supervisor	35	25.0
Education			Helpers	17	12.1
10th	2	1.4	**Diploma in Tourism**		
10+2	67	47.9	Yes	70	50.0
Graduate	60	42.9	No	70	50.0
Post Graduate	11	7.9	**Designation of Employee**		
			Manager	10	7.1

Source: Primary Data

TABLE : 5

Distribution of Employees in terms of Working Experience

Working Experience	Less than 2 years	2-5 years	5-10 years	More than 10 years
Total Job Experience	32 (22.9)	30 (21.4)	50 (35.7)	28 (20.0)
Experience at present company	59 (42.1)	34 (24.3)	39 (27.9)	8 (5.7)

Source: Primary Data. Figures in the brackets are the percentage of total sample (N=140)

Data from the Table- 5, reveal that out of total 140 employees surveyed, 32(22.9%) were having a total working experience of less than 2 years, 30 (21.4%) of 2-5 years, 50 (35.7%) of 5-10 years and 28 (20%) having total job experience of more than ten years. In case of the working experience of the employees at present company majority of the employees (59, 42.1%) were working at their present enterprise for less than 2 years followed by 39(27.9%) who were working at their present enterprise for five to ten years, 34 (24.3%) were for two to five years while merely 8(5.7%) were working at their present enterprise for more than ten years.

The reasons behind voluntary turnover play an important role in human resource management. In order to find out the important reasons for the employee turnover in the travel trade organizations in the study area, the employers were asked to express their agreement on the 7 factors related to the employee turnover based on a 5 point Likert scale and the responses are tabulated in the Table: 6

TABLE : 6

Reasons for Employee Turnover

Reasons	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	S. D.
Low salary	7 (10.0)	8 (11.4)	8 (11.4)	33 (47.1)	14 (20.0)	3.55	1.22
Poor growth	2 (2.9)	8 (11.4)	13 (18.6)	34 (48.6)	13 (18.6)	3.68	1.00
Inappropriate division of work	3 (4.3)	2 (2.9)	12 (17.1)	40 (57.1)	13 (18.6)	3.82	0.91
Seasonal job	7 (10.0)	6 (8.6)	8 (11.4)	27 (38.6)	22 (31.4)	3.72	1.27
Under productivity	3 (4.3)	26 (37.1)	20 (28.6)	14 (20.0)	7 (10.0)	2.94	1.07
Conflict with management	7 (10.0)	34 (48.6)	16 (22.9)	7 (10.0)	6 (8.6)	2.58	1.08
Personal factor	6 (8.6)	15 (21.4)	8 (11.4)	34 (48.6)	7 (10.0)	3.30	1.17

Source: Primary data. Figures in the brackets are the percentage of row total

The analysis in the Table: 6 reveals the reason for high level of employee turnover are seasonality of job (57.1%), inappropriate division of work (48.6%), low salary (47.1%) and poor growth (48.6%) .

On the other hand, in Table: 7 the F-value obtained from the 'difference in employee turnover' mean is statistically significant in the three areas in the place of distribution such as poor

growth, In appropriate division of work and seasonality of the job.

TABLE : 7

Reasons for Employee Turnover at different Locations

Reason for Employee Turnover	Haridwar (N=20)	Rishikesh (N=30)	Dehradun (N=20)	F Value
Low salary	3.35 (1.13)	3.63 (1.18)	3.65 (1.38)	0.39^{NS}
Poor growth	3.75 (1.11)	3.93 (0.69)	3.25 (1.16)	3.02**
Inappropriate division of work	4.40 (0.68)	3.73 (0.69)	3.40 (1.14)	7.39***
Seasonal job	4.30 (1.26)	3.80 (1.34)	3.05 (0.82)	5.54**
Under productivity	3.25 (0.78)	2.93 (1.20)	2.65 (1.08)	1.58^{NS}
Conflict with management	2.80 (1.05)	2.46 (1.13)	2.55 (1.05)	0.57^{NS}
Personal factor	3.55 (1.27)	3.16 (1.17)	3.25 (1.06)	0.66^{NS}

*Source: Primary data. Figures in brackets are standard deviations. NS=insignificant.**-significant @ $p<.05$, ***-significant @ $p<.01$*

Conclusion

Haridwar, Rishikesh and Dehradun are the base point cities for travelers and tourists to make the necessary arrangements for their journeys to higher reaches of Garhwal Himalaya. Therefore large numbers of travel trade enterprises are being mushrooming in the cities of Haridwar-Rishikesh-Dehradun and providing employment to large number of people from community of the state and around. Evolution of travel trade has been a chronic phenomenon for these base towns from an informal and unorganized sector of pre 1980s to formal and well organized travel intermediaries of present time. Along with branches of many leading travel agencies and tour operator companies, most of the tourism and travel trade enterprises here play as ground handling agencies for inbound tourists on one hand while working as a full-fledged tourism organizers for white water river rafting, trekking and pilgrimage to holy abodes on the other hand. Their role also varies widely according to the motivations of tourists and facilities they deal with. Most of these are medium and small sized tourism and travel enterprises.

With the growing opportunities of employment for tourism and hospitality professionals,

retaining experienced human resources for longer period has become a challenge for these organizations in this region as well. As the demand of these professionals are arising in other sectors viz. hotels, airlines, event management companies, visa & passport facilitators, etc. there is a need for development of the employees and retaining the employees for a longer period. It has been observed from the study that there is high employee turnover in medium and small sized tourism and travel trade enterprises in the region. Seven factors viz. low salary, poor growth, inappropriate division of work, seasonality of job, under productivity of employees, conflict with management and personal factors were identified for leaving or changing the jobs by these professionals. The statistical analysis of data reveals that a high level of employee turnover in this region is due to seasonality of job followed by inappropriate division of work, low salary and poor career growth. Even after having the high employment potential in tourism and travel trade enterprises in this study region, the employee retention rate is very low. Employees move to other company even for a minor financial gain in terms of salary or incentives and for self assessed job satisfaction and security or move to nearby metro cities in Delhi, Guru Gram or others. Hence retaining the experienced employees here in these enterprises is a challenge. The research reveals that employee retention is low in the region in tourism and travel trade enterprises which leads to the high employee turnover. Hence employee retention factors should be scrutinized regularly in order to overcome the low employee retention rate. These medium and small sized tourism and travel trade enterprises lacks in sound human resource management (HRM) practices. The industry also needs to emphasize to make the employment more lucrative to attract the best manpower. The division of work among the employees should also be given proper attention and salary structure must be competitive with other industries. The appraisal policy should be transparent and strengthened by the travel trade organizations. Recognition and reward must be given to the employees performing better jobs in order to utilize their optimum potential.

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Exploring the Relationship between Employees' Organisational Identification, Customer Orientation and Job Performance

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ABSTRACT

The study aims at highlighting the role of organisational identification in developing employees' customer orientation that leads to better job performance comprising of task performance and organisational citizenship behaviour. The study is based upon the responses obtained from managers and employees of private sector banks operating in northern part of India. The study contributes to the existing literature on employees' customer orientation by assessing its relationship with organisational identification and job performance. Specifically, the study highlights the intervening role of employees' customer orientation in transmitting the effect of organisational identification on their job performance. Thus, employees identifying with and having a deep bond with the organisation, adapt and signal the behaviour and culture of the organisation.

Keywords : Organisational Identification, Customer Orientation, Job Performance, Task Performance and Organisational Citizenship Behaviour

Introduction

In today's competitive service environment, frontline service employees' role is vital to the success of service firms (Babakus & Yavas, 2012) and therefore, the issues pertaining to the attitudes and behaviours of frontline employees continue to generate interest among service scholars. Employees' customer orientation is one such issue of interest to academics and researchers. Service employees (i.e., frontline employees) play a crucial role in service firms as they help by responding to customers' inquiries and needs on the spot rather than waiting for the managers' judgement and feedback (Lee, Nam, Park, & Lee, 2006), therefore customer orientation is considered as an important tool for these employees who are in direct contact with customers. Due to the inseparability feature of services, the role of customer-contact employees becomes crucial in the formulation and delivering of the product/service that the customer receives. Frontline service employees are so critical as the product being delivered is a performance (Lovelock, 1983). In this context, it is imperative to recognise that to constantly deliver excellent services to customers, frontline or contact employees must have a deep-level bond with the organisation, be willing and able to achieve performance tasks and demonstrate citizenship behaviours. As individuals attempt to incorporate constituents of the organisation into

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their own sense of self, therefore organisations also stimulate such identity enactment through employees' performance. The process of identification is described as the interplay between individuals and organisations (Ashforth, Harrison, & Corley, 2008) and is the extent to which employees perceive sameness with their respective organisation. Organisational identification signifies employees' desire to perform better for the mutual benefit of the organisation and themselves, while customer orientation captures service workers' intrinsic interest in improving their performance (He, Wang, Zhu, & Harris, 2015). Strong identifiers are more likely to perceive that helping other organisational members through extra-role behaviours (e.g., spending time helping newcomers, willingly assisting others experiencing work-related problems) parallels helping themselves (Dukerich, Golden, & Shortell, 2002). Furthermore, employees who strongly identify with the organisation are more likely to engage in customer-oriented activities that essentially contribute to organisational effectiveness (Homburg, Wieseke, & Hoyer, 2009). Moreover, highly customer-oriented employees are inclined to place top priority on continually finding ways to meet customers' needs and provide superior customer value (Babakus, Yavas, & Ashill, 2009).

During the last decade, customer orientation has been recognised as a keystone of the theory and practice of marketing management (Brady & Cronin, 2001). Though the executives and managers of service organisations have acknowledged the value of customer-oriented frontline employees, the process by which customer orientation may be generated is far from being well understood (Wieseke, Ullrich, Christ, & Van Dick, 2007). In this regard, Homburg et al. (2009) suggested to address the knowledge gap relating organisational identification with the level of customer-contact employees and to know more about the role of employee organisational identification with respect to their customer orientation and organisational citizenship behaviour. Therefore, it becomes imperative to examine the relationship between employees' organisational identification, customer orientation and job performance.

Understanding service workers' customer orientation and their performance is a pivotal issue for service management (Donavan, Brown, & Mowen, 2004; Cross, Brashear, Rigdon, & Bellenger, 2007; Homburg, Muller, & Klarmann, 2011). Moreover, it is widely acknowledged that firms with customer orientation are more likely to build satisfied customers and produce more favourable behavioural outcomes than firms lacking customer orientation (Brady & Cronin, 2001). Frontline service employees play a significant role in enhancing customer satisfaction and improving the perception of service quality (Hartline & Ferrell, 1996; Phillips, Tan, & Julian, 2006), however there is little understanding of the behaviours of frontline service employees (Fisk, Brown, & Bitner, 1993). An important variable that helps in understanding and explaining service behaviours is customer orientation (Donovan et al., 2004). While investigating the link between customer orientation and individual performance, most of the studies have been

conducted in selling context (e.g., Cross et al., 2007; Knight, Kim, & Crutsinger, 2007; Singh & Venugopal, 2015). In addition, Zablah, Franke, Brown and Bartholomew (2012) argued that empirical research producing contradictory results has led scholars to question the efficiency, or at least the universal efficacy, of customer orientation as a determinant of frontline employees' job outcomes (e.g., Franke & Park, 2006; Homburg et al., 2011). For example, some studies have shown that customer orientation increases both self-rated (e.g., Licata, Mowen, Harris, & Brown, 2003) and manager-rated (e.g., Grizzle, Zablah, Brown, Mowen, & Lee, 2009) performance whereas others have concluded that customer orientation has no effect on both self-rated and manager-rated performance (e.g., Flaherty, Mowen, Brown, & Marshall, 2009). Moreover, employees' performance encompassing in-role and extra-role performance would provide additional insights into the impact of customer orientation on employees' performance (Karatepe, Yavas, & Babakus, 2007). Thus, the study makes an attempt to add to the scanty research and to improve the understanding of relating customer orientation with employees' job performance (i.e., task performance and organisational citizenship behaviours).

The purpose of the present study is to investigate the relationship between organisational identification, customer orientation and job performance. The study, first, explores the link between employees' organisational identification, customer orientation and job performance. Next, it analyses the intervening role of employees' customer orientation in transmitting the effect of organisational identification on their job performance. The study proposes and tests a model linking employees' organisational identification and customer orientation to the components of job performance (i.e., task performance and organisational citizenship behaviour).

Theoretical Framework and Hypotheses Development

A conceptual model (Figure 1) is designed to guide the present study, which depicts the relationship of employees' organisational identification and customer orientation with job performance.

Organisational Identification and Customer Orientation

A review of the marketing and management literature reveals that organisational identification fosters a natural derive to propel the organisation to bigger heights through enhanced employees' customer orientation (Wieseke et al., 2007). Homburg et al. (2009) found support for the proposition that employees' display a higher level of customer orientation when they have a deep-level bond with the organisation. In a similar vein, Farrell and Oczkowski (2012) stated that elevated levels of organisational identification lead to greater levels of service worker customer orientation, as the individuals who identify strongly with the organisation are

more inclined to engage in customer-oriented activities, which contribute to the overall well-being of the organisation. Moreover, employees become positively inclined to meet the needs of their external customers when they possess attributes similar to an organisation's self-image (Homburg et al., 2009). Organisational identification is the extent to which an individual senses sameness or oneness with the organisation (Ashforth et al., 2008) and goes beyond simply appraising the organisation positively. Frontline employees act as representatives of the organisation when dealing with external customers and therefore, sensing a oneness with the organisation is necessary. Therefore, employees act in customer-oriented ways to the extent they identify with their organisation. This explanation highlights that:

H1: Employees' organisational identification is positively and significantly related to their customer orientation.

Customer Orientation and Job Performance

Customer orientation is positively related to job performance (Saxe & Weitz, 1982; Babin & Boles, 1996; Boles, Babin, Brashear, & Brooks, 2001). Both task performance and organisational citizenship behaviours, as major components of job performance behaviours, are valuable and desirable in organisations (Yun, Takeuchi, & Liu, 2007). In this regard, a study conducted by Knight et al. (2007) showed that customer orientation has a significant and positive effect on job performance, as customer-oriented salespeople perform at higher levels. Moreover, Brown, Mowen, Donavan and Licata (2002) found that customer orientation is positively related to service worker performance and Donavan et al. (2004) exhibited a positive relationship between customer orientation and helping other employees (i.e., organisational citizenship behaviour). Thus, it can be stated that customer-oriented service employees engage in citizenship behaviour as a means of ultimately satisfying the customers. Employees with high customer orientation perform better (Franke & Park, 2006; Cross et al., 2007), as they assign more priority to customers (Yagil, Luria, & Gal, 2008) and consistently engage in necessary problem-solving behaviours to foresee and meet customer needs (Brown et al., 2002). On the basis of above discussion, the next hypotheses are proposed:

H2a: Employees' customer orientation is positively and significantly related to task performance.

H2b: Employees' customer orientation is positively and significantly related to organisational citizenship behaviour.

Organisational Identification and Job Performance

Employees who maintain higher level of organisational identification attach more importance to their organisational membership. Being organisational members, these

employees tend to obey organisational requirements and act in the organisation's interest (Liu, Loi, & Lam, 2011). Empirical evidence has revealed that organisational identification has significant influence on behavioural outcomes (such as in-role and extra-role performance) (Riketta, 2005). Moreover, Liu et al. (2011) showed that an employees' organisational identification is positively related to employees' performance (i.e., in-role performance and organisational citizenship behaviour). In addition, Van Knippenberg (2000) argued that a highly identified employee is collective identity-oriented and takes actions on behalf of the organisation's interests and further proposed the relationship between organisational identification and in-role performance. Moreover, it is essential for employees to put great efforts to complete the tasks required because the more they contribute, the more likely the organisation can stand out from other organisations, which upholds the distinctiveness of their membership in the organisation (Liu et al., 2011). In addition, employees who identify with their organisation will engage in organisational citizenship behaviour (Farrell & Oczkowski, 2012) and existing literature has also witnessed this positive relationship (e.g., Olkkonen & Lipponen, 2006; Van Dick, Grojean, Christ, & Wieseke, 2006). When employees interlink their sense of self with the organisation, they view the organisation's success as their own and perform on its behalf. Thus, organisational identification is significantly associated with behaviours (in-role performance and extra-role performance) in organisations (Lee, Park, & Koo, 2015). On the basis of above, the following is proposed:

H3a: Employees' organisational identification is positively and significantly related to task performance.

H3b: Employees' organisational identification is positively and significantly related to organisational citizenship behaviour.

Organisational Identification and Job Performance: Mediating Role of Customer Orientation

Employees identifying with their organisation and perceiving certain values as significant to the organisation, are more likely to involve in activities and behaviour that reflect such values (Farrell & Oczkowski, 2012). This view was further supported by Homburg et al. (2009) who used the concept of proto-typicality to argue that employees identifying strongly versus weakly with their organisation become more prototypical for this group as they tend to conform to its norms and peculiarities (Farrell & Oczkowski, 2012). One way of acting positively toward the organisation is engaging in customer-oriented behaviour (Homburg et al., 2009). Employees' identifying with the organisation seek opportunities to contribute to organisational

success by serving customers' needs as one of the ways to maintain relationship with customers and to enhance their performance. Thus, the study highlights that employees' organisational identification is associated with a dedication to satisfy needs of customers, which in turn be related to their job performance. Hence, it is proposed that:

H4a: Employees' customer orientation mediates the relationship between organisational identification and task performance.

H4b: Employees' customer orientation mediates the relationship between organisational identification and organisational citizenship behaviour.

Research Methodology

The present study is confined to banking sector. Cross-sectional research design has been employed in this study to collect data from the branches of four leading private banks {i.e., Jammu & Kashmir Bank (J&K), HDFC, ICICI, Axis; n=101} operating in Jammu city of J&K and Amritsar city of Punjab state (India). Branch manager and assistant branch manager along with two employees who frequently interact with customers in each branch comprised the population of the study. The information was gathered from the respondents through a structured questionnaire. Of the total 404 instruments that were administered to managers and employees (n=202 each) of aforesaid private banks, 336 instruments (n=168 each) were received from two sets of respondents. The normalcy of the data was checked through Box plots and subsequently, the outliers were deleted. The final data comprised of 160 complete data sets of matched number of responses of both managers and employees of private banks. In addition, common method variance (CMV) was checked to know the existence of any bias in the data. Harman one-factor test revealed that no single factor emerged, with first factor accounting for 19% (< 50%) of the variance. Thus, common method variance is not a serious threat in analysing the data.

Measures

Two sets of instruments were prepared separately, one for the managers and the other for employees. The information pertaining to employees' job performance (JP) (i.e., task performance (TP) and organisational citizenship behaviour (OCB)) was obtained from the managers while that relating to employees' organisational identification (OI), customer orientation (ECO) was procured from frontline employees. For determining customer orientation of frontline employees, a scale comprising of two dimensions (i.e., enjoyment and needs) was adapted from Brown et al. (2002). Organisational identification was measured with a six-item scale developed by Mael and Ashforth (1992). Task performance and OCB were measured with items adapted from William and Anderson (1991). A five-point Likert scale ranging from "strongly agree" (5) to "strongly disagree" (1) was used to measure the study constructs.

Analyses and Results

Measures Validation

Confirmatory Factor Analysis (CFA) was performed to assess validity and reliability of each construct. Convergent validity has been established by examining factor loadings and average variance extracted (Malhotra & Dash, 2010). Convergent validity gets established as the average variance extracted of all the constructs are above 0.50. Discriminant validity also gets verified as the average variance extracted of all the constructs is greater than the squared correlation between constructs (Fornell & Larcker, 1981). In addition, the value of composite reliability is above .80 for all the constructs.

Hypotheses Testing

Structural equation modeling (SEM) using AMOS 16.0 was employed to test the hypotheses of the study. First, the study examined the direct relationship between employees' organisational identification and their customer orientation, which has been found to be positive and significant (β=.386, $p < .001$), thereby lending support to H1. Also, it extends support for H2a and H2b, as the direct relationship of customer orientation with task performance (β=.372, $p < .001$) and organisational citizenship behaviour (β=.431, $p < .001$) is positive and significant. To test the mediating effect, Baron and Kenny's approach was adopted. The study checked whether employees' customer orientation transmits the effect of organisational identification on employees' performance. With respect to H3a and H3b, the results show that the direct relationship between organisational identification and task performance (β=.396, $p < .001$) and organisational citizenship behaviour (β=.167, p=.033) is positive and significant. Moreover, when customer orientation is added as an intervening variable in the identification and task performance link, the relationship declines though remain significant (β=.296, $p < .001$), hence H4a is supported. The relationship between identification and organisational citizenship behaviour becomes insignificant (β=.041, p=.592) when customer orientation is added as a mediating variable, thereby revealing full mediation of employees' customer orientation in the identification and citizenship behaviour link. Hence, H4b stands proved.

Discussion and Conclusion

The objective of this study was twofold. First, to examine the relationship between organisational identification, employees' customer orientation and job performance. Second, it specifically assesses the association between employees' organisational identification and job performance by analysing the intervening role of employees' customer orientation in linking the two. The results reveal that employees' organisational identification is significantly related with their customer orientation. This result is consistent with the previous studies like Wieseke et al. (2007) and Farrell and Oczkowski (2012). The findings of the present study also explicate the

significant relationship between organisational identification and job performance. The study of Liu et al. (2011) shows that an employee with higher level of organisational identification exhibits higher level of in-role and OCB performance. It indicates that employees identifying with and having a deep bond with the organisation, adapt and signal the behaviour and culture of the organisation. Moreover, employees' customer orientation is also a significant predictor of their job performance (i.e., task performance and organisational citizenship behaviour). Customer-oriented employees perform better (Franke & Park, 2006; Cross et al., 2007) as they assign a main concern to customers (Yagil et al., 2008) and constantly engage in necessary problem-solving behaviours to foresee and meet the needs of customers (Brown et al., 2002). In addition, the study examined whether employees' customer orientation transmits the effects of organisational identification on job performance. In this context, the results reveal that employees' customer orientation partially mediates the relationship between organisational identification and task performance while it shows full mediation when associated with OCB.

The study provides implications for service firms to develop organisational identification among employees, as employees identifying with and having a strong bond with the organisation engage in customer-oriented behaviour. Management should devise appropriate programmes to develop employees' affiliation and identification with their organisation. In addition, one positive way to influence employees' identification with organisation is by exposing employees to the preferred values of the organisation. Service firms shall also recognise the importance of recruiting customer-oriented employees as they create opportunities to deliver better service to customers and perform well on their jobs. Management should carry out relevant programmes to provide training to customer-oriented employees by employing them in jobs that provide them the opportunity to interact with customers. Therefore, practitioners should make customer orientation a criterion in the processes of selection, retention and compensation of their employees.

Limitations and Future Research

Although the present study has provided useful and interesting insights to further the understanding of the linkage between organisational identification, customer orientation and job performance in the service sector, i.e., banking, it is essential to recognise the limitations related to this study. First, the study is based on cross-sectional data and therefore, the results cannot be interpreted as proof of a casual relationship. In order to confirm the relationship between the variables used in this study, future researchers should conduct longitudinal analysis, which will provide profound insights into probable causation. Next, the respondents of the study are drawn from a single sector only i.e., banking, therefore the generalisability of the results needs to be tested in varying sectors (e.g., manufacturing, health, retail etc) of the economy. Future studies

can also explore the existence of possible moderator in the existing model.

Figure 1: Proposed Model
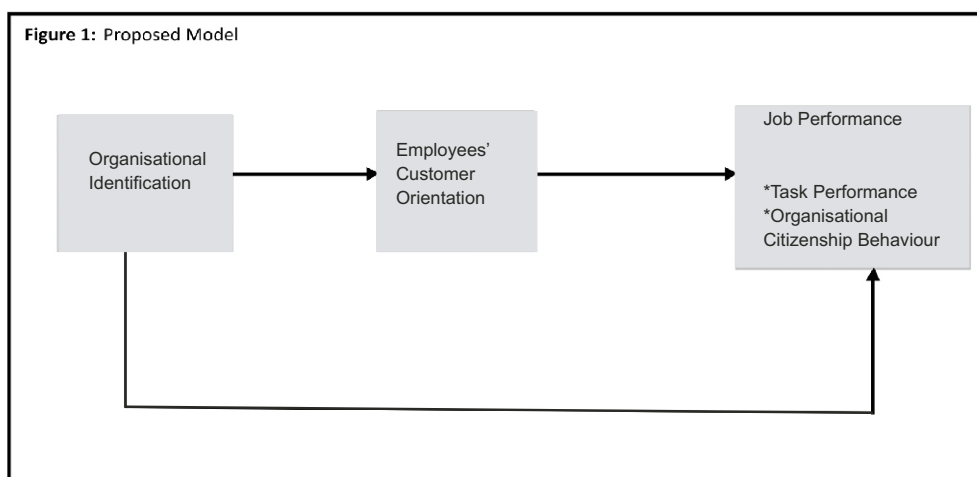
Table 1: Reliability and Validity of Latent Constructs

Constructs	Average Variance Extracted	Composite Reliability	Cronbach's Alpha
Organisational Identification	.66	.91	.76
Employees' Customer Orientation	.59	.91	.78
Task Performance	.75	.92	.78
Organisational Citizenship Behaviour	.61	.92	.80

Table 2 : CFA Fit Indices

Constructs	χ^2/df	RMR	GFI	AGFI	NFI	CFI	RMSEA
Organisational Identification	1.931	.014	.971	.923	.924	.960	.077
Employees' Customer Orientation	1.660	.020	.959	.918	.882	.947	.064
Task Performance	1.243	.006	.992	.960	.987	.997	.039
Organisational Citizenship Behaviour	1.229	.029	.967	.932	.948	.990	.038

APPENDIX

Likert scale type (1 to 5) with "strongly disagree," "disagree," "neither agree nor disagree," "agree," and "strongly agree" as the alternative choices.

Organisational Identification

Criticism of this bank is like a personal insult.

Interested in what others think about my place of employment.*

Saying 'we' when talking about this bank.

Considering praises of this bank as personal compliments.

Viewing bank's success as one's own.

Feeling embarrassed when a story in the media criticised this bank.

Employee Customer Orientation

Enjoyment

I find it easy to smile at each of my customers.*

It comes naturally to have empathy for my customers.

I respond quickly to my customer's requests.

I enjoy remembering my customer names.*

I get satisfaction from making my customers happy.

I really enjoy serving customers.

Need

I try to help customers achieve their goals.

I achieve my own goals by satisfying customers.

I get customers to discuss their needs with me.

I take a problem solving approach with my customers.

I keep the best interest of the customers in mind.

I answer a customer's questions as correctly as I can.

Job Performance

Task Performance

Adequately completes assigned duties.

Fulfills responsibilities specified in the job description.

Performs tasks that are expected of him/ her.

Meets formal performance requirements of the job.*

Engages in activities that will directly affect his/her performance evaluation.*

Successfully perform essential duties.

Organisational Citizenship Behaviour

OCBI

Helps others who have been absent.*

Helps others who have heavy workloads.*

Assists supervisors with his/her work (when not asked).

Take time to listen to co-workers problems.

Goes out of his/her way to protect other employees.

Takes a personal interest in other employees.

Passes along information to co-workers.

OCBO

Attendance at work is above the norm.

Gives advance notice when unable to come to work.

Does not take undeserved work breaks.

Conserves and protects bank's property.*

Adheres to informal rules devised to maintain order.*

Note : *Item deleted in CFA

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Strengthening Supply Chain Management Practices across SMEs by Integrating Perceived Benefits

Gaurav Sehgal

ABSTRACT

The SMEs' view of SCM seems to be the exertion of power by customers and consequently is seen by SMEs' as a one-way process. SMEs' do not employ SCM; rather they are managed at arm's length by large customers. Superior competitive strategies are essential if the SME is to achieve not only absolute growth rates but also growth relative to competitors and the market. This paper is one of the first attempts to study the Supply Chain Practices of Small and Medium Enterprises. SMEs' grow by pursuing a differentiated strategy and progressing through discrete stages of growth and consequently the ability of the entrepreneur to make structural and strategic changes may determine the growth prospects of business. The objective of this paper is to find out the factors that could be integrated so as to match the practices that are being adopted across SMEs with th benefits that the stakeholders perceive from it. The sample frame is SMEs of Jammu District in J&K State. Random samples of 323 respondents were selected from the said SMEs. The respondents were administered a structured questionnaire containing scales to measure the technical uncertainty and supply chain management practices of firms. After the data were collected, the scales were purified using Corrected-Item-Total-Correlation (CITC) values and Cronbach's Alpha values (α). After purifying the items based on CITC, an Exploratory Factor Analysis (EFA) of the items in each construct was conducted for assessing construct dimensionality. Thereafter, unidimentionality of the underlying latent constructs was examined using CFA. Due to the robustness and flexibility of the Structural Equation Modeling (SEM) in establishing CFA, this paper uses SEM to test both first-order as well as second-order CFA models. IBM® SPSS® AMOSTM 19.0 was used to perform SEM analysis. Model data fitting was evaluated based on multiple goodness-of-fit indexes.

Keywords : Supply Chain Management, SMEs, SEM.

1. Introduction

Supply Chain includes suppliers, manufacturers, logistics service providers, warehouses, distributors, wholesalers and all other entities that lead up to delivery to the final customer. In a wider perspective it may also include the suppliers to the vendors and the customers of the immediate customers. In other words, it is the interrelated collection of

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processes and associated resources that starts with the acquirement of raw material and extends to the delivery of end items to the customer. Now in this era of technology and competition the firms need to establish themselves as a strategic entity which is now a necessity. Successful Supply Chain Management (SCM) requires a fully integrative approach: employees, processes, technology, functions and even supply network partners need to be fully aligned and synchronized in order to build capability and thereby gain sustainable competitive advantage. For typical marketing and sales operations the supply chain is more restricted and extends from purchasing the finished goods from the manufacturing facilities to supplying the immediate customer. In more advanced operations it may extend to the customer of the immediate customer. Organizational approaches need to move to where there is north-south goal alignment but a focus on east-west process performance. This research paper tries to address these issues and tries to find out the factors that could help integrate the implementation of Supply Chain Management effectively as regards to the perceived benefits.

2. Review of Literature

Baratt (2004) defines supply chain as a network of facilities and distribution options that performs the functions of procurement of materials, transformations of these materials into intermediate and finished products and distribution of these finished products to the customers. Balsmeier and Voisin (1996) states that supply chains exist in both service and manufacturing organizations, although the complexity of the chain may vary greatly from industry to industry, and from firm to firm.

Swanson (1994) classified IS innovations into three types: Type I are technical task only innovations; Type II innovations support business administration; and Type III innovations are embedded in the core of the business. According to this typology, SCMP with trading partners should be considered as a Type III innovation, because SCMP innovate a firm's core business processes - leveraging two-way communication to improve product offering and customer service. Swanson (1994) further examined the adoption contexts of each innovation type, and contended that typical Type III innovations often requires antecedents such as facilitating technology portfolio, certain organizational attributes, perceived benefits, and external drivers that initiate the firm to adopt such innovation. This theoretical argument can be extended to Supply Chain Management domain: SCMP is being enabled by information and communication technology development, requires organizational enablers, motivated by the potential benefits, and entails environmental drivers of the supply chain context. Thus, upon theoretically examining adoption contexts, innovation types, and SCMP features, we believe that the three

contexts in the organizational technology adoption model are well suited for studying SCM adoption and implementation.

Compared with other IS innovation, SCM implementation is unique in that it cannot be adopted and used unilaterally. Firms that are motivated to adopt SCM must either find similarly motivated partners, or persuade their existing market partners into adopting the practice. Moreover, even after SCM has been adopted, firms must continue making sure the above-discussed antecedents still hold to maintain collaborative relationship with partners in KM to gain sustainable benefits. Perceived benefits refer to the level of recognition of the relative advantage that SCM can provide to the organization. Many practitioners and researchers have attempted to identify the potential advantages that knowledge management system has to offer. Pfeiffer (1992) and Iacovou et al. (1995) argued that these perceived benefits can be understood from two perspectives. The first perspective looks at the direct benefits from SCM. These are mostly operational improvements in organizational knowledge management capabilities that the firm believes SCM can bring. The purpose of knowledge management system is to improve the knowledge management process (Alavi and Leidner, 2001). Therefore one's understanding to firm's perceived knowledge management capability improvement is based on the five activities of the generic knowledge management process identified by Cormican and O'Sullivan (2003), that is, firm's capabilities on supply chain knowledge generation, storage, access, dissemination and application are all expected to be facilitated by SCM practices. With the improve knowledge management process, SCM adopters expect to achieve superior knowledge outcome. Thus, it is necessary to add another dimension besides the above five knowledge activities to look at the overall supply chain knowledge quality improvements.

The second perspective of perceived SCM benefits observes the indirect benefits or opportunities from implementing SCM. It explores to the impact of SCM on the overall organizational and supply chain performance dimensions. These are mostly tactical and competitive advantages the firm gains indirectly from implementing SCM. Although the ultimate benefits of implementing SCM can include large financial savings, better product/service offering, improve customer service etc, these benefits are too remote and too general to be analyzed. Thus, much of one's attention has focused on its impact on business operations. In a conceptual paper, Smith (2001) summarized six possible dimensions of SCM benefits to organizational operations: (1) Adapt to a rapidly changing environment; (2) Optimize business transactions; (3) Enhanced Supply Chain Integration; (4) Exception handling; (5) Be able to innovate (6) Fully capitalize and develop it's people. The impact of SCM implementation refers to

the real benefits adopters believe they have received from utilizing SCM related CKMP (Iacovou et al, 1995). Herein it is assumed that these impacts are closely associated with the perceived SCM benefits. All of the expected benefits should be reflected as an outcome from SCM, providing the implementation is successful. Thus there are two general dimensions of impacts: the first is the improve knowledge capabilities as represented by high supply chain knowledge quality, and the second dimension is the organizational performance advancement, as reflected by supply chain integration as well as supply chain performance.

3. Research Methodology

3.1 Theoretical Framework

In the present research paper the Supply Chain Management Practices Perceived Benefits (SCIPB) construct was presented with five items. Furthermore, the second construct, viz-a-viz, Supply Chain Management Practices (SCMP) was a multi-dimensional construct with four sub-dimensions, viz, Supply Chain Performance (SCP) and Barrier Free Access (BFA) with five items each, Supply Chain Knowledge Dissemination (SCKD) with four items and Supply Chain Practices Application (SCPA) with six items. The detailed items have been listed in Annexure-II.

3.2 Hypothesis

Since the objective of this research paper was to study the factors that could be integrated so as to match the same with the perceived benefits on the supply chain management practices adopted by the firm, thus, the following hypothesis was framed:

H1: SMEs considering SCM as a strategic choice for long term growth is positively correlated with their performance.

3.3 Data Collection, Methodology and Instrument Administration

In order to collect precise data, a reliable measurement instrument is needed. To ensure brevity, understandability and content validity of the items, a rigorous validation procedure was adopted for preliminary test. A survey instrument in the form of a questionnaire was designed based on the constructs previously described and verified from the research methodology adopted for meeting the objectives stated for this research study. Respondents were asked to indicate, using a five-point Likert scale, on four varied themes. To ensure a reasonable response rate the questionnaire was sent in two phases in each industrial hub with a three months interval. In the first phase the questionnaires were sent to all 450 respondents inviting them to participate in the study with a brief description of the research, stating that all data collected would be used for academic research only and be handled confidentially. The sample area for the presented

paper included industrial hubs of Jammu only.

3.4 Response Rate

The researcher received 261 non-deliverable/un-returned questionnaires in three months after the first phase of questionnaires were sent. There were another 21 replies declining participation to the study due to the following reasons: (1) no longer in the supply chain/procurement area (2) company policy forbidding disclosure of information. Therefore, during the three months period after sending out the questionnaires, a total of 240 responses were collected. Then in the second phase of questionnaires were sent one month later to those who had not yet responded for which a total of 189 responses were received. Of the total 18 responses received were incomplete and thus were rejected while data entry was administered, thereby making a total of 171 responses. Therefore, the final number of complete and usable responses for the study stood at 411 (240 in first phase and 171 in the second phase). It yielded a response rate of 91.33%, indicating a reasonable and acceptable response rate for surveys (Dillman 2000). Furthermore, it was analysed that among 411 respondents 88 respondents were either not associated with Supply Chain Management Practices and / or were out of the scope of the questions supplied for the study. Henceforth, a total of 323 responses were finally administered for further statistical analysis, which yielded a response rate of 71.77%.

3.5 Non-response Bias Assessment

Non-response bias could be one of the major concerns for survey research methodology. Because when non-response bias exists, the data collected might not be representative to the population the researcher was intended to study. Thus statistical procedures must be taken to assessment the non response bias of the sample. For this estimation it was assumed that the second wave response is a non-response for the first wave. Chi-square tests were used to make the comparisons of all the 323 responses. It was found that no significant difference in Number of employees in the firm, Position of the firm in the supply chain, Respondent's Job Title, Respondents Job Function in the firm and Number of Years of Service of the respondent in the firm. Thus the researcher concluded that non-response bias was not a cause for concern for this study.

3.6 Methodology

As suggested by Gerbing and Anderson (1988), the researcher decided to test the measurement model first to avoid possible interactions between the measurement and the structural models. Furthermore, a measure cannot be valid unless it is reliable, but a measure can be reliable without being valid. Bagozzi (1980) and Bagozzi & Philips (1982) suggested a

instrument evaluation guideline that the instrument properties for reliability and validity include purification, factor structure (initial validity), unidimentionality, reliability and the validation of the second-order construct. The methods for each analysis were: Corrected-Item-to-Total-Correlation (for purification), Cronbach's Alpha (for reliability) and Confirmatory Factor Analysis (for first and second order factor structure and unidimensionality).

The measurement items (34 in total) were first purified by using Corrected-Item-to-Total-Correlation (CITC) scores with respect to a specific dimension of the construct. Following the guidelines constructed by Nunnally (1978). The reliability analysis of IBM® SPSS® 19.0 was used to perform CITC computation of each of the construct.

After purifying the items based on CITC, an Exploratory Factor Analysis (EFA) of the items in each construct was conducted for assessing construct dimensionality. IBM® SPSS® 19.0 was extensively used to explore potential latent sources of variance and covariance in the observed measurements. Principal Component Analysis (PCA) was used as factor extraction method and VARIMAX was selected as the factor rotation method. Also MEANSUB option was used in most cases to replace the missing values with the mean score for that item. All the items for each construct were EFA tested regardless for its existence in a proposed sub-dimension. To ensure high quality of instrument development process in the current study, 0.5 was used as the cut-off for factor loadings (Hair, et. al., 1992). The Kaiser-Meer-Olkin (KMO) measure of sampling adequacy was calculated for all dimension-level and construct-level factor analysis. This measure ensures that the effective sample size is adequate for the current factor analysis. The next step after item purification is to examine the unidimentionality of the underlying latent constructs. CFA is used to determine the adequacy of the measurement model's goodness-of-fit to the sample data. Due to the robustness and flexibility of the Structural Equation Modeling (SEM) in establishing CFA, this research uses SEM to test both first-order as well as second-order CFA models. Model data fitting was evaluated based on multiple goodness-of-fit indexes. Goodness-of-fit measures the correspondence of the actual or observed input (covariance or correlation) matrix with that predicted from the proposed model. For this study the researcher has used reports of several measures of overall model fit from IBM® SPSS® AMOSTM 19.0, such as, Goodness-of-fit-index (GFI), Adjusted-goodness-of-fit-index (AGFI), Comparative-fit-index (CFI), Normed-fit-index (NFI), Root-mean-square-residual (RMR) and Root-mean-square-error-of-approximation (RMSEA). Finally, the reliability of the entire set of items comprising the second order constructs was estimated using Cronbach's alpha, following the guideline established by Nunnally (1978).

4. Research Findings and Discussions

4.1 Measurement Results

4.1.1 Supply Chain Management Practices Perceived Benefits

Supply Chain Management Practices Perceived Benefits (SCIPB) was initially represented with 5 items in one dimension. The CITC analysis showed that the first item SCIPB1 was having a low CITC score, but due to the importance of the item this score was ignored and the item was not deleted from the study since the overall Cronbanch's Alpha was quite acceptable at 0.817. The CITC scores along with item codes are as presented in Table-1.

Supply Chain Management Practices Perceived Benefits				
Item Code	CITC Initial	Cronbach's Alpha - Initial	CITC Final	Cronbach's Alpha – Final
SCIPB1	0.466	0.817	--	0.817
SCIPB2	0.656		--	
SCIPB3	0.639		--	
SCIPB4	0.604		--	
SCIPB5	0.684			

Table-1: CITC Item Purification results for Supply Chain Management Practices Perceived Benefits

An Exploratory Factor Analysis (EFA) was then conducted using principal components as means of extraction. The Kaiser-Meyer-Olkin (KMO) score of 0.819 indicated an acceptable sampling adequacy. The total variance explained by the single factor for SCIPB stood at 57.948%. Furthermore, all the items were loaded on their respective factors and there were no items with cross-loading greater than 0.40, which was acceptable for our study. The EFA results are as shown in Table-2.

Kaiser-Meyer-Olkin (KMO) : Measure of Sampling Adequacy Score = 0.819		
Item Code	SCIPB	Cronbach's Alpha
SCIPB1	0.626	
SCIPB2	0.798	
SCIPB3	0.784	0.817
SCIPB4	0.761	
SCIPB5	0.822	
Eigen Value	2.897	
%age of Variance	57.948	

Table 2: EFA results for Supply Chain Management Practices Perceived Benefits

The next step is to test the 5 items of in Complementary Factor Analysis (CFA) for measurement model fit. The CFA model for SCIPB was then tested using IBM® SPSS® AMOSTM 19.0. The results indicated poor model fit indices as summarized in Table-5.30; thus modification indices were utilized for improving the model fit. The resultant model is as represented in Figure-1 with results as summarized below (in Table-3); henceforth there was no need for any modifications in the model constructs. Furthermore all the factor loadings (λ) were above 0.50 and significantly important.
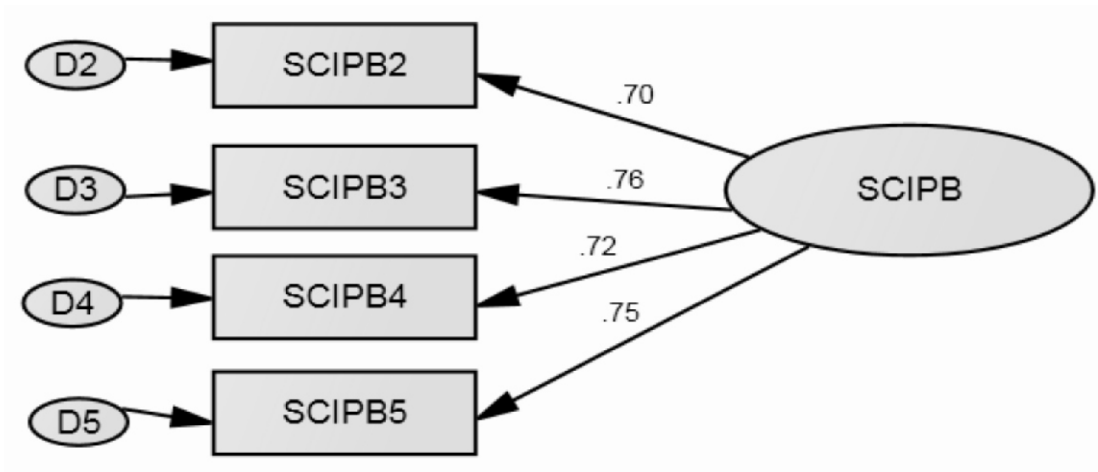
Figure 1 : CFA model for Supply Chain Management Practices Perceived Benefits

Model Fit	χ^2	df	χ^2/df	RMSEA	RMR	GFI	AGFI	NFI	CFI
Initial	23.869	5	4.774	0.108	0.029	0.971	0.913	0.955	0.964
After Removing SCIPB1	1.453	2	0.727	0.000	0.009	0.998	0.989	0.997	1.000

Table3: CFA model fit results for Supply Chain Management Practices Perceived Benefits

4.1.2 Supply Chain Management Practices

Supply Chain Management Practices (SCMP) has 20 items in 4 sub-dimensions: Supply Chain Performance (SCP) five items, Barrier Free Access (BFA) five items, Supply Chain Knowledge Dissemination (SCKD) four items and Supply Chain Practices Application (SCPA) six items.

The CITC analysis revealed that it had a perfect Cronbach's α value (0.900). The results are presented in Table-4. Furthermore, separate CITC analysis revealed that no item in each of the sub-constructs were below the CITC cut-off of 0.5.

Supply Chain Management Practices (SCMP)				
Item Code	CITC Initial	Cronbach's Alpha - Initial	CITC Final	Cronbach's Alpha - Final
SSP1	0.702		--	
SSP2	0.835		--	
SSP3	0.832	0.925	--	0.925
SSP4	0.817		--	
SSP5	0.850		--	
BFA1	0.728		--	
BFA2	0.840		--	
BFA3	0.874	0.932	--	0.932
BFA4	0.842		--	
BFA5	0.871		--	
SCKD1	0.814		--	
SCKD2	0.728	0.921	--	0.921
SCKD3	0.866		--	
SCKD4	0.869		--	
SCPA1	0.586		--	
SCPA2	0.698		--	
SCPA3	0.788	0.893	--	0.893
SCPA4	0.695		--	
SCPA5	0.764		--	
SCPA6	0.753		--	

Table 4 : CITC Item Purification results for Supply Chain Management Practices

In the next step EFA was performed using principal component as means of extraction and VARIMAX as method of rotation. The KMO score of 0.884 indicated a good sampling adequacy. All items load on their respective factors and the result showed no cross-loadings. The EFA results have been tabulated in Table-5.

Kaiser-Meyer-Olkin (KMO) : Measure of Sampling Adequacy Score = 0.884					
Item Code	SSP	BFA	SCKD	SCPA	Cronbach's Alpha
SSP1	0.796				
SSP2	0.895				
SSP3	0.892				0.925
SSP4	0.875				
SSP5	0.902				
BFA1		0.763			
BFA2		0.882			
BFA3		0.919			0.932
BFA4		0.901			
BFA5		0.867			
SCKD1			0.898		
SCKD2			0.832		0.921
SCKD3			0.922		
SCKD4			0.921		
SCPA1				0.709	
SCPA2				0.799	
SCPA3				0.835	0.893
SCPA4				0.735	
SCPA5				0.833	
SCPA6				0.804	
Eigen Value	*7.908*	*3.744*	*3.144*	*0.871*	
%age of Variance	*39.540*	*18.722*	*15.719*	*4.354*	
Cumulative %age of Variance	*39.540*	*58.263*	*73.982*	*78.336*	

Table 5 : EFA results for Supply Chain Management Practices

The first order CFA model for SCMP was then tested using IBM® SPSS® AMOSTM 19.0 with the statistics as presented in Table-6. The results indicated that although factor loading coefficients for the initial model were greater than 0.60 with the least at 0.67 for item SCPA4, but the model fit was having poor indices: χ2/df= 7.846; RMSEA= 0.146 ; RMR= 0.081 ; GFI= 0.729; AGFI= 0.653; NFI= 0.804 and CFI= 0.824 ; henceforth modification indices were utilized for modifications in the model which indicated a chance for model improvement as a result from possibility of error correlation (as shown in Table-6); after removing the correlated affects the final first-order CFA model thus obtained is as shown in Fig-2. Thereafter, modification indices indicated that there was no need for any modifications in the model constructs. The first-order CFA model for Supply Chain Management Practices (SCMP) is as shown in Fig-2. Clearly, the factor loadings (λ) were acceptable with the lowest being 0.73 for the item SSP1.
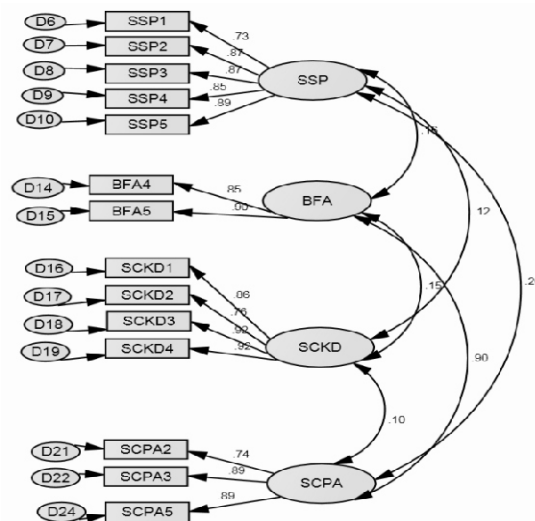
Figure 2 : First Order CFA model for Supply Chain Management Practices

Model Fit	χ^2	df	χ^2/df	RMSEA	RMR	GFI	AGFI	NFI	CFI
Initial	1286.779	164	7.846	0.146	0.081	0.729	0.653	0.804	0.824
After Removing BFA1	877.013	146	6.007	0.125	0.073	0.771	0.703	0.852	0.873
After Removing BFA1, BFA3	640.790	129	4.967	0.111	0.070	0.815	0.754	0.875	0.897
After Removing BFA1, BFA3, BFA2	455.053	113	4.027	0.097	0.070	0.846	0.791	0.899	0.921
After Removing BFA1, BFA3, BFA2, SCPA6	304.717	98	3.109	0.081	0.062	0.897	0.857	0.925	0.947
After Removing BFA1, BFA3, BFA2, SCPA4	198.817	84	2.367	0.065	0.056	0.926	0.894	0.947	0.969
After Removing BFA1, BFA3, BFA2, SCPA1	148.053	71	2.085	0.058	0.045	0.942	0.914	0.958	0.978

Table 7 : First Order CFA model fit results for Supply Chain Management Practices

In the next step, the second order model was tested to see if these four sub-constructs (SSP, BFA, SCKD & SCPA) underlie a single high order construct of SCMP. It was observed that high-order correlated effect was observed for SSP1; hence this item of the sub-construct was deleted from the study model. The resulting second-order CFA model for SCMP Characteristics is as shown in Figure-3; thereafter no further modification in the model was desired. The resultant goodness-of-fit indices for the second-order construct are as illustrated in Table-8.
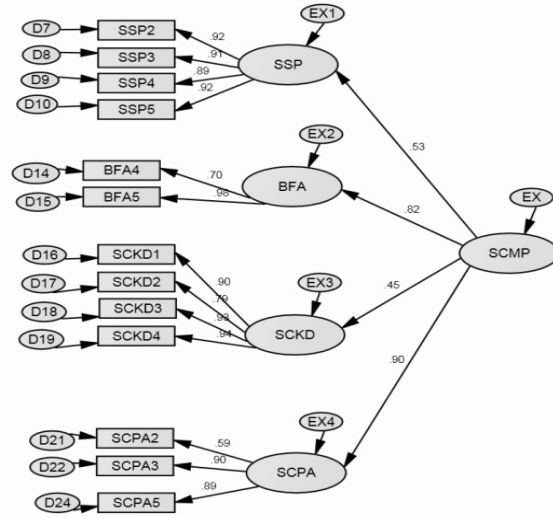
Figure 3 : Second Order CFA model for Supply Chain Management Practices

Model Fit	χ^2	Df	χ^2/df	RMSEA	RMR	GFI	AGFI	NFI	CFI
Initial	360.737	76	4.747	0.108	0.291	0.851	0.794	0.899	0.918
After Removing SSP1	199.959	74	2.702	0.065	0.044	0.865	0.809	0.910	0.927

Table 8 : Second Order CFA model fit results for Supply Chain Management Practices

4.2 Structural Model for Hypothesis

The structural model for the proposed hypothesis H1, the constructs of Supply Chain Management Practices Perceived Benefits (SCIPB) has been regarded as Independent Variables (Exogenous); whereas Supply Chain Management Practices Implementation (SCMP) has been regarded as Dependent Variable (Endogenous).
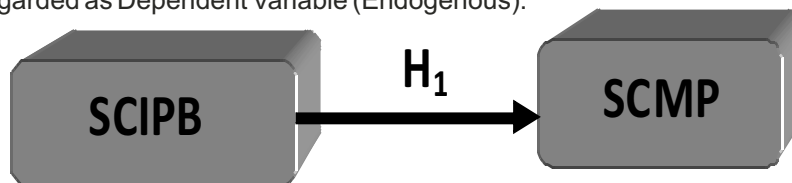
Figure 4 : Structural Model for proposed Hypotheses

The model was tested using one-tail test, a t-value greater than 2.33 is significant at the level of 0.01; and a t-value greater than 1.65 is significant at 0.05; and a t-value of 1.28 is significant at the level of 0.10. The t-value is calculated from the estimates of the model, where t-value is given as model path estimate (parameter) divided by the standard error. The results for the proposed hypotheses and propositions are as given in Table-9.

Hypotheses	Relationship	Standardized Estimate	t-value	p-value	Significance (Yes/No)
H_1	SCIPB $\rightarrow$ SCMP	0.31	= (0.248/0.057) = 4.351	< 0.05	YES

Table 9 : Structural model Hypothesis Testing Results

The structural model for the proposed hypothesis is as presented in figure 5.
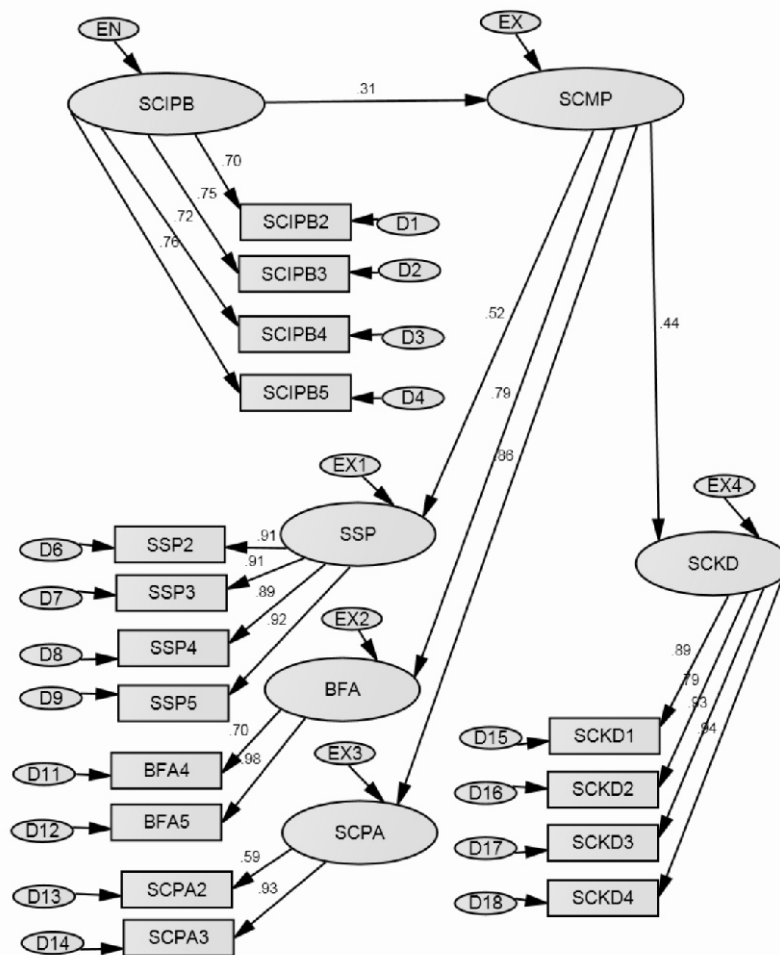
Figure 5 : Structural Model for testing of Hypothesis (H1)

S.No.	Category Code	Sub-Category Code	Item Code	Parameters
1.	SCIPB	--	SCIPB1	I believe SCM Practices helps filling orders on-time.
2.			SCIPB2	I believe SCM Practices helps provide short-order-to-delivery cycle times.
3.			SCIPB3	I believe SCM Practices helps provide high-customer-service levels.
4.			SCIPB4	I believe SCM Practices helps provide short-customer-response-time.
5.			SCIPB5	I believe SCM Practices helps provide quick response to the requirements of our firm's target markets.
6.		SSP	SSP1	Our firm implements SCM because with it our firm wishes to collaborate on the benefits obtained from its usage.
7.			SSP2	Our firm implements SCM because with it our firm wishes to strengthen relationship with our trading partners.
8.			SSP3	Our firm implements SCM because with it our firm believes that our relationship with trading partner is profitable.
9.			SSP4	Our firm implements SCM because with it our firm and our trading partner can share risks that occur in SCM.
10.			SSP5	Our firm implements SCM because with it our firm can have harmonious relationship with our trading partner.
11.	SCMP	BFA	BFA1	Our firm believes that with SCM implementation our firm can handle non-standard orders.
12.			BFA2	Our firm believes that with SCM implementation our firm can meet special customer requirements.
13.			BFA3	Our firm believes that with SCM implementation our firm can produce products with multiple features.
14.			BFA4	Our firm believes that with SCM implementation our firm can rapidly adjust to production capacity in response to the change in customer demand.
15.			BFA5	Our firm believes that with SCM implementation our firm can introduce new products quickly.
16.		SCKD	SCKD1	Our firm believes that with SCM implementation our firm can help exchange information with our suppliers.
17.			SCKD2	Our firm believes that with SCM implementation our firm can help maintain long-term partnerships.
18.			SCKD3	Our firm believes that with SCM implementation our firm can help provide stable procurement relationships.
19.			SCKD4	Our firm believes that with SCM implementation our firm can share market information among departments within the firm.
20.		SCPA	SCPA1	Our firm believes that with SCM applications help to have integrated inventory management system.
21.			SCPA2	Our firm believes that with SCM applications help to have integrated logistics support system.
22.			SCPA3	Our firm believes that with SCM applications help to have automated order refilling system.
23.			SCPA4	Our firm believes that with SCM applications help to have automated accounting system.
24.			SCPA5	Our firm believes that with SCM applications help to have integrated data sharing system.
25.			SCPA6	Our firm believes that with SCM applications help to have synchronized production schedules.

Abbreviations:

SCIPB Supply Chain Management Practices Perceived Benefits; SCMP Supply Chain Management Practices Implementation; SSP Supply Chain Performance from its implementation; BFA Barrier Free Supply Chain Implementation ; SCKD Supply Chain Knowledge Dissemination from its implementation; SCPA Supply Chain Practices Application implementation.

5. Conclusion

This relationship is found to be significant with t-value = 4.351, but with a moderately strong relationship between the two constructs as compared to other two hypotheses framed for the study, which indicates that what benefits organizations perceive has affects on their implementation of SCM but not that to that extent which is expected. This result proved to be a thought provoking and could be understood as such: first, SMEs perception towards SCM change due to instability situations in which the SMEs operate as a whole. During the decision making stage when weighing the probability of adopting SCM, SMEs may have perceived many of the potential benefits that SCM can bring, such as facilitating business transactions, increasing understanding to business context, improved supplier relationships, smooth day-to-day activities, etc. However, after the organization has made investment to put up such a management system, they may find that SCM is not omnipotent as initially expected to solve all of their business problems, particularly during the initial implementation stage when the system is not stable and the employees are not familiar with SCM operations. It is natural when the organization has not fully taken advantage of the benefits of SCM, people do fell certain level of disappointment, which could be exaggerated in answering survey questions. Second, a considerable numbers of our questionnaire respondents were from small sized partially operating with supply chain and having employees' strength of less than 20 or so. A major reason for their adoption of SCM was the requirement from their major competitor or the funding agency for continuing doing business with. For these organizations, they were pushed to implement SCM (and not by their own choice), and tended to ignore many of the possible operational benefits from SCM. But as a whole, our results revealed that SMEs can regard SCM as one of the approaches to boost supply chain performance of their firms.

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Quality of Work Life Practices among Star Categorised Hotels: An Empirical study

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ABSTRACT

This study explores the status of Quality of Work Life [QWL] and difference in presences of QWL practices among various category of Indian hotel. QWL enhances the staff satisfaction in terms of Satisfaction related with health & safety, development in career, self esteem & actualization, recognition, rewards, physical working environment, management relationship. The purpose of this research paper was to indentify the status of QWL and association between dimensions of QWL Practices and demographic characteristics of selected hotels in India. The study also identified the difference in presence of QWL in relation to the demographic profile of the respondent hotels. Descriptive statistics, Reliability Test and The Spearman's correlation, Levene's Test of Homogeneity, Kruskal-Wallis Tests were applied to get the inferences. On the basis of findings, study concluded that the presence of QWL practices were poor in Indian hotels. The significant associations were identified between the dimensions of QWL and demographic profile of the hotels. The study also explored difference in presence of QWL practices in relation to the demographic profile of the hotel.

Keywords : QWL, Indian Hotel Industry, demographic, associations

Introduction

Travel & Tourism is a significant economic activity, an engine for economic growth and an important source of foreign exchange earnings in most countries around the world,. This industry is playing significant role globally and contributing sufficient amount to total GDP, contributing 10% of global GDP and 6% of the world's total exports. More than one billion tourists are travelling to an international destination every year (World Travel & Tourism Council,2017). In 2016, Travel & Tourism directly contributed US$2.3 trillion and 109 million jobs worldwide (WTTC Report, 2017). Hotel industry is one of major component of travel & tourism industry. The Indian hotel industry has emerged as one of the key industries, driving the growth of the many services sector (FHRAI Report, 2016). It is also among the top-job creating sectors and shows significant multiplier effect on employment(HVS Report, 2016). But hotel industry is recognized for its long

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working hours, night shifts, lengthy occupancy, un expected duty roasters, physical and mental work pressure, strict professional environment (Soni and Rawal, 2014). These reasons have contributed in increasing the high attrition rate of employees in hotel industry. One of the most important challenges in hotel industry are employee retention and stability. So it becomes imperative to inculcate QWL practices to enhance employee's satisfaction which may lead to employee retention in future.

The QWL practices make the working place more pleasant for employees which would lead to higher productivity and promote employee stability in hotel industry. The Quality of Work Life practices intend to develop association of employees, to provide better place to work for employees through various QWL indicators i.e. equal opportunities and growth prospects, adequate and fair compensation, welfare facility, social security measures, safe and healthy environment, basic facility related to employees well being, stress management, safety & security, fair compensation, growth prospects will satisfy the employee's psychological, love belongingness and self-esteem needs. Better Quality of Work Life practices support the employees to give better productivity. Productivity does not means only physical output but also better behavior of the employees towards their colleagues, improved team spirit and acceptance level toward sun favorable working conditions without complaints. In organizations, QWL practices are essential for smooth running of organizations and also facilitates the organization in attracting and retaining the efficient employees (Beloor, 2017). So the prime reason for promoting the term Quality of Work Life has been observed that it creates the win-win situation through creating a better place to work for employees by promoting improved employee welfare practices which will make the employees happy and satisfaction with the job, and will also increase employee productivity, longer tenure in the organization and subsequently increased hotel profitability in future.

QWL had become a buzzword of the modern time. Industrial revolution had given birth to the term of Quality of Work Life. In today's competitive scenario management expect high productivity from its employees, and sometimes management treats their employees as machine rather than human. Subsequently, the negative results of high expectations and wrong practices started prevalent in the form of absenteeism, employee turnover, poor morale, alcoholism, drug addiction, fatigue, boredom, occasional damage and accidents resulting from inattention etc. To overcome these problems legislation was enacted in favour of employees to avoid job injuries and harmful working conditions in the organization. F.W. Taylor's scientific management principles created awareness about human resources that were earlier considered

only instruments of production, who were ready to work without limits from dawn to dusk under any situation and being motivated by lure of money. Near to the beginning of 20th century and end of 19th century the role of worker continue to evolve. Significant contribution of Maslow, Herzberg and Mc Gregor in introducing QWL cannot be ignored. The QWL had now come to be known as humanization of work. The main idea of this concept was treating employees as human being rather than machines. The concept of Quality of Work Life had originated from this continuous research process and had become one of the most important issues of present era for every organization. Today the term QWL had gained much popularity in every business. QWL is multifarious criteria that characterize industrial orientation consisting of fair compensation, healthy working conditions, opportunities for developing skills, continued growth of employees, security conducive work environment, protection of workers' rights, social relevance and balance between work & personal life. Later, quality came to be recognized as an approach or method used for improving working conditions which will lead to higher productivity. Quality of work life as strategy and principle which emphasizes on importance of the employee's well-being at work place (Jaya Kumar and Kalaiselvi, 2012). QWL can be ensured when employees of an organization were able to satisfy their important personal needs (Aswathappa,2008).A high quality of work life (QWL) is essential for all organizations to attract and retain employee (Nanju, 2013).Being a labor intensive hotel industry, QWL became an important approach that should be adopted by this industry. Employees of hotel industry face many problems due to the strict professional culture, long working hours, night shifts work pressure, poor working environment. These problems lead to job dissatisfaction. Thus the industry must focus on job satisfaction of employees working for them to retain potential workforce and to attract the new potential employees. Many researches had been conducted on this issue globally. These researches indicated poor existence of QWL in hotel industry. So there is a need of longitudinal study for this one of the important issue. In the present study researchers had tried to study the existing literature in the context of QWL practices in hotel industry with special reference to Indian hotel industry. The next section deals with review of literature related to the concept QWL.

Review of Literature

Quality of work life had its root in the motivational theories given by Maslow, Herzberg and Mc Gregor (George, 2017). QWL gained importance in the mid 60s and further this term started evolving to more extent. QWL is processes in which organization recognizes their responsibility to establish such working conditions which are best for the employees as well as for organization(JosephineandGunasundari, 2017). Quality of work life is a solution for the

negative impacts of job on health and welfare of the employees. To keep employees for the longer period and for the attainment of the objective of industrial organizations every industry want to give better working environment to their workers including all non financial and financial benefits (Shanmugam and Ganapathi, 2017).Typically, the conceptualization of QWL has incorporated job satisfaction and well being, but agreement on what else should be included among key facets has been hard to achieve. The QWL is a multi-dimensional concept, which has been defined by scholars in diverse ways showing discrepancy on its constructs as well as components (Mirvis and Lawler, 1984; Taylor, 1978; Walton, 1975). QWL is a philosophy, a set of principles, which holds that people are the most important resource in the organization as they are trustworthy, responsible and capable of making valuable contribution and they should be treated with dignity and respect (Tabassum et. al, 2011: 12; Rose et. al, 2006: 61). Quality of work life is important for organizational performance and it is an important dimension that affects employee motivation at work (Gupta and Sharma, 2011). In modern Human Resource Management (HRM) practice, the concept of 'Quality of Work Life' (QWL) is a strategy for employee retention. The idea of QWL is developed upon the increasing importance of reducing employee turnover rate in a highly competitive market (Huda, 2017). Quality of Work Life is a generic phrase that covers the feelings of the workers about every dimension of work including economic rewards and benefits, security, working conditions, organizational and interpersonal relationships and its intrinsic meaning in a person's life(Rohidas, 2017).Quality of Work Life (QWL) has different meanings to different people. Some consider it as democracy or code termination with increased employee participation in the decision making process. For administrators, the term denotes improvement in the psychological aspects of work to improve productivity. Employees interpret QWL as more equitable sharing of profits, job security and healthy and humane working conditions (Aliasgar, 2017). Recently, the new concept of job satisfaction, also known as quality of work life, has been taken into account by managerial level who seek to promote the quality of human resources through comprehensive programs necessary for the enhancement of job satisfaction, recruitments and retention of employees (Momeni et al, 2016). QWL is a multidimensional approach which includes job satisfaction, adequate pay, work environment, organizational culture etc, these dimensions affects on the employee performance, productivity, absenteeism, retention rate (Beloor et al, 2017).Further it is observed that every organization need to provide good environment to their workers including financial and non-financial incentives so that they can retain their staff for longer period of time and achieve organizational goals. The quality of work life (QWL) approach is employee's oriented approach. In this approach the employees of organization are considered as an asset

rather than a cost (Chaturvedi and Pandey, 2017). The success of hotel industry is dependent on efficiency of its employees and service quality. An organization's excellence depends on the workforce and their working environment of organization. The work environment is the major dimension that contributes toward quality of work life of employees (Chouhan and Saini, 2017). During the past few years quality of work life had received significant attention among both academic and business environment due to its vital role on the success of organizations. QWL helps employees' well-being thereby the well-being of the whole organization. An organization's success depends on its workforce. Thus to achieve organizational objectives, it is imperative that the employees of organization are satisfied with their job (Dahie et al, 2017).Quality of work life practices (QWL) enhance satisfaction level among employees which is essential for organizations to achieve high performance, growth & profitability(Davoudi, 2014).Quality of work life is a comprehensive program that increases employees' satisfaction, reinforce employees learning and also help them to them to get adapted with required changes imposed by management. Dissatisfaction with job damage the overall morale of employees regardless of their position and level. QWL boosts the morale of employees. Motivated employees work with 100 per cent dedication and work to achieve organizational objective (Noor and Abdullah, 2012). Hotel industry effected with uncertain, unexpected, heavy duty roaster, strict disciplined environment, and physical and mental pressure. These features of hotel industry may cause personal life adjustment and lead employees' psychological variations resulting permanent transition (Soni and Rawal, 2014). Whereas a healthy employee registers a high productivity. Cheerful, confident employees may prove and valuable asset to the organization. This is possible if organizations work in the area of providing safe physical environment and tension free, relaxed working environments and logical working hours (Chouhan and Saini, 2017). QWL influences on productivity of employees in an organization and it leads to physically and psychologically healthier employees with positive attitude. In today's work environment, organizations need to be flexible, and adopt a strategy to improve the employees 'Quality of Work Life' to satisfy both the organizational objectives and employee needs. Present study was an attempt to find out status of quality of work life of hotel employees in Indian Hotel Industry and the association of QWL indicators in relation to organizational profile of hotels. And study also tried to find out the difference between quality of work life practices in different category of hotels

Research Methodology

This empirical study was conducted to indentify the association between presence of dimensions of QWL Practices and demographic characteristics among selected hotel of India. Only Ministry of Tourism, Government of India (MOT) approved hotels were approached for data

collection. Population of the study was India. Convenient sampling method was adopted for the selection of hotels from four regions of India i.e. East, West, North and South. To carry out the study, a structured questionnaire was formulated based on comprehensive review of literature. Data was collected from all the levels of employees' i.e. operational level, supervisory level and managerial levels. Employees' views on the QWL practices were measured on 5 point Likert scale ranging from strongly agrees (5) to strongly disagree (1) and always (5) to never (1) as per the nature of questions. Data was collected through emails and mobile media. Questionnaire was emailed to 360 hotels of all categories from five star deluxe, five star, four star, three star, two star, one star respectively approved by ministry of tourism. 314 responses were received from all over India. This study was aimed to understand the status of QWL practices in Indian hotel industry and association was identified in relation to the demographic profile of the hotel. Further difference in the presence of QWL was also figured out in different category of hotels of India. The data are analyzed with the statistical package programme for social sciences (IBM SPSS 20 for Windows). The basic analysis and tests utilized in this study includes Descriptive Statistics, Reliability Statistic, Shapiro- Wilk Test of normality, Wilcoxon Signed Ranked Test and Spearman's Correlation Coefficient. To achieve aim following objectives had been formulated.

Objectives of the study:

♦ To identify the presence of dimension of Quality of Work Life in Indian hotel industry.

♦ To identify the association between Dimensions of QWL Practices and demographic characteristics of hotels.

♦ To find out the difference between overall QWL practices in selected hotels in relation to the demographic profile.

Hypothesis of the study:

H1 H0 the Dimensions of QWL practices are not significantly related to the demographic characteristics.

Ha The Dimensions of QWL practices are significantly related to the demographic characteristics.

H2 H0 There is no difference between overall QWL practices in selected hotels in relation to the demographic profile.

Ha There is difference between overall QWL practices in selected hotels in relation to the demographic profile.

RESULT AND DISCUSSION

Demographic profile of hotels

Most of the research studies observed that demographic characteristics had a significant impact on the operational and non-operational work practices. Hotel organizations with specific characteristics such as category, age, number of employees in Hotels, location in terms of city and type of ownership had a close association with quality of work life practices. Table 2 shows that 196 hotels (62.3%) properties were chain followed by non-chain hotels comprising of 118 (37.7 %) in totality. Further 37.3 per cent data collected from five star hotels followed by 21.7 per cent from four star hotels, 15.3 per cent from three star hotels, 11.5 per cent from two star hotels and only 1.9 per cent from one star category. In term of age of property 39.6 per cent of respondents had been working with the hotels established from 11-15 years followed by hotels existing above 15 years comprised of 92 hotels (39.4%) and hotels with less than five year of existence had 41 hotels (13.1%) respectively. Further it showed that 51 hotels (16.2%) had less than 50 employees while 77 hotels (24.5%) had 51-100 in total. Location of hotels showed that majority of respondent from hotels comprised of North India with 169 hotels (53.8%) that is followed by South India which consisted of 54 hotels (17.2%) lastly 40 hotels (12.7%) from West India respectively.

Table 2 : (Demographic characteristics of selected Hotels of India)

Variable N= 314		Frequency	Percentage
Type of Hotel	Chain Hotel	196	62.3
	Non Chain	118	37.7
Category of Hotel	1 Star	6	1.9
	2 Star	36	11.5
	3 Star	48	15.3
	4 Star	68	21.7
	5 Star	117	37.3
	5 Star deluxe	39	12.4
Age of Hotel (In-terms of years)	0-5	41	13.1
	6-10	56	17.9
	11-15	124	39.6
	Above 15	92	29.4
Number of Employees in Hotel	Less than 50	51	16.2
	51-100	77	24.5
	101-150	69	22.0
	151-200	60	19.1
	More than 200	57	18.2
Location of Hotel	North India	169	53.8
	East India	51	16.2
	West India	40	12.7
	South India	54	17.2

Presence of Dimensions of QWL in Indian Hotel Industry:

To achieve the research objective i.e. to identify the presence of dimension of quality of work life in Indian hotel industry, descriptive statistics such as, mean, standard deviation, Reliability Statistic, Shapiro- Wilk Test of normality were used for the analysis. To assess presence QWL 63 dimension related with QWL were asked to respondents. In the study, where ever the analysis based on descriptive statistic was done, following parameters had been used for interpretation:

Table 3 : Parameters for interpretation

Mean Value	Interpretation
Above 4.5	Excellent
4.1 to 4.5	Good
3.6 to 4	Above Average
3to 3.5	Average
2.5 to 2.9	Below Average
2.0 to 2.4	Poor
Below 2.0	Very Poor

Reliability Statistic for presence of Quality of work life in hotel industry. Variables to measure presence of QWL were made subject to reliability test to measure the consistency of the scale. Value of Cronbach alpha (α) is used to indicate the overall reliability of scale. Kline (1999) and Field (2013) recommends that a cut off value of .7 is an acceptable value for Cronbach's α as values substantially lower than this indicate an unreliable scale. Cronbach's α value for presence of QWL was .965 which specified that all variables representing QWL had high reliabilities and were proficient to give reliable results and validate them. Therefore, it can be concluded that the variables exhibited adequate content validity.

Table 5 : Reliability Statistics for QWL variables

Cronbach's Alpha	N of Items
.965	63

Objective-1 Presence of dimension of QWL in Indian hotels. With an aim to understand, whether the QWL dimensions were present in Indian hotel Industry, following set of questions on identified dimensions were posed.

Adequate and Fair Remuneration

Adequate & Fair Remuneration dimension consist of seven variables which were related with equality in pay, sufficient rewards for good performance, review of pay, discrimination on the basis of sex, age, religion and so on. Equal pay for equal work and pay is linked to individual responsibility, skill, performance and accomplishments. The aim behind asking these questions was to understand whether Indian hotel industry follows equality in term of remuneration and adequate pay. The overall mean for this dimension was calculated below average i.e. (M=2.88) which indicated lack of parity in remuneration in Indian hotel industry. Mean score for 'hotel establishes a fair and equitable remuneration'(M=2.83) was observed below average followed 'Periodic review and revisions of pay rates are well followed' (M=2.78), which also indicated below average value. 'Hotel's incentive policy well informative and fair (M= 2.80), your job is priced in terms of its worth (M=2.73), pay is sufficient reward in relation to your skills, responsibility and performance (M=2.72) which are showing non-existence of these facilities in Indian Hotel Industry. However result was satisfactory for the variable 'discrimination on the basis of age, sex, region and religion in hotels (M=3.36)'. Overall results indicated that hotel industry does not offer competitive remuneration to lead a quality life for the employees. And employees of hotel industry had the opinion that their work was not been priced in terms of worth. Incentives were not given properly and there was no revision of salary. On the basis of results, it can be proposed to industry practitioners or policy makers to reform the policies related with compensation at all level of employees working in Indian hotel industry in order to bring motivation among the employees and to enhance quality of work life.

Table 6 : (Adequate and Fair remuneration)

Dimension 1	Mean	Standard Deviation
Your hotel establishes a fair and equitable remuneration?	2.83	1.17
Your pay is sufficient reward in relation to your skills, responsibility and performance?	2.72	1.09
Your job is priced in terms of its worth?	2.73	1.08
Hotel retains the present employees by paying at competitive levels.	2.99	.902
Periodic review and revisions of pay rates are well followed.	2.78	1.02
Hotel's incentive policy well informative and fair.	2.80	1.11
Your organization does not discriminate on the basis of age, sex, region and religion.	3.36	1.07
Combined Mean for dimension 1	2.88	

OSHA

Every hotel organization must check working conditions of employees. Organization must ensure safe environment to its employees. It is widely accepted that employees should not be exposed to working conditions that can adversely affect their physical and mental health (Orpen, 1981). OSHA dimension composed of nine variables such as clean and hygiene work place facilities, Protection from chemical hazards, OSHA training, safe working conditions, adequate availability of first aid facilities, appropriate use of warning and accident prevention signage, sufficient exit routes and availability of personal protective equipment etc. Observed Overall mean for this dimension (OSHA) was observed average (Table 3.2) with mean value of (M=3.28). Respondents was asked to whether OSHA practices are well followed in hotels (M=2.93). It was observed that presence of OSHA was below average in hotels. Further responses were recorded 'did hotel employee receive any training regarding in OSHA practices' (M=2.85), 'Employees and management work together to ensure the safest possible working conditions' (M=3.02),'safety of workers at high priority with management found to be average' (M=3.10),'Hotel has sufficient exit routes for emergency' (M=3.30), 'availability of sufficient personal protective equipment at work place' (M=3.39) and 'adequate first aid facilities are

available in hotels(M= 3.40' and 'hotel follows warning signs and accident prevention signs strictly' (M=3.72). On the basis of descriptive analysis it can be observed that hotel management kept guest and employees on priority in order to prevent misshaping in the premises. Presently hotels are serious towards healthy, hygienic and safety of employees. But industry should conduct training session on OSHA for the employees so that employees can be protected form accidents.

Table 7 : OSHA

Dimension 2	Mean	Standard Deviation
OSHA practices are well followed.	2.93	1.06
Work place facilities are in clean and hygienic conditions.	3.82	.845
The safety of workers is a high priority with management where I work.	3.10	1.08
Employees are given training in OSHA practices.	2.85	1.10
Employees and management work together to ensure the safest possible working conditions.	3.02	1.03
Adequate first aid facilities are available.	3.40	1.00
Your hotel follows warning signs and accident prevention signs strictly?	3.72	.831
Hotel has sufficient exit routes for emergency.	3.30	1.07
You have sufficient personal protective equipment at work place?	3.39	.955
Combined Mean for dimension 2	3.28	

Stress Management

Instability of employment, rapid change of demands and intensification of work pressure are widely prevalent consequences of economic globalization and technological change. Stressful experience at work can adversely affect physical and mental health. Stress Management dimension consists of ten variable i.e. taking stress at work, extra hours work beyond usual schedule, not extra remuneration for extra work, not enough rest during working hours, no provision for stress releasing techniques, not allowing to get off from duty in case emergency, quality time spend with family, no spare time to take care of family matters, interference of job life with work life and no guest lectures and workshop on stress management.

Combined mean score for dimension 3 (Stress Management) concluded below average with mean value of (M=2.91) which indicated that employees working in hotel industry living with stressful environment in terms of long duty hours, break shift, guest handling and low wage rates etc. Hotel employees feels stress at work (M=4.05) followed by working extra hours beyond their usual schedules (M=4.10) observed high mean value and indicated poor quality of work life of hotel employees with stressful atmosphere. Further results inferred that remuneration for extra hours worked (M=2.14), provision of enough rest during working hours (M=2.26) and quality time to spend with your family (M=2.43) revealed the poor status of these facilities in Indian hotel industry which is really a matter of concern for policy makers. In addition to that management arranged periodical workshops and guest lecture to reduce or minimize job stress (M=2.59) followed by hard to take time off during my work to take care of the family matters (M=2.74), hotel practices any stress releasing techniques for the employees (M=2.56) and provision for get off from the duty easily in case of emergency in family (M=2.86) inferred that hotel industry has stressful working environment with below averages mean score mentioned in the below table. In addition to that, employees were of the opinion that in hotel industry, their work is highly stressful due to long working hours i.e. beyond duty hours and no rest is given during long shift. These results indicated that hotel employees work under stress. Industry need to take this issue seriously and efforts should be done for improvement in quality of work life practices.

Table 8 : Stress Management

Dimension 3		
Do you feel stress at work?	4.05	.954
Do you work extra hours beyond your usual schedules?	4.10	.968
Do you get remuneration for extra hours worked?	2.14	1.06
Does your hotel practices any stress releasing techniques for the employees?	2.56	1.04
Do you get off from the duty easily in case of emergency in family?	2.86	1.17
Do you get quality time to spend with your family?	2.43	1.00
It is hard to take time off during my work to take care of the family matters.	2.74	1.07
Oftenly the demand of my job interfere my family life.	3.41	1.13

The management arranged periodical workshops and guest lecture to reduce or minimize job stress.	2.59	.994
Combined Mean for dimension 3	**2.91**	

Opportunities and Growth Perspective

Opportunity and growth perspective implies personal growth includes focus upon the opportunities that are provided for employees to advance in their careers. This also relates to the idea of professional learning as a means for career development or succession possibilities. Opportunities and growth perspective has seven variables consist of chances of promotion, receive enough help during work, training and development opportunities, training sessions and workshops on innovative techniques and methods, employees appreciation award, hotel prefers internal promotions rather than external and hotel promotes national integration etc. The table revealed that combined mean score for dimension 5 (Opportunities and Growth Perspective) which is average mean value of (M=3.00) and observed average equal opportunities and growth perspective of hotel employees in Indian hotel industry and proved that there is no equal growth and opportunities are available. Hotel promotes national integration through cross-cultural training (M=2.80) followed by training and development opportunities are good enough to enhance job performance (M=2.89) and training sessions and workshops on innovative techniques and methods are conducted for employees (M=2.77) indicated below average mean score and revealed non-existence of these facilities in Indian hotel industry. Further hotel has provision of various employees appreciation award (M=3.28) followed by chances of promotion are good (M=3.39) and receive enough help, equipment and information to get the work done at work place (2.95) concluded average. Over all mean for this dimension (Opportunity and growth perspective) is average (M= 3.00). But Industry does not offer training & development opportunities for the employees. Although results were on positive note for 2 issues such as appreciation award for better performance and availability of promotion chances.

Table 10 : Opportunities and Growth Perspective

Dimension 5		
Chances of promotion are good.	3.39	.950
Receive enough help, equipment and information to get the work done.	2.95	1.02
Training and development opportunities are good enough to enhance job performance.	2.89	1.04
Training sessions and workshops on innovative techniques and methods are conducted for employees.	2.77	1.08
Hotel has provision of various employees appreciation award.	3.28	.998
Your hotel prefers internal promotions rather than external?	2.94	.997
Your hotel promotes national integration through cross-cultural training?	2.80	1.06
Combined Mean for dimension 5	3.00	

Future Financial Security

The work place should offer future finance security/stability of job and income which is a high priority of the employees. It is a psycho-social motivator as well as a sentinel indicator of employment conditions and the way work is organized. This dimension contains four variables such as job security, pension scheme, provident fund and employment gratuity. Combined mean score for dimension 6 (Future Financial Security) which is average mean value of (M=3.02) and observed average future financial security of hotel employees in Indian hotel industry. Hotel has any pension scheme for the long term employees (2.24) followed by employees feel secure at job in terms of job security (2.24) and hotel provides gratuity which is a reward for long and meritorious service (2.84) indicated below average future financial security in hotel industry while on the other side employee's provident fund is well active in the hotel with mean value of (M=4.25) inferred good indication that hotels are quite conscious about employees provident fund due to labour laws and regulatory bodies. Broadly it can be inferred that future financial security in Indian hotel industry was found average.

Table 11 : Future Financial Security

Dimension 6		
Employees feel secure at job in terms of job security.	2.76	1.09
Your hotel has any pension scheme for the long term employees?	2.24	1.09
Employee's provident fund is well active in the hotel.	4.25	.937
Hotel provides gratuity which is a reward for long and meritorious service.	2.84	1.01
Combined Mean for dimension 6	3.02	

Welfare Facility

The concept of 'labour welfare' is flexible and elastic and differs widely with times, regions, industry, country, social values and customs, the degree of industrialization, the general social economic development of people and political ideologies prevailing at particular moments Employee welfare refers to a set of policies and programs, which provides support to the employees and their families as well as enhance personal effectiveness and quality of life. Welfare facility dimension consists of sixteen variables such as free staff accommodation, separate rest rooms for male and females, adequate staff locker rooms, free food and laundry facility, free transportation during all shift and during night shift only, adequate medical facility, staff cafeteria facility, provision of girl child education, medical insurance, recreational facilities, good mechanism for grievance redressal, crèche facility, flexible work option, provision of compensation in case accident and handling of sexual harassment etc. The combined mean score for this dimension (Welfare Facility) was below average with mean value of (M=2.74) and observed non-existence of welfare facilities in Indian hotel industry. Which would lead to poor QWL in hotel employees. Hotel have any provision for girl child education of employees (M=1.93) followed by hotel have crèche facility (M=2.09) which revealed that non-existence of these facilities in hotel industry while on the other side government of India had made mandatory for the crèche facility for the organization having female employees more than 10 and also encourage to give girl child education allowance as well. Further the results indicated that employees have access to recreational, sporting/ fitness facilities (M=2.47), hotel have provision for free transportation facility during all shifts (M=2.23), hotel have provision of flexible work options (M=2.51), hotel give any medical insurance to you and your family (2.57), hotel have provision for

the compensation in case any accident during working hours (M=2.85), Hotel has good mechanism for redressal of grievances (M=2.62), provision for free transportation facility during night shift only (M=2.98) and adequate staff locker room facility (M=2.93). There are few QWL indicators in this dimension observed average mean score i.e. have provision for free food and laundry facility (M=3.20) and adequate medical facilities are available (M=3.06) inferred average score whereas staff cafeteria facility is hygienic and satisfactory (M=3.54) followed by sexually harassments cases are handled carefully and seriously in hotel (M=3.64). Results of the study indicated that hotel industry provide clean and hygienic work place facility and staff cafeteria. In addition to that the below data concluded that various welfare facilities provided by hotels were average in most of the cases. Industry provide basic facilities to its employees such as food, laundry, cafeteria, medical facilities and so on. But industry does not provide good accommodation, free transportation during all shifts, girl child education allowance, medical insurance, flexible working hours etc.

Table 12 : Welfare Facility

Dimension 7		
Do you have provision for free staff accommodation?	2.47	1.16
Do you have provision of staff rest room separately for males and females?	2.85	1.28
Do you have adequate staff locker room facility?	2.93	1.26
Do you have provision for free food and laundry facility?	3.20	1.16
Do you have provision for free transportation facility during night shift only?	2.98	1.08
Do you have provision for free transportation facility during all shifts?	2.23	1.16
Adequate medical facilities are available.	3.06	1.18
Staff cafeteria facility is hygienic and satisfactory	3.54	1.06
Does your hotel have any provision for girl child education of employees?	1.93	1.07
Does your hotel give any medical insurance to you and your family?	2.57	1.21
Do you have access to recreational, sporting/ fitness facilities?	2.47	1.11
Hotel has good mechanism for redressal of grievances	2.62	1.14
Does your hotel have crèche facility?	2.09	1.11

Does your hotel have provision of flexible work options? Does your hotel have provision for the compensation in case any accident during working hours?	2.85	1.16
Sexually harassments cases are handled carefully and seriously in hotel	3.64	1.11
Combined Mean for dimension 7	**2.74**	

Test of Normality for Quality of Work life among hotel employees

Test of Normality for Quality of Work Life Practices among Indian Hotel industry - Shapiro-Wilk test of normality was applied to analyse the score in the sample to a normally distributed set of score with same mean and standard deviation. If the test is significant (P< 0 .05) it tells that the distribution of sample is significantly different from normal distribution. In this study the QWL practices scores for Shapiro-Wilk W (314) is equal to .953, P < .001, were significantly non-normal. Close examination of Histogram (Fig 1) and Normal Q- Q Plot (Fig.2) also indicated that data has departure from normal distribution as the Histogram did not have approximate shape of normal curve. Hence the data on the quality of work life practices was found not normal and thus supported the use of non-parametric technique The Spearman's correlation to test hypothesis H1.
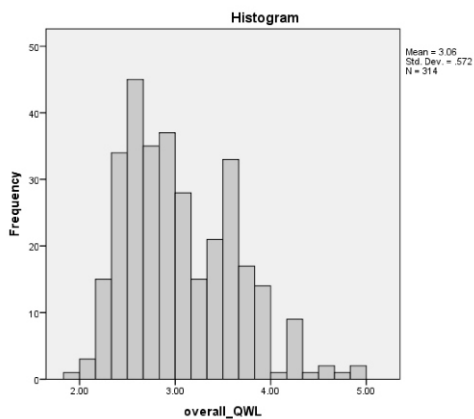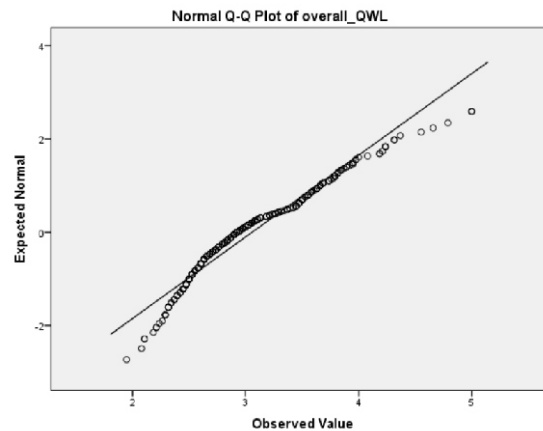

Figure1 Histogram for QWL

Figure 2 Normal Q-Q Plot for QWL

H1- Association between Dimensions of QWL in relation to Organizational Profile of Indian Hotels

Dimension-1 (Adequate and Fair Remuneration)

The Spearman's correlation was applied to identify the relationship between Dimension-

1 (Adequate and Fair Remuneration) and selected organizational profile variables such as type of hotel, category of hotel, age of hotel and number of employees in hotel. The results indicated that Dimension one had positive significant relationship with category of hotel (rs= .219**,p< .01), and number of employees in hotel (rs= 210** ,p<.01). Further it is inferred that there is no relationship with type of hotel and age of hotel.

Dimension -2 (OSHA)

Further Dimension 2 was observed to see the relationship with organizational profile variables and the result indicated that this Dimension (OSHA) had positive significant relationship with category of hotel (rs= 367** ,p < .01), and number of employees in hotel (rs= 353** ,p<.01). This Dimension inferred negative significant correlation with type of hotel (rs= -.157** ,p< .01) and no correlation was found with age of hotel.

Dimension -3 (Stress Management)

The Spearman's correlation was applied to identify the relationship between Dimension-1 (Stress Management) and selected organizational profile variables such as type of hotel, category of hotel, age of hotel and number of employees in hotel. The results indicated that Dimension three had positive significant relationship with category of hotel (rs= 119* ,p< .05) and no correlation was found with type of hotel , age of hotel and number of employees in the hotel.

Dimension -4 (Organizational Culture)

The Spearman's correlation results indicated that Dimension 4 (Organizational Culture) had negative significant relationship with age of hotel (rs= -.152** ,p< .01), and positive significant relationship with category of hotel (rs= .288** ,p < .01) and number of employees in the hotel (rs= .255** ,p < .01. No relationship was observed with type of hotel.

Dimension -5 (Opportunities and Growth Perspective)

Dimension-5 (Opportunities and Growth Perspective) had negative significant relationship with type of hotel (rs= -.203** ,p< .01),   and positive significant relationship with category of hotel (rs= .355** ,p < .01), and number of employees in hotel (rs= .292** ,p<.01). Results of Dimension 5 indicated no relationship with age of hotel.

Dimension -6 (Future Financial Security)

Relationship between organization profile and Dimension-6 (Future Financial Security) was observed. The results indicated that Dimension 6 had negative significant relationship with type of hotel (rs= -.127*, p < .05), and positive significant relationship with category of hotel (rs= .236**, p < .01), and number of employees in hotel (rs= .167** ,p<.01). Further no relationship is found with age of hotel.

Dimension -7 (Welfare Facility)

The Spearman's correlation technique revealed the relationship between Dimension-7 (Welfare Facility) and selected organizational profile variables. The results indicated that Dimension 7 had negative significant relationship with type of hotel ($rs=$ -.204** ,$p<$ .01), and positive significant relationship with category of hotel ($rs=$ .339** ,$p <$ .01), and number of employees in hotel ($rs=$ .280** ,$p<.01$). Dimension seven observed no relationship with age of hotel.

Table 13 : Spearman Rho's Correlation between Dimensions of QWL and demographic characteristics of selected hotel of India

QWL Dimensions	Types of Hotel	Category of Hotel	Age of Hotel	No. of employees in Hotel
Dimension 1 (Adequate and Fair Remuneration)	-.059	.219**	-.076	.210**
Dimension 2 (OSHA)	-.157**	.367**	-.071	.353**
Dimension 3 (Stress Management)	-.111	.119*	-.107	.062
Dimension 4 (Organisational Culture)	-.096	.288**	-.152**	.255**
Dimension 5 (Opportunities and Growth Perspective)	-.203**	.355**	-.075	.292**
Dimension 6 (Future Financial Security)	-.127*	.236**	-.092	.167**
Dimension 7 (Welfare Facility)	-.204**	.339**	-.055	.280**

6. H2- Difference between QWL Practices on the basis of organizational profile of hotel.

The third objective of the study was to identify differences in presence of QWL in Indian Hotel Industry in relation to the organizational profile of Hotel. For this H3 i.e. differences in

presence of QWL by Indian hotel industry in relation to their organizational profile were assessed. Under demographic characteristics, three important variables were considered namely Category of Hotel, number of employees, age of respondent companies and Job position of employees. Differences in presence of QWL were investigated using non-parametric Levene's Test of Homogeneity, Kruskal-Wallis Test and Jonckheere Terpstra Test.

6.1 Kruskal -Wallis Test for Identifying Differences in presence of QWL in Relation to the demographic profile of hotel.

Kruskal Wallis Test was used to determine if there were statistically significant differences between group of an ordinal independent variable (organization profile) on a continuous dependent variable (presence of QWL in Indian Hotel Industry). Further pairwise comparison was also done by comparing each group against each other group in pairs. Effect size (r value) is also calculated and reported for analysis. And finally, another Jonckheere trend test was applied to predict trend of median. It ascertained whether median had increased or decreased across the group in certain order.

Kruskal -Wallis Test is a non-parametric test. Data had already been tested for test of normality by Shapiro -Wilk test ($p < .05$) and with further visual inspection of histogram, normal Q-Q plots which supported the use of Kruskal -Wallis non-parametric test. But before applying this test, the data was also checked for other assumptions of test which are as following:

Assumption 1: Dependent variables were measured at continuous level in the present study.

Assumption 2: Independent variable consisted of categorical independent groups.

Assumption 3: Independence of observations, which means that there is no relationship between the observations in each group or among the groups themselves.

Assumption 4: Homogeneity of Variance which means the distribution of scores for each group of the independent variable has same shape i.e. the same variability.

6.2 Test of Homogeneity of Variance

To test the homogeneity of variance in the data non-parametric Levene's test was applied. The result indicated that the Sig. value is greater than .05 ($p > .05$) for all the four demographic characteristics variables (Tables 14,15,16,17). Thus, the variance was not significantly different between the groups and the assumption of homogeneity of variance is met.

Table 14 : Test of Homogeneity of Variances for category of hotels

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14577.307	5	2915.461	1.348	.244
Within Groups	665912.092	308	2162.052		
Total	680489.399	313			

Table 15 : Test of Homogeneity of Variances for number of employees in hotel

ANONA

IND_Emp

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	.000	1.000
Within Groups	109771.000	309	355.246		
Total	109771.000	313			

Table 16 : Test of Homogeneity of Variances for job position of staff

ANOVA

IND_JobPosi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	2	.000	.000	1.000
Within Groups	457031.500	310	1474.295		
Total	457031.500	312			

Table 17 : Test of Homogeneity of Variances for age of hotel

ANOVA

IND_Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	3	.000	.000	1.000
Within Groups	247833.000	310	799.461		
Total	247833.000	313			

6.3. Differences in Presence of QWL in Indian hotel industry on the basis of Category of hotel, number of Employee and Age of hotel and job position of employees

To assess the differences in presence of QWL in Indian hotel industry on the basis of four variables of demographic characteristics data, the data was analyzed through Kruskal -Wallis Test (table 18).

From the data analysis, it can be inferred that there was significant difference in presence of QWL among groups of independent variable on the basis of category of hotel as the significance value {H (5) = 40.748 and p =.000}was less than .05.

For the next independent variable under demographic characteristics, the result indicated that difference in presence of QWL among groups of independent variable on the basis of number of employees, as significance value {H (4) = 32.423 and p =.000}was less than .05.

For third independent variable, i.e. job position of employees, the significance value {H (2) = 13.594, p =.001}was recorded less than .05 hence did not show any significant difference.

For fourth independent variable, i.e. age of hotel, the significance value {H (3) = 12.576, p =.006} was recorded less than .05 hence did not show any significant difference in the presence of QWL.

From above test results, it can be inferred that there were significant differences in presence of QWL on the basis of category of hotel, number of employees, job position and age of hotels.

Table 18 : Independent -Samples Kruskal-Wallis Test for differences in Presence of QWL in Indian hotel industry on the basis of Demographic characteristics

Variables	Null Hypothesis	Test Statistics	Df	Sig.	Results
Category of Hotel	The distribution of overall QWL is the same across all category of hotel	40.748	5	.000	Reject the null hypothesis
Number of employees	The distribution of overall QWL is the same across number of employees in hotel	32.423	4	.000	Reject the null hypothesis
Job Position	The distribution of overall QWL is the same across all job position	13.594	2	.001	Reject the null hypothesis
Age of Hotel	The distribution of overall QWL is the same across age of hotel	12.576	3	.006	Reject the null hypothesis

Note. Asymptotic significances are displayed. The significance level is .05. N= 313

Conclusion:

Lengthy occupancies and long working hours are the features of hotel Industry. This industry is also known for the most uncertain duty roasters, Physical and metal pressure, strict professional environment, high work pressure. All these features affect employee's personal life. This often causes employee's personal life adjustments and self-psychological adaptations. Again results in permanent transitions in personality of hotel employees. And also ultimately affects the working of the employees. Work Life balance is related to an employee's attainment and fulfillment of professional and personal goals simultaneously. So this concept consist two important aspects i.e. employees personal & professional growth without any compromise. Both personal and professional goals are important for all and can be considered as two sides of a coin which are always contrary to each other but requirement of both is equally important. The demands and satisfaction levels vary from industry to industry depending on the work patterns, timings and pressures. The present paper is an attempt to measure the Quality of work life

among hotel employees of Indian hotel industry. The analysis brings to the conclusion that QWL was poor in Indian hotel industry. Following conclusion can be drawn on the basis of results of this study.

1. Hotel industry does not offer competitive remuneration to lead a quality life for the employees. And employees of hotel industry had the opinion that their work was not been priced in terms of worth. Incentives were not given properly and there was no revision of salary.

2. Further industry was found serious towards hygiene, health and safety of employees. But industry does not provide any formal training on OSHA.

3. Hotel industry had stressful working environment with below averages mean score mentioned. Employees were of the opinion that their work was highly stressful due to long working hours sometimes beyond duty hours. But no rest provision is there for the employees who work in long shifts. These results indicated that hotel employees work under stress. No stress releasing strategies were found in hotels for employees.

4. Over all mean for dimension Opportunity and growth perspectiveis average (M= 3.00). But Industry does not offer training & development opportunities for the employees. Although results were on positive note for 2 issues such as appreciation award for better performance and availability of promotion chances.

5. Future financial security in Indian hotel industry was found average. This dimension consisted of four 4 variables. Industry offers only provident fund facility for employees, apart from this facility no pension, gratuity were given to hotel employees. And employees were of the opinion that they don't feel secure working in hotels due to less financial security measures availability for employees.

6. Welfare facilities provided by hotels were average in most of the hotels. Industry provides basic facilities to its employees such as food, laundry, cafeteria, medical facilities. But industry does not provide good accommodation, free transportation during all shifts, girl child education allowance, medical insurance and flexible working hours etc.

7. All Dimension had positive significant relationship with category of hotel and no of the employees. It can inferred that as category increases from 1 star to 5 star deluxe hotel the QWL presence will also increase. Whereas 3 dimensions such as OSHA, Opportunities and Growth Perspective, Future Financial Security, Welfare facility had negative relationship with type of hotel. It can be inferred that as type of hotel increase from chain to non-chain

hotel the QWL presence will decrease.

8. Study identified significant difference in presence of QWL among groups of independent variable on the basis of category of hotel and number of employees.

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ARTS AND HUMANITIES

THE ESSENCE OF ŚŪNYATĀ

Sonam Lamo

ABSTRACT

The term Śūnyatā is a highly exclusive theory in the later branches of Buddhism, such as; Mahāyāna, Vajrayāna and Tantrayāna. It is equally an interesting concept in all currents of Buddhist Philosophy especially in the Mādhyamika system. It fascinates all levels of philosophical minds that yearn for something more of the sacred nectar of the Buddha's philosophy or in other words, those types of mind that seeks for true liberation from the debt of body and mind. Therefore, Śūnyatā is rather a serious subject meant only for the serious practitioner to be dealt with and more importantly; it is a state of the highest attainment of the stage of Tathagata i.e. the Tattva or Suchness of all Dharma or phenomena. Śūnyatā is a topic which is highly essential for all Buddhist followers to understand it properly as it is neither a kind of spiritual healing nor a kind of mere philosophical subject. It is rather a state of hard long endeavor to meet the true essence of the reality or the real nature of things. Hence, it is imperative for the one to know the exact meaning of the Śūnyatā before proceeding through the summit of practices which it prescribes. Therefore, this paper is an attempt to highlight its origination along with its theoretical and practical implications for the benefit of masses to understand and reflect the core essence of the Śūnyatā within oneself and in the occurrences of the whole phenomena.

Keywords : Definition, Theoretical & Practical Implications, Conclusion.

I. Definition and Origination of the Term Śūnyatā

The term Śūnyatā is derived from the Sanskrit word Śūnya which signifies a state devoid of any existence. In Pali it is written as Suñña and in Tibetan, it is understood as Stonpa-nid or Stongnid. Rhys Davids in his Pali English dictionary defines it as 'empty, uninhabited, devoid of lusts, evil dispositions and karma, but especially of soul and Ego'.So, in this particular context of the Buddhist philosophy, it refers to a particular state of mind, where a practitioner qualifies the hard core practice of the Bodhisattvas and actualizes the highest states of realization such as; Pudgalanairātmya (selflessness of person) and Dharmanairātmya (selflessness of phenomena). Hence, such particular level or the states of mind correspond to the term Śūnya. Thus, the word Śūnyatā may be defined or understood as the theory which deals with all sorts of practice pertaining to various aspects of the state of Śūnyatā.

The great master Nāgārjuna (Tib: Klu-sGrub, c. 150 CE) was the first to expound the theory of Śūnyatā in the field of the Buddhist philosophy. He was one among the seventeen ancient Nalanda scholars, who took birth in a wealthy Brāhmana family in South India. His exact

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birth place is yet to be identified. While establishing his Madhyamika system of the Buddhist Philosophy, he applied the concept of Śūnyatā to plot out the finer explanation of the so called truth, which refers to both the conventional (Samvrtisatya) and the absolute (Paramārthasatya) truths. Some scholars believe that he served as the abbot of ancient Nalanda University, though the University was founded much later during the reign of Kumāragupta (5th Century CE). Nāgārjuna, while mastering in both the Theravāda and Mahāyāna sūtras realized that very few could understand the ultimate mode of existence or the perfection of wisdom and if this ultimate nature of existence is not realized by the mass there would be no such assurance to achieve the real state of liberation. Therefore, in order to elaborate the ultimate nature of existence, he compiled various treatises such as; Mūlamādhyamikakārikā (Fundamental verses on the Middle Way), Yuktiśastikā (Sixty verses of Reasoning), Śūnyatāsaptati (Seventy verses on Emptiness) and so on, in which he tried to elaborate that all the phenomena as such are empty or devoid of true permanent self, however their existence in the world outside is due to their relative or interdependent nature.

II. The Theoretical Implications

Nāgārjuna defines the term Śūnyatā as 'Apara-pratyayam (independently realized), śāntam (peaceful or quiescence), prapañcair aprapañcitam (inexpressible by verbalizing mind), nirvikalpam (dissolution of subject and object or in other words, the destruction of discursive thoughts) and anānārtham (non-dual) as its characteristic marks. He employs the term Śūnya to assert the conditional existence of all things as there is no such thing or dharma that is real in nature. He negates the notion of a permanent self or substance which means the things in real sense lack their particular self-identity, which refers to both living as well as non-livings things such as; the figure of the Buddha, the state of Nirvāna or one's own personality. In other words, he says that we represent things or person with certain names or specific identities such as 'I' or 'mine', to which we possess a huge sense of attachment. We usually think and speak in terms of 'I', me or mine, yours, theirs and so on and more specifically we consider these terms and make it personal or tinge it with personal outlook. It is through these words, we project our self, our thought process outside into the world and the people and things outside react or respond in a similar manner. So the problem is not these words, but the false assumptions that we create with these words. Nāgārjuna says that the usage of these conventional terms is essential to lead a conventional life, so he does not deny it. He just wants to make us aware about the bulk of attachments and false notions that we construct in the name of such terms 'I' or mine because Nāgārjuna sees the true nature of the human body and personality and find it useless to hold and die hard for such false notion about our self. He says a person or thing in real is not a solid

permanent substance. It is rather a product of constant causal conditions which is why he says things in real lack core identity. Therefore, in the text śūnyatāsaptati we found him saying, 'since all things lack substance (svabhāva) either in causes or condition (hetupratyaya) or in their totality or separately, therefore they are empty (Śūnya)'.

Nāgārjuna puts forward this statement on the basis of the Buddha's teaching as we can see the Buddha has also spoken about the origination and cessation of things, the being and non- being, the conventional and absolute nature of truth, however, he just reflects the true nature of things and left the actualization and interpretation parts to the practitioners themselves. Nāgārjuna on the other hand, tries to elaborate the Buddha's own theory with the help of Śūnyatā, which says that there is nothing as such in the world which is eternal or absolutely real because everything in this world is contingent upon or conditioned by something else. He postulates that things in real are neither produced nor non-produced. They are just absolute in nature; however, due to some condition or by being dependent on some condition they come into existence. Therefore, the world or its element, if viewed as a whole is absolute or independent in nature, however if viewed as a process is relative or phenomenal in nature. Therefore, everything is related and interdependent (partītyasamutpāda), the middle path which avoids the two extremes, i.e. the absolute reality and absolute unreality of things. This was his statement about the truth, however, his opponent such as Sarvāstivādins and Sautrāntikas refuted his theory as total nihilism (ucchedavāda), which negates all phenomena and raised a question which says:

'If things were empty, then there would be no origination and cessation. And that which is empty of own-being (svabhāva), how do they cease and arise? Furthermore, if there is no origination and cessation then why Nirvāna is called cessation?'

To this question, Nāgārjuna replies that when we say things exist or (bhāva) then there is permanence and when we say things are non-being or non-existence (abhāva) then there is annihilation'. Therefore, things in reality are neither being nor non-being or in other words, things are 'neither exist' nor 'non-exist', they are just relative in nature and the same case is with the state of Nirvāna as well. However, his opponents were not satisfied with this answer of Nāgārjuna and raised a further question which says;

'In the absence of self, how can there be something that belongs to self?

As a reply to this view, Nāgārjuna responds that denial of the permanent self or identity does not mean rejection of self-awareness and self-consciousness. It is rather a rejection of false assumptions or construction of human personality created or conditioned by factors such as; sense organs and their perception regarding outside stimuli or objects. He further elucidates this

concept and says that the Self (aham +Kāra) eventually creates a strong belief in something like permanent 'I' notion (Śāśvata) whereas, complete rejection of self awareness about one Self and all phenomena leads one to a state of annihilation. Nāgārjuna therefore makes a hard effort to prevent his followers as well as his opponents to prevent them from these two extremes of belief or thought system. He further puts forward;

'Śūnyatā is not annihilation; Samsāra or life process is also not eternal. Hence, it is the continuity of the life process conditioned by the various actions which indirectly refer to the theory of Dependent origination or Pratītiyasamutpāda and that is the main crux of the Buddha's teaching'.

The dependent origination, here is meant for the actualization of both the self and all phenomena and the way to realize it is only through self-awareness. Self-awareness is the way to realize the dependent nature of things and when one truly realizes or sees the true nature of things with samyak drsti (Right Vision), is the realization that everything in nature is empty of the permanent self or existence (Svabhāva-Śūnya).

Here, it may be sensed that not only the common practitioners of modern times, but also the advanced practitioners of his time failed to see the logic behind the theory of Śūnyatā, which may be due to fact that Śūnyatā is a matter of inner realization rather than a subject of any mere philosophical debates. The world lings fail to grasp the essence that Nāgārjuna wants to convey which may be due to lack of inner practice or lack of proper conventional terms to present that abstract relation between the worldly truth and the absolute truth on the common mental ground level. Thus, in the present days also, we can see so many opponents such as Vacaspatimiśra, Sankara and various modern scholars, who equally condemned the theory of Śūnyatā as total nihilism. They took this theory in a literal sense, failed to see the side of its practical aspects.

Śūnyatā as such is not a total nihilism which denies the whole reality, but the denial of only apparent or phenomenal reality. Nāgārjuna asserts that behind such phenomenal world, there is yet another aspect of reality which is absolute in nature; a reality which is free from (worldly) conditional phenomena, which he termed as the Śūnya. However, both conditional as well as absolute phenomena are the two aspects of one single truth. Therefore, both contribute in actualizing the state of Śūnyatā. More importantly, it is a realization at high level spirituality, where self-consciousness merged with the absolute nature, yet in some way maintains their discrete or pure nature or identity. In other words, it represents that point of actualization where the mind of practitioner achieves the zenith (of both conventional and non-conventional worlds) and, thereby, balance it to the point where all phenomena (including oneself) put on their true

nature or unite harmoniously with each other without having any irritation of particular differences. Moreover, the mind of practitioner overcomes the throbs of arising and ceasing nature of his self, thereby, one could balance the two worlds of gross and subtle realities on the same line.

III. Pratical Implications

When we examine the practical side of this theory, we can see the Mahāyāna's Prajñāpāramitā literature as the backbone of this theory. Nāgārjuna, with the content of this literature, launched a new way to elaborate the truth which he termed as Śūnyatā and the whole Madhyamika is a system that integrates this philosophical thoughts and laid huge emphasize to put this thought system in the common world to scan the true nature of all phenomena through the colorless glass of Śūnyatā, i.e. without any tinted glass. On a practical side, Nāgārjuna seems to recommend the very old method of the Buddha in a new way (Śūnyatā) to abolish of all passions (kleśa), desire (rāga), hatred (dvesa) and delusion (moha). As we are well aware, every philosophy contains some practical essence which mostly remains hidden under some particular name or tradition. Therefore, in order to obtain the practical essence, we need to cut out the outer covering of their particular system or tradition to extract its practical essence. So, when we cut open the Mādhyamika system, we get the Śūnyatā and in the theory of Śūnyatā, we find the two conventional means that can lead us to the state of Śūnyatā. These two conventional means are;

1. Collection of merit (Punyasambhāra), which includes the practice of the first four steps of Pāramitās such as; generosity (dāna), good morals (sīla), patience (ksānti) and energy (vīrya).

2. Collection of cognition (Jñānasambhāra), which includes the last two steps of Pāramitās, i.e. the practice of meditation (dhyāna) and wisdom (Prajñā) along with the ten graduated steps of the Bodhisattvas. The dhyāna are the four Jhanic absorption or practice of meditation to earn the first stage or the title of the Bodhisattva.

Here, the title Bodhisattva refers to the transform or Bodhi mind of an ordinary practitioner, who is now ready to sail off through the voyage of Śūnyatā. Thus, as mentioned by the previous travelers, the road of Śūnyatā is not so smooth; one has to encounter certain obstructions such as doubts, hesitation, hallucinations of one's ego in various forms that are fetters on throughout the journey. So, in this case of higher practice, we can see the two very subtle defilements which are termed as; obscurations of defilements (kleśāvarana) and obscurations of knowledge (Jñeyāvarana). Thus, if one wants to understand or meets the true essence of the Śūnyatā, one has to get rid of these two particular defilements along with the others as well. Hence, it is in this particular regarded that we can see the ten graded steps

designed especially for this very purpose, i.e. to ward off all those defilements that obscure the practitioner way of seeing and actualizing the true nature of thing or in other words, the true essence of the Śūnyatā. Now, here we could see the ten graduated steps that are though meant for the transform being or the Bodhisattva, but it is applicable to all practitioners, including the Śravaka, Pratyekabuddhas as well. This concept is supported by the Mahāyāna Buddhist literatures Daśabhumika Sutra. In this context, the practical path is plotted out to reach the secret core of the Śūnya which includes ten practical steps such as; the stages of the great joy (pramuditā), the stainless (Vimalā), the luminous (prabhākari), the radiant (arcismati), the difficult to conquer (sudurjayā), the face to face (abhimukhī), the gone far (dūrangamā), the immovable (acalā), the good intelligence (sādhumati), and at last the cloud of virtue (dharma-megha). So here, the Bodhisattvas or transformed sentient beings have to cross through all these levels of achievement with the help of the ten Pāramitās. The Pāramitās are the spiritual tools that help them in strengthening their minds and bodies, thereby making them enable to terminate the root causes of such above mention defilements. Now, the interesting thing here is that it has been only after reaching the very end of the tenth stage, a Bodhisattva is said to actualize or meet true essence the so called Śūnyatā.

III. Conclusion

Thus, in conclusion, we can only say the Nāgārjuna's theory of Śūnyatā is indeed an interesting and logical concept not only in Buddhist academic levels, but it is equally an interesting subject on the personal level as well. More so the concept of Nāgārjuna's Śūnyatā leans mostly towards the inner realization of the self and surroundings. However, due to lack of inner practice and liberal minds, it seems rather illogical and remains as an intriguing subject in the field of the Buddhist philosophy and the Buddhist scholars fail to take things into account through Nāgājuna's viewpoint. This can be considered as one of the major setbacks of the Buddhist scholars and practitioners because not accounting or acknowledging what he said and more importantly, putting no efforts to understand his implications is kind of like depreciating his theory of truth.

The truth or real nature of things is something that everybody wants to obtain and understand. So, his theory of Śūnyatā is yet another contribution in the field of understanding self, substance and their deliverance.

Therefore, Śūnyatā in Buddhist context is not a mere concept of philosophy. It is rather a state of long awaited yet ultimate destination to be realized by the practitioners to access the true nature of reality. Thus, it is highly necessary to account both the philosophical as well as the practical implications to understand the real truth behind the proposed theory of the great master

Nāgārjuna. Most possibly, it is through this practical aforesaid path that one could only fathom the true essence of Śūnyatā or the voids nature of whole phenomena because it is only after the real practical acquaintance of the prescribed path that one can meet the true essence of the Śūnyatā or the Voidness of the whole phenomena.

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भारतीय स्वास्थ्य एवं कला चेतना में नेत्र प्रसाधन

सुषमा देवी गुप्ता

संक्षिप्तिका

सृष्टि रचना के प्रारम्भ से ही सभी देशों तथा प्रायः प्रत्येक युग के मानव में स्वयं को संस्कारित कर रमणीय बनाने हेतु प्रसाधन की प्रवृत्ति सदैव रही है। इसी प्रवृत्ति के कारण मानव का ध्यान सर्वप्रथम प्रकृति प्रदत्त सुलभ प्रसाधनों पर गया। उसने अपनी देह को विविध प्रकार से प्रसाधित करना प्रारम्भ किया। केशों में फूल, मांग में सिन्दूर, माथे पर तिलक, आंखों में अञ्जन, कपोलों पर लोध्रज, हाथों पावों में महावर, अलक्तक, मैंहदी, लाक्षारस इत्यादि लगाकर सजाने लगा। प्रसाधन प्रारम्भ में प्राकृतिक वस्तुओं से प्रारम्भ हुआ जैसे मनःशिला, सिन्दूर, हरताल, अञ्जन, सुरमा आदि परन्तु कालान्तर में इनमें अनेक सुधार हुए। उदाहरणार्थ पहले शरीर की चिकनाहट को दूर करने के लिए लोध्रचूर्ण का उपयोग होता था, शिर के बालों में महुए की माला दूब के सूत्र में गूँथकर बाँधी जाती थी, इसी प्रकार पहिले नेत्रों में अञ्जन लगाने के लिए अंगुली या अस्थि की शलाका का उपयोग हुआ तथा आगे चलकर स्वर्ण, रजत, ताम्र की धातु शलाकाएं बनीं। प्रसाधन से श्रृगांर या सौन्दर्य वृद्धि पहिले मुख्य उद्देश्य रही परन्तु बाद में इसके साथ ही शारीरिक विकास एवं स्वास्थ्य की दृष्टि भी सम्मिलित हो गई। यथा आंखों में अञ्जन लगाने से सौन्दर्य की तो वृद्धि होती ही है साथ ही नेत्र की ज्योति को भी लाभ पहुंचता है। चूंकि सम्पूर्ण शरीर में नेत्र यानि आंखें ही सबसे अधिक नाजुक एवं संवेदनशील होती हैं अतः आंखों में अञ्जन ने सौन्दर्य के साथ ही स्वास्थ्य वर्धन की दृष्टि से भी महत्त्वपूर्ण स्थान ले लिया। क्योंकि जिस प्रकार स्वर्ण आदि धातुओं तथा मणि आदि से बनी वस्तुओं की सफाई तेल और वस्त्र से साफ करके होती है उसी प्रकार आंखों की सफाई अञ्जन से होती है। भारतीय संस्कृति में नेत्र प्रसाधन एवं नेत्रों के स्वास्थ्य की दृष्टि से (आदिकाल से ही) अञ्जन को महत्त्वपूर्ण स्थान प्राप्त है। इसे नित्यप्रति आंखों में लगाना चाहिए। यह दिनचर्या का एक अंग है। नेत्र में अञ्जन करने से धूप की गर्मी, पलकों पर सूक्ष्म जन्तुओं से उत्पन्न रोग तथा पलको का गिरना नहीं होता। भारतीय संस्कृति के प्रतिनिधि संस्कृत वाङ्मय में इस विषय में विस्तृत विवरण उपलब्ध होते हैं। आयुर्वेद में तो अनेकों ग्रन्थ नेत्र रोगों पर लिखे गये जिनमें चरक संहिता, चक्रदत्तः, शाङ्र्गधर संहिता, आयुर्वेदीय संग्रह सूत्र, रस शास्त्र, अष्टांग संग्रह आदि प्रमुख हैं जिनमें चौरानवे प्रकार के नेत्र रोगों को विविध प्रकार के अञ्जनों यानि सुरमा से दूर करने के उपाय बताये गये हैं, इसके अतिरिक्त विनयपिटक—महावग्ग, वात्स्यायन के कामसूत्र, वाजसनेयी संहिता, शतपथ ब्राह्मण, रामायण, महाभारत, कुमारसंभव, नैषधीयचरित, शिशुपालवध, हर्षचरित एवं कुड्डनीमत आदि में भी स्थान—स्थान पर प्रसाधन हेतु अञ्जन यानि सुरमे की महिमा गाई गयी है जिस पर शोधपत्र में विस्तृत रूप में प्रकाश डाला जायेगा।

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*संस्कृत विभाग, जम्मू विश्वविद्यालय, जम्मू

बीजशब्द :– स्वास्थ्य, कला, चेतना, नेत्र, प्रसाधन, प्रकृतिप्रदत्त, फूल, सिन्दूर, तिलक, अञ्जन, लोध्ररज, महावर, अलक्तक, मेंहदी, लाक्षारस, अनुलेप, गन्धवासन, कुमारसंभव, विनयपिटक, चरक संहिता, चक्रदत्त:, शाङ्गर्धर संहिता, नेत्रप्रसाधन कर्म, आयुर्वेदीय संग्रह सूत्र, रस शास्त्र, अञ्जन, लेखन, रोपण, स्नेहन, प्रसादन, सुरमा, अञ्जन, वात्स्यायन, वाजसनेयी संहिता, शतपथ ब्राह्मण, रामायण, महाभारत, कुमारसंभव, नैषधीयचरित, शिशुपालवध, हर्षचरित एवं कुट्टनीमत इत्यादि।

सृष्टि रचना के प्रारम्भ से ही सभी देशों तथा प्रायः प्रत्येक युग के मानव में स्वयं को संस्कारित कर रमणीय बनाने हेतु प्रसाधन की प्रवृत्ति सदैव रही है। एक त्यागी महात्मा जिसे संसार से कोई मतलब नहीं तथा जिसकी दैनिक आवश्यकताएं अत्यन्त सीमित हैं; वह भी अपने शरीर की ओर से निरपेक्ष नहीं वह नित्यप्रति स्नान द्वारा जटाजूट को स्वच्छ कर उसे एक विशेश क्रम से बांधता है। अपढ़ तथा अविकसित व्यक्ति, जिसका सारा जीवन शिकार में व्यतीत होता है वह भी शिकार में मिली वस्तुओं से अपने शरीर को अलंकृत / प्रसाधित करता है। नागरिक जीवन से दूर जंगल में रहने वाले लोग वनों से प्राप्त होने वाली वस्तुओं से शरीर को सजाते हैं।

इसी प्राकृतिक रुचि के कारण मानव का ध्यान सर्वप्रथम प्रकृतिप्रदत्त सुलभ प्रसाधनों पर गया । उसने अपनी देह को विविध प्रकार से प्रसाधित करना प्रारम्भ किया। केशों में फूल, मांग में सिन्दूर, माथे पर तिलक, आंखों में अञ्जन, कपोलों पर लोध्ररज, हाथों–पावों में महावर, अलक्तक, मेंहदी, लाक्षारस इत्यादि लगा कर सजाने लगा । शरीर को भिन्न–भिन्न रंगों से चित्रित किया। रंगों हेतु उसने विभिन्न रंगों के पत्तों का शरीर के भिन्न–भिन्न अङ्गों पर उपयोग करना प्रारम्भ किया। मानव ने इन सब वस्तुओं का उपयोग केवल इसलिए किया क्योंकि उसे इसमें आनन्द एवं सन्तोश की प्राप्ति होती थी । यह सुख कुछ तो अपने आप देखने में तथा कुछ दूसरों से अनुश्रुति सुनने पर होता था। विशेषतः स्त्रियों में दूसरों से अपनी प्रंशसा सुनने की मनोवैज्ञानिक प्रवृत्ति पायी जाती है। जैसा कि कुमारसंभव में कहा भी गया है कि "स्त्रीणां प्रियालोकफलो हि वेशः" स्त्रियों का श्रृङ्गार पति के देखने से ही सफल होता है ।1

प्रसाधन प्रारम्भ में प्राकृतिक वस्तुओं से प्रारम्भ हुआ — जैसे मनःशिला, सिन्दूर, हरताल, अञ्जन, सुरमा आदि परन्तु कालान्तर में इनमें अनेक सुधार हुए। उदाहरणार्थ शरीर की चिकनाहट को दूर करने के लिए लोध्रचूर्ण का उपयोग होता था, शिर के बालों में महुए की माला दूब के सूत्र में गूँथकर बाँधी जाती थी, इसी प्रकार पहिले नेत्रों में अऋजन लगाने के लिए अंगुली या अस्थि की शलाका का उपयोग हुआ तथा आगे चलकर स्वर्ण, रजत, ताम्र की धातु शलाकाएँ बनीं । प्रसाधन से श्रृङ्गार या सौन्दर्य वृद्धि पहले मुख्य उद्देश्य रही, किन्तु बाद में इसके साथ ही शारीरिक विकास एवं स्वास्थ्य की दृष्टि भी सम्मिलित हो गई। यथा आंखों में अञ्जन लगाने से सौन्दर्य की तो वृद्धि होती ही है साथ ही नेत्र की ज्योति को भी लाभ पहुँचता है। जिस प्रकार स्वर्ण आदि धातुओं तथा मणि आदि से बनी वस्तुओं की सफाई तैल और वस्त्र से साफ करके होती है उसी प्रकार आँखों की सफाई अञ्जन से होती है । इसे नित्यप्रति आँखों में लगाना चाहिए। यह दिनचर्या का एक

अङ्ग है। नेत्र में अञ्जन करने से धूप की गरमी, पलकों पर सूक्ष्म जन्तुओं से उत्पन्न रोग तथा पलकों का गिरना नहीं होता। विनयपिटक, महावग्ग (6—1 / 11) से ज्ञात होता है कि बौद्ध भिक्षुओं के लिए अञ्जन का उपयोग बताया गया है। इस प्रकार अञ्जन प्रसाधन का एक अङ्ग होने के साथ ही शरीर के स्वास्थ्य हेतु आवश्यक रहा है। सम्भवतः पहले प्रसाधन मुख्य उद्देश्य रहा हो तथा पीछे इसमें स्वास्थ्य की दृष्टि का भी समावेश हो गया।2

अनुलेपन, गन्धवास तथा अलंकारों को प्रयोग में लाने से पूर्व दन्तधावन अर्थात दातून से दान्तों को स्वच्छ करना, केश कर्तन द्वारा केशों को सुन्दर आकार एवं विन्यास देना, व्यायाम, मालिश तथा स्नान मनुच्छ की दैनन्दिन क्रियाओं में सम्मिलित हैं। स्नान के पश्चात् किया जाने वाला प्रसाधन दो चरणों में सम्पन्न होता था — प्रथम शरीर का अनुलेपन, चित्रण वासयोग एवं तिलक लगाना तथा दूसरा अलंकार या आभूषण धारण करना। प्रसाधन की इन सभी प्रकार की वस्तुओं का उपयोग सुदूर प्राचीनकाल से ही होता आ रहा है। क्योंकि आयुर्वेद के अनुसार भी चन्दन, केसर आदि सुगन्धित द्रव्यों का अनुलेपन तथा सुगन्धित पुष्पों की मालाओं के धारण करने से कृशता, सुगन्धि, आयु, सौन्दर्य, पुष्टि तथा बल की वृद्धि होती है, मन प्रसन्न रहता है तथा दरिद्रता दूर होती है। अतः इसी कारण भारत इस प्रवृत्ति में सदैव अग्रणी रहा है।3 सौंदर्य प्रसाधन के द्वारा अपने ऐश्वर्य, अहंभाव एवं प्रतिष्ठा के प्रदर्शन करने का अभिप्राय भी निहित रहा है। प्रकृति ने जो रूप–रेखा मानव को प्रदान की है, वह अपने आप में भले ही सुन्दर हो, पर मानव ने कभी प्रकृति की स्वाभाविक देन से सन्तोष नहीं किया है, अन्यथा, अनुलेपन, गन्धवास, अलंकार आदि का कभी आविष्कार ही नहीं होता।

नेत्र अर्थात् आंखों के दो भाग हैं। एक कृष्ण भाग तथा दूसरा स्वच्छ या सफेद भाग। ये दोनों भाग चमकदार तथा बड़े होने चाहिए। आंखों में विशालता तभी आ सकती है जब पलकें हल्की तथा पूरी खुली रहें। नेत्रों का सौंदर्य उनके काले एवं श्वेत भाग के स्पष्ट होने पर ही निर्भर करता है तथा यह काम अञ्जन से होता है। इसीलिए नेत्रों की रक्षा हेतु चरकसंहिता में प्रतिदिन अञ्जन लगाने का विधान किया गया है —

सौवीरमञ्जनं नित्यं हितमक्ष्णोः प्रयोजयेत् ।

पंचरात्रेऽष्टरात्रे वा स्त्रावणार्थे रसाञ्जनम् ।

चक्षुस्तेजोमयं तस्य विशेषाच्छ्लेष्मतो भयम् ।।

दिवा तन्न प्रयोक्तव्यं नेत्रयोस्तीक्ष्णमञ्जनम् ।

विरेकदुर्बला दृष्टिरादित्यं प्राप्य सीदति ।।

तस्मात्स्त्राव्यं निशायां तु ध्रुवमञ्जनमिश्यते ।।

ततः श्लेष्महरं कर्म हितं दृष्टेः प्रसादनम् ।4

अर्थात् सुवीरा नदी में उत्पन्न अञ्जन (काला सुरमा) नेत्रों के लिए हितकारी है। इसको नित्यप्रति नेत्रों में लगाना चाहिए। अथवा स्त्रावण करने के लिये (दुष्ट जल को निकालने के लिए) पांचवें या छठे दिन रसाञ्जन

को नेत्रों में लगाना चाहिए। अतः नेत्र तेजोमय हैं, इसीलिए इन्हें श्लेष्मा अर्थात् कफ से भय रहता है। इसीलिए कफनाशक प्रयोग आँखों के लिए हितकारी है। दिन के समय आंखों में तीक्ष्ण अञ्जन नहीं लगाना चाहिए क्योंकि अञ्जन के कारण पानी निकलने से निर्बल हुई दृष्टि सूर्य से पीड़ित होती है। (शरीर में सूर्य का प्रतिनिधि नेत्र है, परन्तु जिस प्रकार से चाकू पत्थर पर ही घिसकर तेज किया जाता है एवं पत्थर पर ही लगाने से कुंठित होता है, उसी प्रकार नेत्र को भी सूर्य से ही क्षति होती है)। इसलिए स्रावण के लिए अञ्जन रात्रि में नेत्रों में लगाना चाहिए। वैज्ञानिक दृष्टि से भी नेत्र ज्योति की रक्षा हेतु नित्य अञ्जन लगाना चाहिए। इस दृष्टि से अञ्जन की अतिशय उपयोगिता बताई गई है तथा कहा गया है कि जैसे सुवर्ण आदि धातुओं तथा नाना प्रकार के मणियों में तैल, कपड़े तथा बाल आदि द्वारा साफ करने से निर्मल होने पर स्वाभाविक चमक आ जाती है वैसे ही मनुष्यों के नेत्रों में अञ्जन तथा आश्च्योतन आदि द्वारा निराकुल अर्थात् नीरोग अर्थात् निर्मल हुइ दृष्टि, निर्मल आकाश में चन्द्रमा की तरह शोभा सम्पन्न होती है।5 आंखों की श्लेष्मा को ही कम करने के लिए धूम्रपान का भी विधान है। यथा —

तीक्ष्णाञ्जने नाञ्जितलोचनस्य यः संप्रदुष्टो न निरेति नेत्रात्।

श्लेष्मा शिरःस्थः स तु पीतमात्रे धूमे प्रशान्ति लभते क्षणेन ।।

उपरोक्त विवरण से स्पष्ट है कि अञ्जन, काजल एवं सुरमे के उपयोग में सौन्दर्य प्रसाधन के साथ ही साथ शरीर एवं स्वास्थ्य रक्षा का भी ध्येय रहा है। स्वास्थ्य की दृष्टि से अञ्जन का उपयोग बहुत प्राचीन काल से प्रचलित रहा है ।

दृष्टिर्निराकुला भाति निर्मले नभसीन्दुवत् ।।

 — चरकसंहिता, सूत्रस्थान, अध्याय–5, श्लोक – 15–16

चक्रपाणिदत्त विरचित 'चक्रदत्तः' में नेत्र रोगों में अन्य अनेक उपचारों के साथ ही कई प्रकार के अञ्जनों का भी प्रयोग करने को कहा गया है यथा —बिल्वाञ्जन, चूर्णाञ्जन, तालक्षाराद्याञ्जन, नीलोत्पलाञ्जन, तिमिरघ्नञ्जन, शङ्खाद्याञ्जन, गण्डपदाञ्जन, अङ्गुल्याञ्जन, सैन्धवाञ्जन, कणाऽऽद्याञ्जन, मेषशृंगाद्याञ्जन, शुक्तिहरंमञ्जन, वैदेह्याद्याञ्जन, रसाञ्जनाद्याञ्जन, गुहामूलाञ्जन, चूर्णाञ्जन, तुत्थकाद्याञ्जन आदि। यह अञ्जन विभिन्न ओषधियों के मिश्रण से बनते हैं तथा इन अञ्जनों के लगाने से नेत्रों के विभिन्न प्रकार के रोग दूर होते हैं।6 चक्रपाणिदत्त ने अञ्जन के तीन भेद बताये हैं यथा — लेखन, रोपण तथा दृष्टिप्रसादन भेद से अञ्जन तीन प्रकार का होता है। कशाय, अमल, लवण तथा उष्ण औषधियों से जो अञ्जन बनाया जाता है उसे लेखन अञ्जन कहते हैं। तिक्त पदार्थों से रोपण अञ्जन तथा मधुर एवं शीतल औषधियों से प्रसादन अञ्जन बनाया जाता है।7 अञ्जन लगाने के लिए शलाका दस अंगुल लम्बी, बीच में

पतली तथा कली के समान मुखवाली होनी चाहिये। लेखन अञ्जन के लिए ताम्र की, रोपण के लिए कृष्ण लौह की तथा प्रसादन के लिए अंगुली या स्वर्ण तथा रजत निर्मित शलाका का उपयोग करना चाहिये।8

चक्रपाणिदतानुसार प्रक्रिया भेद से अञ्जन तीन प्रकार का होता है — पिण्ड, रसक्रिया तथा चूर्ण। दोष की अधिकता होने पर पिण्ड, मध्यदोषों में रसक्रिया तथा सामान्य दोषों में चूर्ण का प्रयोग करना चाहिये।9 इनका कथन है कि काला अञ्जन नेत्रों के लिए लाभप्रद होता है। अतः उसका नित्य अञ्जन करना चाहिए। पांचवीं अथवा आठवीं रात्रि में नेत्र से आंसू द्वारा अशुद्धि का स्राव कराने के लिए रसौंत को पानी में घिस कर लगाना चाहिए। इसके बाद नस्यकर्म, गण्डूष, धूम्रपान तथा पान का सेवन करना चाहिए।10 चक्रपाणिदत्त ने अञ्जन लगाने का समय भी बताया है कि मध्याह्न में अन्नपान तथा सूर्य के कारण और रात में नींद के कारण दोष बढ़े हुए, पीड़ित तथा चलित रहते हैं। अतः इस अवस्था में अञ्जन करने से नेत्रों के रोग उत्पन्न हो जाते हैं। इसलिये सुबह तथा शाम को आकाश के निर्मल रहने पर अञ्जन लगाना चाहिए।11

श्री थार्ङ्गधराचार्य शाङ्गधरसंहिता में विविध प्रकार के नेत्र रोगों एवं उनके प्रसादन या निदान पर विस्तृत चर्चा करते हुए कहते हैं कि नेत्र में होने वाले रोग चौरानवें (94) प्रकार के होते हैं। उनमें से पलकों में होने वावले चौबीस (24), नेत्र की सन्धियों में होने वाले नौ (9) नेत्र के शुक्ल भाग में होने वाले तेरह (13), नेत्र के कृष्णमण्डल में होने वाले पांच (5) मोतियांबिन्द छः (6) प्रकार का, तिमिर रोग छः (6) प्रकार का, लिंग नाश रोग सात (7) प्रकार, दृष्टिमण्डल में होने वाले रोग आठ (8) प्रकार के, अधिमन्थरोग चार (4) प्रकार के, समग्रनेत्र को व्यापक होने वाले रोग आठ (8) प्रकार के कुल मिलाकर शाङ्गधराचार्य ने चिकित्सा करने की सुविधा के लिये दोषादिभेद से स्पष्टतया 94 नेत्ररोग कहे हैं।12

'नेत्र प्रसादन कर्म' नामक अध्याय में नेत्र रोगों को दूर करने की क्रियाओं के अन्तर्गत शाङ्गधर का कथन है कि "जब नेत्रविकार के आम दोष का परिपाक हो जाय तो अञ्जन का प्रयोग किया जाय। आमावस्या में अञ्जन का प्रयोग न करें। हेमन्त तथा शिशिर में दोपहर को नेत्रों में अञ्जन लगाना चाहिए।

ग्रीष्म तथा शरद ऋतुओं में प्रातः तथा दोपहर बाद अञ्जन लगाना चाहिए, वर्षा ऋतु में जब बादल न हों तथा अधिक गरमी ही पड़ती हो तब तथा वसन्त समय में जब चाहे तब अञ्जन क्रिया की जानी चाहिए।13

किस समय अञ्जन का प्रयोग नहीं करना चाहिए इसके बारे में भी शाङ्गधराचार्य ने विधान किया है कि थके हुए, रोये हुए, डरे हुए, शराब पीये हुए पुरुष को तथा नवीन ज्वर में, अजीर्ण रहने पर तथा मलमूत्रादि शरीर के तेरह (13) वेगों को रोके हुए पुरुषों के भी नेत्रों में अञ्जन लगाना अच्छा नहीं।14

शाङ्गधर ने भी लेखन, रोपण, स्नेहन कर्मभेद से अञ्जन के तीन प्रकार कहे हैं तथा कल्पना भेद से भी अञ्जन के तीन भेद गुटिका (गोली), रस (गाढ़ाद्रव) तथा चूर्ण कहे हैं। इनमें से क्षार, तीक्ष्ण तथा अम्लरस

द्रव्यों से अञ्जन करना लेखन अञ्जन, कसैले एवं कड़वे रस से युक्त तथा स्नेह युत अञ्जन रोपण अञ्जन तथा मधुर रस एवं स्नेह से युक्त अञ्जन प्रसादन या स्नेहन अञ्जन होता है।15 गुटिकाञ्जन की मात्रा दोषानुसार, तीक्ष्ण अञ्जन की मसूर जितनी, मध्यम वीर्य अञ्जन की मसूर जितनी तथा मृदु अञ्जन की मात्रा दो मसूर भर प्रयोग की जाती है।16 शाङ्र्गधर का कथन है कि शलाका अथवा सलाई स्फटिकादि पत्थर से अथवा सुवर्ण आदि धातुओं से बनानी चाहिए। अग्रभागों पर कुण्ठित अर्थात् किसी तरह का धार न हो तथा चिकना हो, मटर जितनी गोल हो एवं आठ अंगुल लम्बी हो ऐसी सलाई बनानी चाहिए। इसी से नेत्रों में अञ्जन लगाया जाता है।17

आयुर्वेदीय संग्रह सूत्र में भी अञ्जन, अञ्जनदानी एवं नेत्रों में अञ्जन डालने वाली शलाका पर विस्तार से प्रकाश डाला गया है। इस सम्बन्ध में कहा गया है —

तत्तु लेखनं रोपणं स्नेहनं प्रसादनमिति चतुर्विधम् भवति ।

तत्राम्लादिभिः रसैः पञ्चभिः शुक्रार्मादिशु लेखनम् ।

तिक्तकषायैः सस्नेहैरभिष्यन्देशुः रोपणम् ।

सर्पादिवसादिभिर्वाततिनिरादिशुः स्नेहनम् ।

स्वादुशीतैः सस्नेहैरभिश्यन्दान्ते सूर्योपरागाशनिविद्युत्सम्पात भूतिपिशाचाद्यद्भुत दर्शनाद्युपहतायांदृष्टौ स्वस्थवृत्ते च प्रसादनम् ।

पात्रे तु कुर्यात्सौवर्णे मधुरम्। राजतेऽम्लम्। मेषशृङ्गमयेलवणम्। कांस्ये तिक्तम्। वैदूर्यमयेऽश्ममये वा कटुकम्। ताम्रमये आयसे वा कशायम्। नलप्लक्षपद्मकस्फटिकशंखान्यतमे शीतम्। एवमव्यापन्नं गुणं भवति। वित्तिघर्षणार्थ च शिला श्लाक्ष्णां निम्नमध्यानुकारिणी पञ्चांगुलायता न्यंगुलविस्तीर्णा।

शलाकाञ्च—कनकरजतताम्रलोहोद्भवा अङ्गुली च। तत्राद्ये प्रसादनेऽञ्जने स्नेहने च। मध्यमालेखने। अन्त्ये रोपणे। मृदुत्वादङ्गुल्येव प्रधानम्। अन्या सरुजेऽक्षिण सैव प्रयोज्या। शेशा दशांगुला राजमाशस्थूलाः सुश्लक्ष्णाः तनुमध्या मुखयोर्मुकुलाकारा कलाय परिमण्डलाश्च।18

अर्थात् अञ्जन के चार भेद हैं यथा — लेखन, रोपण, स्नेहन एवं प्रसादन। इनमें मधुर रस को छोड़ कर शेष पाँच रसों से (अम्ल, लवण, तिक्त, कटु, कषाय से) लेखन अञ्जन बनता है। तिक्त एवं कषाय रस को स्नेह के साथ मिलाकर रोपण अञ्जन बनाते हैं ।

अञ्जन रखने की अञ्जनदानी :—मधुर अञ्जन के लिए चाँदी की, लवण के लिए मेढ़े के सींग की, तिक्त रस के लिए काँसे की, कटु रस के लिए बिल्लोर या पत्थर की तथा कषाय रस के लिए ताम्र या लौह की अञ्जनदानी बनानी चाहिए। शीतल अञ्जन के लिए — नडसर, पिलखन, पद्माख, स्फटिक, शङ्ख में से

किसी की अञ्जनदानी बनानी चाहिए। इनमें रखा अञ्जन बिगड़ता नहीं। अञ्जन को घिसने के लिए पत्थर की चिकनी शिला चाहिए, जो बीच में थोड़ी सी गहरी हो। इसकी लम्बाई पांच अङ्गुल तथा चौड़ाई तीन अङ्गुल होनी चाहिए।

नेत्रों में अञ्जन लगाने के लिए शलाका स्वर्ण, रजत, ताम्र एवं लोहे की बनाई जानी चाहिए। अङ्गुली से भी शलाका का काम लिया जाता है। स्वर्ण एवं रजत की शलाका प्रसादन एवं स्नेहन अञ्जन में बरती जाती है। ताम्र की शलाका लेखन में तथा लोहे की रोपण कार्य में आती है। कोमल होने से इन सभी में अङ्गुली की ही प्रधानता है। दुखती आँख में इसी का उपयोग करना चाहिए। ग्रामों में आज भी वृद्ध व्यक्ति अङ्गुली से ही नेत्रों में जस्ते का फुल्ला या जस्ता आञ्जते हैं।

शलाका दस अंगुल लम्बी होनी चाहिए, राजमाश के समान मोटी, चिकनी, बीच में से पतली, शिरों पर गोल (डोडी के आकार की), मटर के समान मोटी होनी चाहिए।

लकड़ी की शलाका तथा फलपात्र को अञ्जनदानी के रूप में उपयोग में लाने का उल्लेख कादम्बरी में धार्मिक के वर्णन में बाण ने किया है यथाः— कुवादिदत्तसिद्धांञ्जनदानस्फुटितैकलोचनतयात्रि कालमितरलोचनाञ्जनदानादरशलक्ष्णीकृत दारुशलाकेन"19 अर्थात् किसी मिथ्यावादी द्वारा दिये गये सिद्धाञ्जन के लगाने से एक नेत्र के फूट जाने के कारण जिसने दिन में तीन समय दूसरे नेत्र में अञ्जन लगाने के प्रति आग्रह से लकड़ी की सलाई पतली कर दी थी। तथा "इंगुदीकोशकृतौषधाञ्जनसंग्रहेण"20 अर्थात् इंगुदी वृक्ष के फल के खोखल में जिन औषधियों एवं अञ्जनों का संग्रह कर रखा था।

रस शास्त्र में अञ्जन पांच प्रकार का बताया गया है, यथा ——

स्रोतोञ्जनं च सौवीरमञ्जनं च रसाञ्जनम्।

नीलाञ्जनं तदन्यच्च पुष्पाञ्जनकमेव च।।

स्रोतोञ्जनं स्मृतं स्वादु चक्षुष्यं कफपित्तनुत्।

कषायं लेखनं स्निग्धं ग्राही छर्दिविषापहम्।।

हिध्माक्षयास्रहृत् शीतं सौवीरमपि तादृशम्।

द्वयोरञ्जनयोः किन्तु श्रेष्ठं स्रोतोञ्जनं स्मृतम्।।21

अर्थात् स्रोताञ्जन, सौवीराञ्जन, रसाञ्जन, नीलाञ्जन तथा पुष्पाञ्जन। इनमें से नीलाञ्जन का सम्बन्ध एण्टीमनी से, सौवीराञ्जन का सम्बन्ध सीसक से और पुष्पाञ्जन का सम्बन्ध जस्ते से है। प्रायः एण्टीमनी और सीसक के ही अञ्जन का व्यवहार होता है। सुरमा :— एण्टीमनी का समास है, परन्तु सीसक के

समास से भी सुरमा बनाया जाता है। सीसक के कच्चे रूप में ताम्र, जस्ता, एण्टीमनी मिला रहता है। भारत में यह चितराल, सवाईमाधोपुर और जयपुर में मिलता है। अञ्जन :— विशेषतः एण्टीमनी सल्फाईड है, प्रायः इसका भ्रम लैड़ सल्फाईड से होता है। प्राचीन काल में इन दोनों में विशेष भेद नहीं था।22 एण्टीमनी का अञ्जन या सुरमा पीसने में थोड़ा कठिन होता है, सीसक का सुरमा सरलता से पिसता है एवं थोड़ा अधिक काले रंग का होता है। सुरमे को बारीक घिसकर या पीसकर महीन रेशम में से छाना जाता है, जिस से यह आंख में न लगे। इस अञ्जन को भिन्न—भिन्न आकार की अञ्जनदानियों में रखते हैं, जिसमें कि सलाई का काम कभी इनके ढक्कन में लगी सलाई से ही ले लिया जाता है, अन्यथा अलग से ही सलाई रखते हैं।

इस अञ्जन में दूसरी भी ठण्डी वस्तुएं मिलाई जाती हैं। अञ्जन को गरम करके त्रिफला के क्वाथ में या भाँगरे के रस में दो तीन बार बुझाते हैं। इससे यह नरम एवं टुकड़े—टुकड़े हो जाता है। फिर इसे बारीक पीसा जाता है, इसमें चमेली की कलियां सुखा कर पीस ली जाती थीं। 'अष्टांग संग्रह' के सूत्रस्थान नामक आठवें अध्याय में अञ्जन के विषय में विस्तृत विवरण दिया गया है।23

अञ्जन या सुरमा महीन होने से ही आंखों में चिपकता है, मोटा रहने से रगड़ता है तथा गिर जाता है। इसलिए इसको रेशम में से छानना चाहिए। अञ्जन लगाने पर आँख में लाभ होने के साथ शोभा की भी वृद्धि होती है।

वात्स्यायन के अनुसार प्रातः उठते ही नागरिक प्रसाधन करता था। शौच से निवृत्त होकर दातों को साफ करके उचित मात्रा में मस्तक तथा शरीर में चन्दन शरीर का अनुलेपन, वस्त्र का सुगन्धीकरण, सुगन्धित मालाधारण, होठ को आलक्तक से रंग कर (सिक्थक) मोम चढ़ाना, दर्पण में सौंदर्य निहारना, पान खाना आदि कामों को विधिवत् करके अपने काम पर चल देता था।24

अतः स्पष्ट है कि स्नान के बाद जिस प्रकार आज प्रसाधन किया जाता है, उसी प्रकार प्राचीन काल में भी प्रसाधन — सुगन्ध आदि का उपयोग होता था।

सिन्धु—सभ्यता के प्राप्त अवशेषों में अनेक ऐसे पात्र मिलते हैं, जिनमें प्रसाधन के द्रव्य रखे जाते होंगे। कई पात्रों में रखे हुए ऐसे द्रव्य अब भी कुछ—कुछ विकृत रूप में वर्त्तमान मिले हैं। सिन्धुघाटी की खुदाई में मिली सुरमेदानी तथा सलाई इस बात का प्रमाण है कि स्त्री एवं पुरुष इसका उपयोग करते थे। एक बर्त्तन के अन्दर काला पदार्थः मिला है। यह संभवतः अञ्जन है। मोहेंजोदड़ो में मिली सुरमेदानियों का मुख प्रायाः टोंटीदार है, इससे स्पष्ट है कि एक तश्तरी में सुरमा डाल कर उसकी पेस्ट घी या तेल में बनाकर आँखों में लगाई जाती थी। सुरमेदानी धातु की भी मिली है। ये भिन्न—भिन्न आकार की है। ताम्बे और काँसा की सलाईयाँ मिली हैं, परन्तु अधिकतर शलाकाऐं या सलाईयां लकड़ी की बनी मिली हैं। धातु की सलाई 4.4 से 5.5 इंच लम्बी हैं। इनके दोनों किनारे कुछ गोल हैं। सुरमे का प्रयोग नेत्रों की शोभा बढ़ाने के लिए, सूर्य की

प्रखर किरणों से रक्षा के लिए, नेत्रों को सूक्ष्म रोगोत्पादन जीवाणुओं आदि से बचाने के लिए किया जाता था ।25

वैदिक काल से ही स्त्री एवं पुरुष दोनों की अभिरुचि नेत्र प्रसाधन में परिलक्षित होती है। अथर्ववेद के अनुसार वर एवं वधु दोनों विवाह के अवसर पर आंखों में अञ्जन लगाते थे ।26 तत्कालीन धारणा के अनुसार मित्र वर की आंखों में अञ्जन लगाकर उसका प्रसाधन करते थे ।27 वैदिक अञ्जन सुगन्धित लेप होता था, जो नेत्रों के अतिरिक्त शरीर पर लगाया जाता था ।28 मित्र और वरुण अञ्जन लाते हैं, वह उपभोग के लिए होता है ।29

वैदिक काल में अञ्जन बनाने का व्यवसाय साधारणतः स्त्रियों के हाथ में था ।30 सुगन्धित द्रव्यों को पीस कर चूर्ण बनाने की रीति प्रचलित थी। ऐसी सुगन्धित वस्तुओं से प्राचीन काल में उत्पल, तगर, उशीर और सहा को एक साथ ही कूट कर चूर्ण बनाने की रीति का उल्लेख मिलता है। इनके पीसने में विशिष्टिता होती थी। पीसकर अच्छा अंगराग बना लेना कला थी ।31

वैदिक काल में भी वस्त्र एवं अलंकार धारण करने के पश्चात् ही नेत्रों में अञ्जन लगाया जाता था जैसा कि यजुर्वेद के इस मन्त्र से स्पष्ट होता है — "ओं वृत्रम्यासि कनीनकष्चक्षुर्द्रा असि चक्षुर्मे देहि"32 इस मन्त्र से आंखों में अञ्जन करने का विधान किया गया है। अञ्जन एवं वृत्र का परस्पर सम्बन्ध है। वृत्र की आंख से अञ्जन बना है। वाजसनेयी संहिता33 में अञ्जन को वृत्र की आंख की पुतली कहा है। अञ्जन की उत्पत्ति की कथा शतपथ ब्राह्मण34 में उपलब्ध होती है उसमें लिखा गया है कि अञ्जन 'त्रिक्ककुद पर्वत' से आता है, जिसे वर्तमान समय में 'त्रिकूट' कहते हैं तथा जो पंजाब के उत्तर एवं कश्मीर के दक्षिण में है। इन्द्र ने वृत्र को मारकर इसी 'त्रिक्ककुद' पर्वत पर फेंक दिया था; इसकी आँख अलग जाकर गिरी जो सुरमा बन गई। यही कारण है कि 'त्रिक्ककुद' का सुरमा आंख में लगाया जाता है। वाजसनेयी संहिता में पुतली के रंग से अञ्जन की तुलना की गई है। काला अञ्जन आज भी हिमालय के बहुत से भागों में मिलता है। यमुना को भी इसका उत्पत्ति स्थान कहा जाता है। आँख में अञ्जन लगाने के अतिरिक्त पाण्डु, यक्ष्मा आदि रोगों में भी अञ्जन का उपयोग होता है ।35 अञ्जन का महत्त्व इतना अधिक था कि वाजसनेयी संहिता के पुरुषमेध प्रकरण में इसको बनाने वाले 'अञ्जनकारी' के नाम से स्मरण किये गये हैं ।36

सुश्रुत संहिता में अञ्जन के लाभ बताते हुए कहा गया है —

सुखं लघु निरीक्षेत दृढं पश्यति चक्षुशा ।

मतं स्रोतोऽञ्जनं श्रेष्ठं विशुद्धं सिन्धुसम्भवम् ।।

दाहकण्डूमलध्नं च दृष्टिक्लेदरुजापहम् ।

तेजोरूपावहं चैव सहते मारूतातपौ ।।

न नेत्ररोगा जायन्ते तस्मादञ्जनमाचरेत् ।।37

अन्यत्र कहा गया है कि —

पक्ष्मलं विशदं कान्तममलोज्ज्वलमण्डलम् ।

नेत्रमञ्जनसंयोगात् भवेच्चामलतारकम् ।।

बौद्धकाल में संघ के सभी लोगों के लिए नेत्र की सुरक्षा हेतु कालाञ्जन, रसाञ्जन, स्रोतोञ्जन, गेरुक तथा कपल्लकोटि के द्रव्यों का उपयोग निर्धारित किया गया ।38 स्रोतोञ्जन नदियों के स्रोतों से निकलता था । गेरुक स्वर्ण–गैरिक है । कपल्ल दीपशिखा से उत्पन्न काजल था ।

विविध प्रकार के अञ्जनों को सुगन्धित बनाने हेतु इनमें चन्दन, तगर, कृष्णानुसारि, कालीय, भद्र मुक्तक आदि द्रव्य मिलाये जाते थे । उस काल में नागरिकों के अञ्जन में भी सम्भवतः इन्हीं वस्तुओं का मिश्रण होता होगा ।39 अञ्जन को रखने के लिए नागरिक स्वर्ण एवं रजत की डिबिया रखते थे । शलाका सोने चांदी की बनती थी । उसे रखने हेतु केस होता था ।40

रामायण में अङ्गराग तथा महाभारत में नागरिकों के चूर्ण तथा अनुलेपन लगाने के प्रायः उल्लेख मिलते हैं । विविध प्रकार के प्रसाधनों के साथ अञ्जन का भी वर्णन हुआ है । रामायण के अनुसार ऋषि भारद्वाज के आश्रम में जब भरत एवं उनकी सेनाओं का अतिथि सत्कार किया गया तब निम्नलिखित वस्तुओं के साथ अञ्जन की भरी अञ्जनदानियां भी वहां उपस्थित थीं । वहां प्रसाधन सामग्री का वर्णन करते हुए कहा गया है कि कई प्रकार के उबटन सुगन्धित चूर्ण, स्नान के लिए गर्म जल आदि नदी के तट पर बर्तनों में भर कर रखे थे । सफेद कूंचियों वाली दातौन तथा चन्दनमिश्रित उबटन कटोरियों में भर–भर कर रखे थे । साफ दर्पण, कपड़ों के ढेर, खड़ाऊँ और जूतों की राशि लगी हुई थी । अञ्जनदानी (सुरुमदानी) कंघी, ब्रुश, छाते, धनुष एवं मर्म स्थानों की रक्षा करने वाले कवच रखे थे । सुन्दर पलंग और आसन बिछे थे ।41

महाभारत के अनुसार वाह्नीक (पंजाब) की गोरी स्त्रियां मनःसिल के समान चमकीले अपांगयुक्त नेत्रों में त्रिक्कुद का अञ्जन डालती थीं ।42 आज भी सुलेमानी सुरमा एक ओर पंजाब में तथा दूसरी ओर सिन्ध में दूर–दूर तक जाता है । सिन्ध के लोगों में यही सौवीर अर्थात् उत्तरी सिन्ध की ओर से आने के कारण सौवीराञ्जन कहलाता था ।43 पाणिनी के 'त्रिक्कुद पर्वते' सूत्र में तीन चोटी वाले पर्वत का नाम है ।44 इस पर्वत में अञ्जन सुरमा उत्पन्न होता था जिसको 'त्रिक्कुद अञ्जन' कहते थे । यह भी हिमालय की किसी एक चोटी का नाम है । डॉ कीथ ने इसकी पहचान 'त्रिकोट' से की है; जो कि उत्तरी पंजाब एवं काश्मीर की चोटी थी; किन्तु अधिक सम्भावना सुलेमान पर्वत की है, जो अञ्जन या सुरमे का उत्पत्ति स्थान था तथा आज भी है ।

सुलेमान के समानान्तर श्रीनगर की पर्वतशृंखला है, झोब (यह्नवती) नदी के पूर्व दोनों के पीछे टोवा एवं काकड़ की शृंखलायें हैं। पर्वतों की यह तिहरी दीवार ठीक ही 'त्रिक्कुद' कहलाती थी। यहीं त्रैक्कुद अञ्जन प्राप्त होता था ।

अञ्जन अथवा काजल को जन साधारण द्वारा नेत्र प्रसाधन हेतु उपयोग को अधिकांश संस्कृत कवियों ने अपनी कृतियों का विषय बनाया है। कुमारसंभव में कालिदास ने पार्वती एवं शिव के विवाह के समय स्त्रियों द्वारा अपनी आंखों में काजल लगाने का वर्णन कुछ यों किया है कि "ज्यों ही भगवान् शिव की वर यात्रा हिमालय के वैभवशाली नगर में पहुंची तो महादेव जी के दर्शनों को उत्सुक स्त्रियां अपने भवनों की छतों पर खड़ी हो गईं। घरों में जो स्त्री जिस शृंगार को कर रही थी, उसे अधूरा छोड़ खिड़की की ओर दौड़ पड़ी यहां तक कि एक स्त्री अपने दाहिने नेत्र में तो अञ्जन लगा चुकी थी पर बाएं नेत्र में बिना अञ्जन लगाये, शलाका हाथ में पकड़े हुए ही वातायन के समीप पहुंच गई ।45

विवाहोपरान्त भगवान् शिव स्वयं अपने हाथों से पार्वती का शृंगार करते हैं। नन्दन वन में देवी पार्वती का शृंगार करते समय शिवजी ने अपने ललाट में जलने वाले नेत्र से स्वयं काजल पाटकर नये कमल जैसी आंखों वाली पार्वती जी के नयनों में अञ्जन लगा दिया तथा फिर अंगुली में लगा हुआ अञ्जन पोंछने के लिए अंगुली को अपने नीले कण्ठ में रगड़ दिया ।46

नेत्रों में अञ्जन प्रसाधन से द्विगुणित हुए दमयन्ती के सौन्दर्य का वर्णन करते हुए कहा गया है कि अञ्जन से उत्पन्न रेखा ने दमयन्ती के अपांग का स्पर्श करके अतिशय शोभा को धारण किया। ऐसा प्रतीत होता था कि दमयन्ती की वारुण्य–लक्ष्मी ने नेत्रों को बढ़ाने हेतु डोरा डाला है। यह रेखा काजल की नहीं थी; अपितु कटाक्ष–विक्षेप रूप कामविलासों से बार–'बार अपांग का स्पर्श करने वाली पुतली रूपी नीलम की अतिशय काली किरणों ने अपने जाने का मार्ग रंगा हुआ था ।47

शिशुपालवध में रात्रि के समय रसाञ्जन लगाने से दृष्टि तेज होने का वर्णन उपलब्ध होता है कि अन्धकार से आकाश और पृथ्वी भर गई थी, मनुष्य को कुछ भी दीखता नहीं था। इस समय प्रिय के घर का रास्ता देखने के लिए आंखों में रसाञ्जन लगाया था ।48

अञ्जन से प्रसाधित एवं अञ्जन से रहित दमयन्ती की आंखों के सौन्दर्य का चित्रण करते हुए कवि कहता है कि दमयन्ती की जिस आँख में अञ्जन नहीं लगा हुआ था उससे तो कमल भी मलिन हो रहा था। जिस आंख में अञ्जन लगा हुआ था उससे खञ्जन (एक पक्षी) में भी अपनी कान्ति का मद नहीं रहा था ।49

विवाह के समय अञ्जन का मंगल आचार की दृष्टि से उपयोग करना आवश्यक था। पार्वती के विवाह के समय पार्वती का शृंगार करने वाली स्त्रियों ने नील कमल के समान कृष्ण एवं दीर्घ पार्वती के नेत्रों में शोभा को बढ़ाने के लिए कालाञ्जन नहीं लगाया अपितु मङ्गल आचार की दृष्टि से लगाया। क्योंकि पार्वती की

आंखें इतनी सुन्दर थीं कि अञ्जन लगाने की आवश्यकता ही नहीं थी ।50

हर्षचरित में भी अञ्जन को नेत्रों की शोभा बढ़ाने वाला कहा गया है— "एकशलाकाञ्जनजनित लोचनरुचिः"51 अर्थात शलाका से अञ्जन लगाने के कारण उसकी आँखें सुन्दर हो गई थीं ।

तेल से बनाये गये अञ्जन द्वारा सुन्दरियों के माथे पर तिलक लगाने के लिए प्रयोग किये जाने के उल्लेख मिलते हैं कि जिस प्रकार तेल से बनाये अञ्जन (काजल का) श्यामल गोलाकार तिलक रमणी की कान्ति एवं वर्ण की शोभा नष्ट न करते हुए उसे और भी बढ़ा देता है, उसी प्रकार अञ्जन के समान श्यामल वर्ण, सदाचारपरायण भगवान् श्रीकृष्णचन्द्र स्वयं ही ब्राह्मणादि चारों वर्णों की मर्यादा को नष्ट न करने वाली द्वारिकापुरी की शोभा को बढ़ा रहे थे ।52

नेत्रों के स्वास्थ्य एवं नेत्रों के प्रसाधन की दृष्टि से संस्कृत साहित्य में कज्जल अथवा काजल शब्द का भी व्यवहार हुआ है । कज्जल को तेल से पारते हैं । मिट्टी के एक पात्र में सरसों का तेल रख कर रुई की बत्ती इसमें डालकर ऊपर एक नया मिट्टी का सकोरा लौ से कुछ ऊँचाई पर रख देते हैं । बत्ती जलाने पर धुआं ऊपर के सकोरे में लग जाता है । इसे धीमे से अलग झाड़ लेते हैं ।

इसको बनाने की कई विधियां हैं । कज्जल को सूखा भी लगाते हैं तथा थोड़े से घी में मिलाकर भी आँख में आँजते हैं । बत्ती में छाया में सूखे चमेली के सूखे फूल, कर्पूर, रसौंत भी रख देते हैं । इसका बना काजल ठण्डा होता है । अञ्जन से अधिक कालिमा काजल में है । (मैंने बचपन में अपनी नानी जी, मासी जी एवं माता जी को ऐसा काजल घर में बनाते देखा है तथा वह काजल मैंने अपने नेत्रों में लगाया भी है । हमारे घर के छोटे बच्चों की आंखों में लगाने हेतु यह काजल बनाया जाता था तथा ऐसा काजल समग्र भारत के घर–घर में बनाया जाता था; परन्तु वर्तमान समय में भौतिकवाद की चकाचौंध में घिरा मानव अपनी प्राचीन परम्पराओं से दूर होता चला जा रहा बाज़ारों से ही काजल खरीद कर बच्चों की आंखों में लगा देता है तथा स्वयं स्वयं का नेत्र प्रसाधन भी कर रहा है जो कई प्रकार के नेत्र रोगों को निमन्त्रण देने का कारण भी बन रहा है । ऐसे में आवश्यकता है अपनी परम्पराओं में निहित ज्ञान विज्ञान का उपयोग कर स्वास्थ्य लाभ करने एवं नीरोग रहते हुए पुरुषार्थ चतुष्टय की निर्बाध प्राप्ति करने की) प्रायः बच्चों की आंखों में काजल ही आँजा जाता है । काजल अंगुली से ही लगता है । अंगुली पर काजल न अधिक और न कम लगाना चाहिए । अधिक लगे काजल को फूंक से उड़ा देना चाहिए । युवा एवं वृद्ध व्यक्तियों के नेत्रों में अञ्जन आँजा जाता है ।

'कुट्टनीमत' में काजल का उल्लेख करते हुए कहा गया है कि नायिका के शरीर में रहने से श्वेत माथे से टपका जल अर्थात् स्वेद बिन्दु आंखों में लगे कज्जल से मिलकर जब स्तनों के किनारे पर आकर मिलता है तब प्रयाग में मिलने वाली गंगा–यमुना के दृश्य की शोभा प्रकट होती है ।53

उपरोक्त विवरण से स्पष्ट है कि भारतीय स्वास्थ्य एवं कला चेतना के अन्तर्गत नेत्रों का प्रसाधन अति प्राचीन काल से ही होता आया है। भारतीय संस्कृति में अञ्जन सुरमे तथा काजल के उपयोग में सौन्दर्य प्रसाधन के साथ ही साथ शरीर एवं स्वास्थ्य रक्षा का भी ध्येय रहा है।

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2. प्राचीन भारत के प्रसाधन, पृष्ठ — 20 से 22 पर्यन्त ।

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   एवं नेत्रेषु मर्त्यानामञ्जनाश्च्योतनादिभिः ।
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   अञ्जनं खेनं तत्र कषायाम्लप्रदूषणैः ।
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   प्रशस्ता लेखने ताम्री रोपणे काललोहजा ।
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11. निशि स्वप्नेन मध्याह्ने पाना न्नोष्णगभस्तिभिः ।

    अक्षि रोगाय दोषाः स्यर्वद्धितोत्पीडितद्रुताः ।।

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13. अथ सम्पक्वदोशस्य प्राप्तमञ्जनमाचरेत् ।

    हेमन्ते शिशिरेचैव मध्याह्नेऽञ्जनमिश्यते ।।

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    अजीर्णे वेगधाते चनाञ्जनं सम्प्रशस्यते ।। — वही— , अध्याय— 13, श्लोक 67

15. कशायतिक्त रसयुक्सस्नेहं रोपणं मतम् ।

    मधुरं स्नेहसम्पन्नमञ्जनं च प्रसादनम् ।। — वही—, अध्याय — 13, श्लोक — 65

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17. मुखयोः कुण्ठिता श्लक्ष्णा शलाकाऽष्टाङ्गुलोन्मिता ।

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18. संग्रह0 सूत्र — 32

19. कादम्बरी, जरद्द्रविड्धार्मिकवर्णन, पृष्ठ — 833

20. —वही—, पृष्ठ — 834

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26. अथर्ववेद, काण्ड — 14, सूक्त—2, मन्त्र — 31

27. —वही—, काण्ड — 7, सूक्त — 30., मन्त्र — 1

28. अथर्ववेद के 19वें काण्ड के 44 एवं 45 संख्यक सूक्त अञ्जन देव को समर्पित हैं जिनमें अञ्जन ओषधि की महिमा का गुणगान किया गया है। यह "त्रैक्कुद" पर्वत पर उत्पन्न होता है। प्राणरूप है। रोगनाशक है।

सब रोगों का दमन करता है । एवं कौशीतिक ब्राह्मण, 2 / 4

29. मित्रश्च त्वा वरुणश्चानुप्रेय तुराञ्जन ।

तौ त्वानुगत्य दूरं भोगाय पुनरोहतुः ।।

— अथर्ववेद, काण्ड – 19, सूत – 44, मन्त्र – 10

30. वाजसनेयी संहिता, 30, 34

31. सूत्र कृ. 1 / 4 / 2 / 8 एवं विष्णु पुराण 5 / 20 / 5

32. यजुर्वेद, अध्याय–4, मन्त्र–3

33. वाजसनेयी संहिता, 4 / 3

34. शतपथ ब्राह्मण, 1 / 3 / 12

35. सुश्रुत संहिता, चिकित्सा स्थान, अध्याय – 44, श्लोक – 21

36. वाजसनेयी संहिता, 4 / 5 / 3

37. सुश्रुत संहिता, चिकित्सा स्थान, अध्याय – 24, श्लोक – 17.18.19

38. महावग्ग 6.11 से

39. महावग्ग, 5.11 से

40. –वही–, 5.12 से

41. कल्कांश्चूर्णकषायांश्च स्नानानि विविधानि च।

ददृशुर्भाजनस्थानि तीर्थेशु सरितां नराः।।

शुक्लानंशुमतश्चापि दन्तधावन संचयान।

शुक्लांश्चन्दनकल्कांश्च समुद्रेशु अवितिष्ठतः।।

दर्पणान् परिमृष्टांश्च वाससां चापि संचयान् ।

पादुकोपानहां चैव युग्मान्यत्र सहस्रशः ।।

आञ्जनीः कङ्कतान् कूर्चाञ्शस्त्राणि च धनूंशि च ।

मर्मात्राणानि चित्राणि शयनान्यासनानि च।।

रामायण, अयोध्याकाण्ड, सर्ग–91, श्लोक – 74 से 76 पर्यन्त

42. कर्णपर्व, अध्याय – 44, श्लोक – 18

43. पाणिनि कालीन भारत, डॉ. वासुदेव शरणअग्रवाल

44. अष्टाध्यायी, अध्याय–5, पाद–4, सूत्र – 107

45. विलोचनं दक्षिणमञ्जनेन सम्भाव्य तद्वञ्चित वामनेत्रा ।

तथैव वातायन सन्निकर्षं ययौ शलाकामपरावहन्ती ।।

— कुमारसंभव, सर्ग–7, श्लोक – 59

46. भालेक्षणाग्नौ स्वयंमञ्जनं सभक्त्वादृशोः साधु निवेश्य तस्याः ।

भवोत्पलाक्ष्यः पुलकोपगूढ़े कण्ठे विनीलेऽङ्गुलिमुज्जघर्श ।।

—वही–, सर्ग –9, श्लोक – 26

47. अपांगमालिङ्गय तदीयमुच्चकैरदीपिरेखाजनिताञ्जनेन या ।

अपातिसूत्रं तदिव द्वितीयया वयःश्रिया वर्धयितुं विलोचने ।।

अनङ्गलीलाभिरपाङ्गधाविनः कनीनिका नीलमणेः पुनः पुनः ।

तनिस्रवंशप्रभवेन रश्मिना स्पपद्धतिः सा किमरञ्जिताञ्जनैः ।।

नैषधीयचरित, सर्ग–15, श्लोक – 34/35

48. स्थगिताम्बरक्षिततले परितस्तिनिरे जनस्य दृशमन्धयसि ।

दधिरे रसाञ्जनमपूर्वमतः प्रियवेश्मवर्त्म सुदृशो ददृक्षुः ।।

— शिशुपालवध, सर्ग –9, श्लोक – 21

49. निलनं मलिनं विवृण्वति पृशतीम् स्पृशति तदीक्षणे ।

अपि खञ्जन मञ्जनाञ्चिते विद्धाते रुचिगर्वदुर्विधाम् ।।

— नैषधीचरित, सर्ग – 2, श्लोक – 23

50. तस्याः सुजातोत्पलपत्रकान्ते प्रसाधिकाभिर्नयने निरीक्ष्य ।

न चक्षुशोः कान्तिविशेशबुद्ध्या कालाञ्जनं मङ्गलमित्युपात्तम् ।।

कुमारसंभव, सर्ग – 7, श्लोक – 20

51. हर्षचरित, उच्छवास–तृतीय

52. स्निग्धाञ्जनश्यामरुचिः सुवृत्तो वध्वा इवाध्वंसित वर्णकान्तेः ।

विशेषको वा विशिशेष यस्याः श्रियं त्रिलोकी तिलकः स एव ।।

— शिशुपालवध, सर्ग – 3, श्लोक – 63

53. वाससितं स्वेदजलं कज्जलमलिनाश्रुवारिणा मिश्रम् ।

कुचतटपतितं तस्याः प्रयागसम्भेदसलिलमनुकुरुते ।। — कुट्टनीमत, 298

मध्ययुग से समसामयिकता में झांकता कबीर

रूबी बजियाल

सारांश

प्रस्तुत शोध–पत्र में कैलाश नारायण तिवारी जी के उपन्यास 'विरले दोस्त कबीर के' के माध्यम से उन मध्ययुगीन विसंगतियों पर विचार किया गया है जो वर्तमान समय में भी समाज में विद्यमान हैं। प्राचीन समय से लेकर वर्तमान समय तक समाज एवं सामाजिक जन–जीवन में कई परिवर्तन आये हैं। आज हम 21वीं सदी में प्रवेश कर चुके हैं जहाँ व्यक्ति विवेकहीन होकर भौतिक संसाधनों की दौड़ में लगा हुआ है। वैज्ञानिक उपलब्धियों के साथ हमारा भारतीय समाज आगे तो बढ़ रहा है किन्तु अपनी रूढ़िवादी मान्यताओं एवं परम्पराओं को साथ लेकर। जिसके कारण सामाजिक विषमताएं, असमानता, उत्पीड़न, धार्मिक–उन्माद, जातिवाद, अमानवीयता आदि का स्तर बढ़ता जा रहा है। वर्तमान समय में ऐसे भीषण परिदृश्य को देखकर मन व्यथित हो उठता है। ऐसे समय में साहित्य हमारी सहायता कर सकता है क्योंकि जिस साहित्य में कबीर जैसे संघर्षशील एवं क्रांतिकारी महापुरुष विद्यमान हों, वह निःसंदेह हमारा मार्गदर्शक बनकर समाज में परिवर्तन लाने की क्षमता रखता है।

बीजशब्द :– साम्प्रदायिकता, जाति–व्यवस्था, जाति–श्रेष्ठता, अस्पृश्यता, धार्मिक–बाह्यचार, अंधविश्वास, भ्रष्ट धर्माचारी, स्त्री–पराधीनता।

ज्यों तो हम कबीर साहित्य एवं उन पर रचित रचनाओं को पढ़ते आ रहे हैं किन्तु 'विरले दोस्त कबीर के' उपन्यास कबीर को नए रूप में देखने तथा वर्तमान विसंगतियों से रूबरू कराने का अनुपम प्रयास है। इसमें लेखक ने कबीर को एक संघर्षरत आम व्यक्ति के रूप में प्रस्तुत किया है जो अपने जीवन–संघर्ष तथा तर्कशील विचारों से मध्यकाल और वर्तमान को एक डोर में बांधता है। लेखक ने बड़ी सुन्दर कल्पना की है कि स्वर्ग में बैठे कबीर को वर्तमान युग की विषम परिस्थितियों को देखकर अपने जीवन–संघर्ष का स्मरण हो आता है। कबीर के इस संघर्ष में सामान्य व्यक्ति की छटपटाहट स्पष्ट झलकती है जो वर्तमान अराजकता के समय में उपजी आम जन की पीड़ा, निराशा एवं हताशा को प्रतिबिम्बित करती है। वर्तमान समय में चारों ओर विषाक्त वातावरण है। ऐसे अनेक मुद्दे हैं जो हमें कबीर और उनके युग से जोड़ते हैं। मध्ययुगीन परिवेश पर आधारित यह उपन्यास वर्तमान युग की विसंगतियों से साक्षात्कार करवाता है।

आज देश में सबसे अधिक चिन्ताजनक स्थिति साम्प्रदायिकता के कारण बनी हुई है। "साम्प्रदायिकता में एक समूह अपने आपको श्रेष्ठ मानता है तो दूसरे को नीच या दोयम दर्जे का तथा अपवित्र मानता है।"1 भारत में हिन्दू–मुस्लिम कई वर्षों से एक साथ रह रहे हैं किन्तु भीतर–ही–भीतर एक–दूसरे के प्रति घृणा और

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*शोध छात्रा, हिन्दी विभाग, जम्मू विश्वविद्यालय, जम्मू

प्रतिहिंसा की भावना पाले हुए हैं। उदाहरण के तौर पर – जम्मू–कश्मीर राज्य में प्रतिदिन आतंकियों की घुसपैठ लगी रहती है, कई जाने जाती हैं। इसके इलावा राम–जन्मभूमि और बाबरी मस्जिद की समस्या आज भी सुलझ नहीं पाई है जिसे लेकर देश में साम्प्रदायिक दंगे हो रहे हैं। वास्तव में जन–सामान्य के लिए धार्मिक–विवाद आदि बातों का कोई महत्व नहीं है। यह शासक वर्ग तथा चंद संकीर्ण मानसिकता वाले लोगों की ही देन है। यही जनता को धर्म के नाम पर भड़काते हैं, उन्हें अपने धर्म का कट्टरतापूर्वक पालन करने का उपदेश देते हैं। जिसका परिणाम यह होता है कि उनके मन में दूसरे धर्म एवं सम्प्रदाय के प्रति घृणा–द्वेष पैदा हो जाता है। रामधारी सिंह 'दिनकर' मध्यकाल में विदेशी आक्रमणों के पश्चात् उपजे धार्मिक–उन्माद एवं आज उसके परिणामों की स्थिति पर विचार करते हुए लिखते हैं – "भारत में मुसलमानों का अत्याचार इतना भयानक रहा कि सारे संसार के इतिहास में उसका जोड़ नहीं मिलता। इन अत्याचारों के कारण हिन्दुओं के हृदय में इस्लाम के प्रति जो घृणा उत्पन्न हुई, उसके निशान अभी बाकी हैं और पड़ोसी के हृदय में जो ज़हर की लकीरें छोड़ी हैं, उन्हें शिष्ट मुसलमान भी मन–ही–मन अनुभव करते हैं। फिर भी, हिन्दू और मुसलमान इस देश में एक साथ जीते आये हैं लेकिन दिल उनके साफ नहीं हुए।"2 आलोच्य उपन्यास में भी धार्मिक–उन्माद का चित्रण मिलता है। स्वर्ग में बैठे कबीर को स्मरण हो आता है कि बचपन में वह सबकी आँखों का तारा था लेकिन बड़े होते ही दुनिया बदली–सी नज़र आने लगी। लोगों की नज़रों में अब वह स्नेह और अपनापन नहीं दिखता था। लोगों की इस उपेक्षा का कारण खोजने में लगे कबीर सोचते हैं – "जिन्हें मैं अब्बा हुजूर, फूफा–फूफी कहा करता था वे भी तो मुझसे कटते जा रहे थे। क्या मैं कटाऊ था या बाघ था? जो उन्हें फाड़कर खा जाता।"3 बड़े होते ही कबीर को लोगों की मानसिकता समझ आने लगी। धर्म और मजहब के नाम पर एक–दूसरे को हीन मानने वाले हिन्दू–मुसलमानों के भीतर छिपी घृणा को वह समझने लगे थे। इसी ऊहापोह में पड़े कबीर के मन में कई प्रश्न उठने लगते है – "क्या धर्म और मजहब एक साथ जीने का मकसद बदल देता है?... मैं जितना ही अधिक सुलझाने की कोशिश करता जाति और मजहब की गुत्थियां मुझे उतना ही अधिक क्यों उलझा जाती हैं?"4 बालक कबीर के मन में उठते धर्म और मजहब संबंधी प्रश्न सम्भवतः प्रत्येक बालक के हृदय पर तब तक आघात करते हैं जब तक वह इन सबसे अनभिज्ञ होता है। लेकिन ज्यों–ज्यों वह बड़ा होता है अपने समाज में घटित होने वाले प्रत्येक क्रियाकलापों को समझने लगता है। समाज में इस प्रकार की रूढ़िवादी मानसिकता का दुष्प्रभाव एक बालक के साफ मन को मैला कर देता है। वह स्वयं को हिन्दू, मुस्लिम, सिक्ख और ईसाई में बंटा हुआ पाता है। कबीर को भी इस दूषित सामाजिक मानसिकता का शिकार होना पड़ा था। उनका पालन–पोषण जुलाहा परिवार में हुआ था, जिसके कारण हिन्दू तो उन्हें नीच समझते ही थे, मुसलमानों की दृष्टि में भी जुलाहा जाति तुच्छ समझी जाती थी। धर्म और जाति–भेद से क्षुब्ध होकर कबीर मन में विचार करते हैं कि – "ओह! तो इसलिए मैं न हिन्दू हो सका और न ही मुसलमान! क्योंकि ऐसा होने से मैं उसका भार बहुत

दिनों तक नहीं ढो सकता था। आखिर ढोता भी कैसे? वह इतना सड़ चुका था, उससे इतनी दुर्गन्ध निकल रही थी कि सहन करना असंभव था।"5 कबीर का दृष्टिकोण और उद्देश्य दोनों बड़े थे इसलिए उन पर तत्कालीन रूढ़िग्रस्त सामाजिक व्यवस्था का कोई दुष्प्रभाव नहीं पड़ा। उन्होंने दोनों धर्मों को अस्वीकार कर स्वयं को धर्म–निरपेक्ष घोषित किया। हिन्दू–मुसलमान दोनों सम्प्रदायों के लोगों को ईश्वर के नाम पर लड़ते देखकर वह व्यथित हो उठते थे। उन्होंने निश्चय कर लिया था कि वह इस विवाद को सुलझा कर ही रहेंगे। ईश्वर के नाम पर लड़ने वालों को यह सोचने पर विवश कर देंगे कि राम और रहीम में अन्तर केवल नाम का है अन्यथा वे दोनों एक हैं –

"साधो देखो जग बौराना।

हिन्दू कहत है राम हमारा, मुसलमान रहमाना।

आपस में दोऊ लड़त मरतु है, मरम कोई नहीं जाना।।"6

मध्यकाल में मुस्लिम आक्रमणों के दौरान उपजी इस धार्मिक–उन्माद एवं कट्टरता की समस्या से आज़ाद भारत को आज भी मुक्ति नहीं मिली है। इसका शिकार वे निर्दोष और निर्धन लोग बनते हैं जो न हिन्दू हैं न मुसलमान, बल्कि सिर्फ इन्सान हैं। साम्प्रदायिकता समाज और राजनीति में ज़हर घोलने का काम करती है। देश में जो दंगे फसाद हुए, जातियों में विद्वेष का विष फैला, देश के दो टुकड़े हुए, ये सब इसी के परिणाम हैं। समाज में एक–दूसरे धर्म के प्रति घृणा का रंग इतना फैल गया है कि लोग मनुष्यता खो चुके हैं। कबीर ने मध्यकाल में अपनी क्रांतिकारी वाणी द्वारा हिन्दू–मुसलमानों में आपसी सद्भाव कायम करने के जो प्रयास किए थे वह आज भी करने की आवश्यकता है।

धार्मिक विद्वेष तक ही यह समस्या समाप्त नहीं हो जाती बल्कि प्रत्येक धर्म के अंतर्गत आने वाली जातियों में आपसी मतभेद की समस्या भी हमारे देश में भयंकर रूप में विद्यमान है। समाज में जाति–व्यवस्था कर्म पर आधारित न होकर जन्म पर आधारित है। जिस पर किसी का भी वश नहीं। मध्यकाल में "व्यक्ति की पहचान और उसका मान–सम्मान उसके गुणों से नहीं अपितु जाति से किया जाता था। जन्मनः जाति व्यवस्था विद्यमान थी।"7 जाति ही व्यक्ति के अस्तित्व की निर्णायक मानी जाती रही है। जहाँ तक कि एक अबोध बालक तक की जाति पर प्रश्न उठाए जाते हैं। आलोच्य उपन्यास में कबीर द्वारा ऐसी ही स्थिति से गुजरने का मार्मिक प्रसंग मिलता है। लहरतारा तालाब के किनारे पड़े बालक कबीर को देखकर नीमा का ममत्व जाग उठता है। वह उसे गोदी में उठाने के लिए उद्धत होती है किन्तु नीरू उसे डांटते हुए कहता है – "मत उठाओ इस बालक को। न जाने किस करमजली का पैदा किया हुआ है। जिसके जाति, धर्म, कुल, गोत्र, का पता नहीं, उसे पालने–पोसने से लोग क्या कहेंगे?"8 यही स्थिति वर्तमान समय की भी है। एक छोटे से बालक तक को जाति और धर्म से जोड़ दिया जाता। समाज में जाति–व्यवस्था जैसी कुरीति के कारण मानवता का कोई मूल्य नहीं

रह गया है। यहाँ व्यक्ति कर्मों से उच्च नहीं बनता बल्कि जाति से बनता है।

प्राचीनकाल में भारतीय समाज में प्रमुखतः चार वर्ण थे – ब्राह्मण, क्षत्रिय, वैश्य, शुद्र। इनमें ब्राह्मण सदैव शीर्ष स्थान पर रहे हैं और अन्य जातियां क्रमशः निम्न स्तर पर। मानव–जाति को सवर्ण–अवर्ण, ऊँच–नीच आदि वर्गों में विभक्त करना वास्तव में ब्राह्मणवादी व्यवस्था की एक सोची समझी चाल रही है। इसी ने समाज के एक वर्ग को अस्पृश्य मानकर समाज से दूर कर दिया है। अस्पृश्य समझी जाने वाली इन जातियों को मानवाधिकारों से वंचित रखा गया। इन्हें गांव और शहरों से दूर गंदी बस्तियों में रहने के लिए विवश किया गया। जुलाहा जाति में पले–बढ़े कबीर को हिन्दू और मुसलमान दोनों सम्प्रदायों के लोग घृणा की दृष्टि से देखते थे। यदि कबीर इनकी गली से गुजरते थे तो अछूत समझे जाने के कारण दोनों धर्मों के लोगों द्वारा हृदय भेदने वाले व्यंग्य बाणों के प्रहार सुनने पड़ते थे। एक ओर से आवाज़ आती थी – मुसलमान है, मलेच्छ है, कटुआ है, इसे मत छूना।"9 दूसरी ओर से आवाज़ आती थी – "अरे! इधर मत आना। अजान में विघ्न पड़ेगा। पहले बड़े लोगों को सिजदा कर लेने दो फिर आना।"10 इस प्रकार कबीर ने जाति–व्यवस्था के जिस दंश को झेला था, आज का अछूत समुदाय भी उसी पीड़ा से गुजर रहा है। आज भी समाज में निम्न जाति के लोगों को उचित स्थान नहीं दिया जाता है। सामाजिक संरचना में अछूतों का स्थान सबसे नीचे है। इन्हें शिक्षा, सांस्कृतिक जीवन और आर्थिक उन्नति के साधनों से वंचित रखा गया है। आलोच्य उपन्यास में पंचगंगा घाट पर रामानंद के सरल–स्वभाव को देखकर कबीर के मन में उनको अपना गुरू बनाने का विचार आता है किन्तु साथ ही निम्न–जाति में पले–बढ़े होने का भय भी सताने लगता है – "क्या वे मुझे स्वीकार करेंगे?क्या उनके लिए जाति का जुलाहा, कोरी होने की मुहर, कमीना कहे जाने का दंश बाधक नहीं होगा? क्या वे शिष्य रूप में हमें स्वीकार करेंगे? आखिर हैं तो वे भी ब्राह्मण ही।"11 यह सोचते ही कबीर के मन में जाति दंश की अथाह पीड़ा जाग उठी और उनकी आँखों से आँसू छलकने लगे। वर्तमान स्थिति पर दृष्टि डालें तो यही समस्या आज भी है। निम्न जाति के प्रति समाज के घृणा–भाव को देखते हुए उनके बच्चे विद्यालय जाकर शिक्षा ग्रहण करने से कतराते हैं। निम्न जाति का व्यक्ति आज भी अपनी इच्छानुसार कार्य नहीं कर सकता। उसे अपने निर्णय उच्च वर्ग के सुविधानुसार ही लेने पड़ते हैं। चूंकि वह अछूत हैं, इसलिए उनके साथ उठना–बैठना, खाना–पीना या अन्य सामाजिक संबंध रखने का प्रश्न ही नहीं उठता। "वर्तमान समाज में सवर्ण लोग शूद्रों के हाथ का बना भोजन खाना उचित नहीं समझते। पर प्राचीन समय में यह सिद्धान्त माना जाता था कि 'शुद्र' लोग भोजन बनाएं और आर्य लोग उसका सेवन करें।"12 प्राचीन समय में समाज में समत्व था किन्तु विदेशी आक्रमणों के पश्चात् ब्राह्मणों ने धर्म–रक्षा के लिए जातीय बन्धन कठोर कर दिये। अछूतों को समस्त मानवाधिकारों से वंचित रखा गया। अछूत के साथ सामाजिक दूरी बनाए रखना केवल उच्च जाति का ही कार्य नहीं माना जाता बल्कि यह अस्पृश्य जातियों का भी कर्त्तव्य है कि वे उच्च जाति के लोगों से दूर रहें। आलोच्य

उपन्यास में कबीर को पंचगंगा घाट पर एक जटाधारी साधु से हुई मुलाकात का स्मरण हो आता है। साधु कबीर को काशी तथा यहाँ की मान—मर्यादा को संभालने का दायित्व सौंपते हुए थोड़ा गंगाजल अपने मुंह में डालने को कहता है। कबीर साधु की यह बात सुनकर चकित रह गये क्योंकि ब्राह्मण जाति जो मुसलमानों के स्पर्श को भी अपवित्र मानती है, आज एक ब्राह्मण ही उनको अपने मुंह में गंगाजल डालने के लिए कह रहा है। उनके मन में असंख्य विचार आने—जाने लगते हैं। वह माँ से कहते हैं — "अपना धर्म और अपनी जाति शायद उस समय मेरे आड़े आ रही थी। मैं सोच नहीं पा रहा था कि क्या करूँ। क्या न करूँ?"13 क्योंकि जुलाहा होने के कारण समाज से उन्हें केवल तिरस्कार और घृणा ही मिली थी। इसी घृणा को वर्तमान समाज मे अछूत भी सहन करने को विवश है जिसके साथ उच्च जातीय समाज कोई सामाजिक संबंध नहीं रखना चाहता।

हिन्दू समाज और धर्म पर सदा से ब्राह्मणों का प्रभुत्व रहा है जिसके कारण इनमें जाति—श्रेष्ठता का मिथ्याभिमान जागृत हो गया है। समाज का यह उच्च वर्ग किसी अन्य की श्रेष्ठता स्वीकार करने को तैयार ही नहीं है। आलोच्य उपन्यास में एक सर्वज्ञशास्त्री कबीर को ईश्वर संबंधी गूढ़ रहस्यों को समझाने का आग्रह करता है। इस पर कबीर उसे पहले अपना शिष्य बनने को कहते हैं। यह सुनते ही पंडित का अभिमान जागृत हो उठता है और वह क्रोधित होकर कबीर से कहता है — "अरे पापी! अरे दुष्ट! तुम मलेच्छ हो। मलेच्छ! अधर्मियों के घर पले—बड़े हो। अब तुम कुरान शरीफ की आयतें पढ़—पढ़ कर इतने बड़े सयाने हो गये हो कि मुझे शिष्य बनाना चाहते हो? ... अब कभी मेरे सामने मत आना। हुँह! चले हैं आचार्य सर्वज्ञशास्त्री को शिष्य बनाने।"14 खोखली मान्यताओं के आधार पर बनी जाति—व्यवस्था ने उच्च जाति के लोगों को दुःसाहसी बना दिया है जिसके चलते ये निम्न जाति के लोगों के साथ अभद्र व्यवहार करते हैं, उन्हें हीन समझते हैं। कबीर को हिन्दुओं में प्रचलित जाति—व्यवस्था तथा ब्राह्मणों के मिथ्याभिमान से घृणा थी क्योंकि जाति—व्यवस्था का दंश उन्होंने भी झेला था। वास्तव में तथाकथित उच्च जाति के लोगों द्वारा आत्म—गौरव का प्रचार सर्वथा निंदनीय है क्योंकि वह निराधार है। इसके कारण मनुष्य—मनुष्य के बीच व्यर्थ के भेदभाव को प्रश्रय मिलता है। कबीर उच्च जाति के पंडितों की नीच सोच पर उग्र स्वर में प्रहार करते हुए कहते हैं —

"सन्तो! जाति न पूछे निर्गुनियाँ।

साध ब्राह्मण, साध छतरी, साधे जाती बनियाँ।

साधनमाँ छत्तीस कौम है, टेढ़ी तोर पुछनियाँ।।"15

कबीर की तर्कशील बुद्धि उच्च वर्ग द्वारा जाति—पाति के नाम पर किए जा रहे भेद—भाव को स्वीकार नहीं करती। इसलिए उन्होंने इसका कड़ा विरोध किया। जाति और धर्म को उन्होंने निरर्थक माना।

भारतीय समाज में तो धर्म को मनुष्य—जीवन का अभिन्न अंग माना जाता रहा है। किन्तु आज धर्म का

वास्तविक स्वरूप ही लुप्त हो चुका है। धार्मिक क्षेत्र में ईश्वराधना से अधिक बाह्याचारों एवं कर्मकाण्डों को प्रश्रय मिल रहा है। मध्ययुग में हिन्दू और मुसलमान दो ही धर्म प्रमुख थे और दोनों में धार्मिक और व्यवहारिक मिथ्याचारों का बोलबाला था। "हिन्दुओं में जहाँ अवतारवाद, मूर्तिपूजा, जातिवाद, छुआछूत आदि दुष्प्रथाएं तथा कण्ठी, माला, तिलक आदि बाह्याडम्बर धर्म के अंग बने हुए थे, वहां मुसलमानों में भी रोजा, नमाज, हज, जमात, सुन्नत आदि बाह्य–विधान ही धर्म के अंग के रूप में मान्यता प्राप्त कर चुके थे।"16 इस विकट धार्मिक परिस्थिति में कबीर ने दोनों धर्मों में व्याप्त बाह्याचारों का खण्डन किया। ईश्वर प्राप्ति के नाम पर प्रचलित बाह्याचारों पर प्रश्न करते हुए कबीर हिन्दुओं से पूछते हैं – "अरे! बोल रे ब्राह्मण! बोल! आखिर तेरी बात वह क्यों नहीं सुनता?माला तू फेरता है, तिलक तू लगाता है, लम्बे–लम्बे जटाजूट तू बाँधता है। फिर भी वह तेरी पुकार नहीं सुनता। क्या तेरा अंतर्मन साफ नहीं है?"17 हिन्दुओं से उत्तर न मिलने पर वह यही प्रश्न मुसलमानों से करते हैं – "बोल भाई बोल! तेरे साहब का कैसा रूप–रंग है? तू जिसे मुल्ला होकर पुकारता है। वह कीट–पतंगों की भी आवाज़ सुन लेता है। पर तेरी आवाज वह क्यों नहीं सुनता? बोल! क्या वह बहरा है।"18 हिन्दुओं और मुसलमानों के बाह्याचारों पर उठाये गए ये प्रश्न आज के संदर्भ में मध्ययुग से कहीं अधिक तर्कसंगत हैं क्योंकि मध्ययुग धर्मजीवी युग था तो ऐसा होना कुछ हद तक स्वाभाविक था किन्तु आज का युग वैज्ञानिक युग है जहां बाह्याचारों का अन्धानुकरण भारतीय समाज के परम्परावादी संकीर्ण दृष्टिकोण का द्योतक है।

भारतीय समाज में व्याप्त संकीर्ण मानसिकता ही यहां अन्धविश्वास का प्रश्रय देती है। यद्यपि समाज में यह धारणा है कि शिक्षा के अभाव में निर्धन लोगों में अंधविश्वास प्रचलित हैं किन्तु शिक्षित वर्ग भी इससे अछूता नहीं है। आज भी हजारों वर्षों से चली आ रही रूढ़ मान्यताएं समाज में अंधविश्वास को बढ़ावा दे रही हैं। "हिन्दू धर्म को पुरोहित वर्ग ने कायम कर रखा है इसलिए न तो आधिभौतिक विषयों पर यथार्थवादी दृष्टि से विचार करने की पद्धति बन पाई और न उस प्रकार की समाज–व्यवस्था बन सकी। जिस वर्ग ने नक्षत्रों, मृत–व्यक्तियों, भूत–प्रेतों तथा इस तरह की अनेकानेक भ्रांतियों के आधार पर अपनी सत्ता कायम रखी, उसने अपनीर स्वार्थ–रक्षा के निमित्त ही ऐसी अन्ध–धारणाओं का परिपोषण किया।"19 मध्यकालीन भारतीय रूढ़िग्रस्त समाज में धर्म के ठेकेदारों द्वारा अपने–अपने धर्मानुसार देवी–देवताओं, पीर–पैगम्बर, तंत्र–मंत्र आदि अनेक ऐसी अंधमान्यताओं का प्रचार किया जा रहा था जिसके चलते व्यक्ति कर्त्तव्यविमुख होकर इनके भ्रम में फँसा हुआ था। आलोच्य उपन्यास में काशी घाट पर लोगों द्वारा मन्नतें माँगना कबीर को अंधविश्वास एवं प्रदर्शन प्रतीत होता है। वह इस पर आक्रोश व्यक्त करते हुए कहते हैं – "मैं तो कहता हूँ लोगों से कि भाइयों! बाबाओं, फकीरों, मुल्लाओं से क्या माँगते हो? अरे माँगना है तो उससे माँगो जो सारे संसार को देता

है। जो सारे संसार का रक्षक है। परन्तु ध्यान रखना वह उन्हीं को देता है जो लेने लायक होते हैं।"20 यह धार्मिक अंधविश्वास वर्तमान समय में भी है। आज भी लोग धार्मिक स्थलों पर बैठे बाबाओं को ईश्वर का भक्त मानकर उनके सामने झोली फैलाते हैं, उनसे फरियाद करते हैं जोकि केवल अंधमान्यता है क्योंकि यदि कोई कुछ देने में सक्षम है तो वह ईश्वर है जिसकी अस्मिता को ढोंगी वेशधारी बाबाओं और फकीरों ने अपने प्रपंचों के आवरण से ढक दिया है।

मध्ययुग में धर्म की सीख देने वाले ये धर्म के ठेकेदार जनता को अपने अनर्गल विधि–विधानों में उलझाये रखना अपना कर्त्तव्य मानते थे। स्वयं को ईश्वर मानने वाले इन ढोंगियों पर ईश्वर–भक्ति का कोई प्रभाव नहीं पड़ता। इन हिन्दू–मुस्लिम धर्माचारियों पर क्रोध व्यक्त करते हुए कबीर कहते हैं — "पाखण्ड के बिना तो ये धर्म के ठेकेदार और इनके धर्मावतार एक क्षण भी जी नहीं सकते। ऊपर से ब्रह्मचर्य और सादा जीवन जीने का दूसरों को उपदेश देते हैं। मैं कहता हूँ कि दोनों ही जड़ हैं।"21 ये विवेकहीन धर्माचारी शास्त्रों एवं कुरान को रट कर तथा सदियों से चली आ रही परम्पराओं का अनुसरण कर अपनी विद्वता का रोब जमाते हैं। अन्दर से बिल्कुल शून्य हैं, विचारहीन हैं। कबीर को ऐसे अधकचरे पंडितों और मुल्लाओं से घृणा थी जिनमें केवल ढोंग, पाखंड, हिंसा, अहंकार ही शेष है, जो मानवता की प्रतीक सद्वृत्तियों को अपनी कृत्रिमता के कारण तिलांजलि दे चुके हैं। इन मतिभ्रष्ट धर्माचारियों की वास्तविकता पर कबीर व्यंग्य कसते हैं —

"बहुत मिले मोहि नेमी धरमी, प्रात करत असनाना।

आतम छोड़ि पखाने पूजै, तिनका थोथा ग्यान।

....

बहुतक देखे पीर, औलिया, पढ़ै किताबु कुराना।

करै मुरीद कबर बतलावै, उनहूँ खुदा न जाना।।"22

धर्म के नाम पर यह पाखंड आज भी प्रचलित हैं। आज भी ईश्वर प्राप्ति के लिए मनुष्य धार्मिक आडम्बरों को महत्व देता है। पहले व्यक्ति धर्म के भय से बुरे कार्य करने से डरता था किन्तु धीरे–धीरे धर्म का रूप इतना विकृत होता गया कि धर्म के नाम स्थापित संस्थाएं भ्रष्टाचार के अड्डे बनती चली गईं जिनमें ईश्वर के नाम का आवरण डालकर भीतर भ्रष्टाचार पलता है। धर्म की ध्वजा ओढ़े, साधु संत जो स्वयं को ईश्वर भक्त बताते हैं, धर्म की आड़ में साधारण जनता का शोषण करते हैं। आलोच्य उपन्यास में कबीर वरुणा के घने जंगल में किसी शान्त स्थान की खोज में निकले तो जंगल के बीच उन्हें मनसादेव–सिद्धाश्रम दिखाई दिया। "उस आश्रम में मनसादेव पंडित द्वारा निर्मित हवनकुंड के पास कई स्त्री और पुरुष एक साथ बैठकर मंत्रों का जाप कर रहे थे जिसमें स्त्रियों की दशा पुरुषों से कहीं ज्यादा दयनीय और लज्जास्पद थी।"23 इस वीभत्स

दृश्य को देखकर कबीर का मन उचट गया। साधना के नाम पर होने वाला यह दुराचार ही साधना की पवित्रता को नष्ट करता है। मतिभ्रष्ट साधु जो स्वयं से परिचित नहीं हैं वह अनुचित कर्मकाण्डों द्वारा ईश्वर प्राप्ति का ढोंग कर स्वयं तो डूबते ही हैं साथ ही अबोध जनता को भी अपने भ्रमजाल में फंसा कर उनके विकास का मार्ग अवरुद्ध करते हैं। अबोध जनता अपने कष्टों के निवारण हेतु इन मुखौटा ओढ़े ढोंगियों के पास जाती है और ये जनता की असहाय स्थिति का लाभ उठाकर उनका शोषण करते हैं, उनका नैतिक पतन करते हैं। कबीर माँ के समक्ष इन भ्रष्ट धर्माचारियों की वास्तविकता प्रकट करते हुए कहते हैं – "भोली–भाली जनता को हठयोग का पाठ पढ़ाकर उनका शोषण करते देख ऐसे नराधमों से चिढ़–सी हो गई थी। इनमें न संयम था न ही इंद्रिय–निग्रह का बल। मांस, मदिरा और मैथून में विश्वास करने वाली यह ऐसे साधुओं की जमात थी जो हठयोग के नाम पर कलंक थी।"24 आज भी समाज में ऐसे साधुओं का अभाव नहीं है जो दिन भर भिक्षा मांगते हैं और रात को मांस, मदिरा का सेवन करते हैं। अपने दुर्व्यसनों की लत को पूरा करने के लिए किसी भी हद तक जा सकते हैं। साधना में मांस, मदिरा और संभोग का कोई स्थान नहीं है परन्तु ढोंगी साधु अपनी स्वार्थ सिद्धि एवं कामवासना की पूर्ति के लिए जनता को अनेक प्रकार के प्रलोभन देकर अपने साथ जोड़े रखते हैं। यह पाखण्डी साधू नीति कुशल और व्यवहार विद्ध होकर समाज में अपना स्थान बनाने में सिद्धहस्त है।

मध्ययुग में इन्हीं दुष्ट साधुओं की दूषित मानसिकता और सामन्तों के अत्याचारों के कारण स्त्री की स्थिति दयनीय बनी हुई थी। स्त्रियों को केवल भोग की वस्तु समझा जाने लगा जिसके चलते उन पर सामाजिक बन्धन कठोर हो गए। पुरुष की अनुमति के बिना स्त्री घर की चारदीवारी से बाहर नहीं निकल सकती थी। आलोच्य उपन्यास में इसी पुरुषवादी संकीर्ण मानसिकता का चित्रण मिलता है। कबीर के पिता नीरु नीमा को गंगा स्नान करने जाने से रोकते हुए कहते हैं – "अरे मूर्खा! कुल कलंकिनी! धर्म–नाशिनी! तुम हिंदू औरतों के साथ गंगा–स्थान करने क्यों जाना चाहती हो? क्या तुम्हें पता नहीं कि हम कोरी मुसलमान हैं।"25 प्रायः समाज में यही देखा जाता है कि परिवार में पुरुष स्त्री को अपनी इच्छा और मानसिकता के अनुसार चलाने का प्रयास करता है। भले ही स्त्री को यह स्वीकार हो या न लेकिन उसे पति की आज्ञा का पालन करना ही पड़ता है। पिता को माँ पर क्रोधित होते देखकर कबीर को तनिक भी आश्चर्य नहीं होता क्योंकि वह जानते थे कि उनके पिता भी अन्य लोगों की तरह सामाजिक कुप्रथाओं को ही अधिक महत्व देते हैं। इसी पर कबीर मन–ही–मन सोचने लगते हैं – "जिस दिन से मेरे पिता और पूरा समाज असली धर्म–कर्म और स्त्रियों की पीड़ा को समझना शुरू कर देगा, उसी दिन से इस समाज में परिवर्तन शुरू हो जाएगा। लेकिन वह दिन भारतीय जीवन में कब आयेगा?...कहना कठिन है।"26 यद्यपि वर्तमान समय में स्त्री की स्थिति में थोड़ा परिवर्तन अवश्य आया है, स्त्री अपने अधिकारों के प्रति जागरुक है किन्तु वैचारिक स्तर पर अधिक परिवर्तन नहीं आया है। मध्ययुगीन स्त्री की पराधीनता का जो चित्रण उपन्यास में है वह आज भी है। किसी–न–किसी

रूप में स्त्री आज भी पुरुषों के अधीन है।

इस प्रकार कहा जा सकता है कि मध्ययुगीन परिवेश के परिप्रेक्ष्य में रचित इस उपन्यास में वर्तमान समाज की झांकी स्पष्ट दिखाई देता है। आज वैज्ञानिक उन्नति के बावजूद भी सामाजिक न्याय की स्थापना नहीं हो पायी है। चारों तरफ क्रूरता, प्रपंच और विश्वासघात का जाल बिछा हुआ है। जाति, धर्म और वर्ग के नाम पर निहित स्वार्थों की पूर्ति के लिए व्यक्ति राक्षसी प्रवृति ग्रहण कर रहा है। हिन्दू–मुस्लिम एकता आज भी कायम नहीं हुई, न मंदिर–मस्जिद के विवाद सुलझे, न धार्मिक बाह्याचार समाप्त हुआ, न जात–पात के झगड़े निपटे और न स्त्रियों के प्रति समाज का दृष्टिकोण बदला है। ऐसे में कबीर तत्कालीन समय की अपेक्षा आज और आने वाले समय में अधिक प्रासंगिक रहेंगे क्योंकि उन्होंने तत्कालीन सामाजिक यथार्थ को अपना साहित्य बनाकर एक भविष्यद्रष्टा की भांति वर्तमान समय की विद्रूपताओं को चुनौती दी है। मध्यकालीन कबीर को नए दृष्टिकोण से समझने, वर्तमान विसंगतियों के निराकरण एवं भविष्य की चुनौतियों को अपने में समेटने का सार्थक प्रयास इस उपन्यास की विशेष उपलब्धि है।

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प्रद्यूमन सिहँ

सारांश

डुग्गर प्रदेश च रॊह्ने आह्ले बसनीक डोगरा खुआंदे न। इस डुग्गर प्रदेश दे ग्रांऽ चनास च डोगरा राजपूत जाति ने अपनी संस्कृति गी पुश्तैनी बरासत दे रूपै च साम्भी सम्हाली रक्खे दा ऐ। इस जाति दी संस्कृति बिकासशील रेही ऐ इस करी समें अनुसार इस च तब्दीलियां औंदियां रेहियां न। इस लेख च सिर्फ इक ग्रांऽ ते उस ग्रांऽ दे चनासिये राजपूते बारै गल्ल कित्ती गेदी ऐ।

बीजशब्द :— राजपूत, डुग्गर, कम्म धंधे, रैह्न सैह्न, खान पान, लावा लबास

भूमिका

जिला उधमपुर भारत ते जम्मू कश्मीर प्रदेश दा इक नगर ऐ एह उधमपुर जिले दा मुख्यालय बी ऐ। एह राष्ट्री राजमार्ग 1ए उप्पर जम्मू ते कश्मीर दे रस्ते च स्थित ऐ। किश प्रसिद्ध धार्मक ते इतिहासिक थाहर जि'यां क्रीमची मानसर, सुद्धमहादेव, मानतलाई, वैष्णो देवी आादि उधमपुर दे कोल न। उधमपुर इक शैह्र ते इक्क नगर परिषद ऐ। एह जिला जम्मू सूबे दा सारे कोला वड्डा शैह्र, ते जम्मू कश्मीर राज्य दा चौथा बड्डा नग्गर बी ऐ। राजा गुलाब सिहँ दे पुत्तर ऊधमसिहँ दे नांऽ उप्पर उधमपुर जिले दा नांऽ ऐ। जिला उधमपुर उत्तरी कमान दे मुख्यालय नांऽ कन्नै बी म्श्हूर ऐ, ते जिला उधमपुर च भारतीय वायु सेना मुख्यालय बी ऐ। उधमपुर च जाने लेई राष्ट्री राजमार्ग रोड संख्या 1ए ऐ। जिला उधमपुर हिमालय दी शिवालिक रेंज च स्थित ऐ, ते ज्यादातर लाका फ्हाड़ी ऐ। जिला उधमपुर दे उप्परी लाके च सर्दियें दे मौसम च बर्फबारी बड़ी मती हौंदी ऐ। जिला उधमपुर दे केई लाकें दा सर्दियें च आम तौरे उप्पर तापमान शून्य डिग्री कोला बी घट्ट होंदा ऐ ते गर्मियें च 40 डिग्री कोला उप्पर तक पारा जंदा ऐ। जिला उधमपुर दे रामनगर च बरखा सारे कोला मती होंदी ऐ। बरखा ते बर्फबारी कारण उधमपुर जिले च नुकसान बी मता होंदा ऐ।

जिला उधमपुर मुख्यालय जम्मू कोला 68 किलोमीटर दूर ऐ। उधमपुर शैह्र च 22 नग्गर (बार्ड) न, ते उधमपुर दियां चार तसीलां न, उधमपुर, रामनगर, चनैनी ते मझालता। जिला उधमपुर दी मुक्ख भाषा शुद्ध डोगरी ऐ। एह भाषा आपनी मिठास लेई वडी म्श्हूर ऐ ते दूरा दा पनछोई जंदी ऐ। गुज्जर समुदाय दे लोक गोजरी भाषा बोलदे न ते फ्हाड़ी लाके च लोक गद्दी बोल्ली बोलदे न। असें उंदी बोल्ली घट्ट बुझोंदी, पर ओह् साढ़ी डोगरी झट्ट समझी लैंदे न।

*शोधकर्ता, डोगरी विभाग; जम्मू यूनिवर्सिटी, जम्मू।

जिला उधमपुर च सांस्कृतिक रूप च लोहड़ी, महाशिवरात्रि, ईद उल फितर, होली, रामनवमी, बैसाखी, गुरू अर्जन देव, जनम अश्टमी, महानवमी दिनें दा इक्क महत्वपूर्ण थाहर ऐ। दशैहरा, दिबाली, गुरू रविदास, महात्मा गांधी, गुरू गोविंद सिहँ, चाचा नेहरू दा जन्मदिन ते इंदे कन्नै स्वतंत्रता दिवस ते गणतंत्र दिवस बी वड़े उत्साह कन्नै मनाया जंदा ऐ। जिला उधमपुर च मतियां सारियां स्वयंसेवी संस्थां, नाटक मंडलियां, रामलीला कल्ब, प्राइवेट स्कूल बेल्लै–बेल्लै सांस्कृतिक कार्यक्रम पेश करदे न ते इदें चा किश लोक इनें मुकाबले च हिस्सा बी लैंदे न।

मनुक्खी सभ्यता

मनुक्खी सभ्यता आदिकाल थमां गै वर्गे, वर्ण जातियें, उपजातियें, गोत्तरें, उपगोत्तरें च बंडोई दी रेही ऐ। एह् बंड कुसै माह्नू विशेश दी पंशान बी रेही ऐ। समाज दी एह् बंड जिम्मेदारियें ते कम्में गी सचारू रूपै च करने लेई कीती गेई ही। कोई बी जात लौह्की जा बड्डी नेई मन्निये सब्भै जातियां वर्ण, कुल, गोत्तर, बरोबर मिथे जंदे रेह् न। प्राचीन काल च भारती समाज च'ऊं वर्णे च बंडोए दा हा। एह् वर्ण हे– क्षत्री, ब्रैह्मण, वैश्य ते शुद्र। सभनें गी उंदी योगता अनुसार कम्मै दी सौंपना कीती जंदी ही। जि'यां क्षत्री लोक फौजें च गै भरथी हुन्दे हे। ब्रैह्मण जाति परोहत जां पंते दा कम्म करदे हे। वैश्य जाति दे लोक मते बपारी हे, ते शुद्र जाति दे लोक मजदूर जां सेवक दा कम्म करदे हे। दिक्खेआ जा तां समाज दे निर्माण च इ'नें सभनें वर्गें अपने अपने तौरे उप्पर नुमायां भूमिका नभाई। क्षत्री समाज दे कमजोर तब्के गी सुरक्षा प्रधान करदे हे। इ'यै कारण हा जे उं'दे हत्थ सत्ता दी बागडौर बी रेही। सत्ता गी कुशलता कन्नै चलाने आस्तै ते उच्च नीतियां निर्धारत करने आस्तै सलाह्कार ते विशेषझ लोकें दी बी लोड़ ही। एह्कड़ी भूमिका बैह्मण जाति ने बखूबी नभाई। देश ते समाज दे आर्थिक पक्ख गी गतिमान रखने आस्तै वैश्य जाति ने ते इ'नें त्रौनें गी अपनियां सेवा देइयै शुद्र जाति ने इंदियां औखियें भारियें गी अपने सिरै उप्पर लैता।

जिला उधमपुर च बक्ख–बक्ख राजपूत जातियां खासी संख्या च मिलदियां न। इ'नें जातियें दी अपनी सांस्कृतिक पन्छान ऐ। जेह्ड़ी इं'दे रीति–रवाजें, कार ब्याह्र, लोक विश्वासें ते रोजमर्रा ते कम्म धंधें च लभदी ऐ। पराने समें च राजपूत जाति ने जि'नें कम्में करी अपनी पंछान बनाई दी ही, अज्ज दे बदलदे दौर च दुनिया उ'नें गल्लें गी बिसरदी जा करदी ऐ। राजपूत जाति दी नमीं पीढ़ी बी अपने पुरखी कम्म–धंधे ते कारनामें गी नां ते अपनाꞌ करदी ऐ ते नां गै उ'नेंगी अपने जीवन च कुसै चाल्ली म्हत्ता देआ करदी ऐ। इसदे केई कारण होई सकदे न।

उधमपुर दा लाका अपनी टकोह्दी पंछान करी डुग्गर च अपना चेचा थाहर रखदा ऐ। इसदी सांस्कृतिक पंछान बनाई रखने च इत्थूं दियें राजपूत जातियें बड़ा नमुल्ला योगदान दित्ता ऐ। जीवन दे केई

खेतर ऐसे रेह न जि'नेंगी सोआरियै राजपूत जाति दे लोकें डुग्गर दी संस्कृति विरासत गी संगारेआ, सुआरेआ। उधमपुर लाकें च राजपूतें दियां कई उपजातियां मिलदियां न जि'नें इतिहास च कई उल्लेखनेजोग कम्म ते कारनामें कीते दे न। राजपूत जाति सिर्फ सत्ता दे उप्पर गै काबिज नेई रेही, बल्कि प्रशासनिक सेवाएं, सैनिक सेवाएं ते होर कई चाल्ली दे कम्में च अपना महत्वपूर्ण योगदान दिंदी आई ऐ। चनास ग्रांऽ च इक राजपूत जाति ऐ जम्वाल जेहड़ी सदियें थमां चनास ग्रांऽ च रस्सा बस्सा दी ऐ।

चनास ग्रांऽ बारे दंत कथ :– चनास ग्रांऽ दा नांऽ पैहले चरनआस हा ते समें दे कन्नै कन्नै नांऽ वदलदे–वदलदे चनास उप्पर आई पुजेआ। लोके दा गलाना ऐ अज्ज़ कोला कोई लगभग 430 ब'रे पैहले इक राजा शिवदर्शन देव जैहड़े लड़ाई करदे इस थाहर पुज्जे ते उन्हे इस थाहर उप्पर आपना कैंप लाया ते अगले दिन सवेरे पूजा करदे उन्हे माता बैष्णो दी फ्हाड़ी दे दर्शन होए ते उन्हे उस थाहर उप्परा इस ग्रांऽ दे नांऽ दी घोषणा कीती।

चनासिये जम्वाल राजपूतः– चनासिये राजपूते अपनी संस्कृति गी पुश्तैनी बरासत दे रूपै च साम्भी सम्हाली रक्खे दा ऐ। इस जाति दी संस्कृति विकासशील रेही ऐ इस करी समें अनुसार इस च तब्दीलियां औंदियां रेहियां न। उधमपुर जिले दे चनास ग्रांऽ च जम्वाल जाति दे लगभग 175 घर न। एह सारे लोक आमतौरा उप्पर सांझे परिवारें च रौंहदे न। मकामी लोके दा गलाना ऐ राजा शिवदर्शन जैहड़े लड़ाई परा परतोंदे होई चनास ग्रांऽ च आई डेरा लाया। राजा शिवदर्शन ने इस थाहरै पर अपने इश्टदेव भगवान नरसिंघें दी इक करामात दिक्खियै उत्थें गै पक्के तौर पर रौंहने दा फैसला करी लेआ। जम्मू दे राजा संग्रामदेव ने प्रसन्न होइयै शिवदर्शन गी राजगी दा खताब देइयै चनासै च गै ओदे रौंहने बारै अपनी सैह्मती प्रगट कीती ते निर्देश दित्ता जे चनास च गै राजथड़ा कैम करियै 84 ग्रांऽ बलवालता ते 22 नाले बम्हागै समेत रियासी तगरै दे अलाके दी व्यवस्था सम्हालो ते आम लोकें आस्तै जीन सखाला बनाने दा जतन करो। इस चाल्ली 16मीं सदी दे खीरले चरणै च चनास नांऽ दा एह थाहर अबाद होआ। राजा शिवदर्शन ने इत्थें इक पक्का खूह बनवाया, फौजी सपाहियें आस्तै इक कच्चा किला बनवाया, ते कस्बे दे नबासियें आस्तै बस्ती दे आलै–दुआलै इक कोट बनवाया, जेदे नशान अज्ज बी लब्भी जन्दे न। पराने समें च राजपूत जाति ने जि'नें कम्में करी अपनी पंछान बनाई दी ही, अज्ज दे बदलदे दौर च दुनिया उ'नें गल्लें गी बिसरदी जा करदी ऐ। राजपूत जाति दी नमीं पीढ़ी बी अपने पुरखी कम्म–धंधे ते कारनामें गी नां ते अपनाऽ करदी ऐ ते नां गै उ'नेंगी अपने जीवन च कुसै चाल्ली म्हत्ता देआ करदी ऐ। इसदे कई कारण होई सकदे न। जि'यां पुरखें दे कारनामें ते ब्हादरी दा नेई दे बराबर विचार–बटांदरा ते चर्चा च होना, समाज द्वारा उ'नें कारनामें ते ब्हादरी दा कोई मान मुल्ल घटी जाना। सांस्कृतिक विरासत गी बचाई रखना ते अगली पीढ़ी तगर पजाना अज्जै दी पीढ़ी दी जिम्मेदारी ऐ

कुल देवतेः— जम्वाल जाति दे देवते बाबा काली वीर ते मल रानी दे नांड कन्नै जाने जंदे न एह सारे लोक काली वीर ते मल रानी गी कोई बी कम्म करने थमां पैहले पूजदे न ।

गोत्रः— जम्वाल जाति दा गोतर भारद्वाज ऐ ।

मकानः— चनास ग्रांड च बसने आह्ले जम्वाल जाति दे लोकें दे मकान **ज्या**दातर पक्के न । एह मकान इक दुए कन्नै—कन्नै न । एह सारे मकान इक्क टिब्बे उप्पर **बसे दे** न ।

कम्म—धंधेः— जम्वाल जाति दे ज्यादातर लोक पुलिस ते आर्मी च नौकरी करना पसंद करदे न । बशक्क अज्ज ऐसा कोई खेतर नेईं जित्थैं राजपूत कम्म नेईं करा करदे पर पैहले आला लेखा अज्ज बी आर्मी दी नौकरी उंदे लेई बशेश थाहर रखदी ऐ । पैहलै अपने हत्थें खेती—बाड़ी दा कम्म करना पसंद नेईं हे करदे पर अज्ज किश लोक खेती—बाड़ी दा कम्म बी करदे न । इस लाके दे लोक पढ़े लिखे न ते ज्यादातर लोक नौकरी करदे न ।

खान—पानः— जम्वाल राजपूत जाति दा खान—पीन उ'आ ते बाकी आम लोकें जनेंहा गै पर इंदे भोजन च मास दी प्रधानता मूजब बिशेशता आई जंदी ऐ । ब्याह कारजें, त्यहारें दे मौकें पर भांति— भांति दी मास—मच्छी वनाई जंदी ऐ । राजपूतें दे तकरीबन बच्चे, मरद—जनानियां मासाहारी होंदे न ।
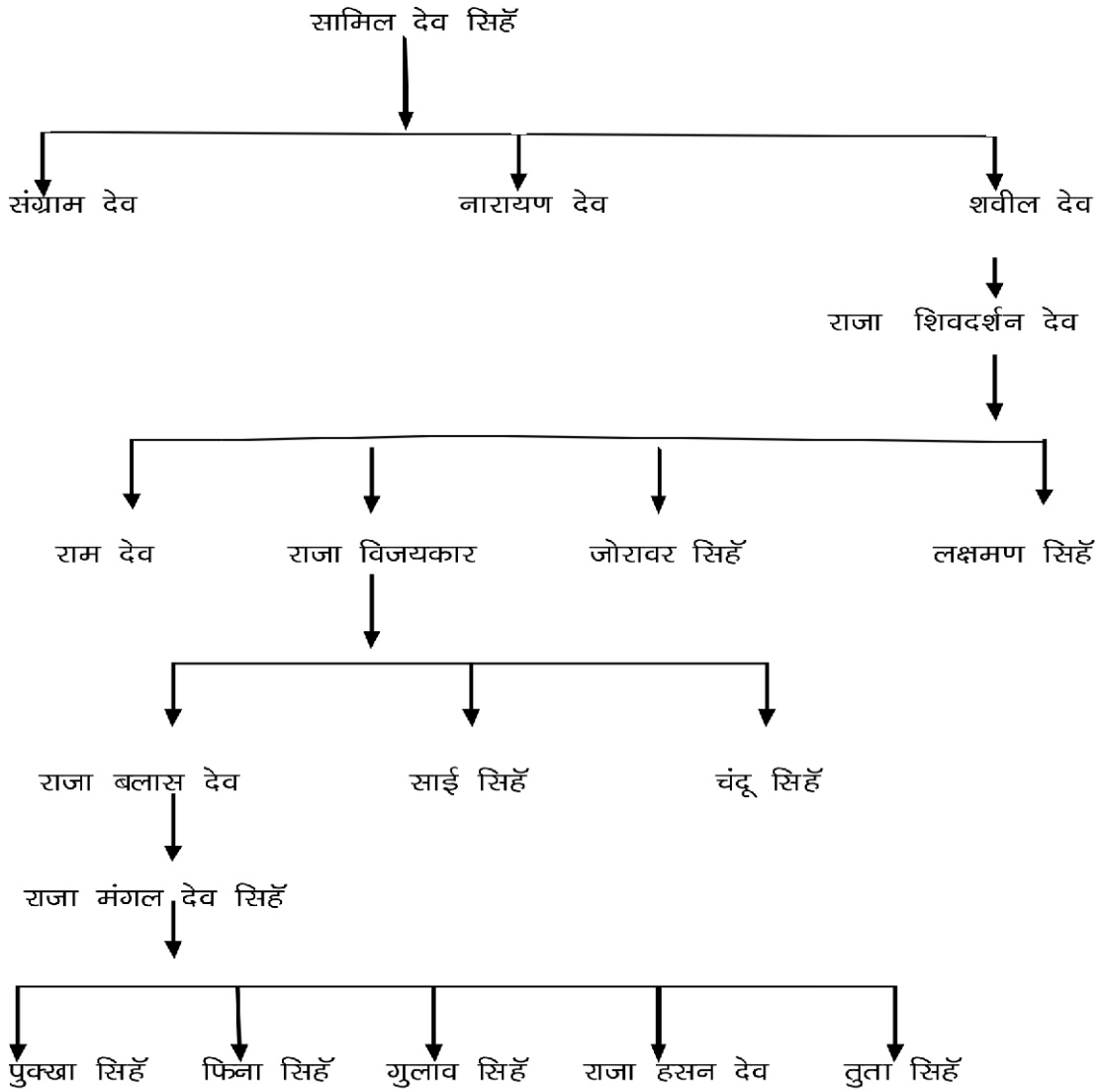
लावा—लबास :— राजपूत जाति दी पशाका च इन्दी पग्ग गै बाकी जातियें इ'नेंगी नखेड़दी ऐ । अज्ज बी अचकन ते दोहरे घट्टने च सज्जे दा लाड़ा दिक्खियै ते साफें दी कलगी ते सनैहरी पट्टी दिक्खियै लोक समझी जन्दे न जे जान्नी राजपूतें दी ऐ । एह लाबा इन्दा परम्परागत लबास ऐ ।

चनासिये जम्वाले दा महिलाएं दे प्रति नज़रीयाः— चनासिये राजपूते दे बरताव च समे कन्नै कन्नै बदलाव औंदां रेआ ऐ पैहले एह लोक आपने बरताव कारण लडाके खुआदे हे ते अज्ज इेदें बरताव च केई तवदिलियां आई गेदियां न । 20 ब'रे पैहलै सिर्फ मरद गै बजार च घरे दा किश समान लैने गी जंदे हे ते अज्ज इंदियां जनानियां बी एहका कम्म करी लैंदियां न । पैहलै जनानियां सिर्फ परदें च रौंहदियां हियां । समें दे कन्नै कन्नै एह प्रथा बदलोई गेई ऐ । अज्ज इस जाति दियां जनानियां नौकरी बी करा करदियां न ।

शौक खेढांः— चनासिये राजपूत अक्सर शकार, कुश्ती, नशानेबाजी, घुड़सुआरी दे शकीन रेह न । इनें लोकें लेई कुश्ती इक मनोरंजन दा साधन ऐ एह लोक कुश्ती दिखने लेई दूर दराडे लाकें तगर बी जंदे न । इन्नां गै नेईं, किश मरद आपे बी कुश्ती दे शकीन न । मासाहारी होने कारण शकार खेढना इंदा मुक्ख शौक आक्खेआ जाई सकदा ऐ ।

चनासै दे खानदानै दी बैंस बेल जिन्नी मिगी थोह्ई सकी, इस चाल्ली ऐ।

```
                    साम्मिल  देव  सिहँ
                          │
                          ▼
     ┌────────────────────┼────────────────────────┐
     ▼                    ▼                         ▼
संग्राम  देव          नारायण  देव               शवील  देव
                                                    │
                                                    ▼
                                        राजा   शिवदर्शन  देव
                                                    │
    ┌──────────────┬──────────────┬────────────────┘
    ▼              ▼              ▼                 ▼
 राम  देव     राजा विजयकार   जोरावर  सिहँ      लक्ष्मण  सिहँ
                   │
    ┌──────────────┼──────────────┐
    ▼              ▼              ▼
राजा बलास देव    साई  सिहँ      चंदू  सिहँ
    │
    ▼
राजा  मंगल देव  सिहँ
    │
 ┌──────────┬──────────┬──────────┬──────────┐
 ▼          ▼          ▼          ▼          ▼
पुक्खा सिहँ  फिन्ना सिहँ  गुलाव सिहँ  राजा हसन देव  तुता सिहँ
```

सहायक ग्रैंथ सूचीः—

डोगरी पत्रिकां

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