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Editorial

This is the maiden issue of *the Journal of Centre for Promotion of Arts and Science*. It is a semi-annual journal comprising two issues published for January -June and for July – December. The aims and objectives of the Centre for Promotion of Arts and Science have been to provide yet another platform to people to give expression to their acquired knowledge and life experiences in the different fields of arts and science. This Journal is a humble effort in that direction.

The Centre was set up in October 2021. By January 2022, the Centre had its own website (www.kalavig.com). In February 2022, the Centre organised a *Talk on Rabindranath Tagore* by Prof. Shirsendhu Chakrabarty. The Centre has steadily progressed since then and has been receiving articles, travelogues and anecdotes for publication on the Centre's website. While it has already produced some podcasts, others are in the pipeline. The Centre, furthermore, began to publish the Centre's *Quarterly Newsletter* from July 2024.

With the launching of this Journal, the Centre has accomplished yet another milestone. It is solely an academic journal, and all publications would be peer reviewed. Research articles, both in English and in Hindi are welcome. Book lovers may send us the book reviews of their preferred books.

In a way, the need for such a journal arose from the realization that the existing Journals of repute in India are unable to publish the articles well in time as they are flooded with them and are unable to accommodate them all. Quite a number of journals furthermore charge a fee for publishing the articles, which is not the case with us. Authors may send their articles/book reviews by going on the web page of *The Journal of the Centre for Promotion and Arts and Science* (<https://journalcpas.kalavig.com>) and submit the same accordingly.

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Commission and Committees as means of Public Policy : Vision and Public Policy in the 21st Century India

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Abstract

The earlier attempts regarding articulating India's Vision for the future relate to the Target Year of 2020. This paper shifts the target year to the next thirty years, that is, to the year 2050. Vision 2050, as articulated in this paper, envisions a structural change in the Indian economy in favour of the 'services sector' as it has the maximum potential to provide employment opportunities. This, in turn, would call for public policies to be pursued on different fronts commensurate with the Vision 2050. The paper argues that Commissions and Committees are the right kind of bodies to formulate sound public policies.

Keywords

Development Strategy, Directive Principles, Public Policy, Gosplan, Planning Commission, Steering Committees.

I. Introduction

Some similarity could be drawn between 'strategic management' followed by corporations and 'development strategy' pursued by governments. Strategic management is known to involve the three steps of: (a) strategy formulation, (b) strategy implementation and (c) strategy evaluation and recalibration. Strategy formulation by companies, in turn, requires formulating the company's vision for the future based on technological changes, competition in the market, changes in interest rates, changes in tax rates, mega demographic trends and changes in commodity prices etc.

Development strategy of governments, likewise, may be said to involve (a) strategy formulation, (b) strategy implementation and (c) strategy evaluation and recalibration. While strategy formulation in the context of development strategy would imply formulating the country's vision for the future, public policy may be looked like a tool for strategy implementation. In other words, if vision implies 'what all to achieve', public policy entails 'how to achieve' the vision.

The preamble of the Constitution of India - is a vision of sorts - envisioning 'a democratic, secular and socialist society and to secure to all its citizens **Justice**: social, economic and political; **Liberty**: of thought, expression, belief, faith and worship; **Equality**: of status and opportunity'. That there is a close relationship between vision and public policy is evident from the Directive Principles of State Policy in the Constitution that mentions the followings:

- (a) The State shall strive to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice, social, economic and political, shall inform all the institutions of the national life,
- (b) That the citizens, men and women equally, have the right to an adequate means of livelihood,
- (c) That the State shall within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age sickness and disablement, and in other cases of undeserved want,
- (d) That children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

In the absence of a linkage between vision and public policy, however, public policy becomes 'a rule – a guide for decision making of the government that affects public at large, or people, or all members of the community' (Chakravarty, 2017). Four possible outcomes may, moreover, be expected of any public policy, namely, (a) it promotes the interests of one group at the cost of other members of the society, (b) it promotes the wellbeing of all the people, although some benefit more and some less, (c) it secures the good of all the people equally and (d) it benefits the target group, that is, those who have been left behind.

It may also give rise to a trade-off between benefit today and benefit tomorrow. While subsidised food through public distribution system provides relief in the present, research in science and technology yield results in the long run. A policy choice may, similarly, have to be made between greater allocation of public expenditure to 'physical infrastructure' in comparison to 'social sector' or vice versa. Equally important is the policy choice between economic development and environmental protection.

2. Vision and Public Policy in the 21st Century

Concerned with the poor human development index in the country, the former President of India Dr A. P. J. Abdul Kalam observed, 'Every year about twenty million Indians are being added to the nation. What vision can they have? Should we, like some question the very concept of development and leave our people to the same condition of stagnation which existed for centuries.... Where should we see India (and its people) going in the next two decades? In the next five decades? And more?' (Kalam, 1998). In his book titled 'India 2020: A Vision for the New Millennium' that was published in 1998, he emphasizes the role of technology in transforming the society.

2.1 'India 2020: A Vision for the New Millennium', by A.P.J. Abdul Kalam (1998)

The thrust of his book is, therefore, to accord technology the central place in the country's vision. He draws attention to the 'green revolution in agriculture'; pointing out how technology made India self-sufficient in food production and reduced our dependence on imports. He wants India to further extend this bio-technological revolution to fruits, vegetables, livestock and dairy production.

He then discusses the possibilities of technological revolution in the field of 'metals' such as iron, aluminium, titanium, rare earths, photonic materials, super conductivity materials and ceramics that are in abundance in India. Since ceramic is used in construction, he looks forward to a big transformation of the construction sector. Next he discusses 'chemicals' and the related chemical industries like petro-chemicals, rubber, polymers, polymer additives and lubricants that promise great technological possibilities.

He, furthermore, argues for research and innovation in the areas of textiles, engineering industries, electrical equipment and transport equipment. These are followed by his emphasis on generation of power through renewable sources of energy and nuclear energy. Health occupies a very high position in his priority where he sees technology transforming the lives of an average Indian - whether that be in the realm of safe drinking water, drainage system, waste disposal, pollution control or clean energy.

He attaches equal importance to development of information and communication technology (ICT) for benefiting the society as it has cut down costs and increased productivity, across the economy. He also looks up to innovation in the fields of marketing communication (advertising, media, consulting), trading and distribution, repair and maintenance, tourism, sports, security, leisure and old age care in the 'services sector'.

2.2 'Report of the Committee on India Vision – 2020' by the Planning Commission (2002)

The Planning Commission brought out the 'Report of the Committee on India Vision – 2020' in 2002, which is a collection of articles by domain experts in the different sectors. The vision document of the Planning Commission endorses the significant role played by technology in transforming economies. It acknowledges, in particular, the role of ICT in bringing India on the global map. The vision document attaches great importance to education and recommends 'general education for all children from class one to ten'. It also emphasizes vocational education and skilling of the rural population engaged in agriculture through 'Krishi Vikash Kendras'.

In the area of health, the document argues for improvement in health status of the population through better access to health services, especially so, by the underprivileged segments of the society. It also draws attention to massive differences in fertility, mortality and health care services across the different states. Recognizing the large size of the population in the reproductive age group, the vision document emphasizes on addressing the unmet needs of contraception/contraceptives in the country.

In order to bridge the wide gap between urban areas and rural areas, the vision document recommends for strengthening the rural infrastructure such as road, water, electricity, transport, telecom, education and health care. It also proposes for linking a cluster of villages - comprising 100, 000 or more people - through a circular highway and developing them into urban agglomerates whereby services of various kinds such as markets, schools and hospitals etc. could all be accessed within thirty minutes.

The vision document also draws attention to social issues such as neglect of girl child and plight of vulnerable sections of the society such as the scheduled tribes, the scheduled castes, other backward castes and the minorities. Regarding national security, the vision document contends that while external security depends on the military preparedness of the country, internal security depends on preservation of core values and fairness in administration.

A great deal of attention has also been paid to employment situation in the country – both wage employment and self-employment – as these are the main sources of livelihood for the people in the country. The majority of the people are, however, engaged in low income generating pursuits with very low productivity. The current unemployment rate at around seven to eight (per thousand) of the total work force - equal to around thirty-five lakh people remaining unemployed during the year - continues to be similarly very worrying. Large scale unemployment and low-income sources of livelihood are the root cause of widespread poverty in the country.

According to the vision document ‘education, technological innovation and globalisation’ have been the main drivers of growth in most economies. These are also considered the way out from the widespread poverty in the country. Although capital accumulation or ‘savings’ in the economy has traditionally been thought to be the main driver of economic growth, the Planning commission document attaches greater importance to ‘Knowledge Resource’. Such a view is based on the growth experience of advanced countries as it was observed, ‘while only one-eighth of the growth in the USA - from 1900 to 1950 - was on account of increase in capital, seven-eighth of the growth was due to technical progresses’.

3. Commissions and Committees as Means of Public Policy

Since public policy is also regarding ‘governance’, it has much to do with the concept of ‘the state’. In the eyes of the Marxists scholars, however, the state represents class interests, and it is naïve to expect that people in power will take a non-partisan view in respect to their decisions. Yet, we have the architect of Russian Revolution, namely V.I. Lenin who set up the Gosplan (State Planning Committee) soon after the Russian Revolution in 1917, as a parallel institution to administrative ministries, for giving ‘non-partisan and expert advice’ to the government.

Both ‘Commissions’ and ‘Committees’ are constituted to give expert advice on varied and complex issues. The essential difference between the two being that while the former is an external body, the latter is an internal body. The first step in setting up a committee or a commission is to identify the problem. At the second stage, the ‘terms of reference’

(TOR) for the committee/commission has to be articulated. Next, the members (the experts) of the committee/commission need to be selected/ nominated. At the fourth stage, the meetings have to be organised along with all that is necessary to address the different areas of concern mentioned in the TOR. Finally, the report has to be prepared that includes the 'executive summary' of the recommendations.

3.1 Planning Commission (NITI Aayog) – A Case Study

Article 246 of the Constitution of India, in the Concurrent List (List III, Item 20), provides for enactment of laws by both the Parliament and the State Legislatures regarding the subject matter of 'Economic and Social Planning'. In his Budget Speech (February 1950), the then Finance Minister announced the setting up of the Planning Commission to: (a) assess the material, capital and human resources of the country, (b) formulate a Plan for the most effective and balanced utilization of the country's resources. The Planning Commission was subsequently set up through a Government of India (Cabinet) Resolution in March 1950.

The Planning Commission was, moreover, modelled on the Gosplan of Soviet Russia. Accordingly, Subject Divisions of Agriculture, Industry, Transport, Power, Education and Health etc. were created in the Planning Commission as counterparts to the different administrative ministries. (Later on State Plan Divisions for the State Governments and the non-subject divisions of Perspective Planning Division, Financial Resources Division and Development Policy Division were set up). The Deputy Chairman of the Planning Commission was, moreover, accorded the status of a Cabinet Minister and he participated in all the meetings of the Union Cabinet.

Significantly, however, whereas the Gosplan in Soviet Russia maintained an arm's length distance from the Ministries, the Planning Commission in India came to work together with the Central Ministries and the State Governments. This was most evident during the formulation of the Five-Year Plans. Accordingly, while the Advisers of the Planning Commission were made the Member-Secretary and Convener of the Steering Committees/Working Groups, the Secretaries of the different Ministries were made the Chairman of the Steering Committees/Working Groups. The advantage of associating the Ministries was that the Steering Committees could thus have easy access to the resources of the sectoral ministries. It ought to be mentioned that in comparison to the Central Ministries, the Subject Divisions comprised a very small group of officials/ subject matter experts.

The decision regarding the Terms of Reference and the selection of experts on these Committees was, however, the prerogative of the Planning Commission. The exercise on the Five-Year Plans, moreover, involved numerous Steering Committees/Working Groups/ Sub-groups working simultaneously for the Plan, spread across different sectors.

More than three to four thousand experts have thus been associated with the formulation of the successive Five-Year Plans¹.

The quality of the different reports, however, depended greatly on (a) the design of the TOR and (b) the calibre of the experts/members on the Committee. The experts selected/nominated on the Steering Committees/Working Groups/Sub-groups have generally been the Heads of the specialised institutions (Director-Generals), academics from universities, bureaucrats with long experience and of repute (both serving and retired), dedicated public servants of renown and individuals having publications in important journals. The Planning Commission thus functioned as a “think tank” of the Government and played a very important role in policy formulation for the country.

3.2 Other notable Commissions of Government of India

Some of the other notable Commissions of Government of India have been Commission on Agricultural Costs and Prices (1965), Tariff Commission (1951/1997), Law Commission (1955), Telecom Commission (1989), Pay Commission (various years) and Knowledge Commission (2005). These were set up in different years to address public policy issues in the different areas.

Unlike the above-mentioned Commissions that were set up through the Government of India Resolutions, the Finance Commission is set up under Article 280 of the Constitution of India after every five years. There have been fifteen Finance Commissions, so far. The Finance Commissions have primarily made policy recommendations regarding (a) the financial transfers from the Government of India to the State Governments, (b) the principles, which should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India, (c) the measures needed to augment the Consolidated Fund of India of a State, to supplement the resources of the Panchayats and the Municipalities of the States.

3.3 Committees constituted by the Legislative Bodies

A perusal of the functioning of the Parliament (Lok Sabha/ Rajya Sabha) and the State Legislatures (Vidhan Sabha/Vidhan Parishad) also shows that they too have depended heavily on ‘Committees’. There are broadly two types of these Committees, namely (a) Permanent Committees and (b) Ad hoc Committees. Ad hoc Committees are constituted for a specific purpose, and on completion of the work assigned they cease to exist. At times they may function as enquiry committees; however, when they are required to deliberate on the merits of a legislative bill, they perform the function of policy formulation.

The work of the Permanent Committees, on the other hand, are of continuous nature. Amongst the Permanent Committees, mention may be made of Estimates Committee, Committee on Public Accounts, Business Advisory Committee, Committee on Public

¹ These exercises have been very cost effective as well for the country since the members/experts on these Committees worked in an honorary capacity receiving a nominal honorarium, and were not paid fees for their services as ‘consultants’.

Undertaking and Committee on Private Member's Bill. In addition, there are the Department Related Standing Committees (for the different Departments of Government of India), which function both as watchdogs as well as recommend policy reforms for necessary improvements.

Except for the Estimates Committee, all the other Committees mentioned above have members from both the Houses of Lok Sabha and Rajya Sabha; the number of members from Lok Sabha being more than from the Rajya Sabha. The tenure of membership on these Committees is for one year. Further, two approaches are adopted for selecting the members on these Committees, that is, either (a) through elections by members of the respective Houses (based on single transferable vote) or (b) through nomination by the Speakers of the respective Houses.

3.4 Committees of the Union Cabinet (Government of India)

India being a democracy, its government functions based on "collective responsibility". This is exhibited by governance through 'the cabinet'. There are, at the same time, different cabinet committees to address different pressing issues of the day, such as, those related to 'economy', 'political affairs' and 'foreign relations'. The more prominent of the policy making cabinet committees of the Government of India today are the Cabinet Committee on Economic affairs (CCEA), the Cabinet Committee on Political Affairs (CCPA), the Cabinet Committee on Security (CCS), the Cabinet Committee on Investment and Growth (CCIG) and the Cabinet Committee on Skill Development (CCSD).

The obvious advantage of these committees is that of 'broad consultation' within the government before any major policy decision is taken. A set procedure is followed, along with the required confidentiality. In the first stage the draft Cabinet Note is prepared by the administrative Ministry seeking the policy decision, which is vetted by the Cabinet Secretariat in respect to the procedure to be followed for submitting the Cabinet Note. The draft Note is then circulated to all the related Ministries for their comments on each of the recommendations of the proposal.

The comments of all the concerned Departments/Ministries are then consolidated, and the Ministry piloting the policy decision is required to reply to each of these comments. Once this exercise is complete and the modifications made, the final Note is placed before the Cabinet for discussion. Since the Union Cabinet is the highest (policy) decision making body, the cabinet notes and the cabinet meetings get all the necessary attention in the government. The system of policy decisions at the level of State Governments, similarly, is a replica of the practise followed in the Central Government.

3.5 Committees of Political Parties and Public Policy

The history of the Indian National Congress (INC) from 1885 to 1947 is also the history of the freedom struggle of India. As it is well known, the INC started as a pan-Indian assembly of intellectuals concerned with the welfare of the country. From the Third Session onward in 1887, the Reception Committee of the INC constituted 'Standing

Congress Committees' to ascertain the subjects the people wished to be brought forward at the next Congress. (Pandey, 1986).

The political parties in post-Independent India have been also playing an important role in sustaining India's democracy. As part of the multi-party system, each party vies with other parties to get a larger per cent share of votes in the elections. Election promises are made to appeal the electorate through the party manifestoes. In this connection, it has been suggested that every party should constitute 'standing committees' on different pressing issues – political, social and economic. The recommendations of these committees could subsequently form the basis of the promises to be made in the party manifestoes (Kumar, 2019). These electoral promises eventually acquire the character of public policy when the party concerned is able to win the elections and form the government.

4. Conclusion (India Vision: 2050)

All human beings have physiological needs (food, water, warmth, rest), safety needs (safety, security), psychological needs (love and be loved) and self-fulfilment needs (self-esteem, achieve one's full potential); this is the well-known 'Maslow's Hierarchy of Needs' – irrespective of religion, caste, community or gender. We may superimpose on this the expectation of a decent source of income, a good education and health care system, assured supply of electricity and an efficient transport and telecommunication system. Since provision of all these goods and services form the basis of a happy society, it could very much be the vision of India - as for any other country - in the 21st Century.

All these requirements are, however, possible when 'the economy' is doing well. This may, furthermore, call for a higher gross domestic product (GDP) than what it currently obtains. In this context, the vision of a US\$ 5 trillion economy for India by 2024, as being envisaged in some quarters, is significant. Earlier, Dun & Bradstreet - an American multinational company - working on the Indian economy had forecasted about India becoming a US\$ 5 trillion economy by 2020. Their paper titled 'India 2020: Economy Outlook' was circulated in 2011; but the forecast remains unrealized as India's GDP currently (in 2020) hovers around US\$ 2.5 to 3 trillion.

Perhaps, it would be better to set the vision for the future in terms of 'per capita income', since it reflects the economic welfare of individuals better– notwithstanding the income inequality in the society. The figures of per capita income, in terms of purchasing power parity, for the different countries stood at Intl. \$ 55,864 for USA, at Intl. \$46, 550 for Germany, at Intl. \$ 40,645 for U.K., at Intl. \$ 16,098 for China and at Intl.\$6, 984 for India in 2018 (Source: IMF World Economic Outlook, October 2019). This also explains the strong tendency of people from low-income countries in North Africa to migrate to high income economies of Europe, and the trend in the rest of the world to migrate to the USA.

There are historical, institutional and geographic reasons for these differences in per capita income amongst the different countries. Nevertheless, possibilities exist for 'the low-income economies' to catch up with 'the high-income economies'. The explanation for such a convergence lies in higher economic growth in 'the low-income economies'

compared to 'the high-income economies' (which often face higher capital depreciation because of past investments). This, however, necessitates right kind of policies to be pursued by the low-income economies.

Regarding vision of India, let us say, for 2050, it could be said that we ought to harness technology for higher economic growth. Technology contributes towards this goal through reducing cost of production and increasing productivity (per unit of capital/labour). Technology, at the same time, is a big disrupter; advent of Artificial Intelligence (AI), for instance, is feared to take away jobs when 'unemployment' is a huge challenge before the country.

The silver lining in all this is the steady growth of the services sector with huge employment opportunities in the known and the unknown (newer) areas. The share of the services sector in India that was 37 per cent of GDP in 1991 has gone up to 49 per cent in 2018 (Source: World Bank). The growth of the services sector, however, is contingent upon increase in per capita income. The per capita income of India that was Intl. \$1,786 in 1991 grew four times by 2018 to Intl. \$ 6,983 in 2018 (in purchasing power parity, at constant prices).

Higher per capita income is observed to spur demand across sectors such as education, health care, retail trade, transportation, travel and tourism, banking and finance, insurance, telecommunication, media, sports, entertainment industry and numerous other areas. It was, therefore, remarked that 'the need to "restructure" economic relations is now seen to be at the heart of international as well as national problem of development' (Chenary, 1979).

The experience of advanced countries is a pointer to such a development as their economies underwent a structural transition from having a larger share of agriculture in GDP initially to a larger share of industry and then to a much larger share of services. The share of the service sector in the US economy today, both in terms of employment and GDP is as high as eighty per cent.

In a way - the Vision 2050 – has to be that of an all-embracing ten per cent economic growth every year. This, in turn, would require commensurate public policies on all fronts. The several aims and objectives - integral to the ten per cent growth - may be expanded to include global impact such as good relations with other countries and concern for climate change. Commissions and committees are well proven bodies for formulating public policies. They can be useful in helping India achieve her vision. Care ought to be taken, however, to select the wisest on these bodies for best outcomes as it was advised, 'Recognize the best and get the best out of the best' (Kalam, 1998).

Note: The paper was presented at the International Seminar on 'Democracy and Public Policy in India: Choices and Outcomes' at the Jamia Milia Islamia University, New Delhi, 26-27 February 2020.

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Impact of COVID (2019) Pandemic on Central Government Finances

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Abstract

The first signs of the COVID-19 pandemic were recognized in China in December 2019. The WHO, however, notified it in March 2020, by when the infection had already spread like a wildfire. On March 24, 2020, India imposed a 21-day national lock-down, which was further extended till May 2020. The national lock-down brought down India's GDP affecting adversely the government finances when it needed to spend more on public health care. The paper analyses the Union Budget (2020-21) and evaluates the Government response to the pandemic.

Keywords

COVID-19, WHO, 21-day national lockdown, labour migration to villages, GDP, Union Budget (2020-21), Market Borrowings, Relief Measures.

1. Introduction

The year 2020 was a difficult year globally. Although the first signs of the pandemic were recognized in China in December 2019, the World Health Organization (WHO) notified this as COVID-19 Pandemic in March 2020 only, by when the infection had already spread the world over like a wildfire. India eventually went for a 21-day national lockdown on March 24, 2020, which was extended further till May 2020.

The lockdown caused a 24 per cent decline in GDP in the first quarter of the FY-2021, although India scored high in terms of 'early response to the Pandemic'. The Government, moreover, did not anticipate the fall out of this lockdown in terms of labour migration from metropolitan cities and other town ships back to the villages.

In the absence of any means of transportation, the miserable workers began returning to their homes on foot and cycles. To their shock, they found themselves unwelcome in their own villages as the villagers feared the spread of the infection. It has been reported that the wives fought for their husbands and brought them home.

The Pandemic continued to spread despite all precautions, and India was faced with the problem of shortage of ventilators and beds in the ICUs in the hospitals. There was confusion in the developed countries as well in handling the situation. Countries such as Italy, Spain, France, the UK and the USA were all faced with a grim situation. Air travel was found to be one of the main culprits of such a fast spread of the Pandemic the world over. The United States put a travel ban only in October 2020, leaving the decision for lockdowns to the different federal states.

The GDP of most of the advanced countries contracted by 10 per cent and more in 2020 due to the Pandemic. The decline in India's GDP for the full year was stated to be by 7.7 per cent, which has been disputed by several experts. Anyway, the revenue collections of the Central government came down at a time when the need for public expenditure went up greatly.

2. Status of the Central Government Finances in 2020

The impact of the COVID-19 Pandemic on the finances of the Central government can be best measured through a comparison between the Budget Estimates (BE) and the Revised Estimates (RE) figures of 2020-21 as reported in the Union Budget (2021-22). What it shows essentially is that while the total revenue receipt of the Central government fell short of the estimates by nearly Rs. 5 lac crores, the expenditure exceeded the budgeted estimates by nearly Rs. 5 lac crores. This meant a gap of nearly 10 lac crore that had to be met through public borrowings. Since the earlier estimate of fiscal deficit was equal to Rs. 7.96 lac crores, the actual figures went up to Rs. 18.48 lac crores (Table1.).

Table1. Central Government Finances during 2020-21

<i>(Rs. Lakh Crore)</i>		
Revenue & Expenditure	Budget Estimate	Revised Estimate
a) Tax Revenue (Net of Transfers to States)	16.36	13.44
(b) Non-tax Revenue	3.85	2.10
Total (a+b)	20.20	15.55
(c) Total Expenditure	30.42	34.50
(d) Fiscal Deficit	7.96	18.48
<i>Source: Union Budget (2020-21), Ministry of Finance, Government of India.</i>		

As it was a health emergency, the whole attention of the Government was on how best to face the Pandemic. According to the Economic Survey 2020-21, the Government classified the different ministries into 'A', 'B' and 'C' categories. All those ministries that were directly or indirectly related to the health sector were put into 'A' category with the assurance that they would be provided with expenditures as required by their Ministries for mitigating the Pandemic.

Category 'B' and 'C' category Ministries, on the other hand, were required to reduce their expenditures and restrict them to spending only 20 per cent and 15 per cent of their budgetary allocations respectively each quarter. As this financial prudence was not good enough to meet the challenge, the Government resorted to public borrowings. As a result, the fiscal deficit of the government went up from the stipulated 3.5 per cent of GDP to 9.5 per cent of GDP.

The Government borrowings comprised market borrowings, National Small Savings, State Provident Funds and external debt. The big increase was in market borrowings that went up from the estimated Rs.5,35,870 crores (BE) to Rs.12,73,788 crores (RE) comprising mainly long duration Government Securities and Treasury Bills (Table 2.).

Table 2. Sources of financing the Fiscal Deficit during 2020-21

<i>(Rs. Crore)</i>		
	Budget Estimate	Revised Estimate
1. Market Borrowings	5,35,870	12,73,788
2. National Small Savings	2,40,000	4,80,574
3. State Provident Funds	18,000	18,000
4. Other Receipts	50,848	39,129
5. External Debt	4,622	54,522
6. Draw Down of Cash Receipts	(-53,003)	(-17,358)
Total	7,96,337	18,48,655
<i>Source: Union Budget (2020-21), Ministry of Finance, Government of India.</i>		

3. Comparison between the government response to the Pandemic in the USA and in India

According to the Economic Survey (2020-21), the Government of India adopted a *step-by-step approach* to face the unfolding crisis arising from the Pandemic. On the other hand, the U. S. Government took fiscal and monetary measures *in quick succession* by February 2020 to revive the economy as it observed the economy sliding into recession.

In retrospect, it is noticed that while India incurred a fiscal deficit of 9.5% of GDP, the USA incurred a fiscal deficit of 15% of GDP during the FY-2020. Table 3. below provides a broad overview of the initiatives taken by the two governments in the USA and in India.

Table3. Fiscal and Monetary Policies in the USA and in India to face the Pandemic

USA	India
(A) Fiscal Measures	
Relief Packages on: I. March 6, 2020, <i>equal to \$8.3 billion</i> II. March 18, 2020, <i>equal to \$3.4 billion</i> III. March 27, 2020, <i>equal to \$ 2.3 trillion</i> (The biggest ever Relief Package in US history) IV. April 20, 2020, <i>equal to \$484 billion.</i> The above amounts were spent on the followings: a. Assistance to American families and workers, b. Assistance to Small Businesses, c. Assistance to State and Local Governments, d. Assistance to Research Institutions and American Industry.	Government of India did the followings: I. Raised the food subsidy from Rs. 1,07,320 crores (BE) to 2, 78,338 crores (RE), II. Raised the expenditure on MNREGA from Rs. 61,500 crores (BE) to Rs. 1,11,500 crores (RE), III. Increased the expenditure on National Health Mission from Rs. 34,115 (BE) to Rs. Rs.35,554 crores (RE), IV. Direct cash transfer under Kisan Samman Yojana to 9 crore small farmers, on the other hand, was reduced from Rs. 7500 crores (BE) to Rs. 6500 crores (RE), V. Assistance under PM-Awas Yojana raised from Rs.27,500 crore (BE) to Rs. 40,000 crores (RE).
(B) Monetary Measures	
I. The Fed cut the inter-bank interest rate by 0.50 per cent on March 3, 2020. It further reduced this rate by another 1 per cent on March 16, 2020. II. The Fed bought Treasury Bills and Bonds as part of its Quantitative Easing programme to ensure enough liquidity in the market, III. The Fed reduced the CRR for commercial banks, IV. The Fed started new lending programme using the U.S. Government's Exchange Stabilization Fund.	I. The RBI reduced the repo rate first on March 27, 2020, from 5.15 per cent to 4.4 per cent, II. The RBI further reduced the repo rate in May 2020 from 4.4 per cent to 4 per cent, III. The RBI reduced the CRR for commercial banks from 4 per cent to 3 per cent in November 2020, IV. The RBI injected liquidity in the market amounting to 13.6 lakh crore through 'Quantitative Easing' by buying Government Securities from the secondary market.

4. Conclusion

In the light of the above, it may be worth asking if the Government of India (along with the RBI) could have done more than what it did during 2020-21? A criticism that might be levelled against the Government of India (GOI) could be that while the government in the USA appeared to take their policy decisions based on the medium-term growth in the economy, the GOI responded to the Covid pandemic merely to face the immediate crisis.

The Central Government could possibly have provided more funds to the state governments, local bodies and hospitals to undertake useful works to mitigate the

sufferings of the people. The crisis could have, furthermore, been turned into an opportunity to address the existing inequality in the society. People would have willingly come in support of the Government realizing well that all are faced with the same challenge. Additional taxes on the rich could have been levied. Nothing of this sort happened.

Salaries and pensions could have been also marginally reduced and the saved amount transferred to meet the higher expenditure on 'health'. A moratorium on 'dearness allowance' for government employees should at least have been declared to meet the higher expenditure on relief measures. The Government of New Zealand did act in that manner.

The crisis also provided an opportunity to the Government to review the extant allocation of public expenditures on different welfare programmes. Populist schemes such as disbursing Rs. 6000/- per small farmer per annum - amounting to Rs. 6,500 crores at the aggregate level - could have been easily dropped and transferred to programmes such as the 'Green India Mission' for afforestation.

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Astronomy and the ‘National Calendar’ of India

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Abstract

The sun, the moon and the wonder of the night sky led to the ‘growth of ‘astronomy’, and later to the development of the calendrical system. The different festivals as well as various other social events are celebrated in different countries based on their respective calendrical systems. These different customs, in turn, have provided distinct identities to these different societies.

While India has given much to the rest of the world in the realm of the calendrical system, she has herself been influenced by them. The paper below provides an overview of the same and has been divided - besides 'Introduction' and 'Conclusion' - into sections such as: a. Primacy of ‘lunar’ calendar in the Indian calendrical system, b. Greek influence on the Indian calendrical system, c. Pre-Islamic, Islamic, and Parsi calendars, d. Calendar Reforms Committee and the National Calendar of India.

Keywords

Solar-lunar calendrical system, Nakshatras, Brahmanas, first month of the year, Holi, Greek astronomy, sidereal solar year, astrology, geocentric solar year.

1. Introduction

The sun, the moon and the wonder of the night sky led to the interest of mankind in the study of ‘astronomy’. The apparent movement of the sun around the earth, the phenomenon of sunrise and the setting sun as well as the different phases of the moon all contributed to the growth of ‘astronomy’. Since these celestial bodies are always in movement and exhibit quite a regular pattern, ‘time’ becomes a useful construct to measure ‘motions’ and ‘activities’ as well as to sequence events.

The occurrence of an event with respect to 'time', however, is also related to 'space'. The same event will be recorded to have happened at different times from different places. 'Time' is thus relative to the 'space' from where it is being measured. According to the theory of 'special relativity' therefore, it is 'space-time', which is the true measure of events in the cosmos.

Notwithstanding such a nuance, 'time' as we experience in our daily lives helps in understanding the past, the present and the future. *Life is, furthermore, lived in a cycle of time from day to day and from year to year.* When seen in this light, the invention of the 'calendar' enabled mankind to organize life better. It has helped to plan better, for instance, in agriculture and industry, in civil administration as well as in fixing days of social festivals etc. The Babylonians are credited to be the first people to have originated the (annual) calendar. India also contributed to the development of calendar in her own way.

It is worth recognizing that *formulating an annual calendar* – for the next year – in ancient India involved careful observations of the movement of the moon, the sun, the earth, and the constellation of stars in the night sky. It appears that five yearly observations of the previous five years were compiled of the relevant parameters and their averages computed to arrive at the expected results for the next cycle of seasons and months. All this required complex calculations regarding the position of the earth, the sun, and the moon.

2. Primacy of 'lunar' Calendar in the Indian Calendrical system

Calendar was very much in use in ancient India and gets mentioned in the Rig Veda. *It was the lunar calendar that was followed.* Moon occupied an important place in this calendrical system on account of its proximity to earth. A month comprised 29-30 lunar days.

As the lunar month comprises the two phases of 'Shukla Paksha' (waxing moon) and 'Krishna Paksha' (waning moon) of fifteen days each, the lunar month was counted either from new moon to new moon (Amavasya-ant – '*amanta*' month) or from full moon to full moon (Poornima-ant – '*puṇimanta*' month). The lunar day was measured from moonset to moonset during 'the Shukla Paksha' and from moonrise to moonrise during 'the Krishna Paksha'.

The fifteen days ('Tithi') identified with each phase of the waxing ('Shukla Paksha') and waning moon ('Krishna Paksha') are known as 'prathama', 'dwitiya', 'tritiya', 'chaturthi', 'panchami', 'sashthi', 'asthami', 'navami', 'dashmi', 'ekadasi', 'dwadashi', 'tryodashi', 'chaturdashi' and 'Poornima' or 'Amavasya'. Generally, every second day of 'dwitiya', 'panchami', 'asthami', 'ekadasi', 'tryodashi' and 'Poornima' or 'Amavasya' were considered auspicious for 'fasting' or for any 'vrat'.

The duration of 'Tithi' is, however, not the same as a solar day. It is generally smaller than a solar day, but sometimes longer as it varies from 20 hours to 26 hours due to the irregularity of the motion of the moon. 'Tithi' begins from the first day of the waning moon

under the ‘amanta’ month and from the first day of the waxing moon under the ‘purnimanta’ month. Every next ‘Tithi’ begins when the moon is ahead of the movement of sun by 12 degrees in the geocentric orbit. The ‘Tithi’ was, furthermore, divided into 30 ‘Muhurtas’ of 48 minutes each.

The constellation of stars (asterism) called ‘Nakashtras’, with respect to the moon’s movement in the sky, distinguish one lunar month from another. The whole night sky was accordingly divided into 27 divisions *equal to the number of days taken by the moon to orbit the earth*. The sighting of the different ‘Nakashtras’ was done at dawn, that is, immediately before the sun rise. The ‘Nakashtras’ were, furthermore, named after the most prominent star (‘Yogtara’) in the constellation.

The names of the different ‘Nakshatras’ being: 1. Ashwini, 2. Pushya, 3. Uttara Phalguni, 4. Dhanishta, 5. Purva Bhadrapad, 6. Vishakha, 7. Uttar Bhadrapada, 8. Shatabish, 9. Hasta, 10. Krithika, 11. Mrigshirsh, 12. Purva Phalguni, 13. Purva Ashadh, 14. Adra, 15. Revati, 16. Rohini, 17. Chitra, 18. Ashlesha, 19. Anuradha, 20. Shravana, 21. Bharani, 22. Jyaestha, 23. Punarvasu, 24. Magh, 25. Swati, 26. Moola and 27. Uttar Asadh.

The twelve months of the year were given their names after the ‘Nakashtras’; however, since there were 27 ‘Nakashtras’, some of them were dropped to make up the final list of 12 months. The twelve months being: 1. Chitra (Chaitra), 2. Vaisakh, 3. Jyestha, 4. Asadh, 5. Sravana, 6. Bhadra, 7. Asvina, 8. Kartika, 9. Mrigshirsa, 10. Pausa, 11. Magh and 12. Phalgun.

Since the lunar year of twelve months constituted only 354 days – falling short of 365 days of a solar year by around 10 days, it was made compatible with the solar year by adding a ‘adhikmas’ (‘malmas’) of 30 days after every three years. To this extent, the calendrical system in use was a lunar-solar calendar. The four days of vernal equinox, autumn equinox, summer solstice and winter solstice heralding the different seasons occupied a very important place in this lunar-solar calendar.

2.1 The first month of the year in the lunar-solar calendar

During the period of the ‘*Brahmanas*’ and the ‘*Vedanga Jyotisa*’ (1500 to 100 BCE), the first month of the year began during the spring season around the ‘vernal equinox’ (March 21-22 in the Gregorian calendar). It has left behind the legacy of new year’s celebrations around this period in the Indian sub-continent, such as ‘Holi’ (in most parts of north India), ‘Rongali Bihu’ (Assam), ‘Pohala Baisakh’ (Bengal), ‘Vaisakhi’ (Punjab), ‘Gudhi Parwa’ (Maharashtra), ‘Ugadi’ (Karnataka, Telangana, Andhra Pradesh), Puthandu (Tamil Nadu) and Navreh (Kashmir).

Perhaps, the most ancient of these new year’s celebrations ‘Holi’ – the festival of colours – takes place closest to the ‘vernal equinox’ and is preceded by ‘Holika Dhan’, which marks the end of the preceding year. ‘Holika Dhan’ occurs on ‘Phalgun Purnima’ in the lunar-solar calendar; the succeeding first day of Krishna Paksha (‘Krishna Prathama’) in the lunar month of Chaitra is ‘Holi’, which symbolizes the New Year. ‘Holika Dhan’ – *when bonfire is made* – symbolizes the destruction of all bitterness towards others that may have crept up during the year gone-by.

Over a period of several millennia this gave rise to different folk lore such as the day when the god of love 'Kamadeva' shot his arrow at 'Shiva' lost in his meditation; angered Him and was reduced to ashes! 'Shiva' is also known as 'Somnath', that is, lord of the moon and is depicted in images as wearing the crescent moon in His hair.

The other important festival of 'Deepawali' – the festival of lights – is celebrated during the night on 'Amavasya' or on the 'new moon day' in the lunar-solar month of Kartik. Deepawali, similarly, got associated with the day Sri Ramchandra (incarnation of 'Vishnu') – *God incarnate in human form* – returned to Ayodhya after killing the demon king Ravana.

By the time of the rise of '*Siddhanta Jyotisa*' (100 to 400 C.E.), however, there appears a change regarding the reckoning of the first month of the year, which got shifted to the 'winter solstice' when the day is the shortest in the northern hemisphere. The first day of the year, that is, December 22 of the Gregorian calendar marked thus the ascendant sun or the sun in 'the Uttarayan' with the days becoming longer every next day until June 21 (summer solstice).

3. Greek influence on the Indian Calendrical system

The political vacuum created by the decline of the Mauryan empire led to the Bactrian-Greeks making inroads into India. Between 100 to 300 C.E., north-west India saw the rule of the Bactrian-Greeks who were subsequently defeated by the Parthians who, in turn, were later ousted from the modern-day Afghanistan (known earlier as 'Sakasthan') by the Sakas who belonged originally to Central Asia. All these successive dynasties used Greek as their language and were influenced by the Greek astronomy.

One of the 'satraps' (provinces) of the Sakas extended to Central India with **Ujjain** as their capital. It is here that the Greek calendrical system and the Indian system got intermingled. The 'Julien' (Roman) calendar, which was based on *the Greek calendrical system* of 365 days comprised twelve months of either 30, 31 or 28 days. *One more day was added every four years known as 'the leap year'*.

3.1 Introduction of the '*sidereal solar year*' in the Indian calendrical system

This intermingling also saw the introduction of the '*sidereal solar year*' in the Indian calendrical system. While the '**geocentric solar year**' refers to the position of the earth in its annual revolution on the ecliptic with the same orientation *with respect to the sun* (*vernal equinox to vernal equinox*), the '**sidereal solar year**' refers to the earth coming back to the same point in its annual revolution *with respect to the constellation of stars* ('the tropical Zodiac').

Both these years were thought to have the same number of days; however, *there exists a difference between the two*. While the number of days in a '*sidereal solar year*' is equal to 365.25636 days, it is equal to 365.24219 days in a '*geocentric solar year*'. The '*geocentric solar year*' is thus marginally shorter than the '*sidereal solar year*'. *Such a difference between these two years arises on account of the tilt of the earth on its axis by 23.4 degrees*.

Over a period of 72 years this difference leads to a difference of one day between a 'sidereal solar year' and a 'geocentric solar year'. After 720 years, therefore, this turns into a difference of 10 days. It was noticed by the Christian Church, for instance, that after a passage of around 'a millennium' the date of 'Easter' – the most celebrated festival of the Christians – was no more falling in the spring season according to the 'Julian' calendar'.

It is worth mentioning that the 'Julien Calendar' was introduced by Julius Caesar throughout the Roman Empire in 46 BCE after his victory of Egypt in 47 BCE and *on the advice of Greek astronomers of Alexandria*. After a lapse of more than a millennium, the Christian church felt the need to set up a Calendar Reform Committee to investigate into the discrepancy between the observed seasons and the day of 'Easter' based on the rules of the 'Julien Calendar'.

On the advice of the Committee, subsequently, *the Julian calendar was advanced by 10 days in 1582* to make it compatible with the 'geocentric solar year' and the reformed calendrical system came to be known as 'the Gregorian calendar' after the name of the then Pope of the Christian Church.

3.2 The western (tropical) 'Zodiac' and the Hindu 'Panchang'

The 'sidereal solar year' mattered in the Greek calendrical system due to the importance of 'the Zodiac' in their **astrology**. The night sky was divided into a 360 degrees circle and divided into 12 divisions of 30 degrees. A month was equal to the number of days the Sun took in passing the 30 degrees distance on this celestial circle ($12 * 30 \text{ degrees} = 360 \text{ degrees}$), beginning from the initial point.

The constellation of stars (the Tropical Zodiac), which the Sun passed in its apparent movement around the earth were known as 1. Aries, 2. Taurus, 3. Gemini, 4. Cancer, 5. Leo, 6. Virgo, 7. Libra, 8. Scorpius, 9. Sagittarius, 10. Capricornus, 11. Aquarius, and 12. Pisces.

The Indianized names of these clusters of stars are: 1. Mesh, 2. Vrushabh, 3. Mithun, 4. Kark, 5. Sinh, 6. Kanya, 7. Tula, 8. Vrushchik, 9. Dhanu, 10. Makar, 11. Kumbh, 12. Meen respectively. *A man's destiny was said to be based on the position of the planets in the different Zodiac signs at the time of his birth.*

While the position of the earth with respect to the sun and the planets was taken to be changing from one solar day to another, its position with respect to the constellation of stars was taken to have the same pattern year after year during the earth's annual revolution around the sun. *All astrological calculations were based on this premise*, until the knowledge of the earth's 'precession' on its axis.

It is common knowledge that the earth rotates on its axis in 24 hours – *causing day and night* – and revolves around the sun in around 365 days. Moreover, since earth is tilted on its axis by 23.4 degrees with respect to earth's orbital plane, the sun's rays do not fall on the earth equally and *give rise to different seasons* in a year. This tilt also determines the direction of earth's axis vis-a-vis the clusters of stars. However, very little was generally known about earth's axial precession in ancient times.

Moreover, since the earth is observed to also wobble slightly on its axis like an off-spinning toy top, it does not follow a fixed pattern year after year in its relation to the constellation of stars.' 'The trend in the direction of this wobble relative to the fixed positions of stars is known as axial precession' and the possibility of the earth returning to the same position with respect to a particular constellation of stars is around 26,000 years in the cycle of axial precession! (NASA, 2020: "Milankovitch Orbital Cycles and Their Role in Earth's Climate").

It was, therefore, pointed out that while a child's birth chart ('horoscope') showed him in the Zodiac of 'Aries' *on the premise that the earth's position with respect to the cluster of stars is **fixed***, in reality 'Aries' had moved eastward, and the child's Zodiac was truly 'Pisces'. When the Greek astrologers came to realize this, they came up with the theory of '*trepidation*' arguing that precession is 'oscillatory', and the old position will soon be once again restored. They were, however, proved wrong as the change is 'unidirectional' and 'accumulative', and overtime shows *a big difference between the 'solar year' and the 'sidereal year'*.

In the meantime, the Greek calendrical system got the support of the 'Siddhantic Jyotisa' school in India, which led to the introduction of the 'sidereal solar calendar' into India. This was followed by the introduction of western astrology into India. To the twelve cluster of stars and the moon, the sun, the five planets (Mercury, Venus, Mars, Jupiter, Saturn) were added 'Rahu' and 'Ketu' – the 'Navagrahas' – which together determined the 'Rashi' in the Indian 'astrology'.

The Hindu 'Panchang' ('almanac'), today, has thus the five limbs of 'Tithi', 'Nakashtras', 'Var' (weekdays), 'Yog' and 'Karan'. The last two ('Yog' and 'Karan') in 'the Panchang' have significance with reference to the planetary positions, the constellation of stars and their conjunctions to each other, and these together are claimed to influence people's lives on earth. Besides making 'the horoscope' of a child, marriages also came to be fixed in India based on proper matching of the horoscopes of the boy and the girl.

Gautam Budha was very critical of 'astrology' as he was against all kinds of miracles. Even Kautilya's Arthashastra does not approve of it. Astrology was, therefore, shunned during their times. However, by the time we come to the 10th century C.E., we find that 'astrology' had become an integral part of the Indian society. This is corroborated from the first-hand accounts of *Alberuni*, as provided in his scholarly work 'Tahqiq Ma-lil-Hind'. He mentions that astrologers having knowledge of astronomy were highly respected in society. India, since then, has not changed much in these last one thousand years.

3.2.1. Hindu 'Panchangs' and the loss of the 'cosmic connection'

Since most of the schools of 'the Hindu Panchangs' abide by the rules of the '*nirayana system*', *which does not recognize the effect of earth's precession on its axis*, the dates of different festivals recommended by them have not been falling in the same seasons as in the past. On independence, Prime Minister Jawaharlal Nehru, therefore, set up the **Calendar Reforms Committee** in 1952, under the chairmanship of Professor Meghnad Saha to examine the various calendrical systems in use in India.

The Committee went into the details and found that the value of 365.258576 days in a year as calculated by '**Surya Siddhanta**' that was followed by the '*nirayana system*' is even larger than the correct sidereal value of days in a year by 0.016560 days. The Committee, furthermore, observed, 'As the value is still used in almanac framing, the effect has been that the year-beginning is advancing by 0.165 days per year, so that in course of nearly 1400 years, the year beginning has advanced by 23.2 days, so that the Indian solar year, instead of starting on the day after the vernal equinox (March 22) is now starting on April 13'.

Similar criticisms have been made by others as it was pointed out that 'Makar Sankranti is celebrated 23 days after the shortest Earth Day of the northern hemisphere' (Patrizia Norelli-Bachelet, 2002). It was also remarked that '**India has lost its cosmic connections**' (ibid). *The Calendar Reforms Committee also observed that* 'in continuing to follow the nirayana system, the Hindu calendar makers are under delusion that they are following the path of Dharma. **They are committing the whole Hindu society to Adharma**'!

3.3 Introduction of 'Era' (Samvat) in the Indian Calendrical system

The zero year or the first year in the chronology of years in India began generally with the coronation of a king. Accounting of the zero year was, therefore, 'regal' in character and did not provide data for an extended period of the annual movements of the celestial bodies for a careful study. In this respect, the Indian calendrical system lagged others.

The Greeks followed their Olympiad Calendar, and the successive years were counted from the pan-Hellenistic event of the athletic contest beginning from 776 B.C.E. This enabled the study of a much longer period of the movements of celestial bodies. This concept of 'era' also got introduced in India consequent to the Indian contact with the Bactrian- Greeks. It saw the beginning of the '*Saka era*' into India. Later, other eras like 'the Vikram Samvat' took roots in India.

4. Pre-Islamic, Islamic, and Parsi calendars

The pre-Islamic calendars such as those of the Jews were also **lunar-solar calendars**; the difference between a lunar year comprising 354 days and a solar year comprising 365 days was made compatible by adding an intercalary week, fortnight, or month after a given number of years. However, since this addition was not generally known to the public – *and the intercalary week, fortnight or month was considered inauspicious for holding any event or for having any festivals* – it created difficulties for the Arabs who gathered in Mecca for their annual Hajj pilgrimage and discovered that they had arrived during an intercalary week, fortnight, or month.

The Hajj pilgrimage is a pre-Islamic custom of Arabia and is also one of the five injunctions (pillars) of Islam. To remove the difficulty of the pilgrims arising from the intercalary period, it is claimed, Prophet Mohammed prohibited ('nasi') the practice of intercalation. The Islamic calendar, therefore, **is purely a lunar calendar**. Consequently,

the cycle of (Islamic) lunar year advances every next year vis-a-vis the (geocentric) solar year by 10-11 days.

Each month, in the Islamic calendar, begins with the observation of one (waning) crescent moon and ends with another (waning) crescent moon, and comprises 29-30 days. *The day begins and ends at sunset under the Islamic calendar.* Weekdays are specified by number, with day one corresponding to Saturday night and Sunday daytime. Day 6 is called 'Al-Jumma', which is the day of congregational prayer. It begins at sunset on Thursday and ends at sunset on Friday. Al-Sabt is the seventh day beginning from Friday night to Saturday daytime.

4.1 *The solar calendar followed in Iran and Afghanistan*

The Republic of Iran and Afghanistan, although being predominantly Muslims, follow the Solar Hijri calendar. As such, although the 'epoch' or the first year of this calendar begins with the year of migration of Prophet Mohammed and his followers from Mecca to Medina, *the Iranian calendar (including those in Afghanistan) is purely a (geocentric) solar calendar based on observations of the celestial movement of earth around the sun.* It comprises 365 days and twelve months. The first month of the year (*Farvardin*) begins with the spring season (March-April). The festival of 'Nowruz' marks the beginning of the 'new year, which is also celebrated by the Parsis of India as well as by the Shia Muslims all over the world.

5. Calendar Reforms Committee and the National Calendar of India

The Calendar Reforms Committee submitted its report to the Government of India in 1957, which was approved by both the Houses of the Parliament in the same year. India, therefore, has an Indian National Calendar ('Bhartiya Rastriya Dindarsika') today and is used for all civil purposes. It is a (geocentric) solar calendar; the length of a day is from sunrise to sunrise of 24 hours.

This is different from the Gregorian calendar where the day starts from midnight at 12.00 A. M. The timings for all-India – **the Indian Standard Time (IST)** – is based on the local meantime of the Central Station of India situated at Ujjain (82 degrees 30 minutes longitude east of Greenwich and 23 degrees 11-minute north longitude).

The year comprises twelve months; while five months have 31 days each, seven months have 30 days making it a total of 365 days. The 'new year' begins with the month of Chaitra (March 21- April 21) in the spring season. (This is different from the Gregorian Calendar which has January as the first month).

The other months being Vaisakh (April 21-May 21), Jyestha (May 22-June 21), Asadh (June 22-July 22), Shrawana (July 23-August 22), Bhadra (August 22-September 22), Ashwin (September 23- October 22), Kartika (October 23-November 21), Pausha (December 22-January 20), Magha (January 21- February 19) and Phalguna (February 20 -March 20).

One more day is added to the month of Chaitra during the leap year. The Indian National Calendar has, furthermore, adopted the 'Saka' era for chronological history. **The Committee did not favour the 'lunar' or the 'luni-solar' calendar on account of the**

difficulty in calculating days and months. Neither did it favour the ‘sidereal solar calendars’ followed by the different calendrical (Panchang) schools of India.

In respect to declaring the dates of different Hindu festivals, however, it continues to follow the ‘lunar-solar’ calendar in accordance with the Hindu Panchangs. The *Positional Astronomy Centre (Government of India), Kolkata* has, therefore, been bringing out an all-India Nirayana Solar Calendar since April 2004 – also known as ‘**Rastriya Panchang**’ – to meet the requirements of the different schools of the Panchang creators.

In regard to Muslim festivals, the dates of religious festivals are fixed based on the ‘lunar calendar’. The *Gazette of India*, moreover, uses the National Calendar along with the Gregorian calendar.

6. Conclusion

It is well acknowledged that India had achieved great heights in the past in the realm of astronomy. The Indian pundits (scientists) were, therefore, able to very correctly predict the solar and lunar eclipses. Science has, moreover, grown rapidly in the last five hundred years, post- ‘Renaissance’ in Europe. This has happened in three steps of: (a) observation, (b) mathematics and (c) verification of results deduced from mathematics. The concepts of ‘space’ and ‘time’ likewise have come to occupy new meanings as knowledge has grown. It has also weakened the hold of ‘astrology’ on the human mind, particularly so in the West. The usefulness of the calendar, nevertheless, continues to be there since life is lived in predictable cycles of different seasons and years.

That the sun, the moon and the different planets affect the earth and lives thereon cannot be denied. There is, therefore, a perpetual need for understanding ‘astronomy’ better. It does not help, however, to be dogmatic as it may only lead us astray. At the same time, search for knowledge ought to be pursued in all humility with ‘science’ and ‘spirituality’ working together. Broadly, the approach ought to be to work together with nature, submit to nature rather than ‘to subdue nature’.

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‘Janak Dulari Collection’ in the National Archives of India

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Abstract

The Janak Dulari Collection is the brainchild of the late Mr. Annapurnanad, a resident of Varanasi. A keen enthusiast of journalism with an interest in philately and numismatics, he developed a passion for journals which led him to acquire ‘the Inaugural Issues of as many as 300 magazines and journals going back to the late 19th and early 20th centuries. The Collection was given to the National Archives by his wife Mrs. Janak Dulari. A unique characteristic of the Collection is the wide variety of subjects and issues covered in those articles.

Keywords

National Archives, Janak Dulari Collection, Kakori Conspiracy Case, Ramprasad Bismil, Asfaqullah Khan, Achhoot, Naari, Asha, Premchand, Nirala.

1. Introduction

It is well known that the *National Archives of India* is the custodian of permanent records of the Government of India and is the premier archival institution in the country. Set up at Calcutta in 1891 as the *Imperial Records Department*, it shifted to Delhi in 1911 and was rechristened as the **National Archives** in 1947. The millions of records housed here depict the evolution of India from a British colony to a free modern nation.

In addition, the rich collection of Private Papers and Oriental Records provides valuable supplementary source material of information contained in these records and official documents. Small wonder that the possessions of the Department have been described as the richest source-for the study of British India.

What is, however, relatively unknown are the priceless treasures in the **National Archives Library** which are still shrouded in obscurity and anonymity since most of these have not yet been adequately explored or made known to scholars. Although the Library has a rich collection

of over 1,70,000 rare books, Volumes, Gazettes, Travel Accounts, Reports, Parliamentary Debates, Native Newspapers etc., the focus of attention has been primarily on Gazettes, Reports and books which are frequently consulted by scholars and individuals apart from various Government agencies. An attempt is being made here to introduce one such collection of documents known as the **Janak Dulari Collection** which was received in the Department Library in 1972.

The *Janak Dulari Collection* is the brainchild of the late Mr. Annapurnanad, a resident of Varanasi. A keen enthusiast of journalism with an interest in philately and numismatics, he developed a passion for journals which led him to acquire the Inaugural Issues of as many as 300 magazines and journals going back to the late 19th and early 20th centuries. Published from different places, which included Delhi, Bombay, Lahore, Varanasi, Allahabad, Calcutta, Patna etc., these journals are primarily in Hindi with a few being in Sanskrit and Urdu. The Collection was given to the National Archives by his wife Mrs. Janak Dulari.

2. Janak Dulari Collection

A unique characteristic of the Collection is the wide variety of subjects and issues covered in the articles, as well as the high level of awareness and candor expressed therein. The titles of the journals themselves indicate their flavor. *Naari, Agrasar, Achoot, Janmat, Rashtrapati, Asha, Hans, Tapohhoomi, Hunter*, are titles which evoke one's interest. It is indeed fascinating to find articles and features on issues like social evils, women emancipation, world history, national movement, patriotism and politics at a time when the country was engaged both in the Freedom Struggle against the British and problems of illiteracy and other social evils.

It is equally interesting to note that several leading lights were associated with these magazines in some or other capacity. Among them were Munshi Premchand, D. P. Mishra, Banarasidas Chaturvedi, Subhadra Kumari Chauhan who were editors of some of these journals. Others like Vijaylakshmi Pandit, Madan Mohan Malaviya, Mira Behn, Madame Cama contributed by way of their inspiring articles.

The earliest journals in the Collection belong to the late 19th century. The first one titled ***Brahmasammelan*** is in Sanskrit, which was published in 1850 from Benaras. Another bilingual journal titled ***Harish Chandra*** was published in 1873 from Benaras. Two interesting articles in this journal, both in English deserve mention. One is an article titled 'Hindee Bhasha' in which the author writes:

"the principle which ought to guide us in our exertions should be calculated to render our vernacular by whatever name you may call it useful and intelligible to all. But do not - while pretending to guard against the introduction of foreign words - fill the language with obsolete Sanskrit idioms. One is as distasteful as the other".

The comments articulated in the second article titled 'The Present State of the Middle-Class Men in Northwestern Provinces' are no less striking and prophetic in today's context, as is evident from the following lines:

"The people of the Northwestern Provinces are conservative and are quite against the innovation of anything, whether social, moral or intellectual reform and hence the progress is slow."

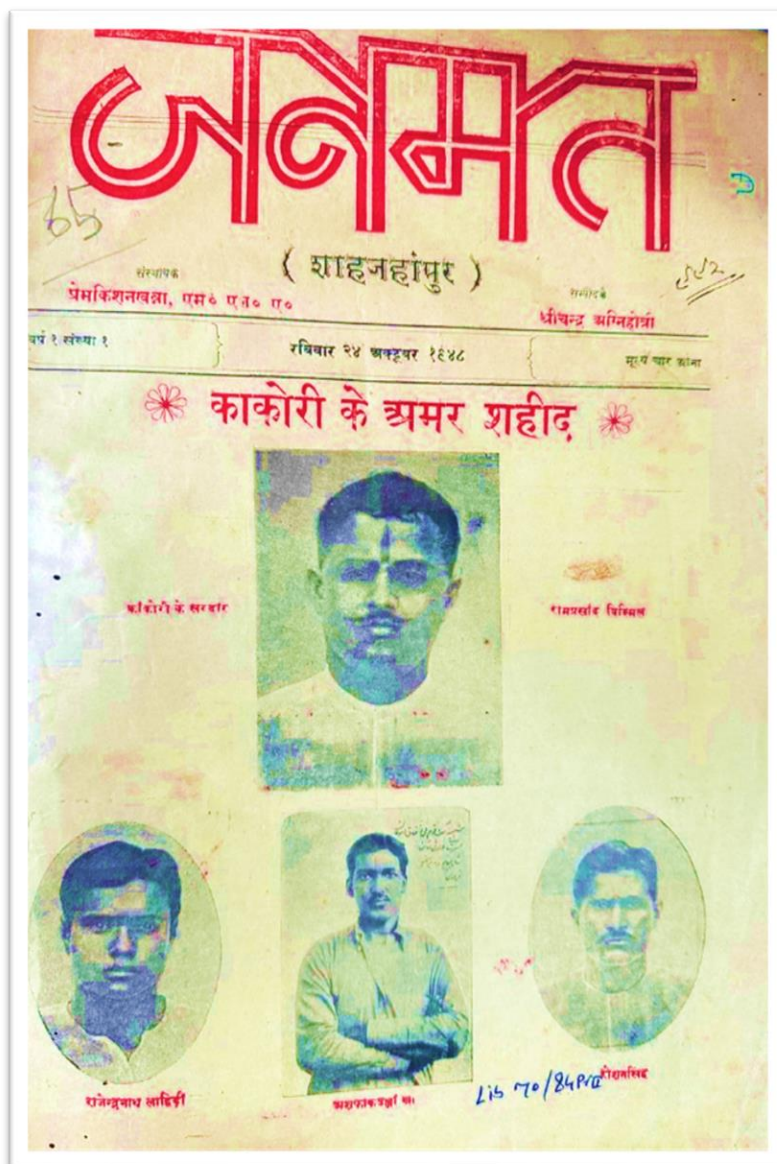


The most popular subjects found among the articles in these journals relate to nationalism and political and social awareness. Perhaps the most fascinating issue is **Janmat** published in October 1947 from Shahjahanabad (Delhi). Featuring the 'Kakori Conspiracy Case', it has on its cover page, photographs of the four heroes of this Case namely Ramprasad Bismil, Ashfaqullah Khan (hailed as the first Muslim to be hanged for conspiring and revolting against the State), Rajendranath Lahiri and Roshan Singh. The inner title page carries the pictures of members of the Defense Committee including Mahatma Gandhi, Jawaharlal Nehru, Ganesh Shankar Vidyarthi and Gobind Ballabh Pant.

Inside the journal, one comes across pictures of some other unsung heroes like Manmanthnath Gupta, Sachindranath Bakshi, Manmohan Gupta and Shivendranath Sanyal. Bismil's

favourite poem “*Sarfarosh ki Tamanna*” (made famous by the film `Shaheed') as well as Ashfaqullah Khan’s pet verse called “*Maut*” are also reproduced here. Adding to this are poignant articles recounting the beliefs, philosophy and patriotic deeds of the four heroes.

Many other journals are replete with similar articles. The ***Rashtrapati*** of September 1937, published from Sitapur, carries a feature which has been debated for decades and is relevant even today. It is titled ‘Vandematram aur Muslim Sanskriti’ and highlights the various problems confronting the Congress led ministries in the post-election scenario (1937). It then offers a very simple solution to this issue, namely, constitution of a Sub-committee to examine all such anthems/songs while taking care to accommodate Muslim sentiments and their culture.

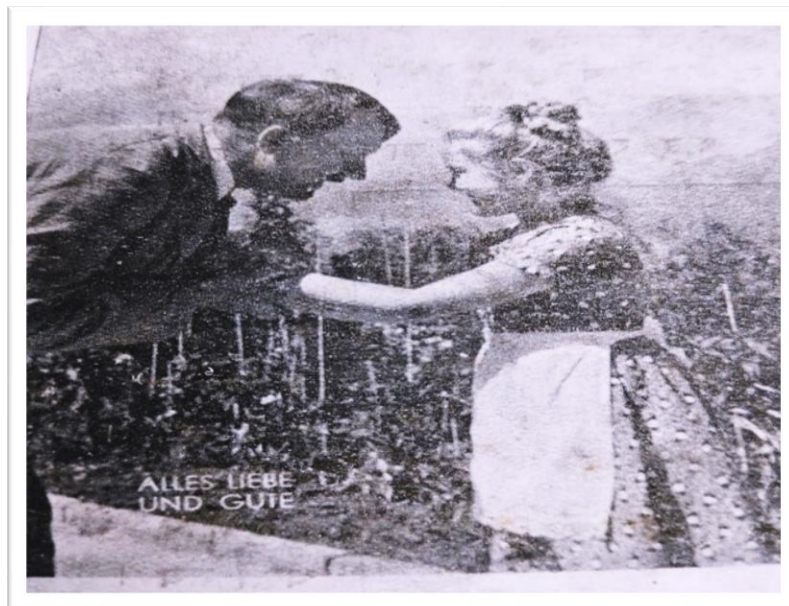


Another journal ***Agrasar***, published from Delhi in July 1938 features a poem titled ‘Aage Badhe Challenge’ by Jawaharlal Nehru on its cover page. There is also an article by the well-known revolutionary Viren Chattopadhyaya. Rabindranath Tagore's ‘Ekla

Chal Re' has also been reproduced in the journal along with its summary in Hindi. Another article 'Ekta Ke Natak ka Pratham Patakshep' analyses the essence of Gandhi-Jinnah correspondence on Hindu-Muslim relation.

Similarly, **Adarsh Bharat** published from Lahore in April 1934, carries an informative article 'Bharatiya Sabhyata Ka Prasar' highlighting the salient features of Indian culture and its influence in other countries. Similarly, **Asha** published from Kashi in 1937 contains two interesting articles: 'Civil War in Spain and its International Ramifications' (by an unknown student of politics), and 'Bharatiya Itihas ka Adhyayan' which discusses various theories on Indian historiography.

Another eye-opening feature can be found in **Janmabhoomi** of March 1938 in which Prof. Janardhan Mishra has written about his visit to Germany in 1934 at the height of Hitler's reign. Recounting his experience of German life the author refers to his conversation with an ordinary hotel employee and is surprised to find the level of his political maturity.



Hitler patting a little girl

While admitting that Hitler has generally done good work, the employee castigates him for creating a one-party rule which in his opinion is dangerous for the welfare of the common man since it offers no mechanism to check arbitrariness and salvage the fate of the people. In his opinion, it is always good to have an opposition party in politics. Hitler, on the contrary, has destroyed this.

In some manner, the author feels the situation in Germany compares very well with the situation in India under the British and under the Congress: both holding the position of eminence, one as the supreme Imperial power and the other as the (single) leading political party. Interestingly the article carries a telling picture of Hitler patting a little girl. Yet, another very enlightening article is titled 'Bhartiya Jeevan mein Buddhivad' by Pandit Rahul Sankritayan.

Another Daily **Lokmat** dated 25 February 1930 and edited by Dr. D. P. Mishra carries a message by Motilal Nehru in his own handwriting lauding the vision of the paper and hoping that '*Lokmat, kabliyat aur himmat se Desh ki khidmat karega*'. There is also a column by Bipin Chandra Pal titled '*Mahatma Gandhi aur Gambhir Rajniti*' as well as a news feature on the **Khalsa College Bomb Case** in which five students were arrested. For students of economics, there is detailed information on the share market in the journal.

The welfare of the poor, the under-privileged and depressed sections of society also figure prominently in these articles. **Hans**, edited by Munshi Premchand which appeared in March 1930, carries a very interesting editorial '*Dominion aur Swarajya*' in which Munshi Premchand makes a bold comment:

"It is possible that today England does not heed the voice of the poor...but the day the poor rise and realize that England is their enemy, England will have to suffer. It cannot suppress them for long".

Similar sentiments about the under-privileged and depressed classes come across in **Achoot** published in August 1947 from Lucknow. Edited by Niranjantlal Kureel, it carries a frank editorial urging upon the Congress to prove its mettle and "*ensure that Indian independence meant freedom for the common man*". It should lead to emancipation of the depressed classes, of women and salvation of the Hindu religion from the clutches of unscrupulous elements.

The journal also carries the news items regarding the appointment of Dr. Ambedkar as the Union Law Minister in India and of Yogendra Nath Mandal as Protem Speaker of Pakistan Assembly. An interesting item is the declaration of three days' full paid leave (August 14-16) to all workers by the U.P. Mill Owners Federation for the celebration of Independence Day. There is also a special feature on the need for reservations in Government jobs. Similarly, **Janmat** carries the first part of the series on 'Our Villages' highlighting the problems faced by the poor due to unemployment, exploitation, illiteracy etc.

2.1 Women and women studies

Women and women studies have also been covered extensively in the journals. **Naari**, published from Delhi in September 1947, stands out in this respect. Patronized by Vilaylakshmi Pandit and edited by Subhadra Kumari Chauhan, this issue represents a bold effort to champion the cause of women emancipation, women rights and other social problems concerning women. On its cover page is a verse from "**Kamayani**" titled 'Naari'. While its introduction carries a philosophical treatise on 'Ishwar mein Vishwas' by Pandit Madan Mohan Malaviya, this issue also has inspiring articles on the changing role of women.

The article '*Women in Foreign countries*' is an attempt to analyze the status of women in England and an appeal to Indian women to take note of the situation there. '*Mahilaon ke Adhikar: Rajniti mein Noon*' and '*Aaj ki Naari*' emphasize the need to respect the rights and responsibilities of women in keeping with the demands of the times and to urge upon the need to recognize the merits of women emancipation.

Another hard-hitting article 'Naari-Pati ki Sampatti' by B. B. Pararkar castigates the existing social values and argues that unless we rid ourselves of the feeling that women are nothing but private properties of men and have no rights of their own, there can be no reform in our society. Mira Behn has also contributed a note on the National Flag there while another column entitled 'Hamara Ghar' lays down recipes for some mouthwatering dishes like 'Lauki ka kofta', 'Mysore Pak', 'Chane ki Kheer'.

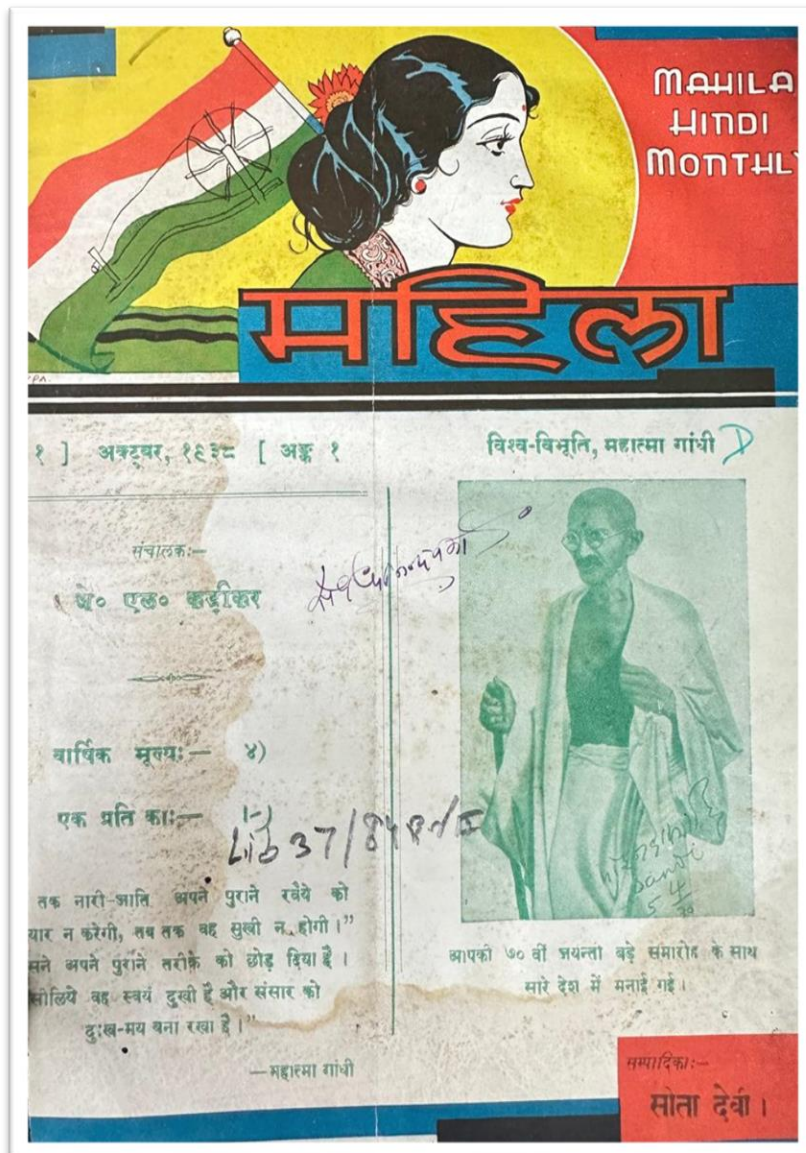
Likewise, **Asha** published in 1927 carries an article examining the position of women in early Hindu society, while another article in **Adarsh Bharat** titled 'Respected position of Women in Ancient India' narrates the kind of freedom enjoyed by women in those days, which were more than what most men enjoyed in the Twentieth century. Another journal **Mahila** published from Ajmer in 1931 and edited by Rampyari Devi Chandrika carries a series of articles about women and woman welfare.

Some of these articles are 'Mahila Samaj aur Maryada Purushottam Shri Ram Chandra', 'Bharat mein vartman Mahila Andolan'. 'Vir Kshtrani Jaya' being the deeds of valour by the daughter of the Raja of Chittor. 'Women of Iran', on the other hand, depicted the changing role and character of women reform in Iran. It mentions the gesture of one of their Cabinet Ministers who freed his daughter from the ritual of Purdah. There is also a news item about the 'Awadh Mahila Sammelan' held in March 1931 where one of the recommendations made was to constitute **Sharda Committees** in every province to keep a check on child marriage.

Bhartendu published in October 1928, contains a special feature on Women Education highlighting the academic achievements of some brilliant women like Sheila Roy, Manisha Sen, Sarla Ghosh, Sharda Devi Naidu, among others. The Collection is equally a delight for lovers of literature, and one comes across several stories and features on literature and literary activities. **Adarsh Bharat** (1934) contains the first part of a series entitled 'Jiwan our Sahitya' by Jagdish Lal Sharma which is an analysis of the salient features of contemporary literature. **Janmabhoomi** (1938), includes two heart wrenching stories 'Garib ki Beti' and 'Aadmi ka Manas' in addition to an analytical feature entitled 'Impact of Sufism on Indian Poetry' by K. L. Mukhopadhyay.

2.2 Articles on Literature

'Mr. Gappilal Sharma, MA, B.Sc., L.L.B., MRSA' by Shriyut Shriday and 'Banphool Ban Mein Bhi Sookha' are two delightful pieces in **Asha** (1927); while the other **Asha** (1937) contains two interesting features, namely 'Kabir Sahitya ka Adhyayan' and 'Maithili Aur Vidyapati' as well as a short story 'Anant' by V. P. Verma. It also pays an obituary to Premchand recalling his contribution to social values through his memorable stories.



In fact, **Hans** edited by Premchand carries delightful stories and spoofs like 'Madhu' by Jaishankar Prasad, 'Photography' by Jainendra Kumar, 'Do Parmeshwar' by S.L. Sudarshan followed by 'Juloos' by Premchand himself. Similarly, **Nirala** edited by Benarsidas Chaturvedi (published in October 1947) contains a translation of a well-known story by the famous Russian author Gogol titled 'Naak kho Gayee'. A striking characteristic of these stories is not only their clarity and lucidity but also the strong social message contained therein.

Manorama (1924) edited by Mahavir Prasad Malaviya and published from Prayag carries several interesting features. Noteworthy among these, is a feature on 'Bhaktamal', an epic in Hindi Vaishnav literature penned by Nabhadas and Priyadas. There is also an article called 'Sahitya aur Chandra' highlighting the symbolism of the moon in literature. It draws profusely from the works of Homer, Keats, and Shelly, who have used this symbolism very effectively. The following lines from **Homer** stand out.:

“As when the moon refulgent lamp of night-
O'er heaven's clear azure spreads her sacred light
When not a breath disturbs the sleep serene.
A burst of glory bursts from all the skies”.

‘Kala aur Sahitya’ deals with the relationship between literature and the arts while ‘Urdu Ke Kuchh Vartman Kavi’ examines the works of some leading contemporary Urdu poets like Mohd. Hadi Aziz, Maulana Safi, Zakir Husain Sakib, Hasrat Mohani, Maulana Mehdi Nasiri, Braj Narain Chakbast and Syed Majid Ali.

Bhartendu similarly carries an exclusive analysis of Bhartendu Harishchandra’s famous work ‘Mudrarakshas’ besides book reviews and virtual tour of the British Museum (London). An exclusive source of pure humour can be found in ‘Sanishchar’ edited by Shyamvijay Pandey and published from Kanpur (1938). It contains a poem by Anathnath titled ‘Main Kaun Hoon’, which is very humorous. The other stories and poems have their titles as ‘Mundan mein Kavi Sammelan’, ‘Cinema Malikon ki Ajeeb Kahaniyan’ , ‘Leaderane Kaun’ etc.

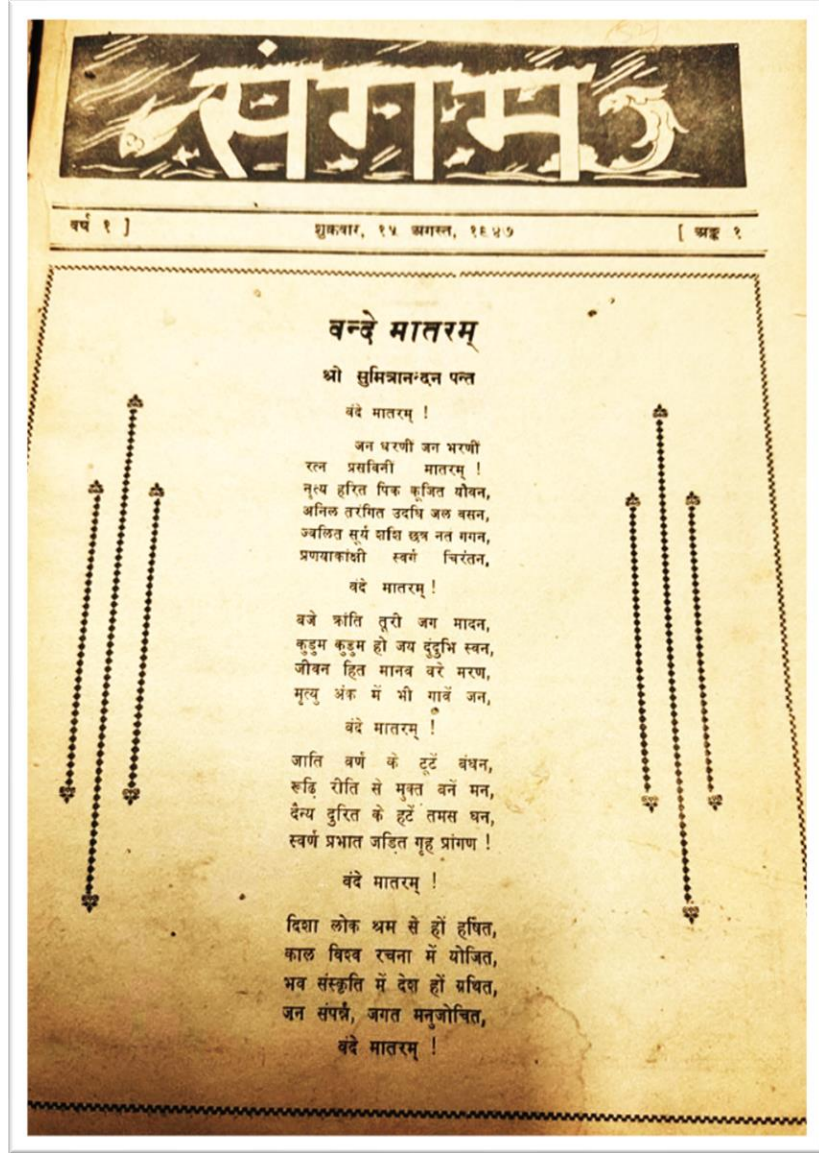
2.3 Scientific Articles

Pranisastra, a journal devoted to dissemination of literature on zoological matters in Hindi, offers fascinating material for those interested in animal, marine and insect life. First published in 1948, the Journal was patronized by several leading personalities including Pandit Ravi Shankar Shukla, Pandit Govind Ballabh Pant, Padmaja Naidu, Dr. Sampurnanand, Dr. P. D. Tandon. Its first issue carries a message from Dr. Radhakrishnan as follows:

“I hope your enterprise of publishing literature in Hindi on zoological issues will prove a great success.”

Apart from carrying information about researches on animal and insect life, one can find here well researched and profusely illustrated articles on a variety of subjects like ‘Study of Fishes in Ancient Hindu Society’, ‘Migration of Birds’, ‘Parasitic Worms’, ‘Monarchy and Democracy among Insects with special reference to Bees’, ‘Problems of locusts and their Remedies’, ‘Insect Society and Human World’. There is also a feature by Dr. N. G. Bahl, Head of the Department of Zoology, Lucknow University about his research on ‘Earthworms’.

Another article by Sh. Madan Mohan Nagar takes the reader on a tour of the Zoological Section of the State Museum Lucknow and provides a detailed analysis of various exhibits featuring a host of animals such as Lion, Hippopotamus, Giraffe, Kangaroo, Antelope etc.



3.Conclusion

The aforesaid description is intended to provide an overview of the rich material available in the **Janak Dulari Collection**, which has something for both the serious as well as the average reader. A number of other Collections of documents are still awaiting examination and their study may well reveal equally fascinating aspects of our glorious past.



Is it high time for India to switch over to the Proportional Representation (PR) method of elections?

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Abstract

A large number of democratic countries today have adopted the Proportional Representation (PR) method of election. There is a general consensus that the PR method is fairer than the First-Past-the-Post (FPTP) method of election currently in vogue in India. The paper discusses the three main variants of the PR method and argues for the introduction of PR method of election for both the Lok Sabha and the Vidhan Sabha.

Keywords

General elections, FPTP method, PR method, Preferential PR method, Closed Party-List method, Open Party-List method, election of members to the Rajya Sabha.

1. Introduction

General elections to the *Lok Sabha* and *Vidhan Sabha* in India are conducted currently based on the ‘**First-Past-the-Post**’ (FPTP) method. Under this method whosoever, amongst the contesting candidates, gets the highest number of votes is declared elected. It follows ‘the rule of the simple majority’ and is often described as “the-winner-takes-all” system of elections.

If the votes get divided between several candidates, then a candidate may get elected to the *Lok Sabha* or the *Vidhan Sabha* even with twenty-five (25) per cent of votes. Such an elected candidate cannot, however, claim to truly represent his/her constituency since the majority of the voters (75%) did not vote for him/her. In such cases, moreover, the larger number of votes would appear to have gone waste as they failed to influence the election results.

A perusal of the Lok Sabha elections (2019) shows that out of the 543 elected members, only 98 members had obtained more than fifty (50) per cent of votes. The Election Commission of India has yet to bring out a similar analysis for the Lok Sabha elections, 2024. Several political parties in the past including the erstwhile Bhartiya Jan Sangh, and in recent years the CPI (M) and the AAM Party have argued for adoption of the PR system.

Both the CPI (M) and the AAM Party promised to implement the PR system in their Lok Sabha (2014) election manifesto if they would form the government.

The Proportional Representation (PR) method of election, as an alternative to the FPTP method, is discussed below in Section 2. Section 3, 4 and 5 dwell on the main variants of the PR method, namely (a) the Preferential PR method, (b) the Closed Party-List PR method and (c) the Open Party -List PR method. Section 6, on the other hand, chronicles the process of election to the Rajya Sabha, which is based on the PR method. Finally, Section 7. concludes with some final remarks.

2. Proportional Representation (PR) method

Under the PR method of election, seats to the state/ national legislative assembly are distributed in proportion to the votes cast in favour of each party or candidates. Thomas Hare (1806-1891), a lawyer by profession, insisted on reforming the FPTP method of election prevalent in Great Britain by switching over to Proportional Representation (PR) method of election. It was supported by Hare's contemporary - the eminent British political philosopher - John Stuart Mill.

A large number of democratic countries today have adopted the PR method of election for their state/ national assemblies, which includes Algeria, Argentina, Austria, Australia, Belgium, Brazil, Chile, European Union, Finland, Greece, Indonesia, Ireland, Israel, the Netherlands, New Zealand, Norway, Sri Lanka, Spain, South Africa, Sweden, Thailand, Turkey.

2.1 Hypothetical results of the Lok Sabha election (2024), if PR method was followed:

Although India does not follow the PR method of election, attempts have been made in recent years to examine the possible outcome of the Lok Sabha election (2024) if India had followed the PR method (*Rangarajan, 2024*). Table 1. below provides the election results to the Lok Sabha election (2024), both based on the extant FPTP method and the hypothetical case of the PR method.

Table 1. Actual and Hypothetical results of the Lok Sabha election (2024)

S.No.	Political Parties	% Vote Share (x) @	Seats under the FPTP method@	Seats that would have been won under the PR method (543*x/100) #
(1)	(2)	(3)	(4)	(5)
1.	BJP	36.56	240	199
2.	INC	21.96	99	119
3.	SP	4.58	37	25
4.	AITC	4.37	29	24
5.	YSRCP	2.06	4	11
6.	BSP	2.04	0	11
7.	TDP	1.98	16	10
8.	DMK	1.82	22	10
9.	CPI (M)	1.76	4	9
10.	RJD	1.57	4	9
16.	Others	21.3	88	116
	Total	100	543	543

Source: @ Election Commission of India (<https://results.eci.gov.in> dt. 7.1.2025).
Author's calculation.

A perusal of Table 1. above would show that the seats won by each political party in the Lok Sabha election (2024) was not in sync with the share of votes received by them. This becomes clear if the figures in column (3) are compared with the figures in column (4). The hypothetical distribution of seats in proportion to the votes by each party is shown in column (5). Since formation of government in a democracy is the game of numbers, India may have witnessed a different kind of coalition politics, and perhaps a different outcome as a result of the PR method of election.

It is, at the same time, important to recognize that there are different kinds of PR methods of election. These may broadly be grouped in the following three categories: (a) the Preferential PR method, (b) the Closed Party-List method and (c) the Open Party-List method. A brief description of these methods is given below.

3. Preferential PR method

Under the Preferential PR method, elections take place for each constituency. Whether as candidates of political parties or as independent candidates, individuals contest the elections from their respective constituencies. In this respect, it is similar to elections under the FPTP method. However, unlike the FPTP method, **no candidate** is declared elected unless he/she crosses the threshold number, that is, more than fifty (50) per cent of the total votes.

The **voters**, on the other hand, are required to rank the different party candidates or the independent candidates in order of their preference - from the most preferred to the least preferred candidate (BOX 1). In the absence of ranking a minimum number of candidates, let us say four or five candidates, the vote is declared invalid.

BOX 1.

Ballot Paper: Preferential PR method

PLEASE RANK THE CANDIDATES IN ORDER OF PREFERENCE 1 – Most preferred 5 – Least preferred	
CANDIDATE A	3
CANDIDATE B	5
CANDIDATE C	1
CANDIDATE D	4
CANDIDATE E	2

The significance of ranking the candidates as the first preference, the second preference, the third preference and so on (i.e., 1,2,3,4... against the empty box of every candidate) - is soon realised when no candidate is able to cross the threshold number, that is, more than fifty (50) per cent of votes in the first round of counting. In that case, a second round of counting takes place by eliminating the candidate with the least number of votes and transferring the voters' second preference candidates marked on those ballot papers to the intended candidates as his/her first preference vote.

If no candidate is able to cross the threshold mark even in the second round of counting, then a third round of counting takes place by eliminating the candidate with the least votes and transferring the voters' second preference votes on those ballot papers to the intended candidates and see if any of the remaining candidates has crossed the threshold mark. This process is continued until a candidate is elected. Elections to the *House of Representatives* in Australia, for instance, is conducted based on this method (may go to the Link: https://youtu.be/W1MsyKazjRA?si=fD_Nzp_q8h94mFG7).

Three distinguishing features, therefore, set the Preferential PR method apart from the FPTP method, namely,

- a. the necessity of a candidate to obtain more than 50% of votes to be declared elected,
- b. the necessity of every voter to rank the candidates failing which his/her vote is declared invalid,
- c. the necessity of counting votes in several rounds until a candidate is found to have crossed the threshold mark > 50% of the total votes cast.

4. Closed Party-List PR method

Under the Closed Party-List PR method, the voters cast their vote **for the multi-member constituency or for the full house** rather than for a single representative. This distinction differentiates the Closed Party-List PR method from the Preferential PR method. Apportionment of seats in the legislative body - amongst the political parties - is done based on the per cent share of votes received by each party. If a political party gets thirty (30) per cent of votes for a house comprising 100 seats, then it has a claim on 30 seats.

The political parties, in turn, are required to provide **the list of their candidates** in order of their importance to their parties as their first choice, second choice, third choice and so on, ahead of the elections. Accordingly, the ballot paper shows the order of the candidates against the party symbol of each party. Assuming further that the political party contested 60 seats, then the candidates figuring from one to thirty (30) from the top in the Party-List only can get elected.

In the process of allocating seats to the political parties, however, complications may arise from the typical distribution of votes as well the number of seats to be filled in. This issue is overcome by using the **D'Hondt Rule** or the *Highest Average Rule*. According to this rule, seats to each party is allocated in turn through iteration as explained below.

The first seat is allocated to the party with the highest average number of votes by dividing its total number of votes by number (1). This is followed by dividing the remainder with (1+1=2) and so on, as shown in Table 2. In the next round, the highest average number of votes for all the parties is once again compared, and the next seat is allocated to the party with the highest number of votes.

Table 2. Distribution of five (5) seats under the Highest Average (D'Hondt) method

Political Parties	Total Votes Received	% share of Votes	/1	/2	/3	/4	Seats Won
A	40000	20	40000	20000	6667	1667	One seat
B	70000	36	70000	35000	11,667	2917	Two seats
C	38000	19	38000	19000	6333	1584	One seat
D	48000	25	28000	14000	4667	1167	One seat
	1,96,000	100					

5. Open Party-List PR method

The Closed Party-List PR method does not give voters the freedom to choose the candidates from the party concerned since the ranking of candidates in the Party-List is pre-decided by the political parties. The Open Party-List PR method overcomes this limitation. *The voters in the Open Party-List method have the choice to cast their vote above the line for the party of their choice or below the line for individual candidates by ranking them* (Box 2.).

Box 2. Ballot Paper of Open-List PR method of Elections

	Vote for the Party of your choice			
	Party-A	Party-B	Party-C	Party-D
	OR			
Rank the Candidates	1	1	1	1
	2	2	2	2
	3	3	3	3
	4	4	4	4
		5	5	5
		6		6
		7		7

If the voter decides to vote for the party of his/her choice, then he/she is required to cast his/her vote to one party without ranking. The apportionment of seats is done on the same principle as under the Closed Party-List method, that is, based on the per cent share of votes won by each party.

If, however, the voter votes for the candidate by ranking them, then each candidate has to cross the threshold number, that is, more than fifty (50) per cent of votes or *the required quota of votes* to win a seat. The calculation of the required quota of votes is done based on the methodology described below.

5.1 Calculation of the threshold number (quota) of votes:

In the case of a **single member constituency**, that is, electing one representative from each constituency, the threshold number (quota) of votes (>50%) under the PR method works out (to be equal to) = (Total number of votes /2 +1 vote). This may be written as:

$$\text{Quota of votes} = \{\text{Total number of votes} / 1 \text{ seat} + 1 \text{ seat}\} + 1 \text{ vote} \dots \dots \dots (i)$$

In the case of **two-member constituency**, the quota of votes works out to:

$$\text{Quota of votes} = \{\text{Total number of votes} / 2 \text{ seats} + 1 \text{ seat}\} + 1 \text{ vote} \dots \dots \dots (ii)$$

The quota of votes in a **multi-member constituency**, similarly, may be found out by dividing the total number of votes by the total number of seats to be allocated +1 seat and adding one (1) vote. In order to account for the fractional values, moreover, the rule becomes:

$$\text{Quota of votes} = \{\text{Total number of votes} * 100 / \text{number of seats} + 1 \text{ seat}\} + 1 \text{ vote} \dots \dots \dots (iii)$$

The above method to find out the threshold number of votes to win a seat in a multi-member constituency is also known as the **Droop's Quota** and is generally preferred over other approaches to calculate the threshold number (quota) of votes.

5.2 Preferential voting and election through exclusion:

Assuming further that no candidate is able to cross the quota of votes necessary to win a seat, then a second round of counting takes place. The candidate with the least number of votes is eliminated and the second preference of the voters on his/her ballot paper is transferred to the intended candidates as the first preference vote. Whosoever crosses the quota of votes in the second round of counting – *with the addition of second preference vote* - is declared the winner. If no one crosses the threshold mark in the second round, then a third round of counting takes place and so on until a candidate gets elected.

5.3. Transfer of Surplus Votes:

Furthermore, in the case of a candidate exceeding the quota of votes, then his/her surplus votes are transferred to the candidate of his own party - short of votes - based on the following ratio:

$$\text{Total number of surplus votes} / \text{Total votes received} \dots \dots \dots (iv)$$

As such, if the surplus votes are 200 and the total votes received are 2000, then only 20 votes would be transferred against 200 surplus votes.

6. Election of members to the Rajya Sabha in India

The members of the Rajya Sabha are elected by the electoral college *comprising the members of the Vidhan Sabha* from each State/Union Territory. Election of the members of the Rajya Sabha is, therefore, indirect. Each State/Union Territory is, moreover, considered as a single **multi-member constituency** from where a given number of members of the Rajya Sabha have to be elected. Schedule 4 of the Constitution of India

provides the allotted number of seats to the Rajya Sabha, from each State/Union Territory.

Voting is done *based on ranking of candidates*, and each candidate is required to cross the **quota of votes**. The calculation of quota of votes is done following the Droop's Quota method, that is, following the rule mentioned above:

$$\text{Quota of votes} = \{\text{Total number of votes} \times 100 / \text{number of seats} + 1 \text{ seat}\} + 1 \text{ vote} \dots \dots \text{(iii)}$$

In the case of candidates short of votes in the first round of counting, second round of counting takes place accounting for the second preference votes based on the exclusion method. In case of surplus votes with some candidates, his/her surplus votes are transferred to the candidate of his/her own party at the worked-out ratio.

Since one-third of the members of Rajya Sabha retire every two years, election to only one-third of the total number of seats takes place at a time. Since U.P., for instance, has been allotted 31 seats, elections for members to the Rajya Sabha takes place in the manner of (10+10+11 seats). As U.P. has 403 members in the Vidhan Sabha, the quota of votes based on the Droop's Quota rule for U.P., when eleven members have to be elected, works out to:

$$[403 \times 100 / 11 + 1 \text{ vote} = \mathbf{3665 \text{ votes}}].$$

7. Conclusion

There is a general consensus that the PR method of election is fairer than the FPTP method. The issue of '*which method to adopt for holding the general elections in the country*' came up for discussion in the Constituent Assembly (1946-1949). Most members of the Constituent Assembly were, however, concerned about the evil of the '*Separate Electorate System*' introduced in India by the ruling British elite and its bureaucracy. Getting rid of it was the priority of the Constitution makers. It has, therefore, been argued that the FPTP method got accepted in India for holding the General Elections, as prevalent in Great Britain, by default and has continued since then.

The PR method has, nonetheless, been adopted for electing the members of the Rajya Sabha - which came into existence later in April 1952. A similar system may be envisaged for (direct) election of Lok Sabha members. **Every state may be considered as a multi member constituency**, and the voters given the choice to vote either for the party or for the candidates by ranking them as under the *Open Party-List PR method*. Elections to the Vidhan Sabhas likewise may also be conducted on the same principle.

The PR method of elections would make the political parties go beyond their "vote banks" for increasing their chances of winning the election by appealing also to the less inclined voters outside their "vote banks". In the absence second/third preference votes, it would be difficult normally for candidates to cross the threshold number (>50%) of votes. At the same time, given the diverse society as that of India and the deep-rooted historical prejudices of caste and religion, it would be difficult to predict for sure how will this play out if PR method of elections is introduced in India.

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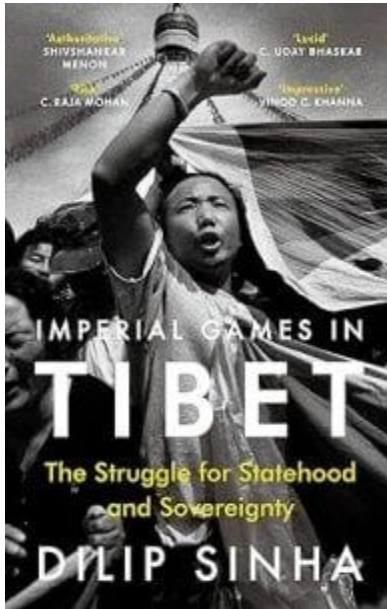
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Book Review

Dilip Sinha, *Imperial Games in Tibet: The Struggle for Statehood and Sovereignty*, pp.287, Macmillan, 2024, Price ₹599



Dilip Sinha is a former diplomat with a rich sense of history. His book under review provides rare insights into the China-Tibet imbroglio. Quite evidently, his sympathies are with Tibet. The gist of the book may be summed up in his following observations: 'The lack of international support for Tibet, and the unquestioning acceptance of China's claim over it, represents a tragic chapter in modern history - one of the acknowledged failures of the UN'.

Researching the trail of events, he holds 'the Great Game', that is, the 19th century rivalry between Britain and Russia essentially responsible for this fait accompli. Instead of recognising Tibet as an independent sovereign country, these two rival imperial countries felt wiser to use its geographical territory as a buffer between the two under the suzerainty of a weak China.

On India's independence in 1947 and after the Chinese Communist Revolution in 1949, the situation was in 'a state of flux' for Tibet and she made efforts to be recognised as an independent sovereign country, especially so, from India and the US. Tibet, however, failed to get support of either of these two countries. China sent its army into Tibet in October 1950 and soon annexed Tibet by May 1951.

India's dilemma vis-a-vis the growing crisis in Tibet.

Chapter 10 of the book is indeed of great value for understanding India's dilemma over the growing crisis in Tibet. Meticulously researched, the author has brought to light some of the rare correspondences during this phase of India's diplomacy. One correspondence sent by India's Political Officer in Sikkim (Harishwar Dayal) to Government of India, in particular, stands out.

To quote Dayal's words, 'It seems desirable at this time.... to avoid making concessions to Chinese claims in advance and giving the impression that India is NOT concerned in what happens in Tibet' (pp.212). He furthermore cautioned the Government that 'after annexing Tibet, China might raise its old claims to Ladakh, Darjeeling, Sikkim, Bhutan and tribal tracks of Assam as well as their own claim of suzerainty over Nepal' (pp.212).

The views of India's ambassador to China were, however, to trust the Chinese. The Government of India, on the other hand, felt necessary to weigh the ramifications of its support to Tibet internationally, and ultimately did not go beyond asking the Government

of China to ensure Tibet's autonomy and advising China to resolve the situation peacefully.

Chinese mindset in the China-Tibet imbroglio

A reading of China's history shows that China suffered far more bloody wars, pillages, rapes and mass killings than most countries. It was accordingly observed, 'In the catalogue of nomadic and seminomadic peoples who menaced the settled regions of China's north, and west may seem inexhaustible.... To this list could be added later sea borne intruders - the European powers in the nineteenth century and Japanese imperialists in the twentieth' (Keay, John, 2008).

Even close to the Chinese Revolution in 1949, China reportedly lost nearly 20 million lives in the civil war consequent to the Taiping Uprisings over the period 1852 to 1864. (It coincided with the Sepoy Mutiny in India). This was followed by the Nanjing massacre by the imperial Japanese army in 1937 and later large-scale killings during 1927 to 1949 due to the civil war between the Kuomintang Nationalists and the Chinese Communist Party. Given such a past and the deep distrust of the Advanced West, China might have felt militarily threatened if Tibet was not under its control.

The Tibetan Empire

The author discusses the China-Tibet imbroglio in the backdrop of the thirteenth century. This is also reportedly the stand of the Government of China who argue that Tibet was part of Imperial China under the Mongols (1271 to 1368 CE). It might perhaps have been more rewarding if the author had gone back to six centuries earlier, that is, to the seventh century CE.

The seventh century CE is remarkable in many ways for world history and very significant especially for Asia. As it was observed, 'The great Tong Taizhong (in China, mine) belonged to a generation of Asian empire-builders..... Strong-brstan-sgam (in Tibet, mine), his contemporary was masterminding the first unification of the scattered peoples of Asia's high plateau to lay the foundations of a formidable **Tibetan empire**. Across the Himalayas in the Gangetic plane Harshvardhan in Kannauj was performing a similar feat in establishing his imperial sway over north India.....And in the far southwest, along the caravan routes of Arabia, another contemporary took rejection in Mecca as cause for flight to Madina where acknowledged as the Prophet, he found a following and launched the crescentade that in less than a century would obliterate the Sassanids and buffet the frontiers of both India and China' (Keay, pp.239)

From the point of view of China-Tibet entente, what is notable of this period is that the **two empires of China and Tibet** emerged in each other's neighbourhood. 'An ambitious Kingdom and would be empire, Tibet had developed an integrated military and an effective administration, a literate culture based on its own grammar and script (an alphabetic one derived from a form of Sanskrit) Then with the capture of Kuqa in 670 CE, they virtually eliminated the Chinese presence throughout western Xinjiang and the Pamirs' (Keay, pp.263)

Keenness to control the trade on the silk road could have been the reason for this rivalry between the two empires. That they were each other's equal is evident from the following observations: 'Tong Taizhong sealed (the peace agreement, mine) with the dispatch of an imperial princess to Tibet. Further exchanges followed, the Tibetans regarding them as evidence of Tang vassalage and the Tong as evidence of Tibetan vassalage' (Keay, pp.243)

In this background, since Tibet has considered itself equal to China, being assured merely of the status of 'suzerainty' cannot satisfy her. The current balance of power is, however, no more the same as during the seventh century. Dalai Lama's approach in the China-Tibet imbroglio today is that of '**the middle way approach**', which was officially adopted by the fourth session of the 12th assembly of Tibetan People's Deputies in September 1997 (Wikipedia, 2024). Accordingly, they merely seek greater autonomy for Tibet.

In similar circumstances, however, Magnolia has been recognised as an independent country by the United Nations. Even if one agrees to the argument that Tibet became subservient to China in the thirteenth century, this was equally true for Magnolia. As pointed out by the author, Magnolia came under the influence of Soviet Russia and when the USSR disintegrated it declared itself as an independent country as the other CIS states (Commonwealth of Independent States). The example of Magnolia goes in favour of Tibet. The author may have expressed his views more candidly on the same.

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