4.4.4.3 Systems.

Perhaps the simplest definition of a system may be ' a whole composed of parts in orderly arrangement according to some scheme or plan'. To see anything as a system, then, is to see it as an inter-related set of interacting components. Managing, like almost every aspect of life itself, is systematic. A business, government or other type of enterprise, or a department within it, is a system, and managing itself, therefore, represents a system. Management plans are also systems involving interacting components of people, authority, information flow, markets, customers, materials and facilities. To say the least, entire life including our bodies, homes, universities, government agencies and our businesses are embodied in a system. All in turn are interconnected with various other systems and each has within it a number of sub-systems. Nature of the network of components in any company, department, problems, technique or programme can neither be disregarded nor overemphasized.

4.4 4.4 Approaches.

Because of exceptional interest generated in management in the recent past, a number of approaches to its study have developed. Large number of scholars particularly from universities with diverse approaches have caused some confusion as to "What management is", "What management theory

and science are" and "how management should be studied". Exponents of the importance of a lone approach to the management may doubt the sincerity and purposefulness of the advocates of various approaches of studies to be conducted by students and managers. Such a recourse is, however, inevitable for modernization and advancement of management and management science. Various approaches so far evolved towards management including one, the subject of this paper being the operational, are categorised as under;

- The operational (management process) approach.
- The empirical or case approach.
- The human behaviour approach.
- The social system approach.
- The decision theory approach.
- The communications centre approach.
- The mathematical approach.

This paper will obviously discuss with "The Operational Approach" category.

5. MANAGEMENT PRACTICES.

The academic and theoretical aspects of management having been appropriately dwelt upon, study of the management in active practice vis-a-vis its application to Rail-road operations in consonance with the aim and purpose of this paper is deliberated hereafter.

The necessity of detailed analysis for adequate management/training efforts being the foremost pre-requisites for any field or forum will in fact

of France with reference to its new regime would best elaborate the above postulation. After amendment dated 27th Jan. 1971, that changed the 1937 agreement or charter for railways in France, the SNCF are now armed with the following essential prerogatives:

i) Freedom of management.

This enables the National Railways to create the opportunity as a matter of duty, to develop the maximum number of financially valid activities as any industrial enterprise would do.

ii) Financial Responsibility.

As a natural corollary of the idea of "freedom of management" the S.N.C.F. assumed full financial responsibility in the bargain. Under this aspect it was expected of SNCF to balance their operational budget by 1974 when after gradual elimination the state subsidy was to cease finally and for all times to come.

iii) Equality of Competition.

The overall application of above policy was nevertheless dependent on the third essential condition viz equality of competitive circumstances between the different transport systems. This aspect is in fact crucial to the viability of a Transport System like "Railways".

- Thanks to the above charter of Autonomy the railways in France, under SNCF, are experiencing a complete rejuvenescence. They have brought about

miraculous redemption, nay phenomenal revolution, in the realm of suburban and cross country transport. Being stalwarts of the speedier, most economical and efficient rail transport in the world, much to be vied by the novel Air transport services, they have earned the gratitude of not only their own countrymen and administration but also of the entire Railway world at large.

5.1.2 Prospects of Similar Reforms on Other Railways.

It may not be out of the way to mention here that following the successful example and story of SNCF, many other railways have started similar compaigns to revamp and modify their Management/ operations characters, Acts of creation or Regulations as the case may be irrespective of the nomenclature jargaon. Some other notable examples are that of the ;

- Italian National Railways.
- Canadian National Railways.
- British Railways.
- Swiss Railways.
- Japanese National Railways.
- Indian Railways.

The progress towards breaking loose the certury old shackles, in the realm of policy regulations, is at various stages of achievement on different railways.

5.1.3 Strategy of Management Reforms on Pakistan Railways.

With a view to bringing about judicious Management reforms in the sphere of external environment, the viability of Pakistan Railways, to play the most called for hegemonic role in assuaging the suffering of economically stricken millions by providing speedier and cheaper transport commensurate with prudent draw on the National resources, will have to be delved deep and at length too. It has unequivocally been acknowledged and universally too that luckily the Railways enjoy unique and preponderating technical-cum-economical status/ privilege. When exploited in earnest they can come upto the aspirations of the multitude of countrymen, and help wrest the Nation free, to a significant extent, from the onslaughts of global economic depression and steer it clear of its dreadful maladies by;

- Providing adequate and speedier yet most economical and pollution free, transport.
- Curtailing too much of dependence not only on dwindling indigenous fossil fuel and/or oil resources but also on imported oil that continues to slash most of the National exchequer because of ever increasingly sky rocketing prices which can for long be ill afforded;
- Switching over to low cost locally generated hydro/thermal electricity which is no less than a panacea for all aforesaid restraints and

- Obviating Environmental pollution dreads.

The firm and valid conviction, deduced by leading European and Japanese Railways after long and sustained experiences, in favour of rail Transport versus that of Road Transport goes as follows:

" To ensure mass transport in densely populated areas of Europe, Japan and Eastern States of U.S.A., THE Railways possess two advantages which are no longer in dispute; it is the least polluting transport mode in addition to being the most economical in terms of land occupation and energy consumption. It has been calculated that for the roads to cope with the same amount of passenger traffic as that of major European stations, during the rush hours, it would be necessary to build a forty-lane road way. Tomorrow, even more than today, Europe will need its Railways a dense and active net-work both technically and commercially homogenous. But already Europe of the Railways is a reality."

It is because of the unenviable and priveleged position of the railways that the Japanese and European Railways high speed lines have not only regained the erstwhile lost traffic but also clinched/generated phenomenal and astounding quantum of both passenger and freight traffic from the following sources;

- carried previously by air
- carried previously by road coaches
- carried previously by self driven cars and
- generated truly/earnestly.

Rising to the occasion and not lagging behind the Japanese and European railways, the next door neighbour India, fully conscious of the viability of the Rail Transport and drawing on the experiences of others, have accorded their Railways the status of National Carriers rendering the role of all other modes only complimentary to them.

Not oblivious of the qualitative characteristics of Railways as a Common man's carrier,what to speak of in terms of economy, comfort and safety but also in respect of the craze of the modern era viz speed, the Indian Railways were accorded, without let or hinderance, full autonomy with Chairman Railway Board holding the office of Ex.officio Secretary to the Central Government.

Quite contrary to Management situation as obtaining in Pakistan, the Railway Board in India wields 'Do as you like' radical powers in all matters concerning 'Research', 'Planning', 'Development', and 'Finance'. Little wonder that in exercise of the above mandate they have already made a laudable break through in the conventional speeds and are happily poised for still greater land marks. Needless to remind here that Italian and Canadian Railways have also gone in for radical reforms in their existing charters of management, operations and investments. The respective Governments have provided their Railway Organisations with the necessary powers and authority, by amending old legislation and regulations in the realm of external environment, thus bestowing upon

them unfettered freedom and autonomy enabling them to work as true commercial enterpreneures.

It cannot, therefore, be gainsaid that in order not to allow the deteriorating conditions aggravate any further and to enable the Pakistan Railways take on the onerous responsibility of playing a role, befitting their inherent capabilities and potentialities, which has unfortunately remained altogether eclipsed and dormant all these decades due mainly to ineffective and incommensurable Management charter, it is imperative to post haste decree the inexplicably delayed Management reforms both in external and internal environments.

The earlier the much called for mandate issues the better it would be not only for the dynamic progress of the Railways itself but also for the betterment of the National economy with healthy repercussion on their clientele and commoners alike.

What a pity that Pakistan Railways industry, second to none but the defence services in volume and size, have been relegated to a mere decrepit shadow of their parent body viz their Indian counterparts. The latter have not only captured their domestic transport market but have also made phenomenal and astounding advancements in capturing overseas business in Middle East & Africa for supply of Railway equipments, construction contracts and consultancy business.

At home the obvious deplorable situation causing

grave, incalculable and irretrievable national losses is mostly attributable to nothing but lack of effective Management charter which unhappily still continues in the form of present 'Diarchy'; there is a Ministry of Railways with a Secretary, from the generalist's cadre invested with all the Managerial/financial controls, as its head viz-a-viz a Chairman from the so called professional management cadre of the Railways but devoid of effective planning control and requisite financial mandatory charter. To compound the situation still further, both belong to Grade 22 of the National Pay Scales creating organizational anomaly of the worst type. Moreover, the uncalled for interference from other state organs such as Ministry of Finance, Establishment Division, O&M Division, Economic Affairs Division, Planning and Public Service Commissions is just proving to be a 'last straw' on the proverbial camel's back.

It must be reiterated that, given a free hand, commensurate with National resources and without undue restraints placed on its commercial and financial working/ operations, the Railways, with collosal public investments in the form of tracks, locomotives, rolling stock, buildings and other infrastructure, have the gusto and capacity to sustain National economy and revolutionize common man's lot by providing speedier, most economical, comfortable and safe transport. Other modes, viz Roads, and Air, with all their inherent encumberances and advantages in the contemporary world, cannot even dream to achieve these

ends.

Reverting to the subject proper of 'diarchy' it sets at nought the very fundamental objective of creating an effective organization which is one of the five cardinal functions of Management viz Planning, Organising, Staffing, Directing and Controlling. The diarchy ridiculously undermines the effective and unambiguous channel of decision making in respect of operations, powers and Authority. It culminates in erosion of sense of leadership, inspiration, accountability and responsibility. Such a situation is lamentably prone to inevitable inefficiency, listlessness and ineffectiveness which can by no means be afforded by any Enterprise worth the name let alone the Railways.

The menacing shackles of inadequate Management charter and restrained Administrative and Financial powers must, therefore, be broken loose and quickly too. Simultaneously, lack of vision in respect of a very highly technologically advanced and specialised service industry like Railways at the highest level state organs like Finance Division, Establishment Division, Federal Public Service Commission, Planning Commission, and other concerned politico-Economic organs must be transmuted into stark realizations/ realities so that the National Railways are accorded 'A One' National Development Priority which, as contended earlier, have the innate answer for combating energy and pollution crises besides bringing about economical resuscitation.

5.1.4 Broad Outlines for Management Reforms on Pakistan Railways.

It is in the light and perspective of above alarming,but not by any means a hopeless,situation that the author has ventured to dwell upon the prospective business like charter of Management for the National Railways with a view to paving the way for their most essential freedom of operations in a free, healthy and equitable atmosphere permeated with a spirit of competitive enterprise and opportunity not losing sight, of course, of the overall National constraints in the political and socio-economic fields.

5.1.5 Proposed Charter of Management.

The overall framework within which the National Railways are, therefore, supposed to operate will be an embodiment of the essential prerogatives of :

- Freedom of Management within the External Environment to the extent provided under the management charter, consistent with the role and priority accorded to the Railways within the overall Transport Sector,
- Complete freedom within the internal environment,
- Financial responsibility barring unremunerative and forced operations by the State and lastly,
- The assurance of equitable competitive environment between various transport modes. The detailed terms and conditions of the above policy principles can be sorted out between the concerned state organs.

In order, therefore, to pave way for effective implementation of the proposed charter commensurate with the aspirations of the National Government and the people at large, creation of a substantially versatile and competent machinery/organization duly invested with Instrument/Authority, manifest with powers necessary to equitably acquit itself financially, technically and administratively, will have to be considered in earnest.

5.1.5.1 Constitution of a Transport-cum-Railway Authority.

Analogous to the foregoing, Railways in the Public Sector must, perforce, be mandatorily managed by a single Autonomous Transport-cum-Railway Authority/ Council under the aegis of the Central Government with its Head/President drawn preferably from the professional Railways cadre concurrently to be designated and ranked as Central Government's ex.officio Secretary General. In fact the Head or President of the proposed Transport-cum-Railway Authority can be drawn from any walk of life viz Political, General administration, Professional from various transport modes, financier, Industrialist or even a Lawyer, as long as all the modes of transport business remain, under the Controller responsible for the policy making of the following functions:

- Assigning Priorities to various modes based on capabilities keeping the national economic constraints,defence, common man's reauirements and material economic development in view.

Railways, weilding control over Sukkur, Quetta and Karachi Division alongwith Hyderabad Carriage Shops. Each railways will be headed by a General Manager of the rank of Additional Secretary to the Government viz RNSP-21. At the Divisional level the existing Divisional system headed by Divisional Superintendents of the rank of Joint Secretaries to the Government (RNSP-20) may continue. The organizational chart delineating chain/order of Authority/responsibility in respective tiers of 'Transport and Railways Authority' in descending order, dealing cursorily with the Transport Board Wing and in detail in respect of the Railway Board Wing is appended at annexure 'A'.

5.1.5.5 Top Priority for the National Railways.

In view of the Railways inherent potentialities, of (i) carrying people and goods at six to seven times lesser rated horse power than their road transport counterparts and (ii) consuming indigenously generated pollution- free electric energy, which obviate dependence on comparatively high priced imported oil, the Railways will have to be accorded priorities, in the context of overall transport needs and future developments, which have so far been denied. Once such a priority parameters have been laid down as a national policy the allocation of matching finances/resources and delegation of authority has to follow as a natural consequence.

5.2 Management Philosophy in the Internal Realm (Environment).

Notwithstanding provision of unfettered mandatory charter in the realm of external environment of an enterprise, commensurate with the pre-requisites enunciated in foregoing paras, a concern, more so the Railways, would continue to falter and degenerate unless equally effective Management efforts in the sphere of internal environment are also fully geared up. Before proceeding to elucidate the role of internal Management, as being professed at present, in various enterprises in general and in the Railways in particular vis-a-vis the one recommended in this paper and sought after to be introduced, attention is invited to a key chart of the contemporary management appended as Annexure 'B'. It would be of immense interest for it will form the nucleus of discussion throughout.

5.2.1 Management Functions.

The key chart denotes five main 'functions' of any management viz 'Planning', 'Organizing', 'Staffing', 'Directing', and 'Controlling'. These will be discussed at length in the ensuing paras with their application to the Railroads in general and the Pakistan Railways in particular.

5.2.1.1 Planning.

The core of the whole complex of a management or organization, on which hinges the successful running of the enterprise, being the planning, its

proper exercise alone can vouchsafe the most vied dividends. It involves selection of objectives primarily. Thereafter appropriate policies, programmes, procedures, priorities and strategies are prescribed for the achievement of those objectives whether for the entire concern or for part thereof. In fact it is a decision making exercise at a given time that would help select a recourse from amongst various alternatives in order to cater best for further requirements and trends. It should not, however, be confused with forecasting which serves as one indicator for the formulation of a good plan. To be more illustrative, it lays down objectives,to be achieved in respect of policies relating to authority, productivity, pricings, competition, management succession and internal audit as also procedures requiring specific method of handling papers, products and people. Besides, planning exercise cannot be extruded from the effective managerial functioning, for all Managers of the organizational structure whether at top, at middle or at the bottom have perforce to plan/execute/ achieve their day to day assignments/targets. A scrutiny of the above planning principles when applied to a Railway will inter-alia encompass the following minimum pre-requisites;

5.2.1.1.1 Formulation of a long term plan to introduce;

a) Modern and new technologies including Methodologies of manufacture, production, replacement and maintenance of various Railways assets.

b) Sophisticated and new equipments pertaining to various items of infra-structure viz power units, Rolling Stock, Track Structure, Signalling and Interlocking gear, Telecommunication facilities, Electrical infra-structure, Electronic instrumentation, gadgets and computer control machines etc.

c) Proper Manpower recruitment and training of all categories at all levels to cope with the demands of personnel required to run and maintain items under (a) and (b) above respectively.

5.2.1.1.2 Formation of progressive short term plans keeping in view various national constraints such as scanty resources, dearth of trained manpower and inflatory trends brought about by National/International political-cum-economic developments.

5.2.1.1.3 Rationalization of schemes and plans aimed at increasing productivity of various items of existing infra-structure and fruitful augmentation of working methods. The core rather the crux of the planning objectives is aimed at catering for the transport requirements of the Nation within targetted perspective, distant and near future, development programmes with due regard to the basic consideration of : (i) Economy in cost of travel, (ii) comfort and safety and (iii) Frequency and speed of service vis-a-vis spirit of co-ordination with sister transport modes rather than unhealthy competition in between.

5.2.1.1.4 The successful formulation and consequent implementation of these laudable plans necessitate and presuppose adequate availability of the following material resources;

i) Adequate and businesslike management charter.
ii) Effective and relevant technological/ professional know-how.
iii) Managerial know-how of necessary skills & aids, and
iv) Back up facilities of technical, adaptative and operational research.

5.2.1.1.5 A cursory and panoramic analysis of the imperfect planning imperatives, requisites and prerogatives followed by P.Railways in the above fields, leads to a stark and vivid revelation that uphill task is now required to plug in the hapless loop holes with a view not only to retrieving the ever-deteriorating situation on account of existing deficiencies/shortcomings but also to making up fast for the wrongs done to enable them acquit before the Nation/clientele. Only then the railways can aspire to come at par with the modern and technologically developed Railways of the world so as to be able to yield much vied dividends before the twentieth century fades out. Needless to emphasize that launching of long and short term revised plans has become an immediate and inescapable necessity in these days of energy crises escalated by derogatory global political developments.

5.2.1.1.6 It will not be uninteresting to take note of a reasonably viable planning enunciated by the author in a paper, "Prospects of High Speed Operations on Pakistan Railways", presented at the 23rd Annual Convention of the Institution of Engineers on the 10th March, 1980 whereby the following attainable targets in respect of speed and travel time of passenger & freight trains by the year 2000 A.D. were outlined.

Section	Type of Traffic	Max.permissible speed to be achieved.	Overall travel time to reach the destination
Karachi to Lahore	Fast Passenger	100 MPH/160 KmH	8 to 10 hrs. in each direction.
Karachi to Lahore	Freight	60 MPH/100 KmH	16 to 24 hrs. in each direction.
Lahore to Peshawar	Fast Passenger	100 MPH/160 KmH	4 to 6 hrs. in each direction.
Lahore to Peshawar	Freight	60 MPH/100 KmH	8 to 12 hrs. in each direction.

5.2.1.1.7 In the case of all other important lines and sections various productivity goals such as wagon and engine 'Turn Round' and line capacity etc., and targets in the allied indicators of all sectors, fields and disciplines whether Track Renewal or bridge replacements etc., will have also to be similarly revised and raised . Construction of new

lines, Rolling Stock and residential buildings etc., will have to be defined and attainments set forth. For this transport needs as forecast commensurate with constraints manifest in the plan will have to be kept in view.

5.2.1.2. Organizing.

Once a truly earnest and viable planning has been formulated, it rests with the organization alone to make or mar the desired and anticipated ends. It, therefore, cannot be gainsaid that organization must be fully in consonance with the aspired plans which, unfortunately,has not been the case with the Pakistan Railways as already discussed. As it is, the organization involves the establishment of an internal structure of roles through determination and enumeration of activities which are required to achieve the goals of the enterprise not only as a whole but also in its respective departments. It also involves grouping of such activities, assigning of such groups to the manager, delegation of authority for the proper execution of activities and provision, of course, for necessary coordination of authority and informational relationship, both horizontally and vertically, in the organizational structure. Sometimes all of these factors are included in the term 'Organization Structure' and on others they are referred to as 'managerial authority relationship'. All said, it is the totality of such activities and authority relationship that

constitutes the organizing function.

5.2.1.2.1 The organization structure is, in fact, not an end itself but a means for accomplishing objectives of an enterprise. Efficient organization will, however, contribute to the success of the enterprise for which matter the application of principles is of paramount important; yet striving for a 'pretty' structure with little regard for its precise application would be rendered futile. The organizational structure must, therefore, correspond to the task - and not vice versa - and must reflect any compromises and/or limitations that may be reposed in or imposed on the manager by the people. Some of other basic and minimum norms of good organization are enumerated as under;

5.2.1.2.1.1 - Chain or line of command should be direct and straight and not winding or zigzag. More explicitly, it must be clearly laid down as to who is under whom without an iota of ambiguity or reservation.

5.2.1.2.1.2 - Every subordinate must, as a rule, have preferably only one 'Boss'. In exceptional cases when such a recourse is not possible function-wise delineation of the job must be manifest to the subordinate as to the direction from where he has to receive respective orders.

5.2.1.2.1.3 - Plurality of 'Functions/Authorities' must be avoided in vertical and horizontal planes with

exception in the latter when utterly unavoidable.

5.2.1.2.2 As for the Railroad a minimum three tier basic organization is necessary to serve the purpose. The top tier will be constituted to deliver the ultimate goods in consonance with the "Management Charter" or "Act" or "Regulations" whatever it may be termed. The function and purpose of this tier would be to frame policy, do planning, enunciate principles for the effective running of the business and weild Administrative, Managerial and Financial authority within the confines of the Act or Charter of Management. Needless to emphasize that any proliferation of these fundamentals, whether in vertical or horizontal planes, is fraught with obvious perils for the entire enterprise. This tier can very rightly be termed as a brain in the body of a concern/enterprise.

5.2.1.2.2.1 Existing Organizational Anomalies.

(a) The golden principle to be strictly followed while creating these tiers is 'Unity of Command' already elaborated and discussed in detail under paras 4 and 5.1 above. The existing anomalous situation obtaining in this regard by having a Ministry of Railways manned by a Secretary drawn from generalist's cadre and a Railway Board headed by a professional railway man, both of the same grade/status, is a good example of the negation of the very basic principle of organization viz Unity of Command. An organization chart