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THE CO-ORDINATION OF ROAD AND RAIL TRANSPORT

THE recent announcement of the surplus Railway Budget by the Communications Member must, no doubt, have come to the public as a very welcome departure from the somewhat unpleasant reading which previous Railway Budget speeches have provided. The impressive surplus of over 14 crores, which, as the Railway Member has confessed, surpasses all official estimates. This, however, should not lead us to complacency. It is a matter of common knowledge that this windfall for railway revenues is the direct result of the Railway Board's policy of upward revision of railway rates and fares announced last year, and the unprecedentedly heavy military traffic that is being moved by the railways. The railways themselves cannot claim much for any increased efficiency that might become

apparent by a close scrutiny of railway operation. It is, therefore, clear that the public, as much as the railways themselves, must be on their guard against any over-optimism, as the conditions, under which such huge incomes are being earned, are abnormal and are bound to give way, in their turn, to less favourable circumstances.

War conditions, under which the railways of the British Empire are operating, have brought on many fresh problems, and have emphasised the importance of some of the old ones. The recent enquiries conducted by expert committees into the problems of wagon turn round, dearness allowances for railway workers, etc., are evidences of this. Among such problems one of the most important is the co-ordination of road and railway transport (the need for which was

recently voiced by Mr. Scot in the legislature), so as to produce an integrated scheme of services, capable of giving the cheapest and most efficiently organised means of transport to the community as a whole. In Great Britain, where the railways and road services are operating "under fire", the problems arising out of road-rail competition have, at least temporarily, been relegated to the background. In India, where uneconomic competition is very rife, the importance of this problem needs no emphasising.

Historically the growth of road-rail competition was, at least in part, due to the last World War. In England during the pre-war days competition in transport was mainly between the railways themselves. This competition has almost disappeared after the amalgamation of 1923, and the various pooling arrangements that came into force since then. After the demobilisation following the peace treaty a large number of military lorries were rendered superfluous to the Army and became available for sale at reduced prices. Many of the demobilised men, who had learnt to handle lorries during the period of national service, turned to the plying of motor lorries for hire, or reward as a profession, and this brought them into direct competition with the railways. An era of unbridled competition between these two forms of transport followed. In fact the transport history of Great Britain since the last war is a review of the efforts made by the State and the railways to evolve a co-ordinated scheme of passenger and freight transportation for the country.

In India road-rail competition has grown on somewhat similar lines, although, on the whole, it is much less acute. One important

factor, that has tended to restrict the field of operation of the road haulier in India, has been the paucity of good roads until recently and the great distances between the various centres. The first of these is fast disappearing with the rapid improvement in road building, and ambitious programmes, which have been executed since the utilisation of the Road Fund out of the Petrol Tax, have become an established policy of Government. The phenomenal development in the design of the internal combustion engine has considerably strengthened the position of the road haulier to hold his own even over long hauls, which were formerly regarded as the especial domain of the railways. One thing, however, that has favoured the railways is the lack of organisation on the part of the road hauliers, but even this is quickly being made good, and much lost ground has been made up. Government control of transport undertakings, petrol, tyre, etc., rationing and the commandeering of motor vehicles may mitigate the severity of competition, but will be only a temporary spasm of relief. To be forearmed with schemes for the co-ordination of transport services against the arrival of an era of post-war peace and prosperity is an elementary precaution.

Attempts at the co-ordination of transport fall under two groups, *viz.*, measures adopted by the State through legislation calculated to control and restrict wasteful competition and schemes promoted by the transport interests themselves by agreements, etc. It is clear that every country has to develop its own methods of co-ordination best suited to its individual requirements, and no panacea capable of universal application has yet been devised.

Before considering the methods adopted

for co-ordination it is just as well that we had an idea of the criteria upon which the efficiency of a transport service is judged from the consumer's point of view. The prospective passenger at the very outset demands easy accessibility to stations, information, tickets, etc. In this matter many places in India suffer as the result of lack of foresight on the part of the pioneers of railway transport in India. Adequacy of accommodation, punctuality, cleanliness, the guaranteeing of services and the ready availability of the amenities of travel loom large in the passenger's choice of the mode of transport. The trader desires prompt delivery of goods, freedom from damage or loss. Apart from these the management has its own standard for measuring domestic efficiency. Contented staff, minimisation of waste, and the incidence of accidents and the provision of safe and speedy transport at the lowest cost are the declared aims of all administrations. To the student of transport economics it is of immense interest to study and find out how far these ideals of service are capable of achievement by a co-ordination of the means of inland transport.

It is well known that for certain types of traffics the one or the other method of transport will be the better suited one. For instance, in the case of highly rated traffic moving rapidly in small lots over short distances, road transport easily scores over rail, and perhaps the day is not far distant when the aeroplane may replace the motor lorry. On the contrary, when, say, a huge transformer weighing a hundred tons or a gigantic modern naval gun has to be transported from one end of the country to the other, there is nothing that can touch the railway in the accomplishment of such a feat,

In this connection it is of considerable interest to investigate what weighs with a prospective customer of transport in the choice of the method. Only after understanding why one form of transport is preferred under given circumstances, will it be possible to devise a scheme whereby the different forms of transport can be so co-ordinated as to give the best and cheapest service, by doing away with the shortcomings of the type of transport not preferred, if that is the cheaper to produce. Recently in the United States a questionnaire asking under various heads why road transport was preferred to rail haulage was circulated nation-wide through the medium of the press. The replies make very interesting reading. The reasons determining the choice of the particular method of transport may be divided under service, cost and personal inclination or interest. The road haulier affords cheaper service by reducing packing requirements, lower rates, simpler accountancy and less incidence of damage and faster transport by later acceptance of goods and more flexible services. The same questionnaire also revealed that many did not prefer road transport to rail on account of lack of responsibility or failure to maintain proper services and the non-uniformity of rates or excessive loss or damage. It is of great importance that railways should study by similarly eliciting public opinion on the facilities they provide while shaping their commercial policy.

Before any method of co-ordination of transport becomes successful it is essential to have a clear idea of what types of traffic are best suited for one or the other method of transport. Another important point to be borne in mind is that road transport has come to stay, and all measures adopted by

the state or the railways should be directed towards the organisation of the two as complementary services, neither seeking to divert all the traffic to itself, and thereby occasioning wasteful competition, inconvenience and vain effort. At this stage it will be useful to note, in passing, what handicaps the railways suffer from, which have made road-rail competition such an unequal one. The railways in most countries of the world were partly, if not entirely, financed by the state. This has made the state reserve to itself certain rights, which have militated against railways being run entirely on a commercial basis. The first and perhaps the most important one is the limits imposed by the state within which the railways must quote rates, unless specifically permitted by the government to do otherwise. The railways cannot therefore reduce rates below a certain level to attract a special flow of traffic in competition with a road haulier, or put up its rates, should this be necessitated by commercial expediency. Then there is the "Undue Preference Clause" which prohibits any special treatment to any particular trader as against another. The road haulier is not similarly bound by restrictive regulations. The railways which have invested vast capital on track, rolling stock and other equipment find that in order to earn the standard revenue laid down by the government they must lay down a certain level of charges, having due regard to risks of conveyance, the capacity of the traffic to bear the rate, the type of stock to be provided, the capitalisation of the section of line, weights in relation to the bulk of the commodity and the loading qualities of the traffic. Railway rates are therefore higher than road rates, as road hauliers have an elementary method

of rate-fixing, not being obliged to take into consideration the above factors, while building up their rates. Again the railways have scrupulously to observe every labour convention and see that their staff are not incurring too much "long hours of duty" and pay for overtime. In the case of the road haulage industry, for the most part, the small units are owner-operated, and the question of labour legislation observance does not come in at all. Also the commercial railway lines have to make good at least, in part, the loss in the working of the strategic lines. The plea for a "Square Deal" for the railways is therefore a very well-founded one.

In the matter of the co-ordination of their transport services different countries have adopted different methods. State control, by compulsorily nationalising their transport industry, and the enforcement by legislation that a particular method of transport should confine itself to the carriage of certain types of traffics under specified conditions are an ideal which is hard to achieve, except under totalitarian auspices. In India and Great Britain competition, within limits, in the field of transport has been regarded as essential to prevent monopolistic exploitation. In these countries neither road nor railway transport is entirely under government control. The same is true in America. The state being the supreme law giver can, by regulating legislation, and by a judicious road policy, so shape its transport system that the two methods of transport work as complementary units, performing the work best suited to itself and rendering the community the best service. The recent enactment by the Government of India of the Motor Vehicles Act has, by a system of licensing

lorries, done much to control uneconomic competition. Sometime ago the Sind Government undertook not to build a certain road, which would run parallel to the railway, and for which there was little traffic justification. Such action by the State has tended to keep the road operator to his field. A line of enquiry, which suggests itself at this stage, is the possibilities of the co-ordination of suburban passenger transport. In the larger cities of India like Bombay, Calcutta and Madras there is an enormous amount of passenger traffic carried by the suburban lines of the railways, the buses and trams. It is needless to say that there is some degree of competition between these, and the service rendered at present, though good, is capable of further improvement, if they are brought under a unified control, or if some method of the pooling of receipts and services is evolved. The value of such a system of control gains added emphasis in times of emergency. Besides the recent forecast by the Communications Member, that an enhancement in the near future of the suburban season ticket fares is not to be ruled out, might have the effect of diverting a considerable volume of passenger traffic to road (thereby adding to the congestion of city roads), should the forecast come true, unless there is also a corresponding increase of bus and tram fares. The latter can be assured most easily, if all the suburban services are operated by a single authority. One of the most successful experiments in this direction is the setting up of the London Passenger Transport Board in 1933, whereby the whole of the road and rail passenger services in the London suburban area was brought under a single authority, and the suburban passenger traffic receipts of the main line railways were pooled with

those of the L.P.T.B., and each of the five parties received a fixed proportion from the pool, depending upon the extent of the suburban passenger services operated by each. The same type of co-ordination of passenger transport has been adopted in the city of New York.

Among the numerous methods adopted by the railways to avoid wasteful competition between them and the road transport undertakings may be mentioned their agreements with the road haulage industry. These agreements have sometimes taken the form of financial interests being acquired by railways, or buying up the business of road hauliers. In certain cases the railways have agreed with the road hauliers to provide services to fill in the gaps in railway services or to supplement them in outlying districts, or to act as feeders to a railhead. These agreements have proved very fruitful. In India the Nizam's State Railway has acquired a monopoly for road haulage as well in the State and has been able to produce a remarkable system of integrated services. The East Indian and S.I. Railways have been running long distance road services, and thereby affording a service, which has all the advantages claimed for road transport. This cannot however be called co-ordination, but is a case of successfully competing with the road haulier on equal terms. The North Western Railway has set up in conjunction with a local firm of road hauliers a joint stock company with the Chief Commercial Manager of the Railway as the Chairman of the Board of Directors, and the road services have been arranged so as to provide services at times when the railway itself cannot easily provide them, so that there is no break in the schedule in the twenty-four hours. This joint enterprise is working very

well. The introduction of "Agreed Charges" whereby traffic is held to rail for a period by the railway offering a flat rate for all the traffic based on a fixed charge per ton, irrespective of the distance of haulage, has produced very good results on the B.B. & C.I. Railway which was faced with the problem of combating coastwise country craft competition, which could afford to carry for next to nothing during the off fishing season. Development of air conditioning in railway travel has stimulated passenger traffic, but in a country like India, where the majority of people travel in the lower classes, other improvement in the travelling facilities to lower class passengers, will have a beneficial effect. The same can be said of the development of insulated, refrigerated or registered express and container transport for goods. Most of these innovations have been introduced by Indian railways in different parts of the country. It is however necessary that by undertaking a more elaborate publicity campaign they should be brought before the commercial community, and thus enable their benefits to be more widely appreciated.

Some of the measures, the railways might usefully consider to promote contact with the road undertakings for their mutual benefit, are to encourage, where possible, the bus services to use railway stations as their termini. This will easily enhance the goodwill between the railways and the omnibus people, and act as a good advertisement for the railways. Introducing a system of inter-availability of omnibus and railways tickets, besides being advantageous to the public, is also beneficial to the railways, where traffic is sparse and is mainly on the road and takes away the edge from road-rail competition.

Adjusting rail and omnibus timings so as to improve connectional services and the provision of special road and rail combined facilities may be put into practice with advantage. 'Publicising' omnibus timings in railway time tables, and the road industry reciprocating the courtesy, the erection of "bus stop" signs on railways premises and the displaying of selected road information at stations contribute largely in the promotion of harmonious working. A system of establishing road and rail charges for the same journey giving such a margin of difference that will neutralise the disability of the railway, where they suffer in the matter of accessibility of stations, or frequency of service, may produce encouraging results. Unremunerative branch lines may be closed and the transport needs of the locality met by agreement with the omnibus undertakings. The possibility of free conveyance of passengers by agreement with omnibus owners to railway termini where these are away from the towns' centres may be explored.

The lines on which future policy in regard to the co-ordination of transport may be based are firstly for the State to insist that the road haulage industry is organised on the lines of the railways, so that the two modes of transport can negotiate on an equal footing, and share alike the benefits of any co-ordination schemes. Road rates are as unstabilised in application as they are simple in structure. Legislation calculated to bring them more into line with railway rates, without introducing undue complications, is essential. The hours of work, wages, regulations, etc., must be made to apply in equal measure to both forms of haulage. The "Undue Preference" and "Common Carrier" clauses which are intended to safeguard the

public must also be made to apply to road rates. The publication of road operation statistics on the same lines as railway statistics are issued is very necessary to enable the public to know what is happening inside the industry, and any big profits accruing to the industry must be passed on to the users in the form of rate relief, etc. The setting up of the Transport Advisory Council and the Standing Committee for Roads is a step in the right direction.

The setting up of an organisation under the joint auspices of the road and railway undertakings entrusted with the task of collecting, analysing and collating all relevant information in regard to problems of common interest to the two industries is

certainly worth serious consideration. This organisation can also serve as a clearing house for any outstanding problems at issue between them and advise when consulted in the matter of individual schemes of co-ordination. Problems for investigation may be also referred to this body.

The progress made in the co-ordination of road-rail transport has been considerable and has yielded very satisfactory results. Much ground still remains to be covered. If, however, the vigour, with which the problem is being tackled, should continue unabated, the day is not far off when a completely co-ordinated scheme of transport services will have been evolved.

C. N. R. RAU.

THE DECCAN TRAP

For half-three hundred years million, bowed down with monstrous weight
Of megalosaurs and dinosaurs and saurs of mountain height—
Our earth did groan in severe strain and cracked the Gondwan land,
When the bridge, which spanned the Vindhyan land and the Afric's southern rand,
Submerged—sundered in shattered blocks—beneath the Arab main
And sought the sheltered abyssal depths of Neptune's dark domain.
The Vindhyan land then belched, in gasps, a lurid lava-melt
Through ripped out clefts and rifts afar, in its pent-up strain-filled belt.
The fiery flows from Vulcan's bowl did blaze a burning red
And with gory glow, from down below, they stained the starry bed.
Those bursts of flows—like geysers' surge—had quiescent intervals,
When algal plants and water ferns found tombs with Physa shells.
These Vulcan's pastes did scald the land for miles half million square
And, laid—in steps—to lofty heights, they built a rocky stair.
Their congealed crust, like lakes of jet, did fill the Vindhyan's lap
And cleft and carved by Time's deft hands, it hails now "Deccan Trap".
Its winding glens, at Konkan's edge—with verdant forests fine—
Do run along for miles on miles, like a mazy Maginot line.
Welled these Traps from Vulcan's pools on the wane of Chalk-age day
Or at dawning stage of Tertiary age, as some maintain to-day,
Is a wordy war which rages now with Earth-Science men of Ind,
Who group themselves in fighting ranks to hurl their fossil find.
Sahni's ferns and Hora's fish and Raos's algal cells,
Are thrust to fore to oust the force of Oldham's mollusc shells.
These fossil folk do fight their feuds with Parker pocket pens
And shed their blood—in Quink liquid—in tome-filled dusty dens.
The world moves on unnerved by this,—the fate of Trap-age fight,
To delve Earth's past and date her deeds are not for vulgar wight;
The Earth revolves unchained by this—the Trap-age tangled knot,
She smiles aloof and shouts aloud, "To me it matters not;
The dawn which spanned the Chalk-age night and the morn of Tertiary days,
A tick it counts in endless time: an inch, in boundless space."

R. R. B.