The Train Driver

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BACKGROUND AND HISTORY

The present writer cannot recall a time in his childhood when he wanted to be an engine driver (fire brigade having been his line at the time). Perhaps this earlier indifference becomes an advantage when turning from enthusiastic concern with technological perfection towards a psychological interest in the role of the driver as the key man in the system. Although many ergonomists and applied psychologists are known to be railway fans, remarkably little has been published on which to draw for a skill analysis. Recently, some work towards such an aim has become available (Rohmert, 1973, Mashour, 1974), certain detailed aspects have been dealt with by Davis (1966) and by Buck (1963a). Apart from these, there seems to exist a large body of directly relevant information emanating from the Japanese Railway Labour Science Institute. The present writer believes that his Japanese railway ergonomist colleagues may have covered some of the ground to be explored in this paper. Unfortunately, only brief summaries are available to readers not conversant with the Japanese language.

Train driving is not as uncommon an activity as it may seem. At any moment of the day tens of thousands of men all over the world drive trains and in Britain alone there are 30,000 footplate staff, about one-tenth of the total workers employed on the railways. They drive 4000 locomotives and 10,000 other traction units, moving 23,000 trains per day, transporting 4 million passengers a day and 200 million tons of freight each year. This represents about 19% of all goods moved and 8% of all passenger mileage. The railways’ share of the total cost of transport and the social benefit the country derives from it is hard to estimate, but the train driver's
contribution is clearly an integral part of it. This part is so much taken for
granted that one only realizes how essential the service is when the men are
absent on strike or in some other emergency.

To run a railway is to operate a system in the true sense of the word, in that
all parts are effectively interactive and interdependent. From its earliest days,
the system has a built-in, deeply engrained concern for safety and its human
element forms perhaps the largest disciplined collection of men outside the
military. Their jobs are circumscribed by a large set of rules, approximately
250 in number, with virtually statutory force, derived from practical ex-
perience and covering even remotely possible eventualities. With a high
degree of awareness of responsibilities to the public, and the increasingly
intensive use of track and equipment, operators are well aware of the ‘ripple
effect’ of any incident snowballing delays down the line. The containment of
the consequences of delay is an accepted part of the art of operating the
service.

Figure 8.1  The driver’s work station in a typical steam locomotive. A small forward win-
dow, not visible from this angle, gave limited vision along the body of the boiler. Drivers
and firemen mostly leant out of the side opening to look ahead (By courtesy of British
Railways Board)