The motor car

There are now over *[700 million]7* *[motor vehicles]1* in *[the world]16* - and *[the number]7* is rising by more than 40 million each year. [*The average distance driven by car users is growing too - from 8 km a day per person in western Europe in 1965 to 25 km a day in 1995*]2. [*This dependence*]2 on *[motor vehicles]1* has given rise to major problems, including *[environmental pollution]12*, *[depletion of oil resources]11*, *[traffic congestion]13* and safety. While [[*emissions*]21 *from new cars*]4 are far less harmful than *[they]4* used to be, [*city streets and motorways are becoming more crowded than ever, often with older trucks, buses and taxis, which emit excessive levels of smoke and [fumes]17*]3. [*This concentration of [vehicles]1*]3 makes air quality in urban areas unpleasant and sometimes dangerous to breathe. Even Moscow has joined the list of capitals afflicted by *[congestion]13* and *[traffic fumes]17*. In Mexico City, *[vehicle pollution]12* is a major health hazard. Until a hundred years ago, most journeys were in *[the 20 km range]8*, *[the distance conveniently accessible by horse]8*. Heavy freight could only be carried by water or *[rail]14*. The invention of the motor vehicle brought personal mobility to the masses and made rapid freight delivery possible over a much wider *[area]15*. Today about 90 per cent of inland freight in the United Kingdom is carried by *[road]5*. Clearly *[the world]16* cannot revert to the horse-drawn wagon. Can [it]16 avoid being locked into congested and polluting ways of transporting *[people]10* and goods? In Europe most cities are still designed for the old modes of transport. Adaptation to the *[motor car]6* has involved adding ring roads, one-way systems and parking lots. In the United States, more *[land]15* is assigned to car use than to housing. Urban sprawl means that life without a *[car]6* is next to impossible. Mass use of *[motor vehicles]1* has also killed or injured millions of *[people]10*. Other social effects have been blamed on the *[car]6* such as alienation and aggressive human behaviour. A 1993 study by the European Federation for Transport and Environment found that *[car transport]6* is seven times as costly as *[rail travel]14* in terms of the external social costs [it]6 entails such as *[congestion]13*, accidents, *[pollution]12*, loss of cropland and natural habitats, *[depletion of oil resources]11*, and so on. Yet *[cars]6* easily surpass trains or buses as a flexible and convenient mode of personal transport. It is unrealistic to expect *[people]10* to give up private cars in favour of *[mass transit]30*. *[Technical solutions]22* can reduce the pollution problem and increase the *[fuel efficiency]23* of engines. But fuel consumption and exhaust *[emissions]21* depend on which *[cars]6* are preferred by customers and how *[they]6* are driven. Many *[people]10* buy larger cars than *[they]10* need for daily purposes or waste fuel by driving aggressively. Besides, global car use is increasing at a faster rate than the improvement in *[emissions]21* and *[fuel efficiency]23* which *[technology]22* is now making possible. One solution that has been put forward is *[the long-term solution of designing [cities]20 and neighbourhoods]31* so that car journeys are not necessary - all essential services being located within walking distance or easily accessible by *[public transport]30*. Not only would *[this]31* save energy and cut *[carbon dioxide emissions]21*, *[it]31* would also enhance the quality of community life, putting the emphasis on *[people]10* instead of *[cars]6*. Good local government is already bringing *[this]31* about in some places. But few democratic communities are blessed with the vision - and the capital - to make *[such profound changes]31* in modern lifestyles. A more likely scenario seems to be a combination of [*mass transit systems*]30 for travel into and around *[cities]20*, with small 'low emission' cars for urban use and larger hybrid or lean burn cars for use elsewhere. [*Electronically tolled highways*]50 might be used to ensure that drivers pay charges geared to actual *[road]5* use. [*Better integration of transport systems*]51 is also highly desirable - and made more feasible by modern computers. But [*these*]50,51 are [*solutions*]50,51 for countries which can afford

[*them*]*50,51*. In most developing countries, old cars and old technologies continue to predominate.