

beneath the French *controlleurs*, so now only the Germans do double duty on the jointly manned trains. Pépy insists that TGV Est was not delayed by the squabbling, but even if the trains are running on time and not years behind schedule, as some critics claim, high-speed rail can't count on an easy ride.

Environmental issues can also cause delays. "On one TGV line," Pépy recalls, "we had to spend millions to build special viaducts

be attained safely, adding that the trend has been for yesterday's speed record to become today's operational speed. But it's clear that safety, environmental, and other considerations, including the law of diminishing returns (i.e., incurring ever-higher costs for ever-diminishing savings in travel time), will come into play. "You have to look at all the factors," says Pépy. "Gaining five minutes on the Paris-Lyon run might not be worth it. But if you can bring the Paris-Bordeaux route down under two hours, you may well rob airlines of their market share."

Happily for train operators, high-speed rail travel is not just about speed. It's also about comfort, convenience, and, increasingly, changing consumer habits. French architect Le Corbusier once asked why trains couldn't be like high streets with meeting places, libraries, cafés, and shops. Today's trains may not have all these facilities, but they are becoming more customer-friendly, both for business and leisure travelers. On many of the TGV's new duplex carriages passengers can choose to travel in "zen" or "zap" zones according to their mood (zen for the quiet life; zap for those more inclined to party). Conference areas are available

**SPEEDING IN COMFORT** Enjoying a book on the TGV to Strasbourg (left); en route to London

for business travelers, and parents with children will be able to play tabletop games or rent DVDs. Passengers get to walk around, talk on their mobile phones, enjoy more legroom, and pay no excess baggage charges. "Trains may take longer than planes on some routes," says Pépy, "but I like to think in terms of people gaining time on trains rather than spending it." He also sees evidence that train trips are becoming not just a means to an end but an end in themselves. "I want people to buy a train journey for the fun of it, as they would a DVD or a theater ticket."

for migrating frogs." By the time the TGV Est was completed, environmental and other pressure groups had forced the addition of 24 extra bridges, tunnels, and viaducts. In Champagne the line was diverted to protect some vineyards.

Resulting budget overruns mean TGV Est will lose \$140 million in its first year, despite being sold out for the first three months, and it probably won't break even for another five years. And if activists can cause headaches, so too can the laws of physics and economics. France is working on increasing operating speeds to 224 mph, but as Pépy and others concede, that will produce an increase in both noise and energy consumption. Tunnels are a particular problem, as air compressed by a speeding train races ahead of the locomotive and can burst out of the tunnel with a sonic boom. And the faster trains go, the more vulnerable they are to crosswinds. International Railway Association high-speed director Iñaki Barron points out that the TGV's recent record-breaking run of 357 mph shows that much higher speeds can

Call it the curse of the wish come true, but with the launch of TGV Est, the SNCF found itself overwhelmed by demand for seats. Its own forecasts had shown traffic growing by a greater rate than could be explained by people switching from air to rail. Was it just the low promotional fares, or were all those extra people aboard for the fun of it? Perhaps. After all, as Bombardier's Navarri explains, "Trains are very much part of Europe's DNA." If so, it's a good omen for rail's future and a vindication of the old Taoist saying that "the journey is the reward"—especially if it's at high speed. **E**

FEEDBACK [fortunemail\\_letters@fortunemail.com](mailto:fortunemail_letters@fortunemail.com)

**FRENCH ARCHITECT LE CORBUSIER ONCE ASKED WHY TRAINS COULDN'T BE LIKE HIGH STREETS, WITH MEETING PLACES, LIBRARIES, CAFÉS, AND SHOPS.**