Intra-industry trade is trade among countries with similar factor endowments and in commodities with similar factor intensities (Davis, 1995, p. 204). According to the HO theory, such trade must be nonexistent. Not so in the real world. Trade among countries in the European Union has been developing fast, and intra-industry trade much faster than the rest of the trade. Thus, countries are not only specializing in products of different industries but also in different varieties of the same commodity from within the same industry. What are the reasons for intra-industry trade? The reasons are many and they have nothing to do with factor proportions.

Before answering the question posed, it may be useful to note another failure of the HO theory. The standard model yields two important predictions regarding the relation between factor endowments and the volume of trade. The first is that, *ceteris paribus*, the greater the difference between the factor endowment ratios, the greater the volume of trade. The second is that ‘relative country size has no effect on the volume of trade’ (Davis, 1995, p. 219). These predictions may or may not hold in the real world. In other words, the HO model proves again not to have predictive value.

Economists seem to agree that empirically scale economies, product differentiation and imperfect competition are typically important (Helpman and Krugman, 1989, p. 133; Greenaway, Hine and Milner, 1995). Take again as a representative example the production of automobiles. Apart from expensive custom-made (or produced in small series) luxury cars, the production of standard cars must reach the volume of a few hundred thousand cars per year in order to be profitable. That implies three important consequences: (a) in an average country only a couple of makes can be produced as there is simply no market for more, (b) by efficient competition in the international market, the small domestic market can be enlarged (but that works in the opposite direction also) and (c) customers demand differentiated and not uniform product, and even the largest country in the world would not be able to supply all technical varieties imaginable. For instance, I drive Citroën because of its hydraulics. Yet I live on the slope of a mountain outside a city and...
I need four-wheel drive for the winter season. However, the car with the two characteristics mentioned is now not produced in the entire world. The Citroën managers probably guess – rightly or wrongly – that the market is too small in the entire world. In other words, even the world is too small for such a relatively simple technical combination.

Where the HO theory fails completely, the theory of Ricardian comparative advantage has no difficulty. The trade criterion for exports from France is

$$\frac{P_i}{P_j} > \frac{p_i}{p_j}$$

where $i$ is Citroën and $j$ is another commodity. This is the familiar criterion for inter-industry trade. We now consider the trade in cars. A car is a technical package of various characteristics such as speed, acceleration, security, petrol consumption, service consumption, traction, durability, design and some others. The package has its objective costs in terms of resources used in production. But different features will be valued differently by different consumers. Consequently the sellers will confront two decision variables, price and specification, instead of taking into consideration only price. The market structure will be monopolistic competition, either perfect or imperfect (Lancaster, 1980, pp. 156–57). Some Frenchmen will prefer driving Mercedes ($j$), even if it is no cheaper than Citroën, $P_j \geq P_i$. Since Mercedes is not produced in France, its price is mathematically infinite, $p_j = \infty$. The inequality is still valid, indicating that commodity $j$ (Mercedes) will be imported into France. This is now an intra-industry trade. Assuming that the two cars embody an equal amount of resources – whatever that means – international competition will equalize prices, $P_i/P_j = 1$. The ratio of domestic prices, one actual ($p_i$ for Citroën) and the other imputed ($p_j$ for Mercedes) will be less than one, $p_i / p_j < 1$. The old comparative advantage inequality re-emerges:

$$\frac{P_j}{P_i} < \frac{p_j}{p_i}$$

and Mercedes will be imported into France.

If the trade in cars is not balanced in values, some other commodities will be exported / imported. The import of German Mercedes – and vice versa for Citroëns – will proceed as long as consumer budgets (given preferences) can tolerate it. When the budgets