



**5.20** • Network types defined by route type.  
 (a) All-corridor (not a network). (b) All-cantilever network. (c) All-collector network. (d) All-connector network.

subject of practical interest. A more detailed presentation of the 'solution space' of the routegram is given in Appendix 5.

The connector and cross-connector streets are those with the highest relative connectivity. These give the typology its greatest 'breadth', yet these are precisely the types most likely to be discouraged in conventional engineering practice. This is because main roads with many side roads are discouraged, as are any roads with crossroads.

The route types may also be equated with network types (Figure 5.20). This demonstrates how the character of the network is directly related to the character of the constituent routes, and vice versa. This reflects the two-way nature of structure alluded to at the opening of the chapter.

## CONCLUSIONS

This chapter demonstrates that links and nodes are not the only ways of representing networks. It suggests that structural interpretation is not just a matter of analysing abstract topologies, but needs to take account of how those topologies relate to what is being represented. Different forms of analysis may be suitable for treatment of different scales of resolution or different modes of movement. This opens the way for those wishing to analyse urban systems – whether engineers or urban designers – to do so without necessarily having always to start from the conception of the system of streetspace as a 'transport network'.

Accordingly, a method has been developed that conceptualises streets as *routes* that form components of urban structure. Route structure analysis recognises structure in terms of how parts relate to wholes; in this regard route structure analysis directly builds in the relationship between minor and major routes as constituted by the continuity of routes through junctions. Route structure analysis therefore provides a means of analysing street networks that is alternative to either conventional transport network analysis or to space syntax – although the development of route structure analysis has learned from useful features of both. Broadly speaking, one could say that space syntax is particularly useful for bounded spaces and streets, route structure analysis for street and road layouts, and conventional transport analysis for road, rail, air and other transport networks.

Since routes can be directly derived from links, route structure analysis can directly plug into conventional transport-related practices. Moreover, the fundamental elements of route structure analysis – routes – are obvious elements by which networks are normally designed. That is, designers tend to consciously construct a network by adding discrete route sections (roads, paths, etc.) to an existing network structure.