Figure 2.6
The city allows the celebration of individual expression. Graffiti is a universal symbol of free expression, as this example from Barcelona shows. (*Source*: Guy Briggs.)

landlords, or where those driven off the land would attempt to make a new life. Cities have also long been associated with insurrection and rebellion, still in evidence today with, for example, annual international demonstrations against global capitalism (Ackroyd, 2000).

The city offers its citizens the freedom to associate with whomever they wish, the freedom to congregate in large numbers, to express political ideas and affiliations, and to express ideas (Figure 2.6) that may not be common to the majority. In Soho (London) annually, on a particular Saturday in August, a gathering of sado–masochists march through the streets, demonstrating, with cracking whips, outlandish leather and latex costumes, handcuffs and chains, their right to practise their personal delights, carefully escorted by politely attendant policemen. If these were attempted in a small town it would cause a riot. The city enables this and many other freedoms, which encapsulates the second primary driver for the existence of cities: *to enable freedom of association and expression.*

If the city's fundamental roles are to facilitate transaction and to enable freedom, city intelligence will be a measure of how well it does this. This leads to a definition of the intelligent city that goes beyond the concept of wired (or wireless) networked space. It stops short of defining the city as a sentient being, but it does gain something from the implication contained in the word 'intelligence'. The idea of the city as an organism, although it conjures up images drawn from science fiction fantasy, allows the elaboration of a definition of city intelligence

Figure 2.7
The built fabric of the city is only half the equation, without the social, cultural and political processes, the city's fabric is but an empty shell. (*Source*: Guy Briggs.)

far more complex than that referred to by measurements of digital infrastructure (Kane, 1999; Shutz, 1999).

Digital infrastructure is but one aspect of the city's physical fabric (Figure 2.7), which also includes its transport infrastructure, its utilities and its building stock. This is the city as container, a passive vessel. But such a view is one-dimensional. A broader concept of the city, derived from the sense of the city as organism, would consider it to be a network of systems, a complex structure of interwoven organizational forms. The city is both container and contained the sum of its fabric and the human processes that shape and are shaped by this fabric. The city is the intersection of its people, their processes and the physical place.

To draw an analogy with the digital world, the city's physical fabric is its 'hardware'. The 'software' that brings it alive and allows it to function is the collection of human organizational systems (Figure 2.8) that construct the city its social networks; cultural infrastructure; economic base and infrastructure; and institutional infrastructure, including political and planning mechanisms.

At its broadest level, city intelligence is the capability of this network of organizational systems to function effectively, and successfully, over a period of time. It is reliant on compatibility between the city's functional objectives (its 'business plan'), and the provision of hard and soft infrastructure to service these objectives. References to 'city intelligence' should measure how effectively the city (fabric, networks and systems)