> An hour lost by an air traveller is valued very generously, taking into account business overheads as well as salary, but an hour of sleep lost by those living outside the area of major impact is given no value whatever.
> (RIBA 1970)

The costing of noise annoyance or the value of quiet had proved difficult enough for the Roskill Commission, but when considerations of the conservation of wildlife at Foulness were introduced to the argument the whole decision-making process began to split at the seams. Cost-benefit analysis was clearly incapable of developing one equation to balance the profits of an airport against the loss of a totally unproductive but irreplaceable and, some would say, priceless sanctuary for birdlife. The Roskill report itself recognised the futility of attempting totally objective judgement in comparing the Cublington and Foulness sites. The choice was between the damage to the value of Aylesbury and the loss of a fine Norman church at Stewkley or the ruining of the Essex coastline and probable extinction of the dark-bellied Brent goose:

> As with much else in this inquiry there is no single right answer however much each individual may believe there is. For us to claim to judge absolutely between these views (the importance of conservation of buildings or wildlife) is to claim gifts of wisdom and prophecy which no man can possess. All we can do is respect both points of view.
> (Roskill Commission Report)

Even the costings of the more ostensibly easily quantifiable factors proved extremely debatable. For example the cost-benefit research team itself revised the assumptions on which total construction costs had been based. This change proved so drastic that Cublington moved from being the most costly to the least costly of the possible sites in this respect. The inquiry proceeded until it gradually became apparent that many of the fundamental underlying assumptions necessary for the cost-benefit analysis could similarly be challenged. The indecision which resulted at least in part from the discrediting of the technique led to many years of procrastination before an airport was finally built at Stanstead. Perhaps the last word here should come from Professor Buchanan, a member of the Commission who became so concerned that he published a minority report:

> I became more and more anxious lest I be trapped in a process which I did not fully understand and ultimately led without choice to a conclusion which I would know in my heart of hearts I did not agree with.

Recently there has rightly been more emphasis placed on the ecological implications of design decisions. Most of the energy

consumed in the developed countries is connected with the manufacturing and use of products. A very high proportion indeed is connected with the construction industry. Similarly, levels of pollution and atmospheric emissions are heavily influenced by the decisions of industrial designers, architects and town planners. All this leads us to want more information on the true impact of design decisions, not just at the stage of constructing but in terms of the full life cycle. Again legislation is increasingly setting, and then changing, limits on energy consumption and pollution. Most designers are probably very conscious of the need to improve our world in this way, but find it extremely difficult to incorporate findings and recommendations into their design process. The findings and data are seldom clearly expressed in a form which a designer can make sense of. Just as it is increasingly difficult to know what it is safe and healthy to eat, so designing in an ecologically sound way is surrounded by myths, campaigns and, sometimes, deliberately misleading data. In all this confusion, however, designers cannot usually procrastinate as did those deciding on the third London airport. They simply must get on and make the decision in as integrated and sensible a way as they can. Their decisions then remain very visible and easy to criticise as data becomes more clearly available!

Objective and subjective decisions

In the final analysis it seems unreasonable for designers to expect to find a process which will protect them from the painful and difficult business of exercising subjective judgement in situations where both quantitative and qualitative factors must be taken into account. The attempt to reduce all factors to a common quantitative measure such as monetary value frequently serves only to shift the problem to one of valuation. The Roskill Commission on the siting of the third London airport provided one further lesson of importance here. Designers and those who make design-like decisions which profoundly affect the lives of many people can no longer expect their value judgements to be made in private. Such large-scale design processes must clearly invite the participation of all those who will be substantially affected. However, we must not expect the design process to be as clear, logical and open a process as the scientific method. Design is a messy kind of business that involves making value judgements between alternatives that may each offer some advantages and disadvantages. There is