

Car park ergonomics

We all use car parks, and probably pay little attention to how they are designed. A car park is a mere adjunct of the need to travel, which in turn is an adjunct of what we do in life. But like any other system, it is possible to get the design wrong.

For many years a car park near where I live kept hitting the headlines in the local press with irate motorists who had been penalised for buying a ticket from the wrong machine. And they were just the tip of the iceberg – it had been several a day according to a car park attendant. The press articles triggered letters from the operators, who claimed that there was nothing wrong with their signs and it was all the motorists fault. Had people been trying to avoid payment there might have been some truth in it, but deliberately buying the wrong ticket?

To an ergonomist, repeated errors by many different people means a faulty system design, so I decided to take a serious look (being semi-retired I had the time). I approached it as I would any other assignment. I gathered information (mainly by walking around, looking at where things were and what people did, and talking to the attendant). I did a task analysis by thinking what car park users needed to do and what factors would influence how they did it. Then I looked at each of the design weaknesses that had emerged and thought what actions might be taken to improve things.

So far, so good. I understood the problem and I had plenty of ideas for solving it. But I didn't have a client. Having put in the effort, if I was to deliver any public benefit I had to persuade one, or ideally both, of the car park operators to do something. In case you hadn't guessed, the root cause is that what most people perceive as 'a car park' is in fact two car parks run by separate operators, and to get to one you have to drive through the other, past one of its payment machines. Years ago the Council operated it all, but the owner of one area decided to switch to a private operator.

The Council was more accessible (I can walk to the offices) so I went to talk through my ideas, and got an enthusiastic reception – after all this car park had been a thorn in their side for several years. But things took a long while to happen. The other operator was remote, and I didn't want to end up as piggy in the middle, so to avoid the hassle I left it to the Council to contact them.

The main problems I found included:

- Split operation with shared access road
- No clear indication on entry that there are two separate car parks
- Too many words on signs so no one would read important information. (The operators' responses to previous complaints had been to add even more words.)

- Obscuration by cars of many signs and a critical machine
- Confusing visual branding on some signs
- Poor visual branding of payment machines

My proposed improvements included:

- A simple visual indication of the two areas at the entrance
- A pair of visually branded signs at the junction between the two areas
- Greater prominence of signs to ensure visual branding was visible from all locations
- Better visual branding of the payment machines
- Clearer, rearranged information by the critical payment machine
- Possible relocation of some machines (though the cost would be higher, and there were pros and cons)

Not all of these were implemented. The Council put a dual branded sign at the junction, which led to a dramatic reduction of problems, and the other operator added more signs (with far too many words on them) but they are big enough and high enough to show the visual branding across the whole area. I predicted that though much reduced the problem would not be solved.

My motive for doing all this (free) work was partly the public good but also to demonstrate the value of ergonomics. So when the dust had settled I sent the story to the local press. My press release explained that repeated errors by many people are caused by poor design, and people should not be harassed for making innocent mistakes. It described me as a retired ergonomist, and the supporting notes included a definition and a link to the IEHF website. I was a little disappointed when the headline called me a 'designer' though 'ergonomist' still appeared in the text. The article quoted the responsible councillor as thanking me for my work, but disappointingly he described the changes as making the signage 'more in your face'.

A year after the new signs went up the car park hit the news again with letters from two irate motorists, confirming my view that the partial solution wasn't enough. Sensing the opportunity to get some first hand user experience I asked the paper to pass my details inviting them to contact me and I wrote a letter to the paper inviting any readers to tell me their experiences. Sadly none responded so I don't have any hard evidence about the residual failures modes.

On my website there is a fuller description of the problems and solutions, and you can download the full report. jaharrison.me.uk/Ergonomics/CarPark/