



## **Roller Coaster Design**

The design of Nemesis

### **Male**

I am just shaking. It's just an experience. You're here, there and everywhere. I just .. I looked once and that was about it.. all I could see was feet and..

### **Female:**

I was a bit nervous to start with. But as soon as I got on I was okay. But no, it did seem to be all over very quickly, that's the only thing.

### **Male:**

I'm still shaking.

### **Narrator:**

It's fashionable to be frightened. And the designers of rides know it. Successful amusement rides are big business. A market-leading ride might cost ten million to design and build. We're going to try to understand why they're built that way. A combination of engineering, psychology and physiology. Design starts two to three years before the rides are built, to allow for independent cross checks and for arguments between the different design responsibilities. But when Nemesis was installed, it was chosen to have this effect on the passengers. This effect on the supports. And to miss the cosmetic decoration of the theming by just this amount.

Even the fact that the initial ascent is a low slow haul is part of the game. It's more likely to build anticipation than an elevator.

Long before the first passengers joined a lengthy queue, the designers knew exactly how fast they would be travelling subsequently. And what forces they would feel at every stage of the following terrifying, delicious, scary and horrific ninety odd seconds.