

A Formula of Thrill

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What thrills you – winning that last-second bid on ebay? Or freewheeling down a steep hill on a cold Autumn morning? Or maybe, it's arranging a secret rendezvous...? If you haven't figured out what really thrills you, don't worry - a designer may already have worked it out for you.

Brendan Walker, a Research Fellow based at the Royal College of Art, has devised a mathematical formula for rating the experience of thrill.

The Walker Thrill Factor is based on the volatile dimensions of arousal (A) and pleasure (V), which fluctuate wildly during thrill. The formula can be used to identify moments ranging from the intensely thrilling (maximum TF) through deeply boring (zero TF), to physiologically arousing but deeply unpleasant horror (minimum TF).

Walker came up with the formula whilst making sense of a diverse set of interviews he'd conducted as part of an ongoing project, Chromo11, to design new thrilling experiences. Walker quickly realised that his formula could be used to scientifically rate any thrilling experience.

Whilst developing his research, Walker had spent months capturing the facial expression of riders at the fairground, exploring the relationship between the rider and ride. Walker asked participants to wear an auto-portrait machine he'd specially created. This detected the sensation of thrill through real-time sampling and analysis of physiological reactions. And as the rider experienced their thrill peak, so the machine fired its camera mechanism, taking a photo of the fairground visitor at exactly the moment of optimum thrill.

Walker worked with Media Lab scientist Dr James Condrón to develop the microprocessor algorithm at the heart of his machine. The algorithm identified the moment of thrill by analysing GSR bio-signals measured at the rider's fingertips, and searched for specific arousal signatures. The dimension of pleasure was simply recorded during a post-ride discussion.

The rider's harness, with auto-portrait machine attached, is designed to withstand forces up to 4g. Walker developed the equipment in consultation with the government's Health and Safety Laboratory in Sheffield.

Walker aims to develop his sensing technology and algorithm to become an industry standard, useful in rating experiences from roller coaster rides to horror films.

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