The formula to ensure the perfect 'cracker pull'

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Scientists have come up with a formula for the perfect way to pull a Christmas cracker.
A top physicist from the University of Surrey (UniS) is working with Tesco to help people to make sure that they win the cracker prize.

"When it comes to pulling, it's not size that matters, but technique." says Marcus Scarlett, Tesco Christmas Cracker Buyer.

"Our research shows that more people than ever want to win the cracker prize - sales of quality Christmas crackers are soaring as us Brits show our competitive streak at Christmas.

"The gifts you get nowadays are so much better than the plastic novelties

usually associated with crackers."

Dr Paul Stevenson from UniS says: "When it comes to ensuring you win the cracker pull – the answer is simple:"

$$p = \frac{s \times (10 - j) \times (10 - t)}{81 \times (A + 1)} \times \frac{n_y}{(n_y + n_o)}$$

P = the 'probability' - between 1 where you have no chance of winning and 10 for certainty that you will win the pull…

J = the 'jerk factor' - The ratio of how much you are pulling compared to your opponent. This ranges between 1 where you are keeping dead still - where as your opponent is doing all the active pulling, through to 10, the reverse situation, when you are tugging hard.

T = the 'twist factor' - This again ranges between 1 and 10. 1 means you are not twisting your end of the cracker away from the cracker body, and 10 is for the extreme situation when you twist your end to be right angles to the body of the cracker.

Ny and No = the total number of times you and your opponent respectively have won when pulling crackers.

S = the 'stare factor'- It takes into account how good you are in a

psychological battle with your opponent. Rate yourself from 0 if you are useless to 10 if you would always be able to stare them out!

A = the number of units of alcohol you have drunk compared to your opponent. - If you have drunk less or the same you can set A to 0.

Dr Stevenson continues; "The real trick is to let the opponent do most of the work, twisting and weakening the bonds at his end of the cracker - whilst your pull remains straight.

"Cracker pulling is a psychological battle too and this is factored into the equation. As is the likelihood that you or your opponent may have had a tipple or two… "

"If you have been drinking you had better hope that your opponent has too!"

Some facts:

* The Christmas cracker was invented by Tom Smith in 1847

* Tom got the idea from a trip to Paris where he discovered the ‘bon bon’ a sugared almond wrapped in a twist of tissue paper

* It was the crackle of a log as he threw it on his fire that gave him the flash of inspiration which eventually led to the crackers we know today

* The original early Victorian mottoes were mainly love verses

* The largest cracker in the world was made by the children and parents of Ley Hill School in Ley Hill, Chesham, Buckinghamshire in 2001

* The cracker was 207 feet - 63.1 metres long, and 4m in diameter

* It was made of: 200m 6" a 2" timber, 1/2 mile cardboard, 1300 bolts, 1000 nails, 500 screws and 1/2 mile of plastic tape

Source: University of Surrey