

THE BUTTERFLY EFFECT
(Inspired by the little book of this name by Andy Andrews)

1. A gorgeous butterfly on a lush leaf deep in the Amazon jungle decides for some unfathomable reason to flap its wings twice every second and not the normal once. This disturbs the air molecules which are slowly rising off the humid forest floor, and the air changes its pattern, setting off other nearby air currents to blow differently, and these catch the morning breeze and it too changes ... then later, thousands and thousands of km away ... a hurricane happens!

That's the "butterfly effect": The term, coined by Edward Lorenz, is derived from the metaphorical example of the details of a tornado (the exact time of formation, the exact path taken) being influenced by minor perturbations such as the flapping of the wings of a distant butterfly several weeks earlier.

*"In chaos theory, the **butterfly effect** is the sensitive dependence on initial conditions in which a small change in one state of a deterministic nonlinear system can result in large differences in a later state."*



2. The American Civil War. It is at a crucial state when the Confederate troops are set on capturing, taking, the important capital city of Gettysburg. The long line of attack realises that the far end of the defending Union troops is its weakest. This is a company made up of butchers and bakers, vets and school teachers; not a battalion of hardened trained soldiers. So the Confeds attack the Unionists, at a ridge whose

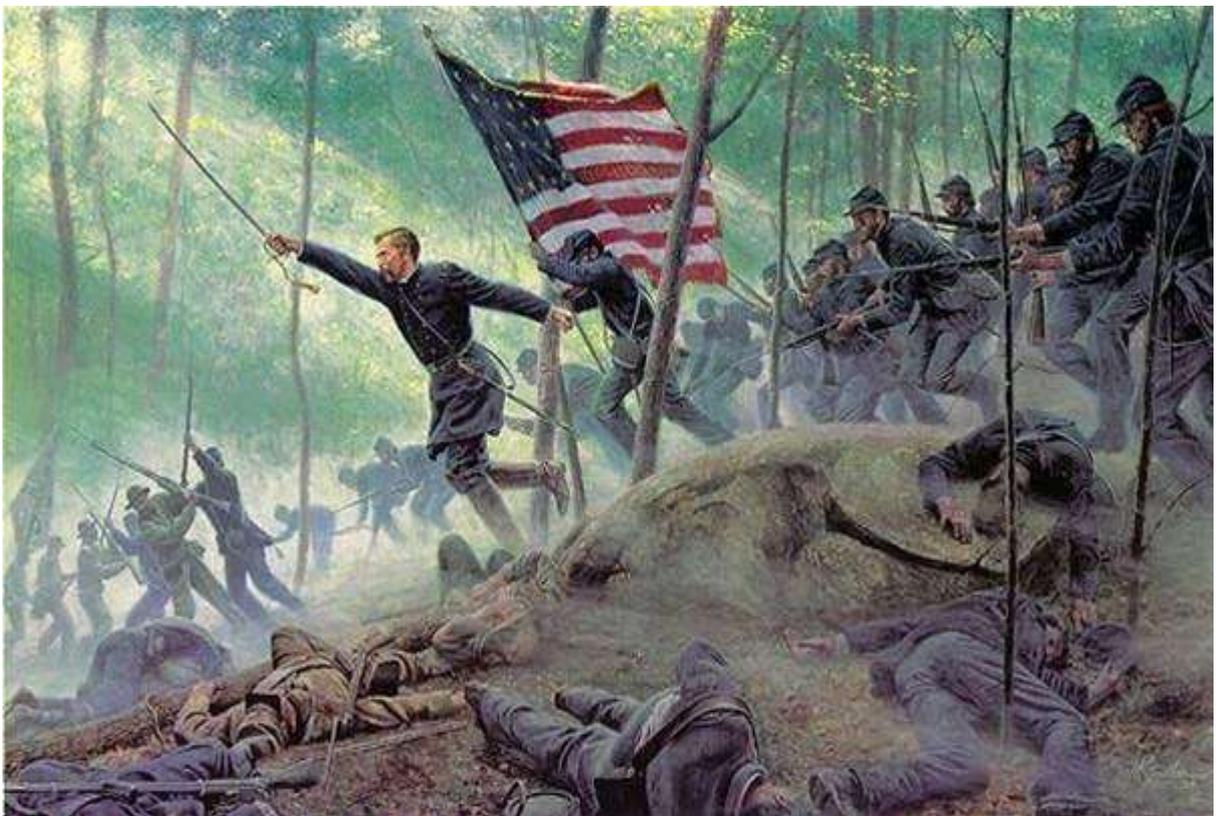
highest point is a hill called Little Round Top. If they get past the Union line, they will take Gettysburg and probably win the entire war.

The Confederates are making mayhem of the poor “Dad’s army” Union soldiers. They are being shot like crows in a mealie field. Eventually a low ranking Lieutenant Tozier finds himself the last officer alive, so he has to make a decision. The obvious (and sensible) thing to do is call “Retreat! Every man for himself!” but for some unfathomable reason in a split second he decides otherwise.

“Fix bayonets! Raise the flag! Charge!”

The attacking Confeds hear bayonets being clicked onto rifle barrels, they see the standard raised, and see a motley group of Unionists charging down at them yelling like crazy! The Confeds “realise” reinforcements must have arrived so they turn tail and retreat!

In due course reinforcements *do* arrive- eventually - but by then the tide of battle has turned. The Civil War is won by the Union and history has been made. One man’s **butterfly moment**, decision, possibly changed the world because the USA came into being.



3. In 1984 a young vet is gatvol of days of lofty lectures and chest-beating by important speakers at an international congress in Durban. He skips the gala banquet and takes himself to a quiet hotel verandah overlooking the Esplanade, palm trees, beach and the Indian Ocean. He sits at a small table and orders a beer. Other couples or groups are at other tables, enjoying the serenity and relaxed atmosphere. Then a vagrant appears, greasy hair, tattoos, dirty short denim pants and a rude T-shirt; he goes from table to table, a nuisance begging. The vet doesn’t want to be disturbed so when the tramp sits alongside him, for some unfathomable reason he pretends to be

deaf and ignores him. When he signals to the lout that he is deaf, the lout scampers away in embarrassment – or afraid it is an infectious condition!

The other people enjoy seeing the nuisance flee and give the vet a polite round of applause! The young vet has to decide whether to continue acting deaf or to admit to everyone that he was just putting it on.

The **butterfly flaps its wings** and he continues his charade. He is given free beer and free food by the other guests, and he adds to his act by pretending to feel the beat of the band's music with his hands on the table. The band realises this and later compassionately asks him if he has a favourite tune and he asks for "Sounds of Silence."

The young woman sitting at the closest table – with her male partner – bursts into tears. The vet staggers off, chortling and full of free beer and a thick juicy steak.

Many years later the same - now middle-aged - vet treats a dog for some visitors to his town. The visitors drive a very fancy vehicle with emblems and letters on the doors. He asks them about their business.

They explain: His parents were newly qualified medical doctors who once encountered a deaf man on a beachfront hotel in Durban!! They spent the rest of their working lives specialising in acoustic medicine, cochlear implant stuff, and formed a very successful business in that line. They and their business has helped countless hearing-impaired people throughout South Africa.



4. In the 1920s another vet, in a small town in the US mid-west, was sitting on a bench in the park eating his lunchtime sandwiches. A young mother and her little boy,

Tommy Bennett, sat alongside him. A bee sat on the vet's finger that had a bit of honey on it from his sandwich. The boy shouted a warning.

The vet was about to flick the bee away but in a flash, **a butterfly moment**, he didn't. Instead, the old man made the boy look closely at the bee and gave him an inspiring talk about the wonder of honey-bees.

Tom Bennett got his PhD in entomology at Texas A&M and set up Bennett's Honey Farms which expanded all over the USA. The huge enterprise transports hundreds of thousands of hives across America, pollinating crops today!

Moreover, Bennetts funds research and scholarships into medicinal and other uses of honey, propolis, beeswax etc. It is one of the world's driving forces to stem the devastating decline in bees all over the world.

(This story was shared with me by the grandson of the original mid-west vet over a couple of Budweisers one evening when I attended the AABP Congress in Albuquerque in 2015.)



5. In the late 1990s another vet - in Canberra, Australia - was about to send a noisy nuisance little girl out of the consulting room while he was attending to her mother's cat. Probably inoculations. He too had **a butterfly moment** and instead, picked her up and sat her on the examination table with their pet and explained in child's talk what he was doing, and why. She grew silent and the seed was sown.

Dr Becky Butterworth graduated from Sydney University and has been a prime mover in the universal use of animal therapy in dementia, depression and other human handicaps.

>
>
>

