

Pleasure And Pain Modeled With Math

Post by "waterholic" of December 2, 2023 at 9:36 AM

[Quote from Cassius](#)

Perhaps labeling (at least on the main chart) the directions of greater pleasure / lesser pleasure and greater pain / lesser pain?

Indeed, thank you. I wasn't sure if anything like this would have any value in the first place, so did not spend too much time labeling.

[Quote from Cassius](#)

Also, why does the numbering jump from 5.50 to 1000, and from 1.10 to 1000?

The values are of course arbitrary. The assumption here is that in our daily lives we experience pleasure and pain in the range of 0 to 3-4 of arbitrary units. But what happens to us when we experience extremes? Imagine a regular daily life interrupted by an extremely stimulating (negatively or positively experience). So the units here are given to demonstrate the extremes: the way "we feel" is calibrated to the environment. We can have a normal life in a modern city or all of a sudden be transported to a war zone. After a brief shock, we will continue to experience negative and positive stimuli in a similar range as before.

[Quote from Cassius](#)

Also: Is there a narrative explanation of what the "arctan" function does? Why are the charts not simple arithmetic?

This brings us to why we can't use simple arithmetic. Simple linear arithmetic functions are proportional and infinite. Let's say we have a function How we feel = Function of (how much pleasure we get). If the function is simple arithmetic, then there will be no limit to how good we feel: no amount of sex, booz and rocknroll will be too much. No amount of tiramisù will be too unpleasant. The arctan function is a trigonometric function that happens to meet the required shape - some benefit in the beginning, but a maximum limit to how well we feel no matter how much stimuli is applied. There are other functions like that, but arctan (inverse tangent) is the most convenient one that came to my mind.

[Quote from Cassius](#)

And last, on the "over time" chart, where do the input values come from per day. Presuming that you are just taking random numbers, could that be stated so as to make the chart more clear?

Yes absolutely, thank you. These are randomly generated numbers. To be clear, I don't believe such mathematics in practical life would be of any value or use - we are far better equipped to do the mental "maths" between pleasure and pain by default.