

NAME : RAJ PATIL
ROLL#: CS18BTECH11039

Assignment 1:

Describe 2 experiments that demonstrate any two of the rules(Good Gestalt/Pragnanz), but applied to non visual modality.

conjecture 1

Rule: Common fate/evolution of events

Sense: Touch/ Kinesthetic

Description:

consider when you are walking up or down the stairs and you happen to pull out your phone and check some messages. At first you may need to pay some attention to how you are walking, how each step falls properly on the corresponding stair and once given a couple of steps, you don't need to pay the same amount of attention and those subtle decisions are delegated to a slightly dumber, laid back part of your processing.

What actually are you processing as a group? :

- The periodic pressure your feet and skeletal structure experience when you take a step : left,right,left right.
- a periodic feedback loop from your muscles also assists the background-you (I don't know the correct term).

These events, happening in a periodic way i.e. evolving over time in a similar fashion are being grouped together. How can we say so...?

Just wait until you reach the end or the start of your climb (which you are unlikely to notice due to your phone) :- you probably stumble a bit, or at the very least, feel something was off about that last step. This is an anomaly in a time-series. Because you can experience the existence of an anomaly, you can justify the existence of a group of data points (previous pressure experiences). Start walking on flat ground again and you will again quickly delegate these similar decisions to the background-you.

conjecture 2

Rule: Continuity, prior experience

Sense: Hearing/ Auditory

Description:

consider,again..., that you're on a long drive on curvy roads amidst foggy monsoon mountains. You decide to put on some soothing jazz/ambient music and you are simultaneously conversing with your family. Now definitely, both these sounds(longitudinal waves) interfere and fall on your ear drums at the same time but you still are able to easily distinguish which one corresponds to which.

What allows you to do so ?

- Over time, you remember from where each sound originates: you have a latent representation of an origin sound vector of those sounds:- the stereo system of your car and your family's mouths; contributing to the continuity case.

- moreover, you probably don't need to rely on the sound vector for your family's voices given you are familiar with their nature (pitch, usual volume and so on) allowing you to build up on your classifications from above.

Hence, you are , somewhat, running a dynamic clustering algorithm wherein you group these sound vectors associated with accompanying information to their corresponding semantics.