Statistics of psychological observations: an introduction for cocky beach girls.

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Abstract

In order to further dessiminate my work on psychological interactions, we describe situations in real life which are prone to quantum mechanical effects. The cocky beach girls have now the opportunity to test such important things in life.

1 Introduction

As a child, entering a candy store, you are often presented with the choice between different kinds; tasting a specific kind i of candy, you can tell whether it is good with a probability p_i and bad with a probability $1 - p_i$. Standing in front of a whole series of kinds, ignoring the spatiotemporal setup (in either whether they are presented in a straight line, a slice of a circle, a square) as well as your personal physical condition (not particularly favoring the one closest to you), you might wonder whether the probability of satisfaction of your choice is still

$$p = \frac{1}{N} \sum_{i=1}^{N} p_i$$

and hence, the probability of dissatisfaction

$$q = 1 - p.$$

In other words, are statistically independent Bernouilli observables sufficient to describe the situation? Obviously, if there would be any kind of interference between the different products depending uponthe whole setup, something which can still be described by stochastic variables in principle, it would be desirable to have a thight interplay between kinematics and dynamics, the latter telling what the correct probability interpretation really is. This is the case for quantum mechanics, where “Hermiticity of the generator of motion” as an operator on a Hilbert space, determines the associated scalar product to procure for the right probability formula. This is just some techical statement which might be beyond your comprehension but you will slowely learn what it means. The important thing is that there is very little room beyond these technicalities to conceive an operational formulation regarding the necessity of a kind of spectral

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theorem (that is, the observable is characterized by a complete set of "disjoint" measurements). An operational formulation of physics regards the outcome of a *free measurement* where the observable represents the measurement from the point of view of the observer without really knowing all details. Competeness means that the entire system is characterized by *some* outcome of an experiment; no outcome means the experiment just did not take place. Indeed, technically, the imposition of no loss of information (or completeness) implies linearity or disjointness (classicality) and leaves only the choice of the associative division algebra $\mathbb{R}, \mathbb{C}, \mathbb{Q}$ as an ambiguity. Therefore, it is natural to wonder whether psychological observations satisfy this completeness assumption as well a complex quantal behaviour given that elementary particles do to an amazing accuracy. Indeed, one would expect an answer from a costumer to sales oriented questions. In this paper, we will describe some situations which could be important in sales to the extend that the shop setup might enhance costumer satisfaction without product alteration.

2 An example with cocky beach girls.

Given two magnificent female oriented hermaphrodites lying on a sandy beach called K and M respectively, J as a male oriented hermaphrodite seductor and N as an "impartial" observer. Describe the state space of K, M, J by $\mathcal{H}_s$ with s one of the aforemementioned letters with respect to N who is the ultimate "truth teller". N knows how to "'massage" those persons as to prepare them in a state Ψ_s, which is "rather well" determined (up to an arbitrary accuracy) by asking a complete series of compatible questions, after submersion of the subject s to a potential treatment. Given that Ψ_s must procure the answer yes to the observable horny for J, N might wish to consume with "hiem" some liquor prior to walking to the beach. Anyway, the question concerns happiness and is posed to J (K, M being irrelevant here) after contact with K xor M. N has all the statistics of that, on the same beach, rather comparable occupation and metereological circumstances such as sunshine and water temperature. Now, N has the ingeneous idea of putting K, M on a line parallel to the seashore next to one and another with an equidistant separation using a wind screen and J originally on a vertical line, perpendicular to the previous one, through the screen. This is important in order to treat both sheems on an equal footing.

By redefinition of the happy and unhappy eigenstates, it may be assumed that the evolution is a such that

$$\Psi_J \otimes \Psi_K \to \cos(\theta(\Psi_{JK}))|\text{happy}_{JK}\rangle + \sin(\theta(\Psi_{JK}))|\text{unhappy}_{JK}\rangle$$

and

$$\Psi_J \otimes \Psi_M \to \cos(\theta(\Psi_{JM}))|\text{happy}_{JM}\rangle + \sin(\theta(\Psi_{JM}))|\text{unhappy}_{JM}\rangle.$$

Now, considering the observable $\text{happy}_J = \text{happy}_{JM} + \text{happy}_{JK}$ given that it turns all around J, then assuming no pairwise interaction between K and M, the state $\Psi_J \otimes \Psi_K \otimes \Psi_M$ is assumed to evolve into a complex multiple of

$$(\cos(\theta(\Psi_{JK}))|\text{happy}_{JK}\rangle + \sin(\theta(\Psi_{JK}))|\text{unhappy}_{JK}\rangle) \otimes \Psi_M +$$
$$e^{i\theta_{KM}} i_{KM} \left((\cos(\theta(\Psi_{JM}))|\text{happy}_{JM}\rangle + \sin(\theta(\Psi_{JM}))|\text{unhappy}_{JM}\rangle) \otimes \Psi_K\right)$$

where i_{KM} is the interchange of K and M and θ_{KM} reflects a triple interaction JKM. In order to further determine the precise form of interference, it is mandatory to characterize the states Ψ_s and $|\text{happy}_{JK}\rangle$ in terms of tensor products of those. Here, it might be sufficient to start from a global $SU(2)$ invariant black and white theory to procure the Ψ_s and take for hapiness the amount of whiteness of J and K, M (indicating that J is only happy if and if both are).