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September 9, 2018

Abstract

In order to further disseminate 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 Bernoulli observables sufficient to describe the situation? Obviously, if there would be any kind of interference between the different products depending upon the whole setup, something which can still be described by stochastic variables in principle, it would be desirable to have a tight 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 technical statement which might be beyond your comprehension but you will slowly 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 “dis-
joint” measurements). An operational formulation of physics regards the
outcome of a free measurement where the observable represents the mea-
surement 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 in-
formation (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 quan-
tal 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 \( \mathcal{H} \), with s one of the aforementioned 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 \( \Psi_s \), 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 \( \Psi_s \) 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
meteorological 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

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

and

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

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

\[
(e^{i\theta_{KM}} i_{KM} ((\cos(\theta(\Psi_{JM}))|\text{happy}_{JM}\rangle + \sin(\theta(\Psi_{JM}))|\text{unhappy}_{JM}\rangle) \otimes \Psi_K) + \text{complex terms})
\]

2
where $i_{KM}$ is the interchange of $K$ and $M$ and $\theta_{KM}$ reflects a triple interaction $JKM$. In order to further determine the precise form of interference, it is mandatory to characterize the states $\Psi_s$ 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 $\Psi_s$ and take for happiness the amount of whiteness of $J$ and $K,M$ (indicating that $J$ is only happy if and if both are).