The Hypothesis of Transferred Schemes
A clinical approach to quantum mind

Antonia FR Boffa and Guido Del Prete

Abstract
The authors expose the hypothesis concerning the relationship between cognitive and electrophysiological characteristics of hypnagogic-like states and quantum events. On the basis of this hypothesis the wakefulness consciousness state is characterized by restricted perception of reality caused by perceptive and behavioral top-down schemes. Such cognitive schemes could be expression of hidden parameters to integrate with wave-function. They could be the reason for which it isn’t possible during ordinary awareness to perceive reality in states superposition and consciousness is sufficient cause of quantum collapse. Therefore the cognitive schemes could use nonlocal communications such as transferred potentials among brains to guarantee an objective perception. On the contrary, in some phases of hypnagogic trance, induced by hypnotic suggestion or deep meditation, it could be possible to get at this kind of perception and put in action suitable cognitive schemes to perceive reality in states superposition through typical deprogramming processes of hypnotic therapy. The authors assume that the network of cognitive schemes is an Informational Field influencing mind during wakefulness. On the contrary, during hypnagogic-like state a human subject could perceive better reality in states superposition avoiding its influence. So during hypnagogic state ESP phenomena occur. Nonlocal information models are proposed as a possible mechanism for these anomalous findings.

Key Words: cognitive scheme, collapse, entanglement, ESP, hypnagogic state, hypnosis, quantum mind, nonlocality, transferred potentials

Altered States of Consciousness and Nonlocality
Some Altered States of Consciousness, such as near death, hypnagogic or hypnopompic states, deep meditation etc, have been associated with reports of paranormal experiences (Sherwood, 2000; Palmer, 1979; Braud et al., 1975) such as out of body experience (Braud, 1975; Palmer, 1979; Sherwood, 2000).

Corresponding author: Antonia F. R. Boffa, M.D. Guido Del Prete, M.D. http://www.mindpoint.org
Antonia Filomena Rosaria Boffa, M.D. Via Micaletti, 4 - 80027 Frattamaggiore (NA) - ITALY
e-mail: anto.boffa@tin.it
1975; Palmer, 1979), Extra Sensorial Perception (Glicksohn, 1989, ) and anomalous findings on EEG (Grinberg-Zylberbaum, 1994; Todd Richards et al., 2003). Some characteristics concerning “out of body” experiences and Extra Sensorial Perceptions, such as non-temporality and non-locality, are in agreement with non-local phenomena that occur in quantum systems.

It seems that mind spontaneously stops to work according to dual logical way, typical of rational activity that obliges every mind to observe a collapsed world, so that the mind rises to superior cognitive levels without space-time and cause-effect schemes. These states are characterized by prevalence of alpha and theta rhythms on EEG (Healy, 1986). These remarks suggest the existence of a particular consciousness state, defined by specific electrophysiological parameters and peculiar cognitive aspects. During this state several nonlocal phenomena, such as OBE, transferred potentials, etc., are possible more than in wakefulness state. This state that connects the EEG and cognitive characteristics of the before described states is a hypnagogic-like state. According to our hypothesis hypnagogic-like state is required to enable the mind working beyond the cognitive schemes through a three values logic model that is also the logic of quantum physics. However, it is required that quantum coherence is realized, so that a non local phenomenon can express.

Consciousness and quantum collapse
Quantum coherence in the biological dimensional scales could occur only in a system characterized by practically null fluctuations of values of motion quantity. Such conditions, however, very rarely occur spontaneously in the electrophysiological brain activity during ordinary awareness. So, according to quantum isomorphism hypothesis, if mind is believed as a quantum system, in which observed quantum events and mental states are entangled (Germine, 1998; Stapp, 1993), cognitive apparatus during wakefulness consciousness state cannot perceive reality as states superposition as well as is described by quantum physics. States superposition is very well determined by Schrödinger wavefunction. Such equation is based on a three values logic model. Sufficient condition causing quantum collapse is conscious observation, that’s why is emphasized the “disturbance” role of rational awareness. Before observation a quantum system is in an uncertain situation of states superposition, which according to this hypothesis is not a logical-mathematical artifact, but a truthful description of reality.

Because of quantum collapse observer instead of to perceive a richest of contents reality, looks at only one of possible aspects of superposition state. So occurs changeover from uncertain reality, in states superposition (unconscious state), to another reality that is certain but poor of contents (conscious state) (Germine, 1998; Stapp, 1993), in which is in force a two values logic that runs on categories of space, time and cause-effect.

Human mind during ordinary state of consciousness is unable to perceive the states superposition, beyond cause-effect and space-time formalizations and, for such reason, cannot watch according to nonlocal way typical of OBE and ESP phenomena. The top-down schemes could be the cause of quantum collapse because they make a selection. The energy fluctuation in an electromagnetic state of quantum coherence can cause a quantum collapse (Germine, 1998). The waveform of the electromagnetic energy variation could direct to diverse kinds of quantum collapse (quantum computation). Each set of quantum collapses could be linked to a
determined perceptive schema. Every perceptive schema could be deleted or modified by hypnosis.

The cognitive schemes drive our awareness over features of scene that validate the internal model and they remove from conscious observation the components that are useless or contradicting the inner model.

An example of top-down cognitive schema could be the process that is on the basis of the scanpath theory (Stark Lawrence, 1997). Cognitive schemes could be carried by “transferred potentials” among brains (Grinberg-Zylberbaum, 1994) to guarantee objective perception. Visual evoked potential EEG experiments have indicated that neural signals can be transferred between isolated meditators (Grinberg-Zylberbaum, 1994). Functional magnetic resonance imaging (fMRI) methods were used in an other study as an effort to repeat these findings using an other measure of brain activity (Richards, 2003). Nonlocal information models are proposed as a possible mechanism for these anomalous findings.

The top-down cognitive schemes could represent within mind processes the hidden parameters, which could interact with the conventional parameters of the state vector and could explain quantum collapse dynamics (Stapp, 1993).

These mathematical interpretations of the cognitive schemes could be compared with the logical mathematical functions that are present in the theory of logical networks and computation. A theoretical implementation of these schemes could suppose, on the basis of these remarks, the existence of “cognitive software” based on non-local properties that regulates our perceptions and behaviours.

**Does a Universal Informational Field exist?**

A few scientists agree (Germaine, 1998; Stapp, 1993) on idea that quantum mind is not something positioned only in the individual brains, but in a global mind, as an informational field, covering the whole universe. We find a like concept in neoplatonic school of III century A.D. when the ancient Greek philosopher Plotino theorized the existence of “nous” as emanation of the One. In the twenty century the psychiatrist Carl G. Jung defined the personality as a part of “collective unconscious”. Germaine views global consciousness as One Mind and individual minds as components of this Mind (Germaine, 1998).

According to this hypothesis the informational field through cognitive schemes could establish as much components of superposition state must be led to conscious perception as those on the contrary must be excluded from awareness and cause collapse of the selected component. The objectiveness feature could be guaranteed through the changeover of information carried among brains by transferred potentials. Probably the substratum of the informational field is electromagnetic, considered the ability of electromagnetism to drive information. Likely experimental confirmation of every theory of “hidden parameters” occurs by the study of electromagnetic activity both at the level of brain or universe.

**The spectrum of consciousness**

It is reasonable to suppose the existence of a spectrum of the consciousness on the basis of the following remarks:
It seems that during particular consciousness states, such as near death, hypnagogic or hypnopompic states, etc., several nonlocal effects (as transferred potentials) occur so much that it is reasonable to assume the existence of ways of acting that are typical of state of quantum coherence into the brain functions. They are variable with reference to consciousness state on the basis of the Bell inequality curve.

Every consciousness state seems to be linked approximately to an EEG profile that is prevalently expression of the postsynaptic potentials.

On the basis of such remarks we can indicate the following hypothesis:

- A particular consciousness state is linked to a specific electromagnetic state.
- The electromagnetic state can have a non-local way of acting.
- Specific electromagnetic states seem to be privileged with respect to quantum coherence.
- Nonlocal way of acting during perception keeps the observed system in a superposition state.
- The output of defined electromagnetic cerebral potential and energy fluctuation in this state can cause a quantum collapse in the brain of the observer and in the observed system according to the hypothesis of isomorphism between brain electromagnetic activity and collapse of state vector in the observed system (Germine, 1998; Stapp, 1993).

Now we can deduce according to quantum isomorphism model (Germine, 1998; Stapp, 1993) that:

- The consciousness can be considered as a structured sequence of quantum collapses.
- The variations of quantity of motion and position of system components can be intended as a structured set of quantum collapses.
- The world of physical phenomena and the psychic processes that lead to consciousness are the same event: a structured breaking of the symmetry of Schrödinger wavefunction. Such breaking occurs when the system move away from values of Planck constant (Germine, 1998; Stapp, 1993).

The energy fluctuation in an electromagnetic state of quantum coherence can cause a quantum collapse. The waveform of the electromagnetic energy variation could direct to diverse kinds of quantum collapse (quantum computation).

Each set of quantum collapses could be linked to a determined perceptive schema. Every perceptive schema could be deleted or modified by hypnosis.

A proposal of clinical approach

In the circumstance of schemes activation the property of deprogramming typical of hypnotic state can be useful to remove such schemes and to perceive the reality beyond cause-effect and space-time settings.

Nevertheless, during altered states of consciousness, as hypnagogic state, the mind spontaneously stops to work according to dual logical way, typical of rational activity that obliges to observe a collapsed world, so to rise to superior cognitive levels without schemes of space-time and cause-effect correlation.

So, the hypnagogic-like state can be induced by hypnotic suggestion and in that state a human subject can be trained by a particular procedure (based on mind-body techniques) to
think according to a three values logical model (Del Prete, 2003; Del Prete, 2005).

Some steps of mind-body training:

- EEG monitoring (international system 10-20)
- Decrease of sensorial stimuli
- Hypnotic induction
- Deprogramming of spatial referents and cognitive schemes (using phrases as “Space is nothing, Time is nothing, You exist in eternity in a infinite space”)
- Programming new logical cognitive schemes (using phrases as “Concentrate! Watch you beyond the time… and the space…. In the eternity and infinite).
References


Lawrence SW. Top-down vision in humans and robots, BISC Seminar 24 April 1997, 310 Soda Hall.


