

Symmetry Dynamics in Leadership and Management

Js. Gilberto Concepcion G., Ph.D, P.E.

Department of Chemistry, Universidad Nacional Pedro Henríquez Ureña

JGC & Associates, Andres Avelino #16, Ens. Naco

Santo Domingo, Dominican Republic, jconcepcion@verizon.net.do

A symmetry model based on Molecular Orbital symmetry of neurotransmitters and their interaction with ion channeling effect is proposed that let us relate thinking coordination patterns to leadership and management conditions and how can they be used for human resources, management and leadership development in organizations. Heat sensitivity experiments and our model SED® Dynamic System Evaluation demonstrated that there exists a causal analogy in the thinking coordination pattern of individuals.

Keywords: symmetry dynamics, dynamic intelligence, molecular orbital, coordination thinking pattern, leadership and management.

Ion channeling effects and neurotransmitter interactions of the electrical impulse and chemical concentration in cell body surface in the neuronal flow are well known [1]. Velocity and excitability of the neurotransmitters are chemical and temperature dependence. Additionally, nuclear magnetic resonance imaging and other similar brain spectroscopy have been used to identify brain functions and interactions; however, these techniques have not answered the question of differences in thinking coordination patterns and consciousness [2]. Similarly, quantum mechanics has proposed mechanism for the electron interaction in molecular brain transitions, but its interpretation is again for general answer and can not take into account the individual thinking differences [3].

Many authors have intended to explain dynamic change as a scientific approach, but most of them have not related this leadership and management dynamic to measurable characteristics. One of the pioneers in this matter was Deming with his profound knowledge theory and the extension of Shewhart cycle for learning and improvement with the four levels of plan, do, study and act [4].

In *Creating Minds*, Gardner defines eight types of intelligences: logic, linguistic, naturalistic, interpersonal, kinesthetic, intrapersonal, musical and spatial [5]. Herrmann

has described four brain dominances, analyze, organize, personalize and strategize [6]. Forming a matrix that correlates the intellectual and emotional intelligence, we have classified these intelligences and dominances under the concept of dynamic intelligence in four levels, analytical, practical, social and creative [7].

Software was developed in order to obtain the interactions and combinations of the four intelligences and the transitions and symmetry between the states named Dynamic System Evaluations (SED®). Groups of four words are given that reflects analytical, practical, social and creative conditions. Two words are chosen that indicate your first and second elections. These answers are then arranged statistically in order to obtain the combination factor and the symmetry between the first and second choice. We have used the mathematical combination as described by the coefficients of the electronic densities in electron spin resonance technique and the effect of ion pair dynamic equilibrium having two states at the same time, free (α) and tight (β).

$$(\alpha) = (\beta) \quad (1)$$

Eight types of combinations were obtained: traditional, practical, balanced, curious, social, spontaneous, creative and entrepreneur, accordingly to the intelligence dominance (Figures 1 and 2). Additional four transitions were calculated accordingly to the symmetry of the factors: close loop or longitudinal, vertical, lateral and transversal (Figure 3). Some of these transitions have been previously explained by E. de Bono [8].

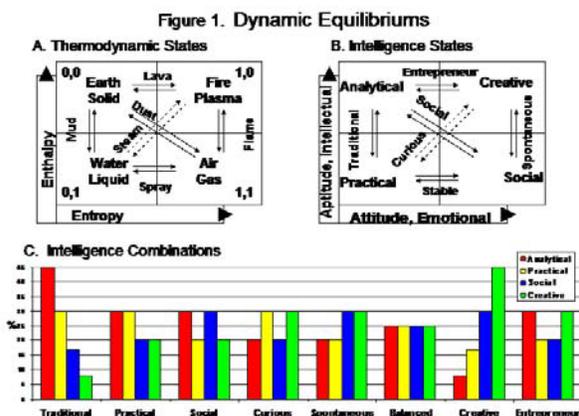
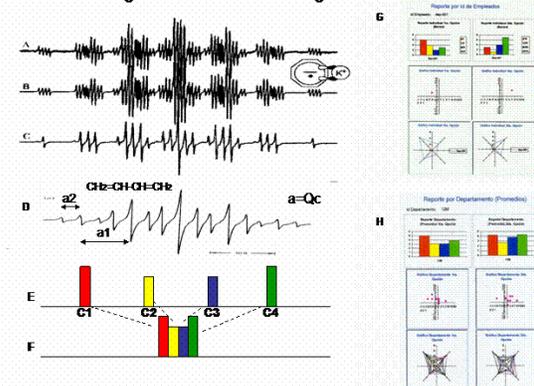


Figure 2. Relations of experimental quantum mechanics coefficients with the one for intelligence combinations using SED® model.



Most thinking coordination can be considered similar to a car motor functioning. As cylinders move due to fuel injection the velocity of the car increases. If we consider a simple neuron, Sodium/Potassium pump acts as the motor cylinder and the neurotransmitters as the fuel. This relation develops a chemical and physical interaction that propagates through all the nervous system. If we think of this phenomenon at the atomic nano level and consider a simple two ions system interaction, they can generate four possibilities of spin mixing. If we use the numerical binary combination as in computers for spin magnetic numbers, the four possibilities are: 00, 01, 10 and 11. The state preferred is the one with major probability dependent in the level were the transition takes place [9, 10]. We can also correlate the relation of the Sodium and/or Potassium with the neurotransmitter as an ion pair effect [11]. Additionally, the symmetry of the molecular orbital system of the neurotransmitter can also be analyzed in order to understand if these considerations are causal or casual.

The question to answer was how we can correlate these transitions with the intelligence combination found? There has been much enthusiasm in the study of brain dynamics related to quantum mechanics [3, 12]. However, just theoretical conceptions are considered and the use of any molecular model has not been explained to account for individualities. Any reaction or dynamic change that a molecule performs uses either the HOMO or LUMO orbital. Neurotransmitters are molecules composed of Nitrogen, Oxygen and Carbon atoms, mostly of the peptide like. It is well known ion pairing and solvation effects in these types of molecules [13]. In order to make our comparison simple we have chosen the Butadiene Molecular Orbital System, that is a linear conjugated four Carbon atoms, it forms the simplest delocalized MO system [14]. The symmetry of the orbitals is similar to the first four modes of vibrations of a guitar string or a simple particle in a box, or a very complex molecule [15]. We compare the energy and the symmetry interaction of the four Carbon centers, the HOMO, LUMO and the rest of the orbitals with the combination of four intelligences and to relate with what we define as symmetry dynamic leadership and management.

The Butadiene model has four energy levels with four atoms or units. The first two levels or orbitals are named bonding and the last two anti bonding orbitals, the HOMO and LUMO orbitals are the second and third respectively. The symmetry of these orbitals does not change with increase in conjugation. Each energy level is characterized by its wave function, symmetry and electronic density [16].

$$\Psi(N) = c_1\psi_1 + c_2\psi_2 + c_3\psi_3 + c_4\psi_4, \quad (2)$$

Where Ψ represents the wave function for a level, ψ is the wave function for a particular atom and c the coefficients. The electronic density, c^2 represents the probability of a particular atom and can be related to the domain of a particular intelligence (ψ), analytical, practical, social and creative in the dynamic intelligence model. Any reaction or interaction of this system occurs between the second and third level (Figures 3 and 4). In order to demonstrate this condition, we did heat sensitivity experiments to compare with the SED® results and obtained similar results as those reported using NMR imagine [17]. It was found that individuals that indicated less heat influences were those whose system resembled that of the HOMO and LUMO energy and symmetry. This experiment shows that this phenomenon is also

related to symmetry and thinking coordination conditions (Figure 5). Additionally, this experiment demonstrated that there exists a causal condition and not a casual interpretation in the coordination thinking styles.

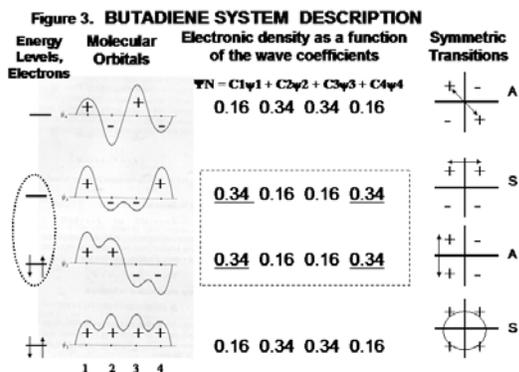


Figure 4. Spin dynamics Leadership and Management combinations

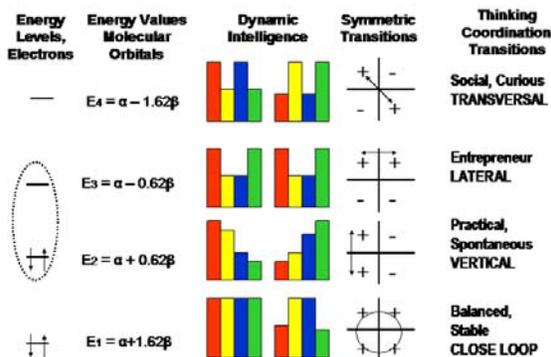
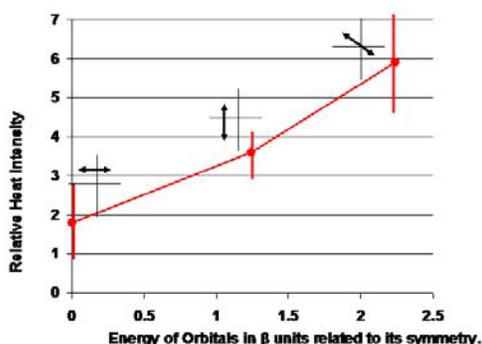


Figure 5. Relation between heat intensity and energy of orbitals in β units.



We have found that the entrepreneur model with a 30:20:20:30 approximation domain is the pattern presented by very successful individuals [18] no matter, gender, age, race, activity or hierarchy level in society or organization. It has the same configuration presented by the reacting MO orbitals (Figure 4). This condition is observed in 5

per cent of the population in a natural or acquired pattern. Using this type of person from an individual point of view or in group condition increases the possibility of success. We have correlated our studies with more than 35+ thousand persons and 100+ organizations and showed how interacting with these entrepreneur individuals we have been able to develop very successful organizations, improve the understanding in family business, choose world class athletes and teams, improve education and coaching relations, and have a better knowledge of management and leadership. Symmetry Dynamic Leadership and Management related to SED® and intelligence dominance can be an important tool for future of management, leadership, human and business development.

Finally, in order to increase the possibility of success, any person or organization has to develop a four step journey. Recognizing the type of coordination pattern they possess, becoming what we define a quality person and reaching the entrepreneur dynamic condition, and further achieve the level of entrepreneur management and leadership conditions. Those with the appropriate symmetry thinking pattern have the greater possibility for success.

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Js. Gilberto Concepcion is Professor Emeritus of Department of Science of Universidad Nacional Pedro Henriquez Urefia. He has a Ph.D in Physical Chemistry from University of Puerto Rico, post doctoral work at Syracuse University and management training at University of North Carolina. He is Principal Executive of JGC & Associates, fellow of the World Academic Productivity Sciences and fellow of the American Society for Quality.