Neuroeconomy and Emointelligence Equation (I=T*Eα *ε)

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Abstract: *We present a framework that incorporates both emotion and intelligence in an emergent field named neuroeconomy using emointelligence equation. Our concept ONE-H (One nature One Emotion One Health) is able to explain and improve theories of economic behavior. Our previous theories and research suggests that contact with natural environments improves emotional well-being and in the same way on economy decisions. This manuscript is intended to, study Emoeconomy, Emomarketing, political and social power, discuss and interpret the use of EmoIntelligence equation in the recent concept of Neuroeconomy $I_{NE}=T_{NE*}E_{NE}{}^{\alpha}*\varepsilon$ (I: Intelligence or Innovation, T: Time, E: Emotion, NE: Neureconomy, α: Factor and ε: coefficient). By applying the Emointelligence equation, we attempt to introduce an innovative concept called Neuroemoeconomy.*

Keywords: *Emotion, Intelligence, Neuroeconomy, Politic, Social, Power.*

1. INTRODUCTION

Neuroeconomics is a recent field that represents the confluence of economics, psychology and neurosciences in the study of Human decision making related to emotions and social or political power. In our point of view, it was common to consider social concerns, moral values, and emotions in economic activities (Smith, 1761; Edgeworth, 1881; Abdelmelek et al, 2018; Abdelmelek et al, 2019). Previous studies pointed out that people often care about others, have moral ethics and emotion fluctuation, and may have important economic impacts (I_m). However, most economists still routinely assume that people are motivated only by their own material self-interest and do not care about "social or political" considerations nor "moral" values. Other studies have shown that non-negligible proportion of individuals appear to have moral concerns that promote honesty correlated to good emotions (α>0) even when the material gains from dishonesty and negative emotions (α<0) outweigh the material incentives associated with honesty (Mazar et al, 2008; Abdelmelek et al, 2018). It is only relatively recently that a few papers have attempted to explain the notions of positive or negative emotions in economy. In this current manuscript, we present an original framework that attempts to combine both moral motivations and fairness considerations. Our model is based on two simple ideas.

The first idea is that individuals face a trade off in their utility function between their material individual interest and their desire to follow moral or emotion norms in decision-making. The second idea is that individuals or bankers want to maximize their own material payoffs. On the other hand, they would like to "do the right thing" by acting morally with positive emotions by using alpha between zero and +6 in emointelligence equation and Neuroeconomy $I_{NE}=T_{NE}*E_{NE}{}^{\alpha}*\varepsilon$ (I: Intelligence or Innovation, T: Time, E: Emotion, NE: Neureconomy, α: Factor, ε: coefficient). Interestingly, individuals, Directors, Bankers may attribute different weights to material payoffs and satisfaction derived from morality and emotion related to neuroeconomical concepts. In the other hand, behind our model is that morality or emotion is conditional in the sense that was influenced by the observation of others and by fairness

considerations (Abdelmelek et al, 2018; Abdelmelek et al, 2019). In our model, moral obligation is a combination of both an autonomous moral based on emotion fluctuation and a social and/or political influences or power ($I_m=\alpha*P*I$; I: Intelligence or Innovation, Im: Economic or social impacts, P: Social or political Power, α: Factor between -6 until +6). Consequently, our model is also close to One nature One Emotion One health ONE-H, it consider that nature influence positively emotion and moral motivation about right behavior in Human decision making.

2. A SIMPLE MODEL OF EMOMARKETING, EMOECONOMY, AND NEUROECONOMY

Here, we present a framework that incorporates both moral motivations and fairness considerations in a simple model of emomarketing, emoeconomy and Neuroeconomy.

Equation 1: Emomarketing equation $I_{EM}=T_{EM}*E_{EM}^{\alpha}*\varepsilon$ (I: Intelligence or Innovation, T: Time, E: Emotion, NE: Neureconomy, α: Factor and ε: coefficient).

$E_m=\alpha*SP*I$; I: Intelligence or Innovation, E_m: Emomarketing, SP: Social or Political Power, α: Factor between -6 until +6.

Equation 2: EmoEconomy or NeuroEconomy equation $I_{NE}=T_{NE}*E_{NE}^{\alpha}*\varepsilon$ (I: Intelligence or Innovation, T: Time, E: Emotion, NE: Neureconomy, α: Factor and ε: coefficient).

$E_E=\alpha*E*I$, I: Intelligence or Innovation, E_E: EmoEconomy impacts, E: Economic impacts, α: Factor between -6 until +6.

The interpretation of these equations is that a small increase in alpha values between -6 until +6 raises the EmoEconomy or Neuroeconomy impacts in a company or a country. This approach to formulate a simple model in Neuroeconomy field is quite efficient to study, correct or evaluate economic crisis.

This is, in essence, the idea behind the use of EmoEconomy in the interpretation of emoEconomical dissonance theory and how emotional dissonance can be reduced by exposure to nature and appropriate behavior.

This paper describes a theoretical framework that incorporates emotional considerations into one's preferences in a way that is intuitive and can capture behavior in individual or group decision domains (Abdelmelek et al, 2017; Abdelmelek et al, 2018; Abdelmelek et al, 2019).

Our approach models utility as a function of one's own outcome as well as a function of one's moral target or standard of behavior in interaction with nature. Given the model's ability to explain several stylized empirical and experimental results, we hope to stimulate an increased focus on how morals and emotion standards can help shed light on important behavioral tendencies. Many scientists from diverse scientific field have recognized the importance of contact with natural environments for physical and mental well-being but the economy impacts is poorly understood.

The discipline of neuroeconomics arose at the end of the 90s when mathematics solely became insufficient to the economists to explain the behavior of some "economic agents" or even to explain more global economic phenomena. The academic discipline of neuroeconomics continues to uncover new links between neurological processes and Human decision-making.

3. CONCLUSION

We conclude that Emointelligence equation $I=T_*E^{\alpha}_{*}\varepsilon$, could be used to better understand Human decision-making, using different innovative concepts as Emoeconomy, Emomarketing, Emoneuroeconomy.

REFERENCES

[1] Hafedh Abdelmelek, Amel Hanini, Ouajdi Souilem. Emotional Bank System and Intelligence: Emointelligence equation. J Neurobiology (2019) Pubtexto.

[2] Abdelmelek H, Hanini A, Saili L, Azzouz A, Nebil E, et al. Energy Management and Health: Implication of Nervous System Superconductor -Like Behaviour. J Health Med Informat. 2017 Oct; 8:289.

[3] Abdelmelek H, Hanini A, Azzouz A, Bouslama Z, Saili L, et al. Interpretation and Theories of Superconductor-Like Behaviour through Nerves. Current Opinions in Neurological Science. 2017 Oct: 149-156.

[4] Edgeworth F.Y., M.A., Barrister Application of Mathematics to the Moral Sciences. By -at-Law. London: Kegan Paul & Co., 1881. Pp. viii. 150.

[5] Maza N, Ron A. Dan A. The Dishonesty of Honest People: A Theory of Self-Concept Maintenance. Journal of Marketing Research 45(6) (2008)

[6] Smith, Adam (1761). Theory of Moral Sentiments (2 ed.). Strand & Edinburgh: A. Millar; A. Kincaid & J. Bell. Retrieved 26 May 2014.