



MINDFULNESS AND DISTAL INFLUENCE OF SOCIAL GROUPS

ALIODOR MANOLEA ^a

^a *Hyperion University, Faculty of Psychology and Educational Sciences
Department of Psychology*

Abstract

There are several levels at which distal influence action can be made to influence behavior, a more direct one- the “Emotionally Based Strategic Communications” as an appropriate communications strategy for “transforming negative dominant emotional maps into more positive ones”, and the other more subtle - psihoinformational distal influence. The cerebral connectivity studied in the experiment testing the psihoinformational distal influence was defined as the link, without physical mediation. The experiment consisted of exposing inducer subjects to visual stimuli with affective significance and simultaneous measurement of the effect of distal social influence on receiver subjects. There is a significant positive relationship between specific skills and the number of the brain connections performed by psihoinformational distal influence. This information transfer by distal influence can be done by any normal healthy subject, but the most effective ones are found to be those who have a specific training, namely mindfulness. Emotion has been identified as the distal influence mediator.

Keywords: *mindfulness, eeg, psihoinformational distal influence, brain connectivity*

1. INTRODUCTION

The concept of mindfulness is taken from the ancient techniques of Buddhist meditation, but today it is a technique of intentional concentration of attention on the present moment and the acceptance, without judgment, of the thoughts, emotions, and sensations that define us. Mechanisms through which mindfulness meditation techniques help alleviate symptoms are not well known, but evidence (Dickenson et al, 2013), suggests that mindfulness meditation may be associated

Corresponding author: Aliodor Manolea

E-mail address: aliodor@glide.ro

with changes in brain structure and functioning in the areas responsible for attention (Pagnoni, 2012, Dickenson et al, 2013), emotional regulation (Lutz et al, 2014) and self-awareness. Recently, with increasing scientific support, mindfulness meditation has become a self-contained therapeutic technique introduced in various therapies such as cognitive-behavioral psychotherapy (Marchand, 2012). With the help of mindfulness meditation techniques, it can be reached a deeper understanding of ourselves, learn to live now and here. In other words, mindfulness would be the state of mind that involves active attention, a clear perception of what is happening at each moment with the individual and with the environment, an intentional attitude to keep focus focused at every moment.

1.1 TECHNIQUES FOR INFLUENCING SOCIAL GROUPS, CRITICAL POINTS

The methods for influencing the dynamics of group behavior are operational in different contexts. There are several levels at which action can be made to influence behavior, a more direct one-Emotionally Based Strategic Communications (Ćosić et al, 2012) as an appropriate communications strategy for transforming negative dominant emotional maps into more positive ones, and the other more subtle - psihoinformational distal influence. Distal Psiho-informational Influence (DPsiI), was shown to be real and effective at the individual level or small groups of people (Manolea, 2015). Training methodology involves methods and techniques of psychology, validated in practice, among which are hypnosis, cognitive-behavioral methods, methods of transpersonal psychology and mindfulness. The ultimate goal of specific training is to achieve the mind control, as a means of manifestation of DPsiI (Manolea, 2017).

The common feature thereof is the use of emotions as a means of inducing a change in the behavioral pattern of individuals (Taylor et al, 2011), having as physical support the neuroplasticity process, which designates the change of neuronal network connections in response to stimuli of the same type (Manolea, 2017). These brain-acting mechanisms of both methods are governed by the theory of chaos, which involves bringing the group of people whose behavior is desired to be modulated, at a critical point that generates a bifurcation of behavior. This action allows, through a relatively insignificant maneuver, to act on the level of the unconscious, so that the group is influenced in a controlled manner (Manolea, 2015). In order to reveal the basic idea of chaos theory, that any dynamic system is characterized by a fundamental instability phenomenon called "sensitivity to the initial conditions", the metaphor of "butterfly wings" has become emblematic as the butterfly effect (Lorenz, 1993). Sensitivity to initial conditions determines the impossibility of making long-term predictions, being the engine of changing the status of any system. These changes of order occur in some critical points of system evolution, called bifurcation points (Prigogine and Stengers, 1984). This is, in short, a possible mechanism of social influence.

2. OBJECTIVES AND HYPOTHESES

2.1. OBJECTIVES

The objective of the study was to demonstrate that skills for distal influence exist even in non-trained subjects, while subjects with a specific training (mindfulness) have better performances in the practice of distal influence.

2.2. HYPOTHESES

The assumption was that there is a significant correlation between the subjects' skills and performance in the distal social influence. After applying the specific activation procedure of their own potentials, the subjects show greater efficiency in the action of distal psycho-informational influencing (IPsiD).

3. METHOD

3.1. PARTICIPANTS

The distribution of the 48 subjects was done in six experimental groups. Each two groups, one of the inducers and the other of the receptors, participated in each experiment. The first experiment was attended by 16 subjects aged between 18 and 23 ($m = 19.6$, $SD = 1.3$), students of the Faculty of Psychology of the University of Bucharest. The participants were randomly selected from the students of the first year and were unaware of the purpose of the experiment, thus implementing the first experiment, the unintentionally distal psycho-informational influence (IpsiD-*NgI1* and IpsiD-*NgI2*). In the second experiment, 16 subjects aged between 18 and 24 ($m = 19.8$, $SD = 1.5$) participated in the distal, Intentional Psycho-Informational Influence (IPsiD-*I1* and IPsiD-*I2*) students of the Faculty of Psychology of the University of Bucharest. The participants were randomly distributed to the two inducer and receptor groups, having knowledge of the purpose of the experiment. The third experiment was attended by 16 subjects aged between 22 and 56 years. A number of eight participating students of the Faculty of Psychology from the University of Bucharest aged between 22 and 30 ($m = 26$, $SD = 3.6$) were randomly selected from the students of the first year and were aware of the purpose of the experiment, thus implementing the experiment on Intentional Distal Psycho-information Influence (IPsiD-*IA2*), constituting the group of subjects without specific training. The other eight subjects (IPsiD-*IA1*), aged 41 to 56 years ($m = 48$, $SD = 4.01$), had specific training in attention and mental concentration.

3.2. INSTRUMENTS

The following instruments and software have been used in the study:

1. GDV Camera Pro, instrument produced by KTI Co.
2. Aura Video Station 5.1 produced by Inneractive Aura Video Systems, USA.
3. EEG MindWave - MindWave Mobile Headset

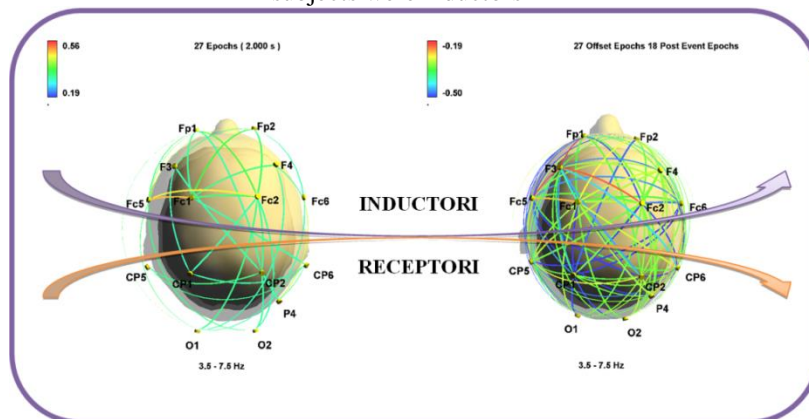
Data were processed in “GDV SciLab”, SPSS 20, EDFBrowser, MATLAB, EEGLAB, ASAEED and “MS Excel” software.

3.3. PROCEDURE

The experiment consisted of exposing inducer subjects to visual stimuli with affective significance and simultaneous measurement of the EEG signals as the effect of distal social influence on receptor subjects. Each experiment has had 25 sessions attended by groups of subjects distributed after Fibonacci's string. The cerebral activity of the subjects was monitored using a wireless EEG headset with one channel each. They communicated with a data acquisition system with synchronized internet time. There were eight spatially and sensory isolated subjects by means of a reinforced concrete wall. The brain activity of the induction and receptor subjects was measured, synchronized over time, and the data obtained was processed with several signal and data analysis packages: EXCEL, EDFBrowser, MATLAB, EEGLAB, ASAEED for extracting packed information in the EEG structure (Manolea, 2017).

The cerebral connectivity studied in this experiment was defined as the link, without physical mediation, between two neural networks belonging to two different brains. The method that has been highlighted is the one commonly used to show the connectivity of different neural networks belonging to the same system, namely studying the coherence between two EEG signals.

Figure 1 The amplitude of the achieved coherence, for the session in which the trained subjects were inductors



They achieved 14 connections (the green lines) with receivers subjects (Manolea, 2015, p. 159). A data set with a structure similar to that of figure 1 it was obtained, meaning the number of brain connections made by the subjects.

3.4. EXPERIMENTAL DESIGN

Defining variables

In order to collect the data, GDV Camera Pro and AV 5.1 were used. These devices generate a large number of data grouped into a considerable number of parameters, namely 39 for GDV and eight for AV5.1. Not all of these parameters can be interpreted in order to obtain useful information for defining the ability of the subjects to produce distal influence. In order to be able to make such an analysis, it was necessary to apply a statistical technique for reducing the number of variables, namely the factorial analysis, and the method of extracting the variables was the Analysis of the Principal Components (PCA). This method involves studying the correlation between the values of the measured variables, in order to associate a larger number of them on the basis of the correlation between them and the significance of the studied dimensions, so that we can obtain a clearer and simpler explanation of the availability (potential) of subjects with regard to distal social influence. The factors found in this way are called somewhat arbitrary, but with names that describe as meaningfully their significance in the experiment (Manolea, 2017).

An analysis of the principal components was performed based on the correlations between of the 47 variables. There were six groups of variables whose correlation coefficient was greater than 0.65. Thus, a number of six more suggestive variables have been introduced, which can more intuitively describe the groups of subjects in terms of the skills needed to practice IPsiD with maximum performance. These are Physical Availability, Psychic Availability, Emotional Availability, Psychic Balance, Mental Availability, and Spiritual Availability. In other words, a system of variables was created to describe different subjects in terms of the potential to produce distal influence.

4. RESULTS

4.1. FIGURES AND TABLES

Testing the hypothesis was done by applying the statistical method of studying how sets of scores of variables resulting from the factorial analysis are or not similar for the six groups of subjects of the experiment, ie by applying ANOVA variance analysis. After ANOVA was found to be statistically significant for the variables Physical Availability ($F(5)=9.307$, $p<.05$), Psychic Availability ($F(5)=3.862$, $p<.05$), Psycho-emotional Balance ($F(5)=4.278$, $p<.05$), Mental Availability ($F(5)=8.468$, $p<.05$), and Spiritual Availability ($F(5)=8.556$, $p<.05$), and not

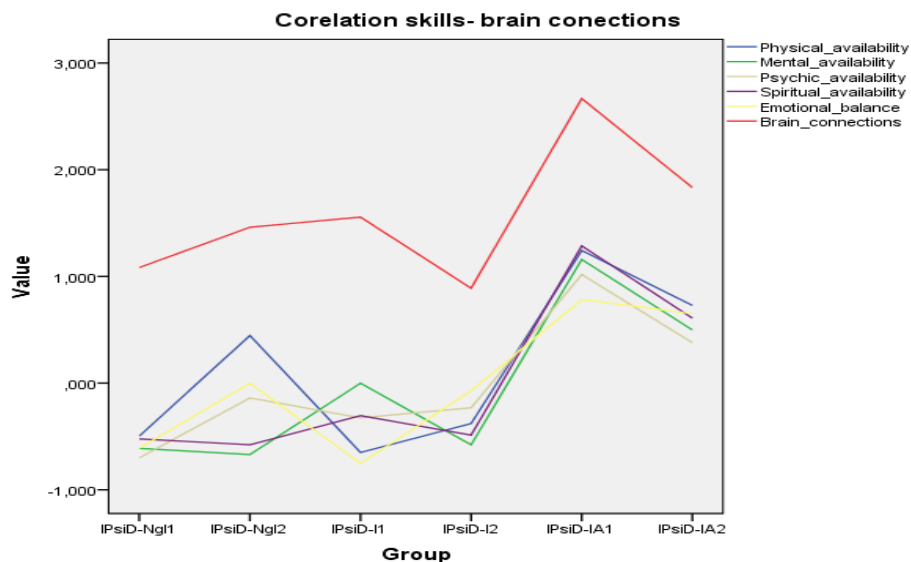
statistically significant for the variable Emotional Availability ($F(5)=1.706$, $p=0.15>.05$), an analysis of how these variables differed was done.

This was possible by performing a multiple comparison test, which shows that for the variables Physical Availability, Mental Availability, Spiritual Availability and Psycho-emotional Balance, differences between groups are statistically significant.

After checking that the data are normally distributed (Shapiro-Wilk and Kolmogorov-Smirnov test), the statistical analysis (Pearson correlation) also revealed that is a strong correlation between the results obtained in the IPsiD experiments (figure 1) and the distribution of the variables parameters characterizing the skills of the subjects in the field of distal influence Ipsid.

Thus, there is a significant positive relationship between the Physical Availability and the number of the Brain connections ($r=0.83$, $df=4$, $p<0.05$), the Mental availability and the number of the Brain connections ($r=0.93$, $df=4$, $p<0.01$), the Psychic availability and the number of the Brain connections ($r=0.91$, $df=4$, $p<0.05$), the Spiritual availability and the number of the Brain connections ($r=0.92$, $df=4$, $p<0.01$), the Emotional balance and the number of the Brain connections ($r=0.70$, $df=4$, $p<0.05$) (figure 2). The subjects with the higher Physical Availability, Mental availability, Psychic availability, Spiritual availability, Emotional balance get better results in distal influence activity.

Figure 2 Variation of the skills variables mean compared with performance in distal influence (red line)



These graphs show the same variation for all skills variables (Physical Availability, Psychic Availability, Emotional Availability, Psycho-emotional Balance, Mental Availability, and Spiritual Availability) indicating, in addition to the superiority of the IPsiD-A1 group (the trained group - mindfulness), and the superiority of the IPsiD-A2 group, that benefited from only a temporary psychological support. The support technique remains undefined, highlighting only the effect obtained, namely an improvement in distal influence IPsiD performance. It can say that the hypotheses mentioned were validated by the experiment.

5. CONCLUSION

EEG records can be a useful, viable and safe tool to highlight the distal psycho-informational influence. Extracting information packed into the EEG record structure is an activity that involves an adequate interpretation of the dynamics of neural networks involved in the subliminal transfer of information (Manolea, 2015). This information transfer (IPsiD) can be done by any normal healthy subject, but the most effective ones are identified to be those who have a specific training. Emotion has been identified as the IPsiD mediator. The cerebral connectivity between an inductor subject and a receiver subject, mediated by emotion is manifested in the theta band of brain waves specific to this type of activity, the phenomenon taking place without awareness from the receiver and sometimes from the inductor. The magnitude of the effect in this experiment is small (0.20) (Manolea, 2015), in agreement with other studies in the field, but considering what we are talking about, it is significant.

Received at: 1.09.2017, Accepted for publication on: 10.09.2017

REFERENCES

- Ćosić, K., Popović, S., Kostović, I., Judaš, M. A., Srblijinović, M., Vukšić, E. (2012). Extreme Political Attitudes and Emotionally Based Strategic Communications (EBSC), *Journal of US-China Public Administration*, Vol. 9, No. 6, pp. 637-653.
- Dickenson, J., Berkman, E.T., Arch, J., Lieberman, M.D. (2013). Neural correlates of focused attention during a brief mindfulness induction. *Soc Cogn Affect Neurosci*, 8: pp. 40-47.
- Falk, B.E. (2014). Mindfulness and the Neuroscience of Influence. In Amanda Ie, Christelle T. Ngnoumen, Ellen J. Langer (Eds), *The Wiley Blackwell Handbook of Mindfulness*. DOI: 10.1002/9781118294895 (pp. 387-403). Ed. Wiley Blackwell.
- Lorenz, E. N. (1993). *The essence of chaos*. University of Washington Press, p.179.
- Lutz, J., Herwig, U., Opialla, S., Hittmeyer, A., Jäncke, L., Rufer, M., Grosse, Holtforth M., Brühl, A.B. (2014). Mindfulness and emotion regulation-an fMRI study. *Soc Cogn Affect Neurosci*, 9:pp. 776-785.

Manolea, A. (2015). Brain to brain connectivity during Distal Psycho-informational Influence sessions, between spatially and sensory isolated subjects. *Procedia - Social and Behavioral Sciences*, ELSEVIER, pp. 250-255.

Manolea, A. (2017). *Stări amplificate ale conștiinței. Acțiunea beligenă și influențarea psihoinformațională distală*. Universitară: București.

Marchand, W.R. (2012). Mindfulness-based stress reduction, mindfulness-based cognitive therapy, and Zen meditation for depression, anxiety, pain, and psychological distress. *J Psychiatr Pract*, 18:pp. 233–252.

Pagnoni, G. (2012). Dynamical properties of BOLD activity from the ventral posteromedial cortex associated with meditation and attentional skills. *J Neurosci*, 32:pp. 5242–5249.

Prigogine, I., Stengers, I. (1984). *Order out of Chaos*. Bantam: New York.

Taylor, V.A., Grant, J., Daneault, V., Scavone, G., Breton, E., Roffe-Vidal, S., Courtemanche, J, Lavarenne, A.S., Beauregard, M. (2011). Impact of mindfulness on the neural responses to emotional pictures in experienced and beginner meditators. *Neuroimage*, 57: pp. 1524–1533.