

Essay

Depression between Biology & Mathematics: Does the Word Play a Role?

Massimo Cocchi*, Fabio Gabrielli & Grazia Gulino

Research Institute for Quantitative & Quantum Dynamics of Living Organisms,
Center for Medicine, Mathematics & Philosophy Studies, Italy

Abstract

This essay is intended to be a reflection on the meaning and intervention of the “right word” in the adjuvant treatment of psychopathology. The authors identify a logic which, starting from the etymological meaning and phenomenology of the "word", enters into the possibility of using the "word" as a modulator of the mental state of the person.

Keywords: Depression, word, biology, mathematics, psychopathology, phenomenology.

Many millions of people suffer from "depression" and misdiagnosis of this devastating disease. This allows the drug to invade the brains of these people, violating their balance and, not least, creating dangerous drifts that aggravate the pathological state. The incorrect diagnosis ranges between 40% (Bowden, 2001) and 70% (Tenth World Day for the Prevention of Suicide, Rome, 2012) and favors a consequently inaccurate therapy, often a harbinger of suicidal thought.

In this dramatic scenario that day by day recruits subjects who take drugs, based on rigorous scientific evidence, the conviction is emerging that a possible effective and widespread use of the "right word" can be combined with the "right drug".

In this regard, one cannot but refer to the etymology of the term “word”: from the Latin "parabola", which in the church's language indicates the allegorical narrative, and more specifically it refers to the parables of the Gospel, becoming the "word" for excellence, and again in Greek "parabolè" from "paraballo" that is comparison, it manifests the intent to illustrate a moral truth. Same goes for the term "drug", from the Greek "pharmakon" with its ambivalence of meaning: "remedy" and "poison".

Strong biochemical evidence, together with the use of a higher mathematical function, have allowed the creation of an effective and precise diagnostic system that allows to frame the psychopathology from the onset, where the psychopathological aspects of "major depression" and "bipolar disorder" fade into each other (Cocchi et al. 2008; Cocchi and Tonello, 2010; Benedetti et al. 2014; Cocchi et al. 2017).

* Correspondence: Prof. Massimo Cocchi, Research Institute for Quantitative & Quantum Dynamics of Living Organisms, Center for Medicine, Mathematics & Philosophy Studies. Department of Veterinary Medical Sciences, University of Bologna, Italy.
E-mail: massimo.cocchi@unibo.it

Although this solution, surprisingly, can allow to better target the therapy, the belief remains that the word intervenes with a mechanism still unknown from the biological aspect, however, probably attributable to mechanisms, even if difficult to measure, which could influence the temperature centrally.

And how can we not think in this regard of the anthropological value of the Sicilian dialectal expression "na parola conza e na parola sconza" (a word corrects and a word destroys). Is it not a "misplaced word" that in the course of a diatribe makes you lose your emotional control, sometimes leading the individual to make unconscionable gesture for a temporary, sudden, clouding of the psyche?

This is what happens in the tragedy of Medea, for example. In the same way, a "just word" can be a harbinger of peace, and in this sense the use of the word is interpreted as a gift from God. A reflection is required on the theme that sees word and drug in concert for the best success of the treatment and the relationship between doctor and patient.

In this sense, the word must have above all a tactile and discrete nature:

- Tactile, to the extent that touching, experiencing skin on skin, surface on surface, refers to that original self, expressive of the first moments of life, which is, in fact, linked to the skin (skin and brain are formed both in the ectoderm). Here, feeling welcomed thanks to a touch that is deeply, entirely bodily, suggests how feeling is at the origin of the relationship (between mother and baby, and then in future intersubjective dynamics).
- Discreet, since the word, especially in human practices of extreme fragility, as in the case of major depression, must never be invasive, overflowing, hegemonic, under penalty of its unproductivity, its absolute non-listening, even more so in depressive manifestations. If anything, it must be a welcoming verb, a womb imbued with body tenderness and gestures, a fruitful practice of pauses and caresses. The caress, in fact, by its nature: "[...]. It consists in not seizing anything [...]. It <search>, rummages. It is not an intentionality of disclosure, but of research: a path in the invisible. In a certain sense <expresses> love but suffers from an inability to say it. He is hungry for this expression itself, in a continuous increase of hunger (Levinas, 2006).

Received January 19, 2020; Accepted January 29, 2020

References

- Benedetti, S., Bucciarelli, S., Canestrari, F., Catalani, S., Mandolini, S., Marconi, V., Mastrogiacomo, A., Silvestri, R., Tagliamonte, M., Venanzini, R., Caramia, G., Gabrielli, F., Tonello, L., and Cocchi, M. (2014). Platelet's Fatty Acids and Differential Diagnosis of Major Depression and Bipolar Disorder through the Use of an Unsupervised Competitive-Learning Network Algorithm (SOM). *Open Journal of Depression*, 3, 52-73.
- Bowden, C.L. (2001). Strategies to reduce misdiagnosis of bipolar depression. *Psychiatr. Ser.*, , 52, 51-55.
- Cocchi, M., Minuto, C., Tonello, L., Gabrielli, F., Bernroider, G., Tuszynski, J. A., Cappello, F. and Rasenick, M. (2017). Linoleic acid: Is this the key that unlocks the quantum brain? Insights linking broken symmetries in molecular biology, mood disorders and personalistic emergentism. *BMC Neurosci* 18:38.
- Cocchi, M., Tonello, L. (2010). "Bio molecular considerations in Major Depression and Ischemic Cardiovascular Disease". *Central Nervous System Agents in Medicinal Chemistry*. 9: 2-11.
- Cocchi, M., Tonello, L., Tsaluchidu, S., Puri, B. K. (2008). "The use of artificial neural networks to study fatty acids in neuropsychiatric disorders", *BMC Psychiatry*, 8(Suppl 1): S3.
- Lévinas, E. (2006). *Totalità e infinito. Saggio sull'esteriorità*, introduzione di Silvano Petrosino, trad. di Adriano Dell'Asta, Sezione quarta 'Al di là del volto', B. 'Fenomenologia dell'eros', Jaca Book, Milano.
- Tenth World Day for the Prevention of Suicide, Rome, (2012).