



Is Neuro-Linguistic Programming hoax or hard science? A neuroscientific investigation into the theory

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Neuro-Linguistic Programming [NLP] was first introduced in the early 1970s with a publication by Richard Bandler and John Grinder “Structures of magic I and II”. Since then, NLP has gained immense popularity around the world. Bandler and Grinder have been travelling around the globe giving seminars and helping thousands of people change the way they perceived themselves and the world around them. Despite the fact that the number of publications devoted to NLP is high, the theory is criticised by psychologists for the lack of subjective scientific evidence. However, it appears that NLP has not been analysed from a neuroscientific perspective. Thus, reaching any objective conclusions regarding the theory is scientifically disallowed. This paper attempts to carry out a neuroscientific analysis of the core principles of NLP and their impact on our brain by making references to neuroimaging studies using such techniques as functional magnetic resonance (fMRI). The paper shows that NLP uses techniques influencing our emotional states that lead to a re-organisation of our brain’s function. Analogous techniques are used in neuroscientific research (Ochsner 2002, 2004a, 2004b; Hamann 2002). According to neuroimaging studies carried out by Schwartz (1996), Martin (2001) and Paquette (2003), a successful psychological treatment can cause changes in our cerebral circuits. It appears that NLP’s successful communication techniques can be correlated with phenomena, such as the Theory of Mind and mirror neurons (Gallese 1998, 2006; Lakin 2003a, 2003b; Umiltà 2001). Moreover, NLP uses the term ‘anchoring’ which denotes the brain’s ability to link or anchor feelings to external stimuli. Anchoring seems to be analogous to the unconscious learning processes which take place in the brain (Baumeister et al. 2007; Olsson – Ochsner 2007).

References:

- Bandler, Richard – John Grinder. 2008. *Struktura magii* [The Structure of Magic] 2 vols. Gliwice: Wydawnictwo Helion.
- Baumeister, R. F. et al. 2007. “How emotion shapes behavior: feedback, anticipation, and reflection, rather than direct causation”, *Personality And Social Psychology Review: An Official Journal Of The Society For Personality And Social Psychology*, Inc 11: 167–203.
- Gallese, Vittorio – Alvin Goldman. 1998. “Mirror neurons and the simulation theory of mind reading”, *Trends in Cognitive Sciences* 12: 493–501.
- Gallese, Vittorio. 2006. “Intentional attunement: A neurophysiological perspective on social cognition and its disruption in autism”, *Brain Research* 1079: 15–24.
- Goldin, Philippe R. – Kateri McRae – Wiveka Ramel – James J. Gross. 2008. “The neural bases of emotion regulation: reappraisal and suppression of negative emotion”, *Biological Psychiatry* 63: 577–86.

- Laborde, Genie Z. 1998. *Influencing with integrity*. Carmarthen: Crown House Publishing Ltd.
- Lakin, Jessica L. et al. 2003. "The chameleon effect as a social glue: Evidence for the evolutionary significance of nonconscious mimicry", *Journal of Nonverbal Behavior* 27: 145–162.
- Lakin, Jessica L. – Tanya L. Chartrand. 2003. "Using nonconscious behavioral mimicry to create affiliation and rapport", *Psychological Science* 14: 334–39.
- LeDoux, Joseph E. 2002. "Emotion, Memory and the Brain", *Scientific American Special Edition* 12:
- Martin, S.D. et al. 2001. "Brain blood flow changes in depressed patients treated with interpersonal psychotherapy or venlafaxine hydrochloride: preliminary findings", *Archives Of General Psychiatry* 58, 641 –648.
- O'Connor, Joseph – John Seymour. 2002. *Introducing NLP*. London: Harper Collins Publishers.
- Ochsner, Kevin N. et al. 2002. "Rethinking feelings: An fMRI study of cognitive regulation of emotion", *Journal of Cognitive Neuroscience* 14: 1215–1229.
- Ochsner, Kevin N. et al. 2004. "For better or for worse: neural systems supporting the cognitive down- and up-regulation of negative emotion", *NeuroImage* 23: 483–99.
- Ochsner, Kevin N. et al. 2004. „Reflecting upon feelings: An fMRI study of neural systems supporting the attribution of emotion to self and other", *Journal of Cognitive Neuroscience* 16: 1746–1772.
- Olsson, Andreas – Kevin N. Ochsner. 2007. "The role of social cognition in emotion", *Trends in Cognitive Sciences* 12: 65–71.
- Paquette, Vincent et al. 2003. "Change the mind and you change the brain: effects of cognitive-behavioral therapy on the neural correlates of spider phobia", *NeuroImage* 18: 401–409.
- Ramakrishna, Jayashree. 2005. "Rapport building and blurring identity", *Indian Journal of Medical Ethics* 2: 57.
- Schwartz, J.M. et al. 1996. "Systematic changes in cerebral glucose metabolic rate after successful behavior modification treatment of obsessive-compulsive disorder", *Archives Of General Psychiatry* 53, 109 –113.
- Umiltà, M. A. et al. 2001. "I know what you are doing: A neurophysiological study", *Neuron* 31: 155 –165.