

## **Research on Neurobiology of hypnotic trance and hypnotic phenomena**

A recent fMRI imaging study conducted at Stanford University School of Medicine, led by David Spiegel MD, identified distinct areas in the brain of hypnotized subjects showing altered activity and connectivity (Jiang et al., 2016). Along with previous research that suggested (Deeley et al, 2012) the hypnotic state produces alterations in the default mode network (DMN), Spiegel's group found that high hypnotizability is also associated with a greater functional connectivity between two other neural networks: the executive control network (ECN) and the salience network (SN). They found both reduced activity and increased connectivity involving all three network, changes that characterize hypnosis. For the first time this study documented how heightened focused attentiveness, enhanced somatic and emotional control, lack of self-consciousness and dissociative states (all recognized characteristics or phenomena of hypnosis) neurologically manifest during hypnotic trance. Once elicited and combined, these hypnotic phenomena, among others, allow for the crafting of hypnotherapeutic approaches particularly well suited to the treatment of deeply imbedded, dissociated and emotionally disabling memories associated with both subtypes of PTSD. One of the distinct advantages of using hypnosis in PTSD cases is the hypnotic operator's ability to protect his/her subject when dealing with highly charged emotional memories. In that same vein, hypnosis also greatly accelerates rapport between subject and operator thereby contributing to positive treatment outcomes. Strategically, hypnotic trance offers a unique kind of altered psychological state in which the subject's awareness can be directed in ways necessary to bring about their therapy.