

# The Information Transmitted by the Verbal and Non Verbal Communication Modes on the Emotional States: Some Perceptual Data

Anna Esposito<sup>(a,b)</sup>,

<sup>(a)</sup> Dipartimento di Psicologia, Seconda Università di Napoli, Via Vivaldi 43, Caserta, Italy

<sup>(b)</sup> Istituto Internazionale per gli Alti Studi Scientifici (IIASS), Via Pellegrino 19, Vietri, Salerno, Italy  
e-mail: [iiass.annaesp@tin.it](mailto:iiass.annaesp@tin.it); [anna.esposito@tin.it](mailto:anna.esposito@tin.it)

## Abstract

Synaesthesia is a singular sensorial phenomenon (from Greek, *syn* = Together + *aisthesis* = Perception) where a sensation is produced in one sensorial modality when a stimulus is applied to another sensorial modality, as when the hearing of a certain sound induces the visualization of a certain colour. Such a phenomenon is one of the most intriguing examples of the crossing of sensory systems. We will love to say more about synaesthesia but this talk will not discuss on it. The word “synaesthesia” has been used here to introduce the idea of the cross-modal interaction of the sensory systems that mainly happen when we feel a given emotional state. In fact, in expressing our emotional states, it seems that we are trying to generate in our interlocutor a synaesthetic experience since he is receiving the information of our feeling through different sensorial channels, and this bring to the focus of the talk that will discuss on the amount of emotional information transmitted by the several communication modes. These modes are referred to as the verbal (the semantic content of our message) and non verbal (the gesture, the gaze, the tonal expression) modalities. From an engineering point of view a such transmission of the information content is redundant, since the same information is transferred through several channels. How much information about the speaker emotional state is transmitted by each channel and which channel play the major role in transferring such information? This work try to answer the above questions through a perceptual experiment that evaluates the subjective perception of different emotional states in the single (either visual or auditory channel) and the combined channels (visual and auditory). Results seem to show that, taken separately, the semantic content of the message and the visual content of the message bring the same information amount of the combined channels, suggesting that each channel performs a robust encoding of the emotional features that results very helpful in recovering the perception of the emotional state when one of the channel is degraded by the noise.