

Selling Through “Reflections”: Mirror Neurons and Anthropomorphic Advertisements

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It is well recognized that the brain is uniquely tuned to detect animacy automatically and that human infants start demonstrating this ability to preferentially track moving objects very early in life. By 18 months, a human child probably knows about ‘mental states’ (Pineda, 2005). Serendipitous discovery in this regard, of special kind of neurons in the F5 sector of the ventral premotor cortex (Rizzolatti, Luppino, & Matelli, 1988) of macaque monkeys, led to newer insights into the phenomenon. They have been termed the mirror neurons and they form a network involved in the automatic understanding of the motor acts performed by others (Rizzolatti, Luppino, & Matelli, 1988).

Refined data point towards an extremely complex function of this system. Two main cortical networks with mirror properties have been described in humans: the parieto-frontal mirror system involved in recognition of voluntary behavior, and limbic mirror system in recognition of affective behaviour (Cattaneo & Rizzolatti, 2009). It has been reported that observation of motor acts performed by others causes ‘subliminal motor activation’ (Fadiga, Craighero, & Olivier, 2005) in respective cortical areas in observer’s brain, in a way as if she is actually involved in the task, without inducing obvious movements. Called the “simulation theory”, it assumes that this ability enables the observer to “experience” sensations, movements and emotions associated with others’ acts as if they were her own (Cattaneo & Rizzolatti, 2009).

It has been hypothesised that this mirror neurons system is essential to the successful organization and functioning of human society; for ability to attribute mental states to others and predict their intentions and for “having a theory of mind” (ToM) (Cattaneo & Rizzolatti, 2009). This system has also been shown to facilitate ‘learning by imitation’, with an increase in the plasticity of the motor cortex (Catmur, Walsh, & Heyes, 2007) for such tasks.

We are witnessing a very interesting manipulation of this mirror neuron system in modern media, which is being flooded with anthropomorphic advertisements. They show a humanized representation of the product, and associate it with pleasurable audio/visual stimuli. When actors are shown to be using the products,

they are projected as being successful, happy or complacent. While watching these, viewer feels “as if” she is a part of the scene, with her motor cortex activated in a fashion which simulates her experiencing the phenomenon. Associated pleasures (soothing music, beautiful depiction of nature, feeling of bliss or being successful) are transmitted across media interface and are then integrated, perhaps unconsciously, with the product. Thus she “realizes” how beautiful life would be if she had the product, and repeated realizations on her part strengthens this association through Pavlovian learning and probably through modulation in brain plasticity. Gradually, product becomes an integral part of her daily well-being, and she decides to buy it. Thus the point is made, and the product is sold.

As the science becomes clearer to us regarding the perception of biological motion and so called “internal simulation”, we are now provided with the proverbial two edged sword. While on one hand this might imply a scientifically empowered evolution of advertising industry; this might also enable the multi-national companies to manipulate an unsuspecting viewer. How we use this insight is thus left to us.

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