

## Between neural networks and social networks: Between recognition and discrimination

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It is indeed a privilege to be asked to comment on Professor Thomas Pettigrew's article on the causes of prejudice and the psycho-social conditions for overcoming it. Pettigrew gives us in his article a clear summary of a several decades-long research study on conditions giving rise to prejudice, laying out the most relevant findings – ones that have survived multiple challenges – and their most successful applications.

In the spirit of furthering academic discussion on the topic, this commentary will attempt to remark on the author's model and its implications, outlining a viewpoint based on several different theoretical traditions and sources.

By way of focus, Pettigrew's model distinguishes between manifest and latent prejudice, taking into account three causal levels: structural, contextual and individual.

This being said, specifically how prejudice works and what its relationship is to stereotypes are two points that are not, in my opinion, sufficiently clear. Saying, on the one hand, that stereotypes answer to the cognoscitive level in categorically organizing information coming from social perception, and on the other hand, that prejudice refers to affective reactions towards the stereotyped object, does not respond to information processing processes and the manner in which the brain functions. Cognoscitive processing goes hand in hand with affective processing; that is to say, in order for each element of cognition to be evaluated there must be an element of affect. If we look at how the brain works, the formation of an element of cognition ensues from the activation of a neural system with specific intensities that permit linkage of specific neuronal groups; this activity implies a parallel restriction, constraint or inhibition of other neural sets or systems (Thagard and Kunda, 1998; Tononi and Edelman, 1998). This activation-inhibition process which assumes different amounts of

intensity refers to affective responses, which vary according to the level of consciousness, or how automatically the cognitions are formed.

Two consequences can be derived from this: 1) all stereotypes imply in turn affective responses of diverse natures. Only in this manner can social categorization processes be activated. All perceptions, evaluations and actions towards groups or people entail an attitude of attention, suggest variable response times, and evoke sympathetic nervous system reactions that imminently refer to affective reactions.

At this level, the difference between stereotype and prejudice is found rather on the threshold of consciousness and in the possibility or lack thereof of triggering attributive mechanisms that not only allow for constructing or reconstructing stereotype theories but also make it possible to grant meaning to affective responses – which stop being so in order to become emotions.

A stereotype can therefore be understood as a function of the relationship between the set of activated features and concomitant affective responses proper to a categorization process operating below the threshold of consciousness. Prejudice, on the other hand, would be the process of stereotyping that takes place above the threshold of consciousness, implying activation of mechanisms for causal attribution of the stereotype and a concomitant emotional response.

It is precisely at this point where socio-cognitive neurosciences intertwines with socially distributed cognition models (Ochsner and Liberman, 2001; Smith and Semin, 2004). This refers to the fact that the attributive process inputs are precisely the ideological discrimination systems present in a society that lead precisely to derogatory explanations. Said ideological systems are spread in the form of ingenuous theories in different types of communicative contexts, whether face to face or in the framework of mass communication. Neuronal systems and social systems interlink in a single social network for generating knowledge – a network in which affective and emotive processes are implied, as occurs in all communicative contact.

This said, how can we explain that at a socio-cognitive level, the justifying content of denigrating stereotypes is precisely certain ideological systems? The answer may come precisely from a basic evolutionary process of social categorization that allows not only for classifying people and human groups by features or attributes, but also for differentiating them from each other. Of interest is that this is a fundamental mechanism for both social recognition and exclusion or social discrimination. Both recognition and derogatory theories are assumed to be distributed communicatively in modern societies (Honneth, 1994); however, it is the dominant societal norms in any particular context that determine the prominent theory.

Two more points can be derived from these considerations of Prof. Pettigrew's article. The first has to do with the assumption of an authoritarian personality as a prejudice-sustaining explanation at the individual level. This personality presupposes different sets of attitudes and acquired features, the combination of which allows us to understand how the individual acts. Authoritarianism makes reference, rather, to a system of societal norms aimed at legitimizing social hierarchies and culturally constructed dehumanizing criteria (Leyens). In an authoritarian context, for example, different personality variations would allow for legitimizing said system of norms. To talk about an authoritarian personality is, on the one hand, to psychologize a social ideology, and on the other to incur in the risk of socio-biologizing cultural patterns.

The second point refers to the conditions for reducing prejudice through contact – conditions which have been clearly documented and stated by the author. The effect of contact can only be understood in the framework of the same categorization processes that form the basis for human organization in society. By means of contact, the mechanisms of prejudice stop operating, since the norms and theories that allowed for attribution of the outgroup's behavior have changed. The derogatory theories have been replaced by recognition theories; for this there has been a recurrence to mechanisms such as cognoscitive dissonance and inhibitory control as a result of changes in the conditions and communication content. The neuronal systems involved in the process of social perception would vary in both activation of the information nodes sustaining it and the associated affective reactions. The categorization process remains the same, but this time it works to the favor of social recognition.

## References

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