The Cognitive Nature of Prejudice:

Deconstructing Anxiety-Inducing Mediating Factors

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Introduction

Prejudice differs from stereotypes by involving rational or emotional judgment (Wright, & Taylor, 2007, p. 432). Stereotypes are mental categories that naturally arise from our dissecting perception, or straightforward: stereotypes are this dissection. Prejudice is constructed upon stereotypes, linking them to emotions or values by judgment. Whereas stereotypes appear to be an intrinsic feature of our learning process, prejudice involves volition and is thus subject to change.

The Nature of Prejudice

Following Vygotsky (1978), stereotypes are categorizing blueprints to mediate signs with tools, forming language as tool of tools in the internalization of higher psychological functions (pp. 52-57). Abstractions of language successively exclude direct sensation and thoughts without evidence, distinguishing beliefs by their acceptance based upon the ground that supports them (Dewey, 1910, pp. 1-5). Human cognition intrinsically creates stereotypes, as the co-evolution of human language and conceptual thinking operate on the generalizing formation of archetypes. Combining Dewey's (1910) theory on thinking with Festinger's (1954) theory of dissonances,

beliefs may be seen as thoughts whose mediated reflection results in consonance. Thus, reflection describes a process of sense-making that restructures one's perceptive environment (and thus beliefs) in accordance with one's cognitive context that is holistically constructed upon prior cognition (Festinger, 1957, pp. 18-31).

For prejudice to emerge, beliefs have to be enriched by emotions, as values of *good* and *bad* emerge upon comfortable or uncomfortable emotional content. Higgins (1987) links goal-driven behavior with an emotional spectrum between pleasure and anhedonia based upon discrepancy with internalized ideals. Similarly, prevention behavior resides between equanimity and anxiety based upon one's oughts or prescriptions. Thus, prejudice arises from prevention behavior, shading out-group relations via anxiety-inducing mediating factors (AIMF). Positive bias results as an inversion thereof (Allport, 1954, pp. 29-47). Typically, negative traits of out-groups are generalized to individuals, creating relative homogeneity, and positives accentuated in in-groups.

Situational Irrelevance of Prejudice

The situational irrelevance of prejudice may arise from several preconditions: (a) total absence of instances of a stereotype and loss of entitativity, (b) changes in perception that cause the reconstruction of stereotypes (group shifts, reassignment of meaning; Wright, & Taylor, 2007, pp. 434-437), (c) changes in anxiety-inducing norms and prescriptions or their relevance for beliefs, (d) exclusion of AIMFs (e.g. absence of authority figures), (e) deconditioning of AIMFs (cf. posttraumatic stress therapy), (f) cognitive shift towards promotion behavior (cf. Higgins, 1987), or (g) the cognitive deconstruction of AIMF and prejudice by mental bracketing (Derrida, & Caputo, 1997, pp. 31-48).

Prejudice is apparent in religious groups. Negative attitudes are held towards members of different religions, often homogenizing on extreme stories (cf. Islam and Islamists). This is especially true for religions whose prescriptions base on authority, where non-conformity appears as AIMF. Common features such as clothing or beards may serve as stimulus for devaluation of an otherwise unknown individual. Nations or races are confused with religious beliefs, for example, Arabs and concepts of Islam. Whereas prejudice arises reflexively, its deconstruction requires (nothing more than) continuing volitional effort. Discrimination is more difficult to overcome, as its subconscious residue is often interwoven with cultural habits. The freedom of religion, in inter-group contexts, may thus be transliterated to a right to prejudice.

This deconstruction of AIMFs strongly suggests a relation to basic, emotional processes in the brain. The famous example of Phineas Gage and research of post-traumatic stress disorder support this hypothesis (cf. Macmillan, & Lena, 2010). The brain circuitry involved appears to be tightly coupled to our biology and thus available to neuroscientific research. Affective experience by definition reflects changes in biology on the mind as awareness of an emotional state. Building upon biology, three subsequent constructions of prejudice can be made: (1) prejudice as a fight-or-flight response, (2) the idea of neuro-prejudice, and (3) the *différance* of social understanding.

Prejudice as Fight-or-Flight Response

The periaquaeductal grey (PAG) plays a role in the suppression of pain, and pain is an intense affective component, its role in emotion can hardly be argued. PAG may be the lowest of three mechanisms that are involved in the formation of prejudice with the highest degree of reactivity. What raises doubts about the role of PAG in the formation of prejudice is the absence of language. The PAG may modulate direct perception of threat by invoking involuntary

responses. However, it is not obvious how these basal reflexes shade higher, cognitive phenomena. There are two pathways that could mediate its role in the formation of prejudice.

PAG activation is feasible in sensorimotor activation as thoughts produce muscular tension and the perception thereof. The premotor cortex is active before a thought of motion becomes aware (Li et al., 2015). Hohmeister et al. (2010) describe PAG activation differences in children upon neonatal nociceptive input and a connection to the somatosensory cortex. Distraction appears to influence pain modulation with involvement of PAG activation (Valet et al., 2004). Thus, individual and situational differences are to be expected. This is consistent with Vygotsky's (1978) theory of learning that considers language to be internalized experience. Cognitive abstraction suppresses reactivity as understanding moves toward the initiation of behavior by inhibiting and postponing actual action. These findings suggest that cognition may never completely pre-date action as the voluntary component appears to be inhibitory and postponing reflexes. "Utlimate inhibition" may be propagated as the Yogic ideal that is said to come with a state of peaceful equanimity, supporting your initial hypothesis.

A second pathway runs via the autonomous nervous system (ANS), as the sympathetic nervous system is considered the fight-or-flight system. A relation between acoustic startle reflexes and fear conditioning in mammals has been shown by Götz & Janik (2011), opening a connection to acoustic phenomena and speech. Meditation or acceptance and commitment therapy attempt to liberate from reflexively following emotions, residing as self-as-context (Harris, 2009). Exerting ANS influence via meditative techniques may inhibit the reflexive experience of affect, involving the PAG as a low-level, central passage (cf. with care chakras; Maxwell, 2009).

Thus, PAG may play a basic role in the experience of emotion and emotional construction of prejudice from stereotypes, structuring our experience into the presence and absence of pain which subsequently shades all human cognition. As cognitive (stereotypical) activation of the PAG cannot be biological but has to be conditioned, there is a missing link between the cognitive, conceptual constructions and the actual emotional experience that still has to be explained. Presumably, higher-area brain plasticity matters. Even Phineas Gage has been said to make an astonishing, social recovery following his accident (Macmillan, & Lena, 2010, pp. 653-654).

Building on the idea of prejudice as a fight-or-flight response, another construction is attempted at the subsequent level of primal emotions.

The Idea of Neuro-Prejudice

The anterior cingulate cortex is usually attributed happy or sad memories (Barret, Pike, & Paus, 2004). In this article, emphasis shall be put on fear and its counterpart.

Panksepp (1998) introduced four reptilian rooted emotional systems (affective feelings): seeking (enthusiasm), fear (anxiety), anger (rage), and lust (sexual arousal). Later, he identified three mammalian adaptions: care (tender + loving), play (joy), and panic (lonely + sad). Likewise, Panksepp places seeking on the pleasure spectrum and panic on the loss spectrum, framing mania and depression as prefrontal cortex emotional disequilibrium of both, where the equanimous set-point has been displaced. This model is highly congruent with Higgins' (1987, 1997) ideas of regulatory focus. Seeking perfectly matches anti-fear. The seeking system "is typically active before the organism has formed detailed cognitive or perceptual representations

of […] objects […] molded by learning, it is active in anticipation of rewards." (Farinelli et al., 2013). Seeking is also the action necessary to get beyond prejudice.

Davidson (2012) distinguishes six emotional styles. Each may influence experience and expression of prejudice. In resilience, the left pre-frontal cortex (PFC) inhibits the amygdala (AMYG). So consequences of fear may differ between people, as PFC down-regulation of AMYG substantially differs. Some people are less likely to recover from fear-inducing incidents, and stereotype in this context of fear experience. Social intuition is low, when there is high AMYG and low fusiform gyrus activity (Davidson, & Begley, 2012, "The brain basis of emotional style"). People on this puzzled extreme may need to rely on prejudice even in face-to-face situations.

Context sensitivity is guided by hippocampus activity. Overly active hippocampi may overgeneralize fear, as known in post-traumatic stress disorder. Similar overgeneralization may produce negative affective experience of prejudice and may even occur when original stimuli are no longer remembered. This turns negative affect accompanying prejudice into a pathologic condition. Self-awareness is guided by insula activity. Hyperactive insulae may cause people to be overly aware of their affective states, seeing danger everywhere unless proven otherwise. This anxiety could diminish the tendency to challenge stereotypes. Challenging stereotypes may further be guided by outlook, where PFC activation maintains high levels in the nucleus accumbens, the brain's reward circuit. The duration of activation differs between people, making them more or less likely to further explore (particularly fearful) experience. Finally, attention may be selective or non-judgmental, as a consequence of high or low phase-locking of the PFC (ibid.). As being non-judgmental is at the roots of avoiding prejudice, the PFC-relatedness suggests that higher cognitive functions play a fundamental role in their cognitive construction.

Along the hypothalamic-pituitary-adrenal axis, cortisol may play a role in the action of the medial PFC, influencing the goal-driven, anhedonic spectrum (Putnam, Pizzagalli, Gooding, Kalin, & Davidson, 2008). Stress hormones may play a role in the likeliness to exhibit seeking behavior or experience an enthusiastic response upon seeking. These individual dispositions may contribute to the willingness to look beyond known prejudice and explore the richness of differences.

As these circuits modulate any emotional experience, they may be involved in higher cognitive functions. However, a taste of phrenology still calls for another construction based on social emotions. Therefore, it is time to investigate prejudice as an intrinsic function of human language formation in social contexts.

The Différance of Social Understanding

Emotions have evolved along with human socialization, constructing complex, social emotions like pride, embarrassment, shame and guilt upon more primal emotions like fear, happiness, disgust, anger and sadness. As social emotions need self-awareness, they appear to be individual constructions shaped by the complex developmental trajectories if their particular minds (cf. with care "Neuroconstructivism"; Karmiloff-Smith, 2009). They may thus be considered a basic form of language, resulting from a process of cognitive differentiation which French philosopher Derrida (1982) named différance. In the understanding of Saussure (1983) linguistic structure, which shapes understanding, is language minus speech. Similarly, emotional structure and understanding may be found in emotion minus expression and affect (ch. 2, "Invariability and variability of the sign"). Social emotions thus may be seen as cognitive process of social understanding by différance:

The denotative chain of language does never end. Every act of denotation (and thus connotation as cultural or emotional association) will at some point end in explanatory principles that are not further investigated, compare Bateson's (1987) outstanding metalogue on "What is an instinct" (ch. 2.7), link below. Explanatory principles share with prejudice that they produce statements aiming for belief (or mutual understanding) by their respective community without further investigation. As scientific understanding progresses, explanatory principles are challenged. As co-conduction of life progresses, overgeneralizations will have to be challenged by taking a closer look at single individuals, creating more refined understanding. In this sense, prejudice displays a "not yet" of cognitive investigation of phenomena (e.g. group), treating them as black boxes.

Interesting to consider is the act of expressing prejudice (which is discriminating), stating stereotyped explanatory principles as truths. There are several preconditions that serve this situation: (a) individual cognition does not (yet) extend beyond what is known by the prejudicial attitude, (b) self-reflection of prejudice as a phenomenon has not yet been cognitively constructed (i.e. persons are not aware that their generalization of the phenomenon is too coarse for the subject-matter considered), (c) self-reflection of prejudice is not available in the situational context (e.g. by cognitive regression induced by alcohol or biological regression induced by stress), (d) impulse control (inhibition) of the display of being knowledgeable about a subject fails although one has at least an idea of the coarseness of one's ideas. Interestingly, (d) may be triggered by a variety of circumstances. Western societies promote know-it-alls, generalizing knowledge of limited facts to impressions of expertism, paving the way to pre-judice (compare this humorous critique of "mansplaining"; Doyle, 2014). This competition for factual authority may affect group dynamics, particularly within hierarchical settings with the presence of figures of authority. They may be framed as an impulse de-inhibitor towards individuals by directive

communication. This behavior may be conditioned by education systems that practice reproduction over interpretation (Blanton, Wood, & Taylor, 2007, pp. 75-90).

Conclusion

Building upon emotions from a social perspective, social prejudice may be constructed as a cognitive phenomenon. Prejudice becomes an intrinsic feature of the différance of human social understanding: explanatory principles that shade “not yet”-knowledge and in any instance actively have to be challenged by the progress of human understanding. Thus, the denial of continuous learning and exploration equals to the reliance on prejudice.

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