LETTER

Oxytocin and intergroup relations: Goodwill is not a fixed pie

De Dreu et al. (1) presented a set of experiments exploring the effects of the neuropeptide oxytocin on implicit associations and moral reasoning about in-group and out-group members. Although their experiments were cleverly designed, their data did not clearly support their interpretation that oxytocin promotes human "ethnocentrism" (1).

Oxytocin has been shown to mediate social stress buffering and attachment behaviors in many mammalian species (2). In humans, oxytocin decreases stress and anxiety responses (e.g., attenuated hypothalamic-pituitary-adrenal axis and amygdala reactivity) and promotes various aspects of complex social cognition and social behavior, including trust and emotion recognition (3, 4). De Dreu et al. (1) unnecessarily oversimplified the effects of oxytocin by aiming their criticism at the straw-man viewpoint that oxytocin is an "indiscriminate love drug" or "cuddle chemical"—catchphrases from the popular press that we were surprised to see in a scholarly article. The authors suggested instead that oxytocin promotes "ethnocentrism" and could "trigger a chain reaction toward intense between-group conflict" (1)—politically loaded claims that are not supported by the authors' experimental data.

In the reported set of experiments, the most striking finding was that oxytocin did not change moral decisions regarding out-group members. In experiments 3–5, the authors found "no support for the hypothesis that oxytocin promotes out-group derogation" (1). In experiments 1 and 2, the authors interpreted results obtained from the Implicit Association Test (IAT) as positive evidence of the effect of oxytocin on "out-group disregard" (1). However, the IAT does not provide conclusive data about a person's views or beliefs (5). An equally parsimonious interpretation of the results of experiments 1 and 2 is that oxytocin simply enhances the cognitive availability of salient information in the social environment, such as widespread stereotypes (5). This alternate explanation aligns well with evidence that oxytocin can increase general sensitivity to socially relevant information (3).

As a direct consequence of its role in promoting social attachment, oxytocin can promote preferential treatment of specific individuals, such as one's offspring or partner (2). It stands to reason that these effects would be detectably, albeit more weakly, extended to more distant in-group members. However, attachment behaviors and in-group loyalty are not direct precursors to "prejudice, xenophobia, and intergroup violence" (1). Goodwill is not a fixed pie, and increased goodwill to in-group members does not necessarily imply any change in goodwill to out-group members. In fact, the authors' own evidence that oxytocin promoted in-group favoritism but not out-group derogation supports the idea that these two tendencies are distinct.

Future research could productively address whether neuroendocrinological stimulation, including acute administration of vasopressin or testosterone, might lead to out-group devaluation and under what specific conditions. Although we applaud the authors' commitment to furthering research on the neurobiological bases of intergroup violence, we have yet to be convinced that these bases are found in oxytocin.

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