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Human Vaginal Odors

The study by Doty *et al.* (Reports, 26 Dec. 1975, p. 1316) on human vaginal odors claims not to support "the notion that such odors are particularly attractive to humans in an in vitro test situation," since odors studied during all phases of the menstrual cycle showed mean estimates on the unpleasant side of the neutral zero point. The authors imply that the absence of pleasantness in the "out-of-context test situation" may be the result of cultural or learning factors, or the underdevelopment of man's olfactory system, or his lack of a functioning vomeronasal organ.

Although this research has an elegant methodology, and contextual factors are appreciated, it is inadequately conceptualized, since the investigators appear to tacitly assume that pleasantness of these odors is independent of the *state* of the judges. It is commonly experienced that a state of sexual excitement profoundly alters perception; for example, a tactile input which is painful in a state of sexual nonarousal may be quite pleasurable when experienced during a state of sexual arousal. Since the observers making judgments in Doty *et al.*'s experiment were apparently not sexually aroused, the authors' conclusion referred to above is hardly justified. This well illustrates that psychological science, however sophisticated, often requires grounding in the phenomenology of ordinary experience.

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We reported that the general absence of pleasantness responses to human vaginal odors *in our particular out-of-context in vitro test situation* may be the result of cultural or learning factors or man's comparatively undeveloped olfactory system or his lack of a functioning vomeronasal organ. We did not suggest, as Globus and Cohen "appear to tacitly assume," that such odors in other contexts would be perceived similarly, or that the factors mentioned by Globus and Cohen were the only ones potentially involved in producing our effects. The *opinion* of Globus and Cohen that hedonic responses to vaginal odors change as a function of sexual arousal provides an interesting hypothesis for future research. Unfortunately, no experimental data exist on this point, making their opinion pure conjecture at the present time. Examples of changes in another, quite different, sensory modality during sexual arousal cannot be taken as strong support for the efficacy of such a notion.

A sampling of a number of individuals' *opinions* (including our own) regarding the perceived pleasantness of vaginal odors in heterosexual contexts suggests a wide variety of experiences, presumably depending upon factors such as the partners involved, their ages, sexual proclivities, histories, and a host of situational variables. The salience of odor memory (*1*) and the close relationship of the chemical senses to emotional processes suggest the possibility of various types of odor conditioning occurring in human sexual situations. Aversions to vaginal secretions can be produced quite easily in hamsters (a species whose vaginal secretions appear to be sexually attractive to conspecific males) by pairing ingestion of the secretion with gastrointestinal illness (*2*).

As we are the first to admit, a study such as ours has many inherent limitations, particularly in the eyes (or noses) of readers who wish to generalize its findings to coital situations. We hope that our experiment and the opinions of Globus and Cohen will entice scientists specifically interested in the perception of vaginal odors in coital situations to perform in vivo experiments on this topic. We hope such individuals will use a variety of participants so as not to bias their findings with too small a sample of the frequently misleading "phenomenology of ordinary experience."

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