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**ANNOUNCEMENT**

**Recent Issues in the Cognitive Science Literature**

**November 13-14, 1992**

Papers related to the colloquium are invited. The main invited speakers are Patricia and Paul Churchland, UCSD. Maximum length: 35 minute reading time. Deadline for submission is **August 1, 1992**. For further information and submissions contact: Dr. Paul Tibbets, Dept. of Philosophy, Univ. of Dayton, Dayton, OH 45469-2260.

## Open Peer Commentary

Commentary submitted by the qualified professional readership of this journal will be considered for publication in a later issue as Continuing Commentary on this article. Integrative overviews and syntheses are especially encouraged.

### Just science?

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It was the second to last day of our kayaking trip, and as we peered out glumly from under the flapping tarpaulin at the pouring rain, the ocean swells, we knew we weren't going anywhere that day. "Well, as you can see," said Ilya (our fearless leader), pausing to clear his throat as he did before any official pronouncement, "as you can see, this will be a day of R, B, and F." We all looked puzzled. Silently, we each enumerated the possibilities. "You mean 'R and R', Ilya?" I asked. (He was, I had long since realized, a gentle soul, the kind of man who turns crimson at the slightest sexual suggestion.) "Ah, well, uh, no" he stammered. "You know, like, a tent day . . . a, um, day spent in the tent . . . Reading, Breeding, and Feeding!" he finally blurted. We all laughed, as much at Ilya as at the expression itself. Suddenly, Louise looked put upon. "Now why is everyone staring at us?" she demanded, for sure enough, four pairs of eyes had solidly fixated on the only couple in the group. "Oh, Louise," I said, trying to ease the situation, "it's nothing. Think of it as pure envy - you know, that we should all be so lucky." That seemed to do the trick - we all thought that was pretty funny. Then, as the general mirth trailed off, Ilya again cleared his throat, his eyes twinkling. This was it. I could tell. The revenge of the shy person. "Well, you know, Kathleen," he said, staring me dead in the eye, pronouncing each word slowly, "as a woman, there's something you should remember: *You do* have a choice."

Personal reminiscence

What is the nature of human sexual experience and what kind of explanation(s) do we need in order to understand it? This, we think, is an exceptionally difficult question, one for which there now exists but a hint of an answer. Take the story above, which is given to serve as a reminder of the complexity and subtlety of human sexual interaction. In that story, there were no "explicit" sexual acts - of intercourse, reproduction, or even courtship. In some sense, "nothing" happened. But of course, in another, broader sense, in the sense relevant to understanding human sexuality, much occurred - sexual events that hinged upon the complex sexual relations between members of that group, their moral and political views, their views about each other, and so on. What, one wonders, would fully explain that?

We do not purport to know the answer to this question, but one thing seems clear at the outset: Human sexual behavior, unlike that of frogs and snails, is complicated by two nontrivial properties. First, our sexual behavior is tightly intertwined with intentional mental events, with our thoughts about our partners, their beliefs and feelings, with our views about sexual practices, with our norms of moral behavior and so on. Our sexual feelings are not modular or "cognitively impenetrable" (as they say) in the standard sense. (Try, for example, to think of a "pure" sexual stimulus - one that, no matter what the circumstances, would evoke sexual arousal in a man or a woman, a

response unaffected by that person's various intentional states. What candidates might there be? Viewing a pair of breasts may be arousing to a man, but certainly not invariably so; among other things, who the breasts belong to often has a significant effect. The same can be said for any sort of sexual caress; what is arousing "all things considered," can be genuinely repulsive under the right conditions.) Second, in the course of sexual interactions, we interpret the physical acts of other people as pieces of behavior: We assign intentional descriptions to those acts. A penis enters a vagina - a physical act - but this, we know, can be many things. It might be an act of mutual passion, of attempted conception, of defilement, of adultery, of contrition, of sexual control, of why-not?-apathetic-boredom, of prostitution, . . . or any combination of the above. In interacting with others, we interpret human behavior, sexual and otherwise, not just as physical events but as acts endowed with meaning.

These two points are not, we take it, particularly novel, but they are crucial to deciding what kind of theory is appropriate to human sexual behavior. For one, we must set aside any behavioristic or quasibehavioristic forms of explanation and with them, the inherited terms of that tradition. For example, one cannot speak, as Thornhill & Thornhill (T & T) do, of "the circumstances of rape itself" or of the "environmental cues" that are detected by a man's "sexual information processing mechanisms," mechanisms that serve to "activate" rape behavior. Certainly this way of speaking ("environmental cues," "activation," and so on) is intelligible and appropriate in other contexts, such as when we explain how and why a moth follows a pheromone trail. There we can say, in physical terms, exactly what the "environmental cues" are and how the behavior comes about. Here, however, the same terminology amounts to no more than jargon. The "circumstances of rape" are *intentional* contexts, when a woman has an intentional psychological state of a particular kind<sup>1</sup> - when she *does not want* to have sexual intercourse - and this is a state that she can express in any number of ways, or can fail to express at all. Hence, if a man is to perceive the "circumstances of rape," he must necessarily *interpret* the woman's behavior (or lack thereof) as indicating *this* mental state - he must come to believe that she does not want . . . Needless to say, this is the kind of complex psychological process about which present neuroscience (or any other cognitive science) has little information. Certainly there is no physiological evidence of any "mechanisms" that "show special design" to interpret "rape circumstances" or to "activate" rape behavior; nor do we have any idea how such an interpretive process might work. In other words, such quasibehavioristic terminology is essentially empty in this context.

Second, if we wish to understand a specific piece of human behavior, we must be careful in deciding what class of actions we want to explain - what the particular act is an act *of*, given the motivations and intentions of the subject. A man puts his bank card into an automatic teller and withdraws \$400. This, we know, can be many things: an act of embezzlement, of fiscal irresponsibility, of generosity (he intends to send it to a charitable cause), of hoarding (he intends to put in under his mattress), of revenge (it is his wife's account), of theft . . . or again, of any combination of the same. How we explain his act will depend on how exactly the bank transaction is intentionally construed. This same principle holds for any explanation (evolutionary or otherwise) of sexual behavior: Rape, we reckon, is at least as intentionally complex as savings account withdrawal. For example, we know that (1) a central motivation for very violent rapists resides in the combination of the terror/pain of the victim plus a (perceived) control over her sexual response (a man who says to his victim: "Say you like it, cunt, or I'll cut your tits off!" has more in mind than reproduction); (2) rape often occurs during war as an act of revenge and defilement directed primarily against one's male enemies; (3) it is common for men who exhibit pathological jealousy to commit rape; (4) gang rape is usually

more about "being one of the boys" than about uninhibited sexual desire; (5) in recent cases of murder/rape (as opposed to rape/murder) the central reason for the murder was not to inflict pain but to have intercourse with a corpse. These acts, at least prima facie, are of many different types. What T & T have failed to establish is that all rapes have a common (adapted) psychological cause (one that arises out of reproductive interests) or even one cause plus a host of pathological expressions. They have failed to establish that rape is one kind of act.

Third, any explanation of human sexuality must contain a reasonable account of the complex interaction between intentional mental states and the human feelings of sexual arousal, sexual urges, desires, and dispositions. Now, classical philosophical theories of human nature from Plato through Kant cast this problem as a conflict between the various parts of the soul, in particular, between the faculty of reason or intellect, on the one hand, and "the passions" or feelings on the other – "cold" reason being charged with the task of reigning in, controlling or "educating" the animal passions. On this view of things, men's sexuality is seen as a constant and seething desire for sexual intercourse, one that the higher considerations of morality, self-preservation, and social sanctions just barely manage to restrain. Moreover, should those passions somehow come to be disinhibited, the views goes, we would see male sexuality laid bare – man's true and innate sexual desires. This classical account of the relation of "reason and passion" seems to be the one implicitly adopted by T & T. For example, they take the following as primary evidence for their theory: Experiments that are premised on attempts to disinhibit rape behavior; experiments that show that men will have erections in response to a depiction of rape if these subjects are told that they have consumed alcohol or that arousal from unusual sexual stimuli is normal, or if the sexual narrative depicts the rape victim as experiencing sexual pleasure; experiments in which men have admitted that they would commit rape if there were no possibility of social consequences, and so on.

We do not ourselves know how to explain the interweaving of sexual feelings/desires with belief – indeed, we are not sure whether this way of putting things starts us off on the right foot. It seems unlikely, however, that the inhibition of sexual response is the only possible effect of intentional states upon sexual processes: If there can be inhibition, why not enhancement – or redirection or even the creation of new sexual dispositions? One need only think here of the many genres of pornography available – kiddie, infant, Asian, amputee, "concentration camp," sado-masochistic, genital self-mutilation, necrophiliac, pregnant woman porn (not to mention the innocent shoe catalogue) – to make one wonder what, if anything, is not potentially an object of sexual arousal. And if our thoughts and beliefs can affect the very nature of our sexual/psychological dispositions, exactly what kind of psychological states does T & T's theory take to be the product of evolutionary adaptation? This is a crucial question, one on which the very coherence of their theory depends.

Even on the assumption that the classical account of reason and passion is correct, however, there is no reason to think that a disinhibition of a sexual response reveals the "true" product of selective adaptation. Consider the human motor system, for example, which works through a set of interconnected push and pull relations, through mutual inhibitory connections between the tensor and flexor muscles. Thus, in some cases of cortical damage, the tensor muscles become disinhibited and spasticity results. But this does not mean that there has been a selective adaptation for tensor rigidity, that spasticity is the "real" nature of human motor behavior. What was selected for in this case was the functional whole, the entire set of inhibitory and excitatory relations which, when taken together, form motor control. Similarly, we cannot infer that if the desire for nonconsensual sexual intercourse can be disinhibited from the fear of social

reprisal that the disposition to rape is the true result of selective pressure. This behavior may occur – but we cannot conclude that it was *selected for* unless we know something more about the general organizational principles of the system.

Although we have presented arguments against T & T's evolutionary explanation of rape, this does not adequately convey our views about the target article. We think, first, that this research constitutes bad science. For the reasons given above and for many others as well, the evidence does not justify the hypothesis.<sup>2</sup> Then again, we do not think that this is just bad science either. The hypothesis under consideration is that rape is a "natural" or evolved behavior, one that is "activated" by "environmental cues." Rape is treated, in other words, like any other naturally occurring phenomenon (say lightning); hence the goal of scientific research is construed as the identification of those conditions under which rape "strikes." "If you don't want to be hit by lightning, don't play golf in a thunderstorm" – this, it seems, could be the only practical social implication of the Thornhill view. Rape is explained as a phenomenon that lies outside the realm of moral judgment.

Most people, we trust, will find this an offensive conclusion – one that has to make a person wonder. We are not claiming, of course, that there are no patently offensive facts in nature (there are), or that science would be wrong to uncover them (it would not). Rather, if the legitimate scientific interests of a researcher lie within a morally sensitive area, such an investigation cannot pretend to duck the moral issues behind a pretense of "just doing science." If one wants to prove that genocide is an adaptive behavior or that the practice of slavery has enhanced societal fitness or that the rape of women by men is "natural," the very subject matter carries with it obligations – to examine one's own conscience carefully about the ideological motivations for selecting a particular topic, approach or hypothesis and to address the question with unusual scientific care and sensitivity. These things matter – and we cannot avoid treating them with respect.

#### NOTES

1. Or would have, were she capable of having intentional states at that moment.
2. For example: (a) the predictions do not follow from the hypothesis alone, but only together with auxiliary assumptions about past reproductive strategies that are equally as dubious; (b) there are no telling predictions, ones that we would not have expected to be true but for the hypothesis (would it not follow, we wondered, that a husband should find his wife *more* arousing when she fails to show sexual interest?); and (c) despite T & T's claims, the "natural history" of male sexuality is almost completely ignored.

### Evidence for an evolved adaptation to rape? Not yet

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We share the Thornhills' desire for greater understanding of men's (and women's) sexual psychology, and we agree that evolutionary theory is a productive framework in which to conduct this work. We believe, however, that the Thornhills' attempt to amass evidence to support a specific adaptation to rape is flawed by selective inclusion of data, misinterpretation of findings, and neglect of research that conflicts with their predictions.

The Thornhills assert that there is strong evidence that men are more likely than women to infer sexual interest by a potential partner when no such interest exists (sect. 5, para. 2). Citing the work of Abbey (1982) and Saal et al. (1989) to buttress