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The human sense of smell may be forgotten but it's not lost. And studies are showing that the effects of smell on feelings and behavior may be substantial. See story page 282. (picture courtesy of NOVA)

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SCIENCE NEWS OF THE WEEK

Homosexuality: Help for Those Who Want It

The sedate, chocolate-brown jacket of William H. Masters and Virginia E. Johnson's new book, Homosexuality in Perspective (Little, Brown & Co.), belies the controversy its contents are already beginning to generate. Fanning the debate is the star status of Masters and Johnson among sex therapists; much of what their latest research reports — particularly concerning the relatively "normal" sexual mechanics of many homosexuals - has been known or suspected for years and probably would spark little reaction had it been announced by lesser recognized social scientists.

But at least one of their major findings is revolutionary enough to stir up discussion and criticism all on its own. Masters and Johnson report surprising success rates in "reversing" or "converting" homosexual individuals to heterosexuals with the help of just two weeks of sex therapy and psychotherapy at their laboratories in St. Louis. Among homosexuals they selected and treated in the study between 1968 and 1977, Masters and Johnson report that just 33 percent of the 54 men and 40 percent of the 13 women failed to achieve heterosexual behavior. The failure rates are, the researchers state, "lower than the original expectation."

But those results are so fraught with qualifications and disclaimers that Masters and Johnson themselves are reluctant to discuss the findings in terms of "success." To begin with, they term their attempts to follow up on the progress of their converted patients after their twoweek treatment a "disaster area, statistically." Sixteen of the men and three of the women "have been lost to continuing communication with the institute," they acknowledge in their book. The reported failure rates include the "presumption" that four of these persons reverted to homosexuality at some point (nine others were known to revert to homosexuality after initially achieving heterosexuality following treatment). The subjects' lack of cooperation in follow up is primarily due to "fear of disclosure of past orientation," and not wanting to be reminded of the past, the researchers suggest.

But lack of sufficient follow up may be secondary to what some other behavioral scientists consider the study's more serious flaw, involving the type of persons selected for the homosexual group. Masters and Johnson refused treatment to 23 percent of the homosexual applicants because of the applicants' "insufficient motivation" to become heterosexual.

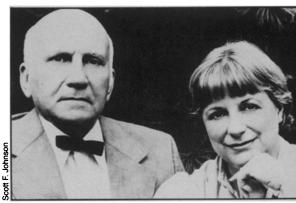
"If a person [homosexual] has reached

the decision to go to ... St. Louis" and invest the expense and time to combat their homosexuality, "then you've got a hopelessly biased, self-selected sample skewed in favor of success," says John Money, professor of medical psychology and associate professor of pediatrics at Johns Hopkins University Medical School. Most of those in that part of the Masters and Johnson study were "ripe for a change," Money says.

Money and other critics say that very few, if any, such motivated people could be classified as a No. 6 on the Kinsey classification of sexual preference. The scale ranges from 0 — a heterosexual with no homosexual experience - progressively through 6, an exclusive homosexual with no history of overt heterosexual experience. Masters and Johnson counted three 6s and six 5s among their male homosexual subjects and two 6s and one 5 among the females. The researchers report that only two of those intensely homosexual males and none of the three females failed to "convert" to heterosexuality.

"I would doubt very much that you could reverse a group of 6 persons in two weeks," says Judd Marmor, past-president of the American Psychiatric Association. 'Most of the people [homosexuals] psychiatrists deal with are in the 5 or 6 category and have profound inhibitions and anxieties about heterosexuality." At best, Marmor says, psychiatric therapy can reverse one-quarter to one-half of Group 5 persons who are "highly motivated, young [and] have had some heterosexual experience." The chances of reversing any Group 6 individual, or of finding many Group 5 or 6 persons who want to change in the first place are "very small," he says.

That persons classified as less strongly homosexual, in Groups 1 through 4 (the majority of study subjects), can revert to heterosexuality comes as little surprise to



Masters and Johnson: "Reversing" gays.

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Marmor or Money. Such individuals are "essentially bisexual," Marmor says. And if they are strongly motivated to change, "it's conceivable that some could give up homosexuality and become heterosexual." These homosexuals "always have heterosexual tendencies," Money says. "I know dozens of homosexuals who have managed to get into long-term heterosexual relationships without going to professionals."

Still, Money concedes, "no one can do sex research without sampling problems." He believes the basic difficulties with this and other studies go deeper, to the definition of homosexuality itself. "We've all fallen into the trap of defining a psycho-sexual problem as a sexual one," he says. "But when you get to know the patients, the key to the problem is not sex at all, but love." The totally, intensely homosexual person "is someone incapable of falling in love, except with someone with the same sex organs as himself or herself," he says. "I don't think Masters and Johnson addressed this problem—Are their so-called 'cured' homosexuals able to fall in love? You can't fall in love with a surrogate in two weeks," he says, referring to the use of sexual surrogates in the St. Louis treatment where opposite-sex partners (estranged wives or husbands or others) were not available to participate.

Masters and Johnson have acknowledged to reporters and in their book that their sample is relatively small and somewhat skewed by the motivation of their study subjects. "That's true," says Chris Busby, spokesperson for the Masters and Johnson Institute. "This is a very small and select population. This [the Masters and Johnson therapy] is not the be-all and end-all," says Busby. "They're not claiming to have any magic cure. The hope is that this research will open up more avenues so that homosexuals will be able to get more help in the future."

Such research, and the motivation behind it, is aimed at persons who are unhappy with their homosexuality and want to change. Many professionals view the rest of the homosexual population that is basically happy with its lifestyle simply as a minority that does not need to be altered for mental or physical health reasons. The American Psychiatric Association has not considered homosexuality an "illness" since 1973, when it officially removed the term from its Diagnostic and Statistical Manual of Mental Disorders. Today, the only reference to homosexuality found in the manual involves "ego-dystonic" homosexuality, where the individual is "profoundly unhappy" and wants to change.

The relatively normal sexual functioning of homosexuals is confirmed in another portion of the Masters and Johnson study. They found some, but few significant differences in the ability of homosexual and heterosexual couples to respond on a physical level to various sexual stimuli. While some researchers at the St.

Louis institute have suggested this finding disproves a stereotype that homosexuals are less functional than are heterosexuals, other scientists contend that no such stereotype has existed for years.

That's no great surprise," says a West Coast sex researcher who says he has a policy of not being quoted by name. "Once the sexual machinery gets going, it goes." Adds Money: "No one ever expected it [the functioning of a homosexual's sex organs] to be different." But he says he believes that Masters and Johnson are basically measuring the "functioning of genitalia" and that the differences between homosexuals and others lie not so much in their response as in their "perceptions" of sexual stimuli. "If they're saying the psychological experiences [of homosexuals and others] are the same," says the West Coast psychiatrist, "then that's not true."

Nevertheless, researchers acknowledge that homosexuals are — like their heterosexual counterparts — subject to sexual dysfunction, including failure to reach orgasm, impotence and premature ejaculation. Masters and Johnson report that in still another aspect of their study — in which follow-up data were provided — they successfully treated all but 12 percent of 84 male and female homosexuals with sex performance problems. Masters and Johnson techniques, for homosexuals and heterosexuals alike, involve meshing physical manipulation with a psychological reorientation of the approach to sex.

Again, professionals observed that this is encouraging but not unexpected, since Masters and Johnson's sexual and psychotherapeutic techniques have worked for many motivated heterosexuals in the past. "What is laudable," says Marmor, "is the sense of [Masters and Johnson] doing an objective, scientific study in the sociology of homosexual behavior." And Money notes that although much of the new data on homosexuality are not unexpected, "it's rather good to have it documented."

Summer cyclones on Mars

Among the fascinating aspects of the planet Mars are the patternings of its weather, climate and seasons, whose existence provides a familiar context in which to study an otherwise alien world. After looking at startlingly congruent graphs of the winds measured in 1976 during the Viking 1 lander's first two days on the Martian surface, for example, the mission's chief meteorologist noted that "if one of them were the Dow-Jones average and the other were my predictions, I'd be a wealthy man."

Few aspects of meteorology, of course, turn out so neatly, particularly on other planets, where the data are limited and much must be deduced, inferred or simply guessed at. On a global scale, there are the huge Martian dust storms, whose source regions and times of occurrence can by now be predicted to an extent, but the more regular types of large-scale circulation patterns such as cyclones still pose difficult problems. Viking's predecessor, Mariner 9, provided some evidence of baroclinic waves (pressure systems associated with cyclones) during the planet's late winter over the north polar region one of the most meteorologically active parts of Mars - but the Viking 1 orbiter has now gone Mariner 9 one better by photographing a pair of summer cloud patterns that strongly resemble almost classically regular cyclones. The Viking orbiters were not designed primarily as weather satellites, and it was only because of their longevity that enough suitable observations were made possible to reveal such patterns. According to Garry E. Hunt of University College, London and Philip B. James of the University of Missouri, the pictures are "the first evidence that baroclinic waves, prevalent during other sea-



Relatively twice life size

Now Albert Einstein joins the residents of Washington's mall. In bronze he can commune with sculpted presidents and with his own predecessor in classical field theory, Joseph Henry. The memorial, in honor of Einstein's centennial, was dedicated by the National Academy of Sciences this week.