

evaluating. Spitzer provides the level of evidence appropriate to the initial stages of therapeutic evaluation with regard to a heuristically important issue.

Spitzer, pessimistically, but perhaps accurately, states that this methodologically correct next step, the evaluation of the treatment of a well defined consecutive series of homosexual patients, is unlikely to occur. However, cost and duration are really not to the point, considering other trials that have received NIMH funding. Concerns about patient safety may be more to the point but apparently these concerns are more theory driven than data substantiated. A data safety monitoring board would provide an adequate safeguard.

The trepidation in this area may arise from concern about the "repathologization" of homosexuality. This is fostered by the term "reparative therapy," which is both vague and presumptuous. However, if it was renamed, say, "role modification," would that help? Effective change techniques do not necessarily imply illness (e.g., cosmetic surgery).

The American Psychiatric Association (APA) states that it supports such research, but ethical practitioners should refrain from attempts to change individual's sexual orientation until the research findings are at hand. Such a data based orientation with regard to psychotherapeutic efforts can only be welcomed. Of course, if this criterion was consistently applied, the APA would have to be substantially more critical about other more favored psychotherapies.

Treatment evaluation aspires to demonstrate specific benefits through determinate causes. Spitzer suggests that the causal efficacy of reparative therapy may never be shown because it is extremely unlikely that patients would enter a long placebo controlled trial. However, the point of a placebo controlled trial is to address the null hypothesis that the entire effect of the treatment is due to the nonspecific combined effects of being in treatment, having one's hopeful expectations raised in a congenial environment, and the natural history of the condition.

However, there are controlled dismantling comparisons that allow causal inferences. Behavioral activation, which may account for the benefits of cognitive behavior therapy, is a reasonable comparison. Reparative therapy might be compared to its components, such as incremental heterosexual pleasures, avoidance of exposure to homosexual pleasures, or any other credible component of the currently ill-defined reparative therapies. If it turns out that complex reparative therapy was more effective than its credible components, and if it were unlikely that the components were toxic, this suggests causal efficacy for reparative therapy, even though specific causal agents remain obscure.

To engage in such meticulous research would require a very convincing body of data from the simpler longitudinal, complete, series of treated and evaluated subjects. Those who claim therapeutic success have the responsibility for providing the supportive data. Spitzer's study provides the necessary minimum for future studies to be considered feasible and perhaps fruitful.

Some claim that they know that the mere publication of this report will cause grievous social, political, and personal harms. This amounts to a call for censorship, rather than meeting the issues on factual and logical grounds. History is replete with often successful attempts to quash questions about the conventional wisdom. This accounts for their infrequency. Initiating questions, in the framework of fostering objective studies, rather than asserting prior knowledge of the truth, has an honored place in science.

A Positive View of Spitzer's Research and an Argument for Further Research

Richard B. Krueger, M.D.

Sexual Behavior Clinic, New York State Psychiatric Institute, Unit 45, 1051 Riverside Drive, New York, New York 10032-2695; e-mail: rbk1@columbia.edu.

Spitzer demonstrates that some individuals who have undergone "reparative" therapy report that they have changed their sexual orientation from homosexual to heterosexual for at least a 5-year period. His study obviously has many limitations, being retrospective, relying on telephone interviewing, and without any objective measurements of sexual arousal, such as penile plethysmography or vaginal photoplethysmography, which he fully discusses.

Arguably, one's fantasies, including masturbatory fantasies, are the best reflection of one's sexual arousal pattern compared with questions involving one's history of sexual interest or behavior. It is notable that in this study, among those who masturbate posttherapy, 68% of males and 41% of females still report same sex fantasies on 20% or more of masturbatory occasions and only 31% of males and 72% of females report opposite sex fantasies on 20% or more of masturbatory occasions. This masturbatory data suggest that change in one's sexual arousal pattern is difficult.

Spitzer, as well as the various national organizations cited in his article, suggests that more research could be done to further determine "reparative" therapy's risks versus its benefits. However, he then says that, realistically, it is unlikely, given the costs of such a study, that such research will be conducted in the future. Although "reparative" therapy concerns itself with change in sexual orientation, other therapies, such as cognitive behavioral therapy, concern themselves with the control or

elimination of unwanted sexual behaviors and arousal, such as those present in the paraphilias or in individuals who are sexually compulsive (Abel, Osborn, Anthony, & Gardos, 1992; Benotsch, Kalichman, & Kelly, 1999; Kalichman, Greenberg, & Abel, 1997). Further study of behavioral and/or pharmacological therapy to help such individuals seems indicated and appropriate. I think that Spitzer has made a substantial contribution, given limited resources, and would hope that more funding for the study of therapies involving not only the change and control of unwanted sexual behavior, but its origins and development, will become available.

Penile Plethysmography and Change in Sexual Orientation

Nathaniel McConaghy, D.Sc.

Paddington Practice, 326 South Dowling St., Paddington, New South Wales 2021, Australia; e-mail: neilmc@paddingtonpractice.com.au.

In his article, Spitzer pointed out that reported change in sexual orientation in men and women following therapy would have benefited from use of penile or vaginal plethysmography. Outcome changes in men's penile volume responses to films of nude men and women were reported in a series of studies evaluating aversive therapies aimed at changing sexual orientation, administered over 1 week. The men were investigated prior to as well as at follow-up, at 6 months to 3 years. Their self-reports showed changes following treatment similar to, though less strong than, those reported by Spitzer. Of 40 men consecutively treated in the first study (McConaghy, 1970), at follow-up of 1–3 years, 15% reported an increase, and 30% a possible increase in heterosexual desire. Thirty-two percent reported a reduction, and 15% a possible reduction in homosexual desire. Prior to treatment, 38 had homosexual relations with a number of partners, with 18 having been arrested for homosexual behavior on one or more occasions. Following treatment, 27% had no homosexual relations, and 32% reduced their frequency; 7% continued heterosexual relations at the same frequency, and 27% initiated them or continued them at an increased frequency. They showed significantly reduced mean penile volume responses to men; however, although they showed significant mean increase in penile responses to the films of women, this change was only present in men who prior to treatment had shown negative responses to those films, not in the men who prior to treatment had shown positive responses to them.

Some men who remained exclusively homosexual following treatment reported they were no longer con-

tinuously preoccupied with homosexual thoughts and felt more emotionally stable and able to live and work more effectively. Others were able to control compulsions to make homosexual contacts in public lavatories, which had previously led to their being arrested. Of nine married men, six stated their marital sexual relationship had markedly improved. They included two of three who had ceased having intercourse with their wives some years before treatment. Related studies were carried out on a further 40 men (McConaghy, Proctor, & Barr, 1972) and 46 men (McConaghy & Barr, 1973). The changes in self-report and penile volume responses of the men following treatment were comparable with those found in the first study. Again, the increase in penile volume of the treated men to pictures of women was due to reduction of negative penile responses, rather than increase in positive penile responses. It was considered that the aversive procedures produced reduction in homosexual feelings, but no actual increase in heterosexual feelings. The increase in heterosexual feelings and behaviors reported by treated patients was attributed to their increased awareness of previously existing heterosexual feelings when their homosexual feelings were reduced.

It was attempted to increase the heterosexual feelings of homosexual men by showing them slides of nude women in temporal association with slides of nude men to which they were sexually aroused. It was expected this would lead by conditioning to the pictures of women becoming sexually arousing. The men seeking sexual reorientation were randomly allocated, 15 to receive the conditioning procedure and 16 to receive aversive therapy (McConaghy, 1975). The men's penile volume responses throughout treatment were monitored. No increase in the men's penile volume responses to the pictures of women were produced by the conditioning procedure and it was concluded it was therapeutically ineffective. At 1-year follow-up, slightly more men reported increase in heterosexual feelings and markedly more men reported reduction in homosexual feelings and reduction or cessation of homosexual behavior following the aversive than the conditioning procedure, the difference with behavior being statistically significant. As the conditioning procedure was ineffective, it was concluded that it acted as a placebo therapy and the significant reduction in men's homosexual behavior following aversive therapy was a specific effect.

As in previous studies, the men's mean penile volume responses were significantly greater to the moving films of women and less to those of men at the year follow-up, compared to their responses prior to treatment, with the changes being equivalent following the aversive and the conditioning procedure. As the conditioning procedure appeared to have no therapeutic effect, the changes