and antagonist (mecamylamine) greatly facilitates abstinence following smoking cessation treatment. This counterintuitive approach may likewise have potential utility in the analysis and treatment of other drug dependencies. Agonist-antagonist combinations may provide great flexibility in dissociating the tonic level of activation of a receptor system from phasic responsiveness to drug reinforcement. We have also developed methods for replacing the conditioned reinforcing cues which have been shown to be important modulators of craving for cigarettes. These cues are mediated by a variety of receptors, some of which have a pharmacologic specificity similar to that of central nervous system nicotinic receptors. Effective drug dependence treatments may require comprehensive strategies that not only replace and/or block desired drug effects, but also take into account peripheral conditioned reinforcing cues.

SYMPOSIUM

Contemporary Psychological Perspectives on American Drug Policy.

Chairs: *Richard J. DeGrandpre* and *Warren K. Bickel*, University of Vermont, Burlington, VT.

Discussant: *Ethan A. Nadelmann*, Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, NJ.

PSYCHOLOGICAL SCIENCE SPEAKS TO POLICY: DRUG AVAILABILITY AND COMPETING REINFORCERS. Warren K. Bickel, Richard J. DeGrandpre and Stephen T. Higgins. University of Vermont, Burlington, VT.

Psychological science suggests that drug abuse and dependence—in all its manifestations—may be varied instances of a few fundamental principles. These principles suggest that drug taking for those individuals who are at risk is a function of two factors: drug availability and the availability of competing reinforcers. In this paper, a conceptualization of those at risk will be presented, followed by data from the basic animal laboratory through the outpatient clinic to the epidemiology of drug abuse that suggests that etiology, maintenance, treatment, and relapse to drug dependence can be largely understood by these two factors. These data, then, provide a basis for developing an empirical, integrated approach to drug policy where the environmental determinants of drug taking are explicitly acknowledged and altered.

PHARMACOPHOBIC PSYCHOPHARMACOLOGY. Arthur Leccese. Kenyon College, Gambier, OH.

It will be argued that governmental policies of differential prohibition have prompted a specific pharmacophobia, the irrational fear of pleasure-inducing psychoactive drugs. The diverse literature regarding the effects of racism, sexism, and homophobia upon research and medicine will be used to illuminate the consequences of psychology's failure to combat pharmacophobia. Specific examples from the scientific press will support the assertion that pharmacophobia has, indeed, exerted a negative effect upon psychological research, theorizing, and clinical practice. Particular emphasis will be placed on published literature involving determinations of the efficacy of pharmacological treatments for ADHD, various eating disorders, and, most significantly, "drug abuse." Finally, there will be an examination of the benefits that may accrue from revised drug policies that include a humanistic antiprohibitionism that strives to minimize the use of violence and coercion.

AA AND THE TOOTH FAIRY. Stanton Peele, Morristown, NJ.

Recently, Stephen T. Higgins and colleagues at the University of Vermont reported on a randomized comparative study of a community-oriented behavioral approach and "standard drug and alcohol abuse counseling from a 12-step orientation" for cocaine dependence:

> The standard counseling program relied heavily on group meetings and educational materials about drug dependence to *get participants to accept their addiction as a treatable but incurable disease.* The study reports that 11 out of the 13 cocaine-dependent patients enrolled in the behavioral *outpatient* program completed a full 12 weeks of treatment. Seven of the patients did not use cocaine for eight or more consecutive weeks. . . . *By comparison, none of the 12 patients who got standard drug abuse counseling completed the 12-week program, and none achieved eight weeks of continuous abstinence.*

Rather than explaining AA's success, we need instead to understand why AA does not work. The reason for AA's lack of success is that it simply does not provide the necessary ingredients to successfully combat addiction, which include:

(1) motivation based on personal values,
(2) skills with which to lead a life free of addiction,
(3) a lifestyle that generates sufficient rewards and support to replace addiction,
(4) a commitment to issues larger than one's own addiction, and
(5) a sense of responsibility matched by belief in one's own efficacy.

Why, then, are AA and 12-step programs completely dominant in the public and private treatment landscape? Indeed, today the majority of referrals to AA and private treatment are coerced by the government (through the courts and requirements to receive social welfare resources) and EAPS. A system—even a reimbursed or free system—which claims to offer people life-saving help cannot attract clients with which to sustain itself in the absence of coercion.

Clearly, we need to:

(1) broaden our range of therapeutic approaches,
(2) accept and build on (rather than attacking) people's natural recuperative powers, and
(3) de-emphasize coercive treatment which blinds us to the deficiencies in the system from the client's perspective.

A CANADIAN PERSPECTIVE ON DRUG POLICY. Bruce K. Alexander. Simon Fraser University, Burnaby, BC, Canada.

Harmful addictions and drug-related deviance are problems that bedevil the modern world. As aspects of human behaviour, these problems fall naturally within the domain of psychological investigation and practice. Yet discussions of addiction and drug problems have a flamboyant, emotionalized character that scarcely resembles dispassionate professionalism. From a Canadian perspective, it would appear that addiction and drug problems have been swept up in the great currents of American social rhetoric since the early 19th century temperance movement. It would seem that these rhetori-

cal passions profoundly influence discourse concerning addictions and drugs around the world, including the formal literature of psychology on these topics. To "de-rhetoricize" these issues, it is necessary to reexamine some fundamentals of psychology and history. These include: the meaning of the English-language word *addiction* prior to the 19th century, the fact that human beings can be "given over" to various objects of devotion in ways that can be either beneficial or harmful, the history of the American temperance movement and the psychological assumptions that it popularized, and the conditions under which cause and effect can be reasonably inferred. Exploration of these fundamentals leads to a critical view of the DSM-III-R classification of addictive behaviours, the view of addiction as an essentially pathological phenomenon, the imposition of professional treatment on addicted people, and the assumption that drugs cause any significant portion of "drug-related" social problems.

SYMPOSIUM

Drug Abuse Treatment in Special Populations

Chair: *John Grabowski*, University of Texas, Houston, TX.

Discussant: *John Grabowski*, University of Texas, Houston, TX.

SHAPING OF ILLICIT DRUG USE IN TWO HEALTH-COMPROMISED POPULATIONS.

Ronith Elk, John Grabowski, Howard Rhoades, Joy Schmitz and Ralph Spiga. University of Texas, Houston, TX.

Drug abuse by pregnant women can pose extreme risks with personal, social, and economic consequences. Tuberculosis-positive, intravenous drug users who abuse drugs increase the risk of hepatotoxicity. The need for an efficacious intervention on drug use in these two populations is imperative. Shaping by successive approximations involves reinforcing successive approximations of a desired target behavior until the goal is reached. While this intervention has been demonstrated to be effective in the treatment of other behavior problems, it has been implemented only infrequently in drug abuse treatment. The purpose of this investigation was to investigate the efficacy of an innovative shaping procedure in reducing cocaine or marijuana (THC) use in two health-compromised populations: opiate-dependent patients receiving prophylactic treatment for tuberculosis, and opiate- or cocaine-dependent pregnant women abusing drugs.

Subjects were 6 TB positive patients and 4 pregnant women abusing either cocaine or THC. A within-subject A-B design with contingency management interventions on cocaine or THC was implemented. There was no intervention on drug use in baseline. During the contingent phase, patients were reinforced for a decrease in the quantity of cocaine/THC in the urine sample from the previous sample, and received a reinforcer of a larger magnitude for a cocaine/THC-free sample. They received an additional weekly reinforcer if all three samples per week met these criteria. In 8 patients (5 TB-positive and 3 pregnant) cocaine use was intervened on, and in 2 patients (1 TB-positive and 1 pregnant) intervention was on THC use.

Three patients are still in study. Preliminary analyses indicate marked improvement in 7 patients, with 0–20% cocaine/THC-free samples in baseline compared with 40–100% drug-free samples in contingency condition. There was moderate impairment in 1 patient and no improvement in 2 patients. These results are extremely promising. Systematic replications in larger *N* studies are being conducted at our clinic.

FEMALES SEEKING TREATMENT FOR COCAINE DEPENDENCE: ASSESSMENT AND OUTCOME.

Alan J. Budney, Stephen T. Higgins, Warren K. Bickel and Doris H. Ogden. University of Vermont, Burlington, VT.

Females represent 15–30% of persons seeking treatment for cocaine dependence. It is important to assess whether gender influences treatment-seeking behavior and/or treatment outcome. Potential gender differences need to be examined in the following areas: 1) drug-use factors such as age at initiation of use, duration of use, types of drugs used, severity of use, current use patterns, and consequences of use; 2) economic stability; 3) social support; 4) relationship stability; and 5) comorbid psychopathology.

Demographic, drug and alcohol use, and psychiatric functioning data were collected from 127 consecutive admissions to a university-based outpatient cocaine clinic who requested treatment for cocaine-related problems and met DSM-III-R criteria for cocaine dependence. Thirty-four (27%) were women.

Age, education level, marital status, and weekly income did not differ between women and men. Women, however, were less likely to be employed during the prior three years, and the type of living arrangements differed between women and men. No global differences in psychiatric functioning were observed. Women did not differ from men on any cocaine-use variables, except they reported fewer years of occasional use prior to becoming regular cocaine users. Women reported less alcohol use prior to entering treatment, although they were equally likely to be alcohol dependent. Women were less likely to be marijuana dependent. Interestingly, women were less likely to have sought treatment prior to entering our clinic despite reporting substance abuse histories of equal duration to men.

We further examined differences in outcome between 20 women and 52 men who received behavioral treatment for cocaine dependence. No significant differences emerged in duration of cocaine abstinence achieved during treatment. The behavioral treatment, however, includes a range of services that are employed based on the specific needs of each patient; thus, our finding no difference may be a function of differential use of treatment services. We are in the process of evaluating this possibility.

TREATMENT OF TOBACCO DEPENDENCE IN POST-MYOCARDIAL INFARCTION PATIENTS: TREATMENT SEEKERS VS. TREATMENT REFUSERS.

J. M. Schmitz, F. Fuentes and T. Le. University of Texas, Houston, TX.

The health benefits of maintaining smoking abstinence following a major cardiac event are unequivocal and well-documented. Despite such motivational health reasons, research generally reveals that maintaining abstinence from smoking is nearly as difficult to achieve for post-myocardial infarction (MI) patients as it is for the general population. Specialized treatment interventions for cardiac patients suffering from smoking-related health problems have produced substantial treatment effects in some studies, but only slight improvements over usual care or no intervention in other studies. Most people who quit smoking do so on their own, outside of