Reprinted from AMERICAN PSYCHOLOGIST, Vol. 31, No. 1, January 1976
Printed in U. S. A.

Distinguished Contribution for Applications in Psychology Award for 1975

The Distinguished Contribution for Applications in Psychology Award was given this year for the third time. This award is presented to a person who has engaged in a program of research which is both systematic and applied in character. This year the award was given to Nathan H. Azrin. He was presented with a check for $1,000 and an engrossed citation of his contribution. The award was presented by Harold H. Kelley. Other members of the Committee on Scientific Awards are Dorothea J. Hurvich (Chair), James J. Jenkins, Jerome E. Singer, Walter Mischel, and Richard F. Thompson. The first recipient of this award was Conrad L. Kraft in 1973; in 1974 the award was given jointly to Gerald S. Lesser and Edward L. Palmer.

Nathan H. Azrin

CITATION

"For diligence and imagination in applying learning principles to ameliorate a variety of human problems. His studies show how a bold, ingenious investigator can help others obtain rapid and dramatic changes in behavior. In particular, he has demonstrated the efficacy of multifaceted treatment programs for enuretics, stutterers, alcoholics, and individuals with marital problems and nervous habits. His programs are best characterized by a creative combination of procedures, but of the many procedures used, positive reinforcement, repeated practice, and relaxation appear most frequently. Most important, his efforts provide a model for psychologists indicating that both specific skills and general well-being of individuals now can be markedly improved with innovative applications of established principles and procedures."

BIOGRAPHY

Nathan H. Azrin was born on November 26, 1930, in Boston, Massachusetts. There he grew up and received all of his formal education. He attended Boston University where he received his BA cum laude in 1951, and his MA in 1952.

Like so many others, Azrin was attracted initially to psychology by Freud's writings but quickly saw the necessity of scientific evaluation after his first course in experimental psychology from Leo Reyna. The studies of Sears, Mowrer, and Miller at that time promised an attractive synthesis of the experimental and clinical approach. Azrin decided to work toward his PhD in the Personality and Social Psychology program under A. J. Brodbeck, who was a student of Sears. At Boston University he collaborated with O. R. Lindsley on a study of cooperation between children, which led to a strengthening of the notion that behaviorism was a useful approach to solving

Nathan H. Azrin

social problems. After completing almost all of the doctoral requirements, Azrin's desire for even more emphasis on the behavioral approach led him to transfer in 1953 to Harvard to study under B. F. Skinner, who was beginning to extrapolate his behaviorist approach to human problems.

At Harvard, Azrin worked in Skinner's laboratory with animals on aversive conditioning, which was also the topic of his dissertation. B. F. Skinner was formulating the concept of teaching machines and programmed instruction at that time, and Azrin worked as his research assistant in testing out Skinner's initial teaching machine and math program in the public schools. The "Pigeon Lab" weekly meetings were being held at Harvard then and were attended by a small group who later formed the nucleus of the field of operant conditioning. They also founded the *Journal of The Experimental Analysis of Behavior*. Azrin was one of the charter editors and subsequently the Chief Editor of that publication.

After completing the PhD in 1955, Azrin worked briefly with Karl Pribram, but the relation was terminated by a two-year required term of service in the U.S. Army. Assigned to the Human Engineering Lab at Aberdeen Proving Ground, Maryland, he studied the psychological effects of noise and fatigue.

On leaving the Army, Azrin accepted a position in 1958 as a research psychologist at Anna State Hospital, which is a small mental hospital in rural southern Illinois. The position was part of the new research program established by the Illinois Department of Mental Health. The Superintendent, R. C. Steck, and Israel Goldiamond, at nearby Southern Illinois University, were largely responsible for establishing this research facility.

During the first 10 years at Anna, Azrin's major focus was on basic laboratory research. In his studies of punishment, he is identified with the phenomena of recovery during punishment effect, the punishment contrast effect, the interaction between reinforcement and punishment, positive conditioned suppression, aversive effects of positive reinforcement schedules, schedules of punishment, and conditioned punishment. In his laboratory studies of aggression, he demonstrated the pain–aggression phenomenon and extinction-inducted aggression. In a series of laboratory or analogue studies with humans, he developed a behavioral apparatus approach and applied it to the problems of stuttering, posture control, the taking of prescribed medication, and toilet training.

In addition to his laboratory studies, Azrin developed and evaluated many new direct clinical procedures, especially during the past six years. Perhaps the first and best known is the token economy concept and procedure, developed with T. Ayllon for the institutional care of the mentally ill and retarded and since applied to diverse populations and problems.

When profoundly retarded persons began being admitted to Anna State Hospital, Azrin designed many new training procedures for this very difficult population. These new procedures included a rapid procedure for teaching self-initiated toileting, the mini-meal procedure for teaching retarded persons to eat in a normal fashion, a rapid method of eliminating enuresis, the autism reversal method for eliminating the puzzling disturbance known as behavioral stereotypy, a treatment procedure for the urgent problem of self-injurious behavior, the theft reversal procedure for dealing with stealing, and the required relaxation and the overcorrection procedure for dealing with disruptive and aggressive conduct. These newly developed training procedures relied heavily on intensive reinforcement principles.

The high degree of effectiveness of these new training procedures for the retarded encouraged Azrin to design similar methods for use with nonretarded persons with similar problems. The toilet training program initially designed for retarded adults was substantially revised for normal young children. He redesigned the enuresis program for retarded persons to be applicable to nonretarded enuretic children. The autism reversal procedure was redesigned to the habit reversal method for reducing such habits as nail biting, hair pulling, thumb sucking by children, and tics of various sorts. Stuttering has been one of Azrin's continuing research interests. By incorporating a regulated and deep breathing pattern into the habit reversal procedure, he designed a method of eliminating stuttering.

Simultaneous with his interest in these discrete problem behaviors, Azrin began dealing with more complex social problems such as marital counseling, alcoholism, and unemployment. He designed the community-reinforcement method of treating alcoholism, the reciprocity counseling procedure for reducing marital problems, and the job-finding club procedure for securing jobs.

Azrin's current research continues to be outcome oriented and to stress experimental evaluation,

utilization of psychological principles, and objective measurement.

Currently, Azrin is a member of the Editorial Board of the *Journal of the Experimental Analysis of Behavior, Behavior Therapy,* and the *Journal of Applied Behavior Analysis.*

At Southern Illinois University, Azrin is a professor in the Rehabilitation Institute, which offers an MA degree specifically in behavior modification. This position has made possible an integration of the academic role with the clinical research role.

Azrin has been President of Division 25 of the American Psychological Association and President of the Society for the Experimental Analysis of Behavior. Currently, he is President-elect of the Midwestern Psychological Association and President of the Association for the Advancement of Behavior Therapy.

SCIENTIFIC PUBLICATIONS

1956

With A. DiMascio, J. L. Fuller, & W. Jetter. The effect of total-body X irradiation on delayed-response performance of dogs. *Journal of Comparative and Physiological Psychology, 49,* 600–604.

With O. R. Lindsley. The reinforcement of cooperation between children. *Journal of Abnormal and Social Psychology, 52,* 100–102.

1957

Effects of two intermittent schedules of immediate and nonimmediate punishment. *Journal of Psychology, 42,* 3–21.

With L. Katchmar. *Effectiveness of warning lights as a function of flash rate* (Tech. Mem. No. 23). Aberdeen Proving Grounds, Md.: Human Engineering Laboratories.

1958

Some effects of noise on human behavior (Tech. Mem. 6-58). Aberdeen Proving Grounds, Md.: Human Engineering Laboratories.

Some effects of noise on human behavior. *Journal of the Experimental Analysis of Behavior, 1,* 183–200.

With B. Flanagan & I. Goldiamond. Operant stuttering: The control of stuttering behavior through response-contingent consequences. *Journal of the Experimental Analysis of Behavior, 1,* 173–177.

1959

A technique for delivering shock to pigeons. *Journal of the Experimental Analysis of Behavior, 2,* 161–163.

Some notes on punishment and avoidance. *Journal of the Experimental Analysis of Behavior, 2,* 260.

Punishment and recovery during fixed-ratio performance. *Journal of the Experimental Analysis of Behavior, 2,* 301–305.

With B. Flanagan & I. Goldiamond. Instatement of stuttering in normally fluent individuals through operant procedures. *Science, 130,* 979–981.

1960

Sequential effects of punishment. *Science, 131,* 605–606.

Effects of punishment intensity during variable-interval reinforcement. *Journal of the Experimental Analysis of Behavior, 3,* 123–142.

Use of rests as reinforcers. *Psychological Report, 7,* 240.

1961

With W. C. Holz, R. E. Ulrich, & I. Goldiamond. The control of the content of conversation through reinforcement. *Journal of the Experimental Analysis of Behavior, 4,* 25, 30.

Time-out from positive reinforcement. *Science, 133,* 382–383.

With R. R. Hutchinson. Conditioning of mental hospital patients to fixed-ratio schedules of reinforcement. *Journal of the Experimental Analysis of Behavior, 4,* 87–95.

With W. C. Holz & I. Goldiamond. Response bias in questionnaire reports. *Journal of Consulting Psychology, 25,* 324–326.

With W. C. Holz. Discriminative properties of punishment. *Journal of the Experimental Analysis of Behavior, 4,* 225–232.

With W. C. Holz. Punishment during fixed-interval reinforcement. *Journal of the Experimental Analysis of Behavior, 4,* 343–347.

1962

With W. C. Holz & D. F. Hake. Intermittent reinforcement by removal of a conditioned aversive stimulus. *Science, 136,* 781–782.

With W. C. Holz. Interactions between the discriminative and aversive properties of punishment. *Journal of the Experimental Analysis of Behavior, 5,* 229–234.

With R. E. Ulrich. Elimination of undesired escape from footshock. *Journal of the Experimental Analysis of Behavior, 5,* 72.

With R. E. Ulrich. Reflexive fighting in response to aversive stimulation. *Journal of the Experimental Analysis of Behavior, 5,* 511–520.

With W. C. Holz. Recovery during punishment by intense noise. *Psychological Report, 11,* 655–657.

1963

With W. C. Holz & R. E. Ulrich. Punishment of temporally spaced responding. *Journal of the Experimental Analysis of Behavior, 6,* 115–122.

With W. C. Holz & D. F. Hake. Fixed-ratio punishment. *Journal of the Experimental Analysis of Behavior, 6,* 141–148.

With D. F. Hake. An apparatus for delivering pain shock to monkeys. *Journal of the Experimental Analysis of Behavior, 6,* 297–298.

With W. C. Holz. Timing of experimental sessions. *Journal of the Experimental Analysis of Behavior, 6,* 196.

With W. C. Holz. A well-regulated DC power supply. *Journal of the Experimental Analysis of Behavior, 6,* 222.

With W. C. Holz & T. Ayllon. Elimination of behavior of mental patients by response-produced extinction. *Journal of the Experimental Analysis of Behavior, 6,* 407–414.

With W. C. Holz. A comparison of several procedures for eliminating behavior. *Journal of the Experimental Analysis of Behavior, 6,* 399–406.

With W. C. Holz, D. F. Hake, & T. Ayllon. Fixed-ratio escape reinforcement. *Journal of the Experimental Analysis of Behavior, 6,* 449–456.

With R. R. Hutchinson & D. F, Hake. Pain-induced fighting in the squirrel monkey. *Journal of the Experimental Analysis of Behavior, 6,* 620.

1964

With R. E. Ulrich, R. R. Hutchinson, & D. G. Norman. Effects of shock duration on shock-induced fighting. *Journal of the Experimental Analysis of Behavior, 7,* 9–11.

With R. L. Herman. Punishment by noise in an alternative response situation. *Journal of the Experimental Analysis of Behavior, 7,* 185–188.

With R. E. Ulrich & W. C. Holz. Stimulus control of avoidance behavior. *Journal of the Experimental Analysis of Behavior, 7,* 185–188.

With R. R. Hutchinson & R. D. Sallery. Pain-aggression toward inanimate objects. *Journal of the Experimental Analysis of Behavior, 7,* 223–228.

With R. E. Ulrich & P. C. Wolff. Shock as an elicitor of intra- and inter-species fighting behavior. *Animal Behavior, 12,* 14–15.

With T. Ayllon. Reinforcement and instructions with mental patients. *Journal of the Experimental Analysis of Behavior, 7,* 327–331.

1965

With D. F. Hake, W. C. Holz, & R. R. Hutchinson. Motivational aspects of escape from punishment. *Journal of the Experimental Analysis of Behavior, 8,* 31–44.

With D. F. Hake & R. R. Hutchinson. Elicitation of aggression by a physical blow. *Journal of the Experimental Analysis of Behavior, 8,* 55–57.

With R. R. Hutchinson & R. McLaughlin. The opportunity for aggression as an operant reinforcer during aversive stimulation. *Journal of the Experimental Analysis of Behavior, 8,* 171–180.

With R. R. Hutchinson & R. E. Ulrich. Effects of age and related factors on the pain-aggression reaction. *Journal of Comparative and Physiological Psychology, 59,* 365–369.

With D. F. Hake. Conditioned punishment. *Journal of the Experimental Analysis of Behavior, 8,* 279–294.

With T. Ayllon. The measurement and reinforcement of behavior of psychotics. *Journal of the Experimental Analysis of Behavior, 8,* 357–383.

With R. E. Ulrich & R. R. Hutchinson. Pain-elicited aggression. *Psychological Record, 15,* 111–126.

1966

With R. R. Hutchinson & D. F. Hake. Extinction-induced aggression. *Journal of the Experimental Analysis of Behavior, 9,* 191–204.

With R. R. Hutchinson & D. F. Hake. An automatic method for the study of aggression in squirrel monkeys. *Journal of the Experimental Analysis of Behavior, 9,* 233–237.

With W. C. Holz. Punishment. In W. K. Honig (Ed.), *Operant behavior: Areas of research and application.* New York: Appleton-Century-Crofts.

With W. C. Holz. Conditioning human verbal behavior. In W. K. Honig (Ed.), *Operant behavior: Areas of research and application.* New York: Appleton-Century-Crofts.

With T. Ayllon. Punishment as a discriminative stimulus and conditioned reinforcer with humans. *Journal of the Experimental Analysis of Behavior, 9,* 411–419.

1967

With D. F. Hake & R. Oxford. The effects of punishment intensity on squirrel monkeys. *Journal of the Experimental Analysis of Behavior, 10,* 95–107.

With R. R. Hutchinson & D. F. Hake. Attack, avoidance, and escape reactions to aversive shock. *Journal of the Experimental Analysis of Behavior, 10,* 131–148.

With H. B. Rubin. Temporal patterns of sexual behavior in rabbits as determined by an automatic recording technique. *Journal of the Experimental Analysis of Behavior, 10,* 219–231.

Pain and aggression. *Psychology Today,* May, pp. 26–33.

With J. Hopwood & J. Powell. A rat chamber and electrode procedure for avoidance conditioning. *Journal of the Experimental Analysis of Behavior, 10,* 291–298.

With R. R. Hutchinson. Conditioning of the aggressive behavior of pigeons by a fixed-interval schedule of reinforcement. *Journal of the Experimental Analysis of Behavior, 10,* 395–402.

1968

With R. R. Hutchinson & J. W. Renfrew. Effects of shock intensity and duration on the frequency of biting attack by squirrel monkeys. *Journal of the Experimental Analysis of Behavior, 11,* 83–88.

With T. Ayllon. Reinforcer sampling: A technique for increasing the behavior of mental patients. *Journal of Applied Behavior Analysis, 1,* 13–20.

With J. Powell. The effects of shock as a punisher for cigarette smoking. *Journal of Applied Behavior Analysis, 1,* 63–71.

With R. R. Hutchinson & G. M. Hunt. Attack produced by intermittent reinforcement of a concurrent operant response. *Journal of the Experimental Analysis of Behavior, 11,* 489–495.

With H. B. Rubin, F. O'Brien, T. Ayllon, & D. Roll. Behavioral engineering: Postural control by a portable operant apparatus. *Journal of Applied Behavior Analysis, 1,* 99–108.

With H. B. Rubin & R. R. Hutchinson. Biting attack by rats in response to aversive shock. *Journal of the Experimental Analysis of Behavior, 11,* 633–639.

With J. Powell. Behavioral engineering: The reduction of smoking behavior by a conditioning apparatus and procedure. *Journal of Applied Behavior Analysis, 1,* 193–200.

With T. Ayllon. *The token economy: A motivational system for therapy and rehabilitation.* New York: Appleton-Century-Crofts.

With R. J. Jones & B. Flye. A synchronization effect and its application to stuttering by a portable apparatus. *Journal of Applied Behavior Analysis, 1,* 283–295.

1969

With D. F. Hake. A response-spacing effect: An absence of responding during response-feedback stimuli. *Journal of the Experimental Analysis of Behavior, 12,* 17–25.

With D. F. Hake. Positive conditioned suppression: Conditioned suppression using positive reinforcers as the unconditioned stimuli. *Journal of the Experimental Analysis of Behavior, 12,* 167–173.

With F. O'Brien & K. Henson. Increased communications of chronic mental patients by reinforcement and by response priming. *Journal of Applied Behavior Analysis, 2,* 23–29.

With J. Powell. Behavioral engineering: The use of response priming to improve prescribed self-medication. *Journal of Applied Behavior Analysis, 2,* 39–42.

With R: J. Jones. Behavioral engineering: Stuttering as a function of stimulus duration during speech synchronization. *Journal of Applied Behavior Analysis, 2,* 223–229.

1970

Punishment of elicited aggression. *Journal of the Experimental Analysis of Behavior, 14,* 7–10.

With F. O'Brien. Behavioral engineering: Control of posture by informational feedback. *Journal of Applied Behavior Analysis, 3,* 235–240.

1971

With R. M. Foxx. A rapid method of toilet training the institutionalized retarded. *Journal of Applied Behavior Analysis, 4,* 89–99.

With C. Bugle & F. O'Brien. Behavioral engineering: Two apparatuses for toilet training retarded children. *Journal of Applied Behavior Analysis, 4,* 249–253.

1972

With R. M. Foxx. Restitution: A method of eliminating aggressive-disruptive behavior of retarded and brain damaged patients. *Behaviour Research & Therapy, 10,* 15–27.

With F. O'Brien & C. Bugle. Training and maintaining a retarded child's proper eating. *Journal of Applied Behavior Analysis, 5,* 67–72.

With F. O'Brien & C. Bugle. Training profoundly retarded children to stop crawling. *Journal of Applied Behavior Analysis, 5,* 131–137.

With F. O'Brien. Symptom reduction by functional displacement in a token economy: A case study. *Journal of Behavior Therapy and Experimental Psychiatry, 3,* 205–207.

With F. O'Brien. Developing proper mealtime behaviors of the institutionalized retarded. *Journal of Applied Behavior Analysis, 5,* 389–399.

1973

With P. M. Armstrong. The "mini-meal"—a method for teaching eating skills to the profoundly retarded. *Mental Retardation, 11,* 9–13.

With D. R. Webster. Required relaxation: A method of inhibiting agitative disruptive behavior of retardates. *Behaviour Research & Therapy, 11,* 67–78.

With G. M. Hunt. A community-reinforcement approach to alcoholism. *Behaviour Research & Therapy, 11,* 91–104.

With F. O'Brien. Interaction-priming: A method of reinstating patient–family relationships. *Behaviour Research & Therapy, 11,* 133–136.

With R. M. Foxx. The elimination of autistic self-stimulatory behavior by overcorrection. *Journal of Applied Behavior Analysis, 6,* 1–14.

With R. M. Foxx. *Toilet training the retarded: A rapid program for day and nighttime independent toileting.* Champaign, Ill.: Research Press.

With R. J. Jones. An experimental application of a social reinforcement approach to the problem of job-finding. *Journal of Applied Behavior Analysis, 6,* 345–353.

With B. J. Naster & R. J. Jones. Reciprocity counseling: A rapid learning-based procedure for marital counseling. *Behaviour Research & Therapy, 11,* 365–382.

With T. J. Sneed & R. M. Foxx. Dry bed: A rapid method of eliminating bedwetting (enuresis) of the retarded. *Behaviour Research & Therapy, 11,* 427–434.

With R. M. Foxx. Dry pants: A rapid method of toilet training children. *Behaviour Research & Therapy, 11,* 435–442.

With S. J. Kaplin & R. M. Foxx. Autism reversal: Eliminating stereotyped self-stimulation of retarded individuals. *American Journal of Mental Deficiency, 78,* 241–248.

With R. G. Nunn. Habit reversal: A method of eliminating nervous habits and tics. *Behaviour Research & Therapy, 11,* 619–628.

1974

With R. M. Foxx. *Toilet training in less than a day.* New York: Simon & Schuster.

With T. J. Sneed & R. M. Foxx. Dry-bed training: Rapid elimination of childhood enuresis. *Behaviour Research & Therapy, 12,* 147–156.

With M. D. Wesolowski. Theft reversal: An overcorrection procedure for eliminating stealing by retarded persons. *Journal of Applied Behavior Analysis, 7,* 577–581.

With R. G. Nunn. A rapid method of eliminating stuttering by a regulated breathing approach. *Behaviour Research & Therapy, 12,* 279–286.

1975

With T. Flores & S. J. Kaplan. Job finding club: A group-assisted program for obtaining employment. *Behaviour Research & Therapy, 13,* 17–27.

With L. Gottlieb, L. Hughart, M. D. Wesolowski, & T. Rahn. Eliminating self-injurious behavior by educative procedures. *Behavior Research & Therapy, 13,* 101–111.

With M. A. Powers. Eliminating classroom disturbances of emotionally disturbed children by positive practice procedures. *Behavior Therapy, 6,* 525–534.