

Conditioning and Learning

Chapter 7

Psychology
Mr. Coia

Tuesday 11/9

- Introduce new unit
- Handout packets
- Read "Classical Conditioning" p. 191-196
- Critical Thinking sheet 7-10
- Learning Goals (1st part) 7-1

Monday 11/15

- "Operant Conditioning"
- Schedules of reinforcement
- Learning Goals 7-1
- Journal entry #1: Your bad habit (7-7)
- Operant Conditioning 7-8/ 7-9
- Graphic Organizer on comparison (7-5)

HW: Finish sheets not completed in class

Wednesday 11/17

- "Social Learning" and "Cognitive Learning"
- read 208-215
- Review sheets 7-15/7-16
- Changing Your Behavior
- (you will work on changing something about you)

HW: Begin your schedule of change

Friday 11/19

- Classroom Visits

HW: 7-19 and 7-20

Tuesday 11/23

- Share Findings
- Creative Writing Assignment

HW: Type assignment; read "Quitters, Inc." by Stephen King; watch for principles around your Thanksgiving table

Monday 11/29

- "Discovering Psychology": Learning
- Vocabulary sheet 7-13

HW: Read "On Responsibility and Punishment" in light of the Socratic Seminar question

Wednesday 12/1

- Socratic Seminar
- Essential Question: "How effective is the role of punishment in our society?" Use the short story and "On Responsibility and Punishment" as a springboard

Friday 12/3

- Test on chapter 7
- Watch segment of "Cat's Eye"

Extra Credit Assignment (20 points):

Use these principles to teach an animal a new behavior

1. Create a schedule
2. Take small steps
3. Bring in a short video or pictures
4. Present to the class

(the assignment is to use these methods, not to simply teach a trick)

Content Standards covered in this unit

SK – Skills

SK1a. Acquire information from a variety of sources including written, graphic, experimental sources

SK1b. Complete research through oral and written reports, interviews with resource people, visits to institutions

SK1c. Conduct interviews and participate in self-awareness and group dynamic activities

SK1e. Access and use complex electronic databases and communication networks of all types

SS3 Time, Continuity, And Change

SS3a. Identify classical and modern personality theorists with emphasis on Freud, Skinner, Maslow and Rogers.

SS4 Space And Place

SS4b. Describe the effects of interaction between people and environments.

SS9 Science, Technology, And Society

SS9c. Examine the impact of the media on the psychological development of the individual.

SS10 Global Connections

SS10b. Evaluate the effects of media on our perception of the world.

PARTICIPATORY LEARNING (continued)

Changing Behavior

In this activity, you will try to modify a specific behavior about yourself. For example, if you procrastinate whenever you have a large school project and then must stay up the night before to complete it, this might be a behavior you would choose to change. The three steps you will be using are:

1. Clearly specify the behavior you wish to change.
2. Observe the behavior. This is necessary so that you know exactly what your current behavior is. For example, if your goal is to keep your room clean, before you begin, keep track of your room's condition for three or four days.
3. Follow the plan you have developed to change the behavior.

Fill out the following chart as you proceed.

1. Describe the behavior you want to change.
2. Examine this behavior closely for a while. Does it follow a pattern? Are there certain conditions under which it is more likely to happen? Are there consequences?
3. Write down your plan for modifying the behavior. Will you use positive and/or negative reinforcements? Will you be using shaping or chaining?
4. Carry out your plan. Examine the results. Were you successful? Do you think the change will be permanent? If you are concerned that you may slip back into your old ways, do you have a plan to decrease the chances of that happening?



Chapter 7

Principles of Learning

VOCABULARY WORKSHEET

Write the correct vocabulary term(s) on the line next to each of the following definitions.

- _____ 1. Making an association between two events by repeated exposure
- _____ 2. Ivan Pavlov's method of conditioning in which associations are made between a natural stimulus and a learned, neutral stimulus
- _____ 3. Anything that elicits a response
- _____ 4. A reaction to a stimulus
- _____ 5. A stimulus that automatically elicits a response
- _____ 6. An automatic response to a particular natural stimulus
- _____ 7. A previously neutral stimulus that has been associated with a natural (or unconditioned stimulus)
- _____ 8. A response to a stimulus that is brought about by learning
- _____ 9. A response spread from one specific stimulus to other stimuli that resemble the original
- _____ 10. The gradual loss of an association over time
- _____ 11. Conditioning that results from one's actions and the consequences they cause
- _____ 12. Something that follows a response and strengthens the tendency to repeat that response
- _____ 13. Something necessary for psychological/physical survival that is used as a reward
- _____ 14. Anything that comes to represent a primary reinforcer, such as money bringing food
- _____ 15. Strengthening the tendency to repeat a response by following it with the addition of something pleasant
- _____ 16. Strengthening a response by following it with the taking away or avoiding of something unpleasant
- _____ 17. A behavior that spreads from one situation to a similar one
- _____ 18. Learning to tell the difference between one event or object and another; the reverse of generalization



Name _____ Date _____ Period _____

VOCABULARY WORKSHEET (continued)

- _____ 19. The process of gradually refining a response by successively reinforcing closer approximations of it
- _____ 20. The desirability of a specific reward to an individual
- _____ 21. The process of weakening a response by following it with unpleasant consequences
- _____ 22. Reinforcing the connection between different parts of a sequence
- _____ 23. Each time a behavior occurs, reinforcement is given
- _____ 24. Different methods of reinforcing
- _____ 25. Reinforcement is not given each time an act is performed
- _____ 26. Reinforcement occurs after a desired behavior occurs, but a different number of the desired acts is required each time
- _____ 27. A person's beliefs about how well he or she will be able to do something
- _____ 28. A previously extinct response begins to reoccur
- _____ 29. Reinforcement occurs after the desired act is performed a specific number of times
- _____ 30. Reinforcement occurs after varying amounts of time if a desired act occurs
- _____ 31. A reinforcement is received after a fixed amount of time has passed if the desired act occurs
- _____ 32. All learning which occurs in a social situation
- _____ 33. A form of social learning in which the organism observes and imitates the behavior of others
- _____ 34. Learning that isn't obvious
- _____ 35. A way of learning based on abstract mental processes and previous knowledge

Chapter 7 Principles of Learning

ENRICHMENT WORKSHEET

This exercise requires you to spend at least two hours with a group of young children in a structured environment such as a preschool. The children should be between three and five years old. If you choose to visit a preschool or day care center, be sure to call and make arrangements with the appropriate person ahead of time.

Before you go, read through the following questions. Take notes while you are observing. After you are done observing, answer each of the questions. Write your responses as soon as possible while events are still fresh in your mind.

1. Did you see any negative behavior on parts of any of the children? Describe the behavior.

2. How did the adults (teachers, teacher's helpers, etc.) respond to the negative behavior?

Name _____ Date _____ Period _____

ENRICHMENT WORKSHEET (continued)

3. Did you observe any adults using a cognitive approach to learning? If so, describe what they did.

.....

.....

.....

.....

4. Did you see any examples of social learning? Describe the situation. Did you see children involved in observational learning? If so, describe what you observed.

.....

.....

.....

.....

5. Was positive reinforcement used? How about negative reinforcement? Give any examples.

.....

.....

.....

.....

6. If positive and negative reinforcements were used, did they appear to have any results? Describe what happened.

.....

.....

.....

.....

Creative Writing Assignment

Psychology

Mr. Coia

Due Monday 11/29

How does Classical or Operant Conditioning apply to the following people?

Teacher

A lazy student

Athlete

Parent

Dishwasher at Denny's

Photographer

Cigarette Smoker

Dog Trainer

Advertisers

(your choice not here? Create one)

- Pick one occupation
- Create a character: name, age, situation, etc.
- Situation that needs to be addressed
- How it applies (the schedule, the various parts of the change, etc.)
- Include the technical labels that apply
- Write as a creative writer, not as a psychologist. Tell a story of sorts. Don't simply list the information
- Type and turn in

Chapter 7 Principles of Learning

CRITICAL THINKING ACTIVITY – Steps in Classical Conditioning

Fill in the appropriate words from each scenario that represent *N*, *UCS*, *CS*, *UCR*, and *CR*.

1. Tactless Tom yells at Emotional Ernie. As a result, Ernie's blood pressure rises automatically. The next time that Ernie sees Tom, Ernie's blood pressure rises.

(N) _____ + (UCS) _____ (UCR) _____
(CS) _____ (CR) _____

2. Two practical jokers want to get a horse to involuntarily "go wild" (the horse's heart races) every time the horse hears "whoa." The jokers will kick the horse in order to train him.

(N) _____ + (UCS) _____ (UCR) _____
(CS) _____ (CR) _____

3. The same practical jokers want to make a dog afraid of a cat by spraying water on the dog every time he sees a cat. (The dog greatly disliked being sprayed.)

(N) _____ + (UCS) _____ (UCR) _____
(CS) _____ (CR) _____

4. Juanita and her father baked bread every Saturday afternoon, an activity that Juanita always enjoyed. When Juanita grew older, she fondly remembered these times whenever she smelled bread baking.

(N) _____ + (UCS) _____ (UCR) _____
(CS) _____ (CR) _____

Chapter 7 Principles of Learning

LEARNING GOALS OUTLINE

1. What is conditioning?

.....
.....

2. What were Ivan Pavlov's original research intentions? What three strange things helped to alter these intentions?

.....
.....
.....

3. In classical conditioning, what causes some kind of reaction or response?

.....
.....

4. What automatically and involuntarily produces an unconditioned response?

.....
.....

5. After learning has taken place, what automatically and involuntarily produces a conditioned response?

.....
.....

6. What did John B. Watson teach Little Albert? What conclusions did Watson draw from these experiments with Little Albert?

.....
.....
.....

LEARNING GOALS OUTLINE (continued)

7. What did Mary Cover Jones discover?

8. What is the difference between classical and operant conditioning?

9. According to B. F. Skinner, why do we perform certain behaviors?

10. How do reinforcements affect behavior?

11. What is the difference between a primary and a secondary reinforcer?

12. What is the difference between positive and negative reinforcement?

13. How does punishment affect behavior?

14. How is generalization different than discrimination learning?

LEARNING GOALS OUTLINE (continued)

15. In what way is reinforcement used in shopping?

16. What is chaining?

17. What are five methods for extinguishing bad habits?

18. What happens when spontaneous recovery occurs?

19. How is continuous reinforcement different than partial reinforcement?

20. When is reinforcement given for each of the schedules of reinforcement?

21. How does Albert Bandura's theory of social learning differ from classical and operant conditioning?

22. How does the cognitive approach differ from classical and operant conditioning?

Name _____ Date _____ Period _____

LEARNING GOALS OUTLINE (continued)

23. According to the cognitive approach, what two techniques do people use to learn or solve problems?

24. How is latent learning different from the kinds of active learning that are achieved when we are trying to achieve a goal?

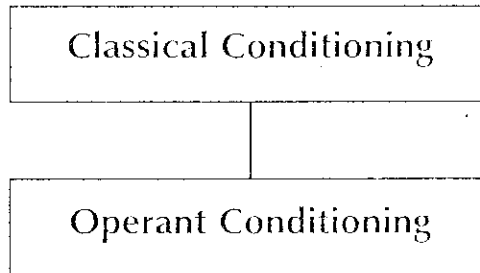
25. How does reinforcement value affect our behavior?

Chapter 7 Principles of Learning

GRAPHIC ORGANIZER

Complete this organizer by comparing both types of conditioning.

Comparison of Types of Conditioning



How are they alike?	How are they different?
1.	1.
2.	2.
3.	3.

Chapter 7 Principles of Learning

INDEPENDENT PRACTICE WORKSHEET – Classical/Emotional Conditioning

1. Referring to Pavlov's classical conditioning experiment with the dog, identify the following components:
 - a. Unconditioned Stimulus _____
 - b. Unconditioned Response _____
 - c. Conditioned Stimulus _____
 - d. Conditioned Response _____

2. Identify the following components of Watson's experiment with Little Albert:
 - a. Unconditioned Stimulus _____
 - b. Unconditioned Response _____
 - c. Conditioned Stimulus _____
 - d. Conditioned Response _____
 - e. Stimulus Generalization _____
 - f. Extinction _____

3. In the chart below, write the name of the psychologist associated with each type of learning.

TYPE OF LEARNING	PSYCHOLOGIST
a. Classical Conditioning	
b. Operant Conditioning	
c. Social Learning	
d. Cognitive Approach	

Chapter 7

Principles of Learning

INDEPENDENT PRACTICE WORKSHEET – Classical/Operant Conditioning

For each sentence, point out in the first column whether the underlined behavior is learned through classical or operant conditioning. Then in the second column, indicate what principle is being expressed.

First column choices:

- a. classical conditioning
- b. operant conditioning

Second column choices:

- a. shaping (applies only to operant)
- b. extinction
- c. discrimination
- d. generalization

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____

1. John Nasalpassages walks into his first period history class. His adrenaline starts flowing because he has to take a test (and he flunked the last history test).
2. When he flunked the last history test, John used an old pencil, so this time he pulls out a new pencil.
3. John does not ask Mr. Rondo any questions during the test because Mr. Rondo ridiculed him the last time he asked a question.
4. Every time John sees someone who resembles Mr. Rondo he starts to sweat uncontrollably
5. Mr. Tinker looks like Mr. Rondo, and John sweats at first. But every day Mr. Tinker encourages John to participate, and eventually John does raise his hand in Mr. Tinker's class.
6. And he stops sweating in Tinker's class!
7. After John's test, blond Tina talks with him and smiles. John blood pressure rises. In his next class he talks with another blond, Imelda, and his blood pressure rises.
8. Imelda, however, is rude to John. So eventually, his blood pressure rises when Tina talks with him, but not when Imelda does.

Stephan King

Morrison was waiting for someone who was hung up in the air traffic jam over Kennedy International when he saw a familiar face at the end of the bar and walked down.

"Jimmy? Jimmy McCann?"

It was. A little heavier than when Morrison had seen him at the Atlanta Exhibition the year before, but otherwise he looked awesomely fit. In college he had been a thin, pallid chain smoker buried behind huge horn-rimmed glasses. He had apparently switched to contact lenses.

"Dick Morrison?"

"Yeah. You look great." He extended his hand and they shook.

"So do you," McCann said, but Morrison knew it was a lie. He had been overworking, overeating, and smoking too much. "What are you drinking?"

"Bourbon and biters," Morrison said. He hooked his feet around a bar stool and lighted a cigarette. "Meeting someone, Jimmy?"

"No. Going to Miami for a conference. A heavy client Bill's six million. I'm supposed to hold his hand because we lost out on a big special next spring."

"Are you still with Crager and Barton?"

"Executive veep now."

"Fantastic! Congratulations! When did all this happen?" He tried to tell himself that the little worm of jealousy in his stomach was just acid indigestion. He pulled out a roll of antacid pills and crunched one in his mouth.

"Last August. Something happened that changed my life. He looked speculatively at Morrison and sipped his drink. "You might be interested."

My God, Morrison thought with an inner wince. Jimmy McCann's got religion.

"Sure," he said, and gulped at his drink when it came.

"I wasn't in very good shape," McCann said. "Personal problems with Sharon, my dad died--heart attack--and I'd developed this hacking cough. Bobby Crager dropped by my office one day and gave me a fatherly little pep talk. Do you remember what those are like?"

"Yeah." He had worked at Crager and Barton for eighteen months before joining the Morton Agency. "Get your butt in gear or get your butt out."

McCann laughed. "You know it. Well, to put the caper on it, the doc told me I had an incipient ulcer. He told me to quit smoking." McCann grimaced. "Might as well tell me to quit breathing."

Morrison nodded in perfect understanding. Nonsmokers could afford to be smug. He looked at his own cigarette with distaste and stubbed it out, knowing he would be lighting another in five minutes.

"Did you quit?" he asked.

"Yes, I did. At first I didn't think I'd be able to--I was cheating like hell. Then I met a guy who told me about an outfit over on Forty-sixth Street. Specialists. I said what do I have to lose and went over. I haven't smoked since."

Morrison's eyes widened. "What did they do? Fill you full of some drug?"

"No." He had taken out his wallet and was rummaging through it. "Here it is. I knew I had one kicking around." He laid a plain white business card on the bar between them.

QUITTERS, INC.
Stop Going Up in Smoke!
237 East 46th Street
Treatments by Appointment

"Keep it, if you want," McCann said. "They'll cure you. Guaranteed."

"How?"

"I can't tell you," McCann said.

"Huh? Why not?"

"It's part of the contract they make you sign. Anyway, they tell you how it works when they interview you."

"You signed a contract?"

McCann nodded.

"And on the basis of that--"

"Yes." He smiled at Morrison, who thought: "Well, it's happened. Jim McCann has joined the song bastards."

"Why the great secrecy if this outfit is so fantastic? How come I've never seen any spots on TV, billboards, magazine ads—"

"They get all the clients they can handle by word of mouth."

"You're an advertising man, Jimmy. You can't believe that."

"I do," McCann said. "They have a ninety-eight percent cure rate."

"Wait a second," Morrison said. He motioned for another drink and lit a cigarette. "Do these guys strap you down and make you smoke until you throw up?"

"No."

"Give you something so that you get sick every time you light—"

"No, it's nothing like that. Go and see for yourself." He gestured at Morrison's cigarette. "You don't really like that, do you?"

"Mood, but—"

"Stopping really changed things for me," McCann said. "I don't suppose it's the same for everyone, but with me it was just like dominoes falling over. I felt better and my relationship with Sharon improved. I had more energy, and my job performance picked up."

"Look, you've got my curiosity aroused. Can't you just—"

"I'm sorry, Dick. I really can't talk about it." His voice was firm.

"Did you put on any weight?"

For a moment he thought Jimmy McCann looked almost grim. "Yes. A little too much, in fact. But I took it off again."

"I'm about right now. I was skinny before."

"Flight 206 now boarding at Gate 9," the loudspeaker announced.

"That's me," McCann said, getting up. He tossed a five on the bar. "Have another, if you like. And think about what I said, Dick. Really." And then he was gone, making his way through the crowd to the escalators. Morrison picked up the card, looked at it thoughtfully, then tucked it away in his wallet and forgot it.

The card fell out of his wallet and onto another bar a

month later. He had left the office early and had come here to drink the afternoon away. Things had not been going so well at the Morion Agency. In fact, things were bloody horrible.

He gave Henry a ten to pay for his drink, then picked up the small card and reread it--257 East Forty-sixth Street was only two blocks over; it was a cool, sunny October day outside, and maybe, just for chuckles--

When Henry brought his change, he finished his drink and then went for a walk.

Quitters, Inc. was in a new building where the monthly rent on the office space was probably close to Morrison's yearly salary. From the directory in the lobby, it looked to him like their offices look up one whole floor, and that spelled money. Lots of it.

He took the elevator up and stepped off into a husbly carpeted foyer and from there into a gracefully appointed reception room with a wide window that looked out on the scurrying bugs below. Three men and one woman sat in the chairs along the walls, reading magazines. Business types, all of them. Morrison went to the desk.

"A friend gave me this," he said, passing the card to the receptionist. "I guess you'd say he's an alumnus."

She smiled and rolled a form into her typewriter. "What is your name, sir?"

"Richard Morrison."

Clack-clackety-clack. But very muted clacks; the typewriter was an IBM.

"Your address?"

"Twenty-nine Maple Lane, Clinton, New York."

"Married?"

"Yes."

"Children?"

"One." He thought of Alvin and frowned slightly. "One" was the wrong word. "A half" might be better. His son was mentally retarded and lived at a special school in New Jersey.

"Who recommended us to you, Mr. Morrison?"

"An old school friend, James McCann."

"Very good. Will you have a seat? It's been a very busy day."

"All right."

He sat between the woman, who was wearing a severe blue

suit and a young executive type wearing a herringbone jacket and modish sideburns. He took out his pack of cigarettes, looked around, and saw there were no ashtrays.

He put the pack away again. That was all right. He would see this little game through and then fight up while he was leaving. He might even tap some ashes on their maroon shag rug if they made him wait long enough. He picked up a copy of *Time* and began to leaf through it.

He was called a quarter of an hour later, after the woman in the blue suit. His nicotine center was speaking quite loudly now. A man who had come in after him took out a cigarette case, snapped it open, saw there were no ashtrays, and put it away—looking a little guilty, Morrison thought. It made him feel better.

At last the receptionist gave him a sunny smile and said, "Go right in, Mr. Morrison."

Morrison walked through the door beyond her desk and found himself in an indirectly lit hallway. A heavyset man with white hair that looked phony shook his head, smiled a little, and said, "Follow me, Mr. Morrison."

He led Morrison past a number of closed, unmarked doors and then opened one of them about halfway down the hall with a key. Beyond the door was an austere little room—waited with drilled white cork panels. The only furnishings were a desk with a chair on either side. There was what appeared to be a small oblong window in the wall behind the desk, but it was covered with a short green curtain. There was a picture on the wall to Morrison's left—a tall man with iron-gray hair. He was holding a sheet of paper in one hand. He looked vaguely familiar.

"I'm Vic Donatti," the heavyset man said. "If you decide to go ahead with our program, I'll be in charge of your case."

"Pleased to know you," Morrison said. He wanted a cigarette very badly.

"Have a seat."

Donatti put the receptionist's form on the desk, and then drew another form from the desk drawer. He looked directly into Morrison's eyes. "Do you want to quit smoking?"

Morrison cleared his throat, crossed his legs, and tried to think of a way to equivocate. He couldn't. "Yes," he said.

"Will you sign this?" He gave Morrison the form. He scanned it quickly. The undersigned agrees not to divulge the methods or techniques of et cetera, et cetera.

"Sure," he said, and Donatti put a pen in his hand. He scratched his name, and Donatti signed below it. A moment later the paper disappeared back into the desk drawer. Well, he thought ironically, I've taken the pledge. He had taken it before. Once it had lasted for two whole days.

"Good," Donatti said. "We don't bother with propaganda here, Mr. Morrison. Questions of health or expense or social grace. We have no interest in why you want to stop smoking. We are pragmatists."

"Good," Morrison said blankly.

"We employ no drugs. We employ no Dale Carnegie people to sermonize you. We recommend no special diet. And we accept no payment until you have stopped smoking for one year."

"My God," Morrison said.

"Mr. McCann didn't tell you that?"

"No."

"How is Mr. McCann, by the way? Is he well?"

"He's fine."

"Wonderful. Excellent. Now . . . just a few questions, Mr. Morrison. These are somewhat personal, but I assure you that your answers will be held in strictest confidence."

"Yes?" Morrison asked noncommittally.

"What is your wife's name?"

"Lucinda Morrison. Her maiden name was Ramsey."

"Do you love her?"

Morrison looked up sharply, but Donatti was looking at him blandly. "Yes, of course," he said.

"Have you ever had marital problems? A separation, perhaps?"

"What has that got to do with kicking the habit?" Morrison asked. He sounded a little angrier than he had intended, but he wanted—hell, he needed—a cigarette.

"A great deal," Donatti said. "Just bear with me."

"No. Nothing like that." Although things *had* been a little tense just lately.

"You just have the one child?"

"Yes. Alvin. He's in a private school."

"And which school is it?"

"That," Morrison said grimly. "I'm not going to tell you."

"All right," Donatti said agreeably. He smiled disarmingly at Morrison. "All your questions will be answered tomorrow at your first treatment."

"How nice," Morrison said, and stood.
 "One final question," Donati said. "You haven't had a cigarette for over an hour. How do you feel?"

"Fine," Morrison said. "Just fine."

"Good for you!" Donati exclaimed. He stepped around the desk and opened the door. "Enjoy them tonight. After tomorrow, you'll never smoke again."

"Is that right?"

"Mr. Morrison," Donati said solemnly, "we guarantee it."

He was sitting in the outer office of Quitters, Inc. the next day promptly at three. He had spent most of the day swinging between skipping the appointment the receptionist had made for him on the way out and going in a spirit of nullish cooperation—*Throw your best pitch at me, buster!*

In the end, something Jimmy McCann had said convinced him to keep the appointment—*It changed my whole life. God knew his own life could do with some changing. And then there was his own curiosity. Before going up in the elevator, he smoked a cigarette down to the floor. Too damn bad if it's the last one, he thought. It tasted horrible.*

The wait in the outer office was shorter this time. When the receptionist told him to go in, Donati was waiting. He offered his hand and smiled, and to Morrison the smile looked almost predatory. He began to feel a little tense, and that made him want a cigarette.

"Come with me," Donati said, and led the way down to the small room. He sat behind the desk again, and Morrison took the other chair.

"I'm very glad you came," Donati said. "A great many prospective clients never show up again after the initial interview. They discover they don't want to quit as badly as they thought. It's going to be a pleasure to work with you on this."

"When does the treatment start?" Hypnosis, he was thinking. It must be hypnosis.

"Oh, it already has. It started when we shook hands in the hall. Do you have cigarettes with you, Mr. Morrison?"

"Yes."

"May I have them, please?"

Straggling, Morrison handed Donati his pack. There were only two or three left in it, anyway.

Donati put the pack on the desk. Then, smiling into Morrison's eyes, he curled his right hand into a fist and began to

hammer it down on the pack of cigarettes, which twisted and flattened. A broken cigarette end flew out. Tobacco crumbs spilled. The sound of Donati's fist was very loud in the closed room. The smile remained on his face in spite of the force of the blows, and Morrison was chilled by it. Probably just the effect they want to inspire, he thought.

At last Donati ceased pounding. He picked up the pack, a twisted and battered ruin. "You wouldn't believe the pleasure that gives me," he said, and dropped the pack into the wastebasket. "Even after three years in the business, it still pleases me."

"As a treatment, it leaves something to be desired," Morrison said mildly. "There's a newsstand in the lobby of this very building. And they sell all brands."

"As you say," Donati said. He folded his hands. "Your son, Alvin Dawes Morrison, is in the Paterson School for Handicapped Children. Born with cranial brain damage. Tested IQ of 46. Not quite in the educable retarded category. Your wife—"

"How did you find that out?" Morrison barked. He was startled and angry. "You've got no goddamn right to go poking around my—"

"We know a lot about you," Donati said smoothly. "But, as I said, it will all be held in strictest confidence."

"I'm getting out of here," Morrison said thinly. He stood up.

"Stay a bit longer."

Morrison looked at him closely. Donati wasn't upset. In fact, he looked a little amused. The face of a man who has seen this reaction scores of times—maybe hundreds.

"All right. But it better be good."

"Oh, it is," Donati leaned back. "I told you we were pragmatists here. As pragmatists, we have to start by realizing how difficult it is to cure an addiction to tobacco. The relapse rate is almost eighty-five percent. The relapse rate for heroin addicts is lower than that. It is an extraordinary problem. *Extraordinary.*"

Morrison glanced into the wastebasket. One of the cigarettes, although twisted, still looked smokeable. Donati laughed goodnaturedly, reached into the wastebasket, and broke it between his fingers.

"State legislatures sometimes hear a request that the prison systems do away with the weekly cigarette ration. Such pro-

ports wife invariably defeated. In a few cases where they have passed, there have been fierce prison riots. Rick, Mr. Morrison, imagine it!"

"I," Morrison said, "am not surprised."

"But consider the implications. When you put a man in prison you take away any normal sex life, you take away his liquor, his politics, his freedom of movement. No riots—or few in comparison to the number of prisons. But when you take away his *cigarettes*—*wham!* bam!" He slammed his fist on the desk for emphasis.

"During World War I, when no one on the German home front could get cigarettes, the sight of German aristocrats picking butts out of the gutter was a common one. During World War II, many American women turned to pipes when they were unable to obtain cigarettes. A fascinating problem for the true pragmatist, Mr. Morrison."

"Could we get to the treatment?"

"Momentarily. Step over here, please." Donatti had risen and was standing by the green curtains. Morrison had noticed yesterday. Donatti drew the curtains, discovering a rectangular window that looked into a bare room. No, not quite bare. There was a rabbit on the floor, eating pellets out of a dish.

"Pretty bunny," Morrison commented.

"Indeed, Watch him." Donatti pressed a button by the window. The rabbit stopped eating and began to hop about crazily. It seemed to leap higher each time its feet struck the floor. Its fur stood out spikily in all directions. Its eyes were wild.

"Stop that! You're electrocuting him!"

Donatti released the button. "Far from it. There's a very low-voltage charge in the floor. Watch the rabbit, Mr. Morrison!"

The rabbit was crouched about ten feet away from the dish of pellets. His nose wriggled. All at once he hopped away into a corner.

"If the rabbit gets a jolt often enough while he's eating," Donatti said, "he makes the association very quickly. Eating causes pain. Therefore, he won't eat. A few more shocks, and the rabbit will starve to death in front of his food. It's called aversion training."

Light dawned in Morrison's head.

"No, thanks." He started for the door.

"Wait, please, Mr. Morrison."

Morrison didn't pause. He gripped the doorknob . . . and felt it slip solidly through his hand. "Unlock this."

"Mr. Morrison, if you'll just sit down—"

"Unlock this door or I'll have the cops on you before you can say Marlboro Man."

"Sit down." The voice was cold as shaved ice.

Morrison looked at Donatti. His brown eyes were muddy and frightening. My God, he thought, I'm locked in here with a psycho. He licked his lips. He wanted a cigarette more than he ever had in his life.

"Let me explain the treatment in more detail," Donatti said.

"You don't understand." Morrison said with counterfeit patience. "I don't want the treatment. I've decided against it."

"No, Mr. Morrison. *You're* the one who doesn't understand. You don't have any choice. When I told you the treatment had already begun, I was speaking the literal truth. I would have thought you'd tipped to that by now."

"You're crazy," Morrison said wonderingly.

"No. Only a pragmatist. Let me tell you all about the treatment."

"Sure," Morrison said. "As long as you understand that as soon as I get out of here I'm going to buy five packs of cigarettes and smoke them all on the way to the police station." He suddenly realized he was biting his thumbnail, sucking on it and made himself stop.

"As you wish. But I think you'll change your mind when you see the whole picture."

Morrison said nothing. He sat down again and folded his hands.

"For the first month of the treatment, our operatives will have you under constant supervision," Donatti said. "You'll be able to spot some of them. Not all. But they'll always be with you. *Always*. If they see you smoke a cigarette, I get a call."

"And I suppose you bring me here and do the old rabbit trick," Morrison said. He tried to sound cold and sarcastic, but he suddenly felt horribly frightened. This was a nightmare.

"Oh, no," Donatti said. "Your wife gets the rabbit trick, not you."

Morrison looked at him dumbly.

Donatti smiled. "You," he said, "get to watch."

After Donatti let him out, Morrison waited for over two hours in a complete daze. It was another fine day, but he didn't notice. The consciousness of Donatti's smiling face blotted out all else.

"You see," he had said, "a pragmatic problem demands pragmatic solutions. You must realize we have your best interests at heart."

Quitlers, Inc., according to Donatti, was a sort of foundation—a nonprofit organization begun by the man in the wall portrait. The gentleman had been extremely successful in several family businesses—teaching slot machines, massage parlors, numbers, and a brisk (although clandestine) trade between New York and Turkey. Mort "Three-Fingers" Ainfelt had been a heavy smoker—up in the three-pack-a-day range. The paper he was holding in the picture was a doctor's diagnosis: lung cancer. Mort had died in 1970, after endorsing Quitlers, Inc., with family funds.

"We try to keep as close to breaking even as possible," Donatti had said. "But we're more interested in helping our fellow man. And of course, it's a great tax angle."

The treatment was chillingly simple. A first offense and Cindy would be brought to what Donatti called "the rabbit room." A second offense, and Morrison would get the dose. On a third offense, both of them would be brought in together. A fourth offense would show grave cooperation problems and would require sterner measures. An operative would be sent to Alvin's school to work the boy over.

"Imagine," Donatti said, smiling, "how horrible it will be for the boy. He wouldn't understand it even if someone explained. Hell, only know someone is hurting him because Daddy was bad. Hell, he'll be very frightened."

"You bastard," Morrison said helplessly. He felt close to tears. "You dirty, filthy bastard."

"Don't misunderstand," Donatti said. He was smiling sympathetically. "I'm sure it won't happen. Forty percent of our clients never have to be disciplined at all—and only ten percent have more than three falls from grace. Those are reassuring figures, aren't they?"

Morrison didn't find them reassuring. He found them terrifying.

"Of course, if you transgress a fifth time—"

"What do you mean?"

Donatti beamed. "The room for you and your wife, a second beating for your son, and a beating for your wife."

Morrison, driven beyond the point of rational consideration, lunged over the desk at Donatti. Donatti moved with amazing speed for a man who had apparently been completely relaxed. He shoved the chair backward and drove both of his feet over the desk and into Morrison's belly. Gaging and coughing, Morrison staggered backward.

"Sit down, Mr. Morrison," Donatti said benignly. "Let's talk this over like rational men."

When he could get his breath, Morrison did as he was told. Nightmares had to end sometime, didn't they?

Quitlers, Inc., Donatti had explained further, operated on a ten-step punishment scale. Steps six, seven, and eight consisted of further trips to the rabbit room (and increased voltage) and more serious beatings. The ninth step would be the breaking of his son's arms.

"And the tenth?" Morrison asked, his mouth dry.

Donatti shook his head sadly. "Then we give up, Mr. Morrison. You become part of the unregenerate two percent."

"You really give up?"

"In a manner of speaking." He opened one of the desk drawers and laid a silenced .45 on the desk. He smiled into Morrison's eyes. "But even the unregenerate two percent never smoke again. We guarantee it."

The Friday Night Movie was *Bullitt*, one of Cindy's favorites, but after an hour of Morrison's mutterings and fidgetings, her concentration was broken.

"What's the matter with you?" she asked during station identification.

"Nothing . . . everything," he growled. "I'm giving up smoking."

She laughed. "Since when? Five minutes ago?"

"Since three o'clock this afternoon."

"You really haven't had a cigarette since then?"

"No," he said, and began to gnaw his thumb nail. It was ragged, down to the quick.

"That's wonderful! What ever made you decide to quit?"

"You," he said. "And Alvin."

Her eyes widened, and when the movie came back on, she didn't notice. Dick rarely mentioned their retarded son.

came over, looked at the empty ashtray by his right hand, and then into his eyes. "Are you really trying to quit, Dick?"

"Really." And if I go to the cops, he added mentally, the local goon squad will be around to rearrange your face, Cindy.

"I'm glad. Even if you don't make it, we both thank you for the thought, Dick."

"Oh, I think I'll make it," he said, thinking of the maddening homicidal look that had come into Donatti's eyes when he kicked him in the stomach.

He slept badly that night, dozing in and out of sleep. Around three o'clock he woke up completely. His craving for a cigarette was like a low-grade fever. He went downstairs and to his study. The room was in the middle of the house. No windows. He slid open the top drawer of his desk and looked in, fascinated by the cigarette box. He looked around and licked his lips.

Constant supervision during the first month, Donatti had said. Eighteen hours a day during the next two—but he would never know which eighteen. During the fourth month, the month when most clients backslid, the "service" would return to twenty-four hours a day. Then twelve hours of broken surveillance each day for the rest of the year. After that, random surveillance for the rest of the client's life.

For the rest of his life.

"We may audit you every other month," Donatti said. "Or every other day. Or constantly for one week two years from now. The point is, you won't know. If you smoke, you'll be gambling with loaded dice. Are they watching? Are they picking up my wife or sending a man after my son right now? Beautiful, isn't it? And if you do sneak a smoke, it'll taste awful. It will taste like your son's blood."

But they couldn't be watching now, in the dead of night, in his own study. The house was grave-quiet.

He looked at the cigarettes in the box for almost two minutes, unable to tear his gaze away. Then he went to the study door, peered out into the empty hall, and went back to look at the cigarettes some more. A horrible picture came into his mind stretching before him and not a cigarette to be found. How in the name of God was he ever going to be able to make another tough presentation to a wary client, without that cigarette burning nonchalantly between his fingers as he

approached the checks and layouts? How would he be able to spare Cindy's endless garden shows without a cigarette? How could he even get up in the morning and face the day without a cigarette to smoke as he drank his coffee and read the paper?

He cursed himself for getting into this. He cursed Donatti. And most of all, he cursed Jimmy McCann. How could he have done it? The son of a bitch had known his hands trembled in their desire to get hold of Jimmy Judas McCann.

Stealthily, he glanced around the study again. He reached into the drawer and brought out a cigarette. He caressed it, fondled it. What was that old slogan? *So round, so firm, so fully packed.* Thier words had never been spoken. He put the cigarette in his mouth and then paused, cooking his head.

Had there been the slightest noise from the closet? A faint shifting? Surely not. But—

Another mental image—that rabbit hopping crazily in the grip of electricity. The thought of Cindy in that room—

He listened desperately and heard nothing. He told himself that all he had to do was to go to the closet door and yank it open. But he was too afraid of what he might find. He went back to bed but didn't sleep for a long time.

In spite of how lousy he felt in the morning, breakfast tasted good. After a moment's hesitation, he followed his customary bowl of cornflakes with scrambled eggs. He was grumpily washing out the pan when Cindy came downstairs in her robe.

"Richard Morrison! You haven't eaten an egg for breakfast since Hector was a pup."

Morrison grunted. He considered since *Hector was a pup* to be one of Cindy's stupider sayings, on a par with *I should smile and kiss a pig*.

"Have you smoked yet?" she asked, pouring orange juice.

"No."

"You'll be back on them by noon," she proclaimed airily.

"Lot of goddamn help you are!" he rasped, rounding on her. "You and anyone else who doesn't smoke, you all think I'm a damn, never mind."

He expected her to be angry, but she was looking at him with something like wonder. "You're really serious," she said. "You really are."

"You bet I am." *You'll never know how serious. I hope.*

"Poor baby!" she said, going to him. "You look like death warmed over. But I'm very proud!" Morrison held her tightly.

Scenes from the life of Richard Morrison, October-November:

Morrison and a crowd from Jarkin Studios at Jack Dempsey's bar. Crony offers a cigarette. Morrison grips his glass a little more tightly and says: *I'm quitting.* Crony laughs and says: *I give you a week.*

Morrison waiting for the morning train, looking over the top of the *Times* at a young man in a blue suit. He sees the young man almost every morning now, and sometimes at other places. At Cade's, where he is meeting a cheat. Looking at 455 in Sam Goody's, where Morrison is looking for a Sam Cooke album. Once in a foursome behind Morrison's group at the local golf course.

Morrison getting drunk at a party, wanting a cigarette—but not quite drunk enough to take one.

Morrison visiting his son, bringing him a large hall that squeaked when you squeezed it. His son's slobbering, delighted kiss. Somehow not as repulsive as before. Hugging his son tightly, realizing what Donati and his colleagues had so cynically realized before him: love is the most pernicious drug of all. Let the romantics debate its existence. Pragmatists accept it and use it.

Morrison losing the physical compulsion to smoke little by little, but never quite losing the psychological craving, or the need to have something in his mouth—cough drops, Life Savers, a toothpick. Poor substitutes, all of them.

And finally, Morrison bung up in a colossal traffic jam in the Midtown Tunnel. Darkness. Horns blaring. Air stinking. Traffic hopelessly stalled. And suddenly, thumping open the glove compartment and seeing the half-open pack of cigarettes in there. He looked at them for a moment, then snatched one and lit it with the dashboard lighter. If anything happens to his Clady's fault, he told himself defiantly. I told her to get rid of all the damn cigarettes.

The first drag made him cough smoke out furiously. The second made his eyes water. The third made him feel light-headed and swoony. It tastes awful, he thought.

And on the heels of that: My God, what am I doing? Horns blatted impatiently behind him. Ahead, the traffic

had begun to move again. He stubbed the cigarette out in the ashtray, opened both front windows, opened the vents, and then fanned the air helplessly like a kid who has just flushed his first butt down the john.

He joined the traffic flow jerkily and drove home.

"Cindy?" he called. "I'm home."

No answer.

"Cindy? Where are you, hon?"

The phone rang, and he pounced on it: "Hello? Cindy?"

"Hello, Mr. Morrison," Donati said. He sounded pleasantly brisk and businesslike. "It seems we have a small business matter to attend to. Would five o'clock be convenient?"

"Have you got my wife?"

"Yes, indeed." Donati chuckled indulgently.

"Look, let her go," Morrison babbled. "It won't happen again. It was a slip, just a slip, that's all. I only had three drags and for God's sake *it didn't even taste good!*"

"That's a shame. I'll count on you for five then, shall I?"

"Please," Morrison said, close to tears. "Please—"

He was speaking to a dead line.

At 5 P.M. the reception room was empty except for the secretary, who gave him a twinkly smile that ignored Morrison's pallor and disheveled appearance. "Mr. Donati?" she said into the intercom. "Mr. Morrison to see you." She nodded to Morrison. "Go right in."

Donati was waiting outside the unmarked room with a man who was wearing a smudged sweatshirt and carrying a .38. He was built like an ape.

"Listen," Morrison said to Donati. "We can work something out, can't we? I'll pay you. I'll—"

"Snaddap," the man in the smudged sweatshirt said.

"It's good to see you," Donati said. "Sorry it has to be under such adverse circumstances. Will you come with me? We'll make this as brief as possible. I can assure you your wife won't be hurt... this time."

Morrison tensed himself to leap at Donati.

"Come, come," Donati said, looking annoyed. "If you do that, Junk here is going to pistol-whip you and your wife is still going to get it. Now where's the percentage in that?"

"I hope you rot in hell," he told Donati.

Donati sighed. "If I had a nickel for every time someone expressed a similar sentiment, I could retire. Let it be a lesson to you, Mr. Morrison. When a romantic tries to do a good thing and fails, they give him a medal. When a pragmaticist succeeds, they wish him in hell. Shall we go?"

Junk motioned with the pistol. Morrison preceded them into the room. He felt numb. The small green curtain had been pulled. Junk prodded him with the gun. This is what being a witness at the gas chamber must have been like, he thought.

He looked in. Chady was there, looking around bewilderedly.

"Cindy?" Morrison called miserably. "Cindy, they—"

"She can't hear or see you," Donati said. "One-way glass. Well, let's get it over with. It really was a very small slip. I believe thirty seconds should be enough. Junk?"

Junk pressed the button with one hand and kept the pistol jammed firmly into Morrison's back with the other.

It was the longest thirty seconds of his life.

When it was over, Donati put a hand on Morrison's shoulder and said, "Are you going to throw up?"

"No," Morrison said weakly. His forehead was against the glass. His legs were jelly. "I don't think so." He turned around and saw that Junk was gone.

"Come with me," Donati said.

"Where?" Morrison asked apathetically.

"I think you have a few things to explain, don't you?"

"How can I face her? How can I tell her that I . . . I . . ."

"I think you're going to be surprised," Donati said.

The room was empty except for a sofa. Cindy was on it, sobbing helplessly.

"Cindy?" he said gently.

She looked up, her eyes magnified by tears. "Dick?" she whispered. "Dick? Oh . . . Oh God . . ." He held her tightly. "Two men," she said against his chest. "In the house and at first I thought they were burglars and then I thought they were going to rape me and then they took me someplace with a blindfold over my eyes and . . . and . . . oh it was horrible—"

"Shhh," he said. "Shhh."

"But why?" she asked, looking up at him. "Why would they—"

"Because of me," he said. "I have to tell you a story, Cindy—"

When he had finished he was silent a moment and then said, "I suppose you hate me. I wouldn't blame you."

He was looking at the floor, and she took his face in both hands and turned it to hers. "No," she said. "I don't hate you."

He looked at her in mute surprise.

"It was worth it," she said. "God bless these people."

"They've let you out of prison."

"Do you mean that?"

"Yes," she said, and kissed him. "Can we go home now? I feel much better. Ever so much."

The phone rang one evening a week later, and when Morrison recognized Donati's voice, he said, "Your boys have got it wrong. I haven't even been near a cigarette."

"We know that. We have a final matter to talk over. Can you stop by tomorrow afternoon?"

"Is it—"

"No, nothing serious. Bookkeeping really. By the way, congratulations on your promotion."

"How did you know about that?"

"We're keeping tabs," Donati said noncommittally, and hung up.

When they entered the small room, Donati said, "Don't look so nervous. No one's going to bite you. Step over here, please."

Morrison saw an ordinary bathroom scale. "Listen, I've gained a little weight, but—"

"Yes, seventy-three percent of our clients do. Step up, please."

Morrison did, and tipped the scales at one-seventy-four.

"Okay, fine. You can step off. How tall are you, Mr. Morrison?"

"Five-eleven."

"Okay, let's see." He pulled a small card laminated in plastic from his breast pocket. "Well, that's not too bad. I'm going to write you a prescription for some highly illegal diet pills. These are sparingly and according to directions. And I'm going to set your maximum weight at . . . let's see . . ." He

consulted the card again. "One eighty-two, how does that sound? And since this is December first, I'll expect you the first of every month for a while-in. No problem if you can't make it, as long as you call in advance."

"And what happens if I go over one-eighty-two?" Donatti smiled. "We'll send someone out to your house to cut off your wife's little finger," he said. "You can leave through this door, Mr. Morrison. Have a nice day."

Eight months later:

Morrison runs into the cromy from the Larkin Studies a Dempsey's bar. Morrison is down to what Cindy proudly calls his fighting weight: one-sixty-seven. He works out three times a week and looks as fit as whipcord. The cromy from Larkin, by comparison, looks like something the cat dragged in.

Cromy: Lord, how'd you ever stop? I'm locked into this damn habit tighter than Tillie. The cromy stubs his cigarette out with real revulsion and drains his scotch.

Morrison looks at him speculatively and then takes a small white business card out of his wallet. He puts it on the bar between them. You know, he says, these guys changed my life.

Twelve months later:

Morrison receives a bill in the mail. The bill says:

QUITTERS, INC.

237 East 46th Street
New York, N.Y. 10017

1 Treatment	\$2500.00
Counselor (Victor Donatti)	\$2500.00
Electricity	\$.50
Total (Please pay this amount)	\$5000.50

These sons of bitches! be explodes. They charged me for the electricity they used to . . . to . . .
Just pay it, she says, and kisses him.

Twenty months later:

Quite by accident, Morrison and his wife meet the Jimm-

McCanns at the Helen Hayes Theatre. Introductions are made all around Jimmy looks as good, if not better, than he did on that day in the airport terminal so long ago. Morrison has never met his wife. She is pretty in the radiant way plain girls sometimes have when they are very, very happy.

She offers her hand and Morrison shakes it. There is something odd about her grip, and halfway through the second act he realizes what it was. The little finger on her right hand is missing.

On Responsibility and Punishment

John Staddon

John E. R. Staddon is the J. B. Duke Professor of Psychology, Professor of Zoology and Neurobiology. He has written many books on behavioral analysis including this 1995 excerpt from the Atlantic Monthly magazine.

The litany of social dysfunction is now familiar. The rates of violent crime are 40 percent higher than they were a decade ago; Americans kill and maim one another at per capita rates five to ten times as high as those of other industrialized nations: The rate of illegitimacy continues to climb. Tens of thousands of children have no fathers and no family members or close acquaintances who hold regular jobs; this pattern is now repeating into the second and third generations. Illiteracy is a big problem, and schools have so lost authority that the accepted response to armed pupils is to install metal detectors. Senator Daniel Patrick Moynihan, in a celebrated article, recently pointed out that we cope with social disintegration by redefining deviancy, so that crimes become “normal” behavior.

How did we arrive at this condition? There’s no short answer, but I have increasingly come to believe that my own profession—psychology—bears a large part of the blame. The story began many years ago, when psychology defined itself as a science. Thus self-anointed, the discipline gained great prestige. People accepted with little demur prescriptions that would earlier have been condemned on moral grounds. Don’t spank your child. Don’t attempt to deter sexual exploration by young people—deterrence is probably bad and will certainly fail. Punishment is ineffective and should be replaced by positive reinforcement. Self-esteem is good, social stigma bad. It is not clear that this advice was all wrong. What is clear, and what I will show

in this article, is that it was not based on science.

Some questions about behavior can be answered—either now or in the future—through the methods of science. How does visual perception work? What are the effects of different reward schedules? How accurate is memory for words and faces? What lighting conditions are best for different kinds of tasks? Which people are likely to succeed in which professions? Other questions, including apparently simple ones such as the value of some teaching techniques and the legitimacy of corporal punishment, cannot be answered by science, because they have consequences that go beyond the individual or far into the future. Corporal punishment and teaching methods affect not just the child but, eventually, the nature of society. Society cannot be the subject of experiments, and even if it could, the effects of social changes usually take decades or even centuries to play out. Hence we often cannot expect to get hard scientific answers to social questions.

Obviously, we need to separate those questions that belong in the domain of science from those that do not—to separate questions that can be answered definitively from those that cannot. Unfortunately, psychology as a profession tends to assume that all questions about human action fall within its domain and that all can eventually be answered with the authority of science—and this imperialism has gone largely unquestioned.

Psychologists and behavioral psychiatrists seem a diverse crew. At one end of the spectrum

The Atlantic Monthly, Feb 1995, v275, n2, p.88(6), © 1995, John Staddon, as first published in *The Atlantic Monthly*.

argument. Punishment was ruled out not by moral opposition but by supposedly scientific laboratory results. Less science-oriented psychologists and psychiatrists have agreed that punishment is bad, but the reasons for their consensus are more complex, and have to do with the social function of psychotherapy. Nevertheless, for the majority of psychologists and psychiatrists, the facts established by the behaviorists have always constituted an unanswerable argument—especially if these have supported pre-existing beliefs. This "scientific consensus has had a devastating effect on the moral basis of American society.

I will argue, first, that there is no opposition between behaviorist determinism and the notion of individual responsibility; and second, that the scientific basis for blanket opposition to punishment as a legitimate social instrument—in the family, the school, the workplace, and the judicial system—is nonexistent. My focus is Skinnerian behaviorism because it is the area of psychology that has been most concerned with large social issues. But the key ideas have been carried forward by a much larger number of psychologists and psychiatrists who have never thought of themselves as behaviorists.

B. F. Skinner's 1971 best seller, *Beyond Freedom and Dignity*, contains his most contented, and successful, attack on traditional methods of social control. Most psychotherapists, behaviorist and nonbehaviorist alike, have come to agree with the substance of Skinner's message: that punishment is bad and that the idea of individual responsibility is a myth. Skinner's argument is simply wrong. It will be a task for future sociologists to understand why such a bad argument received such ready assent.

Skinner contrasted the "prescientific" view that "a person's behavior is at least to some extent his own achievement" with the "scientific" view that behavior is completely determined by heredity and environment. The conventional view, he wrote, is that a person is free.

"He is autonomous in the sense that his behavior is uncaused. He can therefore be held responsible for what he does and justly pun-

ished if he offends. That view, together with its associated practices, must be re-examined when a scientific analysis reveals unsuspected controlling relations between behavior and environment."

So even if we could predict all human behavior with absolute precision, this wonderful new science would have no bearing at all on the idea of freedom.

Punishment

There is another strand in Skinner's assault on traditional practices—his attack on punishment. He rejected punishment not because it is morally wrong but because it doesn't work. (W. H. Auden had no such doubts about punishment when he remarked, "Give me a nonsense, down-to-earth behaviorist, a few drugs, and simple electrical appliances, and in six months I will have him reciting the Arianston Creed in public.") Since everyone knows that some punishments sometimes work, you may be curious to hear how Skinner defended his position. His argument boils down to three points: punishment is ineffective because when you stop punishing, the punished behavior returns; punishment provokes "counterattack"; positive reinforcement is better. Let's look at each of these.

Punishment Is Ineffective. Well, no, it isn't.

Common sense aside, laboratory studies with pigeons and rats (the basis for Skinner's argument) show that punishment (usually a brief electric shock) works very well to suppress behavior, as long as it is of the right magnitude and follows promptly on the behavior that is to be suppressed. If a rat gets a moderate shock when he presses a bar, he stops pressing it more or less at once. If the shock is too great, the rat stops doing anything; if the shock is too weak, he may still press the bar once in a while; if it's just right, he quits pressing but otherwise behaves normally. Does the punished behavior return when the punishment is withdrawn? That depends on the training procedure. An avoidance procedure, called shock postponement, in which the rat gets no shock so long as he presses the bar once in a while,

Freedom

Is man free? Well, as the professor used to say, it depends on what you mean by "freedom." The bottom line is that you're free if you feel free. Skinner's definition is simpler: to him, freedom was simply the absence of punishment ("aversive contingencies"). But we are all "punished" by gravity if we seek to disobey its rules. The punishment can sometimes be quite severe, as beginning cyclists and skaters can attest. Yet we do not feel unfree when we learn to skate or cycle. Punishment doesn't always abolish freedom—and freedom is not just the absence of punishment.

Skinner had another definition of freedom: absence of causation ("autonomous man"). This is an odd notion indeed. How can one ever prove the absence of causation? In science a conjecture like this is called a null hypothesis, and everyone accepts that such a thing is impossible to prove. We might prove the obverse, however, that people are unfree when their behavior is determined—that is to say, when it can be predicted. For example, suppose a rich and generous aunt offers her young niece a choice between a small sum of money and a large sum. In the absence of any contrary factors, the niece will doubtless pick the larger over the smaller. (Classical economics rests on the assumption that this will always be the choice made.) Can we predict the niece's behavior? Certainly. Is her behavior determined? Yes, by all the usual criteria. Is she unfree? She certainly doesn't feel unfree. People generally feel free when they follow their preferences, no matter how predictable those preferences may be. Behavior can be predicted in other contexts as well. Mathematicians predictably follow the laws of arithmetic; architects the laws of geometry; and baseball

we have touchy-feelies who say things like "Any of us who were raised in the traditional patriarchal system have trouble relating because we've been 'mythified' to some degree by an upbringing that compels obedience and rules by fear, a raising that can be survived only by denial of the authentic self" (John Bradshaw). At the other we have the behaviorists, who say things like "In the scientific view . . . a person's behavior is determined by a genetic endowment traceable to the evolutionary history of the species and by the environmental circumstances to which as an individual he has been exposed" (B. F. Skinner).

Bradshaw and Skinner seem to agree on little. It may come as a surprise, therefore, to learn that psychological pundits from Bradshaw to Skinner agree on several important things. Almost all focus entirely on the individual. All reject what Bradshaw calls "fear." Skinner called "aversive contingencies," and the rest of us call punishment. Nearly all psychologists believe that behavior is completely determined by heredity and environment. A substantial majority agree with Skinner that determinism rules out the concept of personal responsibility. This opposition between determinism and responsibility is now widely accepted, not just by behaviorists but by every category of mental-health professional, by journalists, by much of the public—and by many in the legal profession.

Behaviorism is the most self-consciously "scientific" of the many strands that make up psychology. Although somewhat overshadowed recently by cognitive psychology and other movements, behaviorism has had overwhelming influence during most of the short history of psychology. Consequently, when behaviorists have produced hard evidence in favor of beliefs already shared by other psychologists, the combined effect has always been decisive. I will describe just such a confluence in this article.

About moral positions, argument is possible. But about scientific facts there can be no argument. Skinner, and the behaviorist movement of which he was the head, legitimized both individual responsibility and punishment. Responsibility was dismissed by philosophical

produces behavior that can persist indefinitely when the shock schedule is withdrawn. That is to say, the rat continues periodically to press the bar.

Punishment Provokes Counterattack. Sure: if a food-producing lever also produces shock, the rat will try to get the food without getting the shock. A famous picture in introductory psychology texts is called "Breakfast in Bed." It shows a rat that learned in a shock-food experiment to press the lever while lying on his back, insulated by his fur from the metal floor grid. Skinner was right that rats, and people, try to beat a punishment schedule.

Positive Reinforcement Is More Effective. Not true. The effects of positive reinforcement also dissipate when the reinforcement is withdrawn, and there is no positive-reinforcement procedure that produces behavior as persistent as that produced by a shock-postponement schedule. Positive reinforcement also provokes counterattack. Every student who cheats, every gambler who rigs the odds, every robber and thief, shows the counterattack provoked by positive-reinforcement schedules.

There are other arguments on both sides, but the net conclusion must be that the scientific evidence is pretty much neutral in deciding between reward and punishment. Each has its advantages and disadvantages: punishment is better for suppressing behavior, positive reinforcement better for generating behavior, punishment tends to produce more persistent behavior than rewards, and so on. If we wish to favor reward over punishment, we must make a moral, not a scientific, case.

Justice and Determinism

All this might be academic but for its impact on legal thinking. The opposition between determinism and responsibility, and the doubts cast on punishment, do seem to raise issues of justice. If the devil—or, at least, "my environment"—made me do it, surely I should be spared the rigors of just punishment (of dubious effectiveness in any case, according to

psychologists). In the era of Lorenz, Bobbit, Reginald Denny's attackers, and the Menendez brothers, this argument evidently strikes a receptive chord in the hearts of American juries.

Too bad, because the argument is false. I've already argued that behavior can be both determined (in the sense of predictable) and free. I argue now that the legal concept of personal responsibility is founded on this kind of predictability. Personal responsibility demands that behavior be predictable—not the opposite, as Skinner contended.

What is the purpose of judicial punishment? Legal scholars normally identify two purposes, retribution and deterrence. Retribution is a moral concept, which need not concern us here. But deterrence is a practical matter. Arguments about deterrence are clouded by ideology and the impossibility of deciding the issue by the methods of science. Nevertheless, there is a straightforward approach to deterrence that would much simplify a jury's task. The idea is that the purpose of legal punishment is to minimize the total amount of suffering in society—the suffering caused by crime as well as the suffering caused by punishment. The concept is simple: If thievery is punished by amputation, the level of thievery will be low but the level of suffering of thieves will be very high—higher, perhaps, than warranted by the reduction in theft. On the other hand, if murderers go free, the level of murder will be high and the ease of the killers will not balance the suffering of the rest. We may argue about how to measure suffering and how to assess the effect of a given level of legal punishment for a given crime, but the principle, which I call the social view of punishment, seems reasonable enough. It is consistent with the fundamental principle that government exists for the welfare of society as a whole, not for the good of any particular individual. Once they understand the argument, most people seem to agree that the social view of punishment is acceptable, although not, perhaps, the whole story. What people do not seem to realize is that this perfectly reasonable view is not opposed to determinism; it requires determinism.

From an objective point of view—the only legitimate point of view for science—"holding a man responsible" for his actions means nothing more than making him subject to punishment if he breaks the law. The social view of punishment assures that people are sensitive to reward and punishment—that behavior is predictably subject to causal influences. If criminal behavior is predictably deterred by punishment, the justly punished criminal is less likely to disobey the law again, and serves as an example to other potential lawbreakers. This is the only objective justification for punishment. But, if behavior were unpredictable and unaffected by "reinforcement contingencies"—if it were unrestrained, in Skinner's caricature of freedom—there would be absolutely no point to punishment or any other form of behavioral control, because it would have no predictable effect. In short, legal responsibility requires behavioral determinism.

It is interesting to reflect that the objective case for personal responsibility rests entirely on the beneficial, collective effects of just punishment (on minimizing the sum total of human suffering). It does not rest on philosophical notions of individual autonomy, or personal intent, or anything else at the level of the individual—other than normal susceptibility to reward and punishment. The idea that the law is somehow concerned with the mental state of the accused, rather than with the consequences of judicial action, has taken root because Skinner, like most other psychologists, focused almost exclusively on the individual.

If a person's "behavior is at least to some extent his own achievement," Skinner wrote, then he can be praised for success and blamed for failure. Since personal responsibility is a myth (he concluded), praise and blame are irrelevant. But if personal responsibility is defined as I have defined it, praise and blame need not—should not—be abandoned. In the social view, the use of praise and blame has nothing to do with the ontology of personal responsibility, the epistemology of intention, or whatnot. It has everything to do with reward and punishment: in other contexts Skinner admitted as much, at least with respect to

praise). We praise good behavior because we wish to see more of it; we censure the criminal because we wish to see less crime. Praise and blame are perhaps the simplest incentives available to society. By giving them up, Skinner gave up our best tools for social order.

It is extraordinary that Skinner seems to have missed the connection between determinism and the sanctions imposed by the legal system. He spent his life studying how the behavior of animals is determined by the conditions of reward and punishment. He and his students discovered dozens of subtle and previously unsuspected regularities in the actions of reward and punishment. Yet he failed to see that the system of rewards and punishments imposed by society works in much the same way as his reinforcement schedules.

Remarkably, law and science seem to agree on the social view of punishment. Only when punishment is likely to be completely ineffective as a deterrent does the law limit its use. If the criminal is insane, or if injury was the unintended result of actions whose harmful outcome was unforeseeable, no guilt is attached to the perpetrator and no punishment is meted out—presumably because punishment can play no role in preventing a recurrence of the crime or the injury. There is surprising congruence between the legal concept of responsibility and the function of punishment as a deterrent. "Guilt" is established not so much by the act as by the potential of punishment to deter the act.

The "Victim" Defense: What Should the Jury Do?

These arguments greatly simplify a jury's task. Jurors have no need to puzzle through philosophical questions about intent or knowledge of right and wrong. Nor do they need to ask whether criminal behavior was determined by the defendant's history. (The scientific answer will almost always be yes, because almost all behavior is determined.) History is not the point. The point is, Did the defendant know that his actions would have an illegal outcome? And if he had known in advance of the act that sure punishment would follow, would he still have

acted as he did? If the criminal would have been deterred by the prospect of punishment, the social view says, then he should be punished. Did the Menendez brothers know that their actions would result in the death of their parents? Presumably yes. If they had known that those acts would result in severe punishment (life in prison or death), would they have acted nevertheless? Probably not. Verdict: Guilty. On the other hand, if the jury had reason to believe that the defendants' history was so horrific that they would have murdered even in the face of certain punishment, then some other verdict (which might still involve removing these damaged men from society) would be appropriate.

The Proper Role of Psychology

The social view of punishment is as far as psychology can go toward prescribing social policy. Given a certain set of values, psychology may help us decide what system of rewards and punishments will be helpful in promoting them. But the social view of reward and punishment does not by itself prescribe social policy. Our value system, our morality, plays a legitimate role in measuring suffering, in evaluating known outcomes, and in judging the

rightness or wrongness of particular rewards and punishments. We're less moved by the plight of the disappointed thief who breaks open an empty safe than by the suffering of a mugging victim, for example. Psychology can tell us a little (only a little, since we don't do such experiments on human beings) about the effects on individuals of corporal punishment versus the effects of a jail term; it cannot tell us whether corporal punishment is cruel or not. Social science can tell us that more people will be killed by guns if guns are freely available than if they are not; it cannot tell us whether the freedom to bear arms is an inalienable right. Psychology can tell us something about the extent of homosexuality in different cultures; it cannot tell us whether homosexuality is good, bad, or a matter of indifference. Psychology can also tell us that social opprobrium—Hester Prynne's A, blame, or the big red D some have proposed for drunk drivers—is often an effective deterrent. It cannot tell us whether such punishment is right or not. Scientific psychology, like all science, is amoral: it tells us what is or what might be—not what should be. Psychologists who offer more, promoters of the “authentic self” or punishment-free societies, are peddling not science but faith.

