It is easy to introduce yourself to others and strike up a conversation in this setting. Attending the business meeting also gives one some ideas about issues facing the division. This information can be used by members to identify division activities for which they are well suited and to locate the names of people who coordinate these activities. Members can then volunteer for specific projects or make suggestions about how current issues might be addressed. Discussion of such projects and issues can carry over to the social hour, which follows the business meeting. Because most members wear their convention name badges, the social hour is an excellent place to meet people in a friendly and relaxed atmosphere.

Division Two Governance

Although involvement in Division Two governance is limited by the number of positions available in any given year, it has definite advantages. Faculty from small departments who do not have colleagues with similar interests will find that such involvement provides an additional source of stimulation and friendship. Working on general educational issues also gives one a broader perspective on issues facing the discipline.

Division governance positions include elected officers as well as appointed committees and task forces. Appointment may result through contacts made in the networking described earlier. Annually, *ToP* prints a list of the current committee and task force chairs. Work as a reviewer for the Program Committee is used here to illustrate some of the benefits of involvement in governance activities. Serving as a reviewer for the Program Committee has a continuing education function similar to that of reviewing for *ToP*. Material submitted for program consideration is brief. Continuing education comes through awareness of the range of current work in the discipline rather than content. Serving on other committees or task forces may provide either a continuing education or networking function. Division Two committees are described in the bylaws (1983). Task forces are created to meet specific needs that arise in the division. Current task force topics include: ethical issues, minority issues, and student affairs.

Summary

Getting involved in any of the Division Two activities described in this article requires some assertiveness. A first request may not lead to the level of involvement desired; persistence is important. When a task force of committee needs a new member, your name is more likely to be raised for the vacancy if you have already volunteered to participate. The need for additional help on projects being discussed may also be raised during convention sessions. Volunteering at that time will also increase the chance of participation. Activities described in this article involve varying degrees of time and work. The benefits for professional growth and development are there for those who seek them out.

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Notes

1. An earlier version of this article was presented at the annual convention of the American Psychological Association, New Orleans, August 1989.
2. Requests for reprints or additional information should be sent to Janet R. Matthews, Department of Psychology, Loyola University, New Orleans, LA 70118.

Negative Reinforcement and Positive Punishment

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The concept of negative reinforcement *is notoriously difficult to teach to introductory students. Reasons for this difficulty include: surplus meanings associated with the terms* negative *and* punishment, *the fact that Skinner (1938, 1953) described two types of reinforcement but only one type of punishment, the tendency that most students have to view reward and punishment in subjective terms, and Skinner's (1938, 1953) conflicting definitions of* reinforcement *and* punishment. *Pointing out to students that there are two types of punishment—positive and negative—as well two types of reinforcement—positive and negative—helps them learn that* negative reinforcement *is not a synonym for* punishment.

There probably is no concept more difficult to teach to introductory students than that of negative reinforcement (Tauber, 1988). There are at least four reasons why this is so: (a) the surplus meaning carried by such terms as negative and punishment; (b) the fact that Skinner (1938, 1953) described two types of reinforcement (positive and negative), but only one type of punishment; (c) the tendency that most students have to perceive reinforcement and punishment in terms of their effects on the organism's emotions rather than on overt behaviors; and (d) Skinner's (1938, 1953) habit of using the words *reinforcement* and *punishment* in at least two different ways. Finding a more effective way to teach the concept of negative reinforcement requires resolving all four problems.

Surplus Meaning of *Negative* and *Punishment*

Webster's New Collegiate Dictionary defines reinforcement as "the act of strengthening," clearly a behavioral definition. However, the dictionary also defines *negative* as "disagreeable" and *punishment* as "suffering, pain, or loss," words

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that appeal to inner feelings or emotions, rather than to measurable behaviors. Little wonder, then, that most students (and some psychologists) believe that negative reinforcement refers to the act of punishment—that is, to the onset of pain or dissatisfaction—rather than an action that strengthens a response by reducing or terminating an aversive stimulus.

Two Types of Reinforcement but Only One Type of Punishment?

Although Skinner (1953) mentioned two types of reinforcement—positive and negative—he described but one type of punishment. *Positive reinforcement* is the technical term he used in place of *reward;* however, he did not supply a technical term to replace *punishment.*

Given that *reward* is a synonym for *positive reinforcement* and that *negative* is defined as "something disagreeable," many students assume that negative reinforcement should be the technical term that is synonymous with punishment (Tauber, 1988). Had Skinner provided us with a technical term for *punishment,* this confusion might not exist.

Feelings Rather Than Behaviors

To avoid discussing what goes on inside the organism when reinforcement or punishment occurs, Skinner defined these concepts in terms of their behavioral consequences. He (1953) noted, for example, that organisms tend to approach positive reinforcers and escape from punishers. However, it is difficult to convince most students that the organism's emotions do not mediate the behavioral changes that Skinner spoke of. Indeed, one question students frequently ask is, "But why does the organism approach or avoid the stimulus?" They know full well that they like rewards and dislike punishers and presume that their consequential behaviors are motivated by their feelings. Most students also assume that other organisms feel and respond as they do.

Skinner's Definitions

Most of the time, Skinner (1938, 1974) defined *reinforcement* as a behavioral consequence that increases the probability that a response will be repeated in the future. He (1971) put it this way: "When a bit of behavior is followed by a certain kind of consequence, it is more likely to occur again, and a consequence having this effect is called a reinforcer" (p. 27).

Most of the time, too, Skinner spoke of punishment in terms of its behavioral consequences. Suppose an organism is punished for making a certain response. The effects of this punishment are threefold; he said: First, there is a time-limited reduction in the rate at which the organism emits the undesirable response; second, there is an increase in escape or avoidance behaviors; and third, if the punishment is strong enough, the undesirable response actually increases in strength once punishment is terminated. In describing one of his own experiments, Skinner (1953) said: "The effect of punishment was a temporary suppression of the behavior, not a reduction in the total number of responses" (p. 184).

At first glance, it would appear that Skinner successfully defined both *punishment* and *reinforcement* in terms of their behavioral consequences. However, an analysis of Skinner's writings suggests that he also used the terms *reinforcement* and *punishment* in quite a different way—to describe the onset and offset of certain classes of stimuli under the experimenter's control. This conflict in Skinner's definitions shows up most clearly in his discussion of negative reinforcement. According to Skinner, "You can distinguish between punishment, which is making an aversive event contingent upon a response, and negative reinforcement, in which the elimination or removal of an aversive stimulus, conditioned or unconditioned, is reinforcing" (cited in Evans, 1968, p. 183). Here, surely, Skinner defined both *punishment* and *negative reinforcement* as the onset or offset of a noxious stimulus, not as consequential behaviors.

One reason, perhaps, why it is difficult to explain negative reinforcement to students is that most psychologists tend to use the term in Skinner's second sense—as "the elimination or removal of an aversive stimulus"—not as an increase in the organism's response rate. It is also true, of course, that the words *noxious* and *aversive* appeal as much to emotional mediators as they do to behavioral reactions.

Positive and Negative Punishment

Fortunately, there is a fairly simple way of overcoming the difficulties associated with teaching our students what negative reinforcement actually is. More than 2 decades ago, Catania (1968) noted that there are actually two types of punishment: "Like reinforcement, punishment can be positive or negative" (p. 241). In a subsequent publication, he (1979) defined *positive punishment* as that associated with the presentation of an aversive stimulus, whereas negative punishment results from the withdrawal of a positively reinforcing stimulus. Rachlin (1970) took a similar position, although he did not adopt the terms *positive* and *negative punishment* until several years later (Rachlin, 1976). Redd, Porterfield, and Anderson (1979) also spoke of two types of punishment in their text on behavior modification.

Despite the logic of Catania's assertion that there must be both positive and negative punishment, the terms seldom appear even in operant-oriented journals. A search of *Psychological Abstracts* since 1966—the earliest date that the *Abstracts* are available in computerized form—turned up but 18 references for each term. However, in 14 of these articles, the authors actually referred to the positive or negative consequences of using punishment as a means of controlling behavior. In only 4 of the articles did the authors use the terms as Catania defined them (Jackson & Molloy, 1983; Scott & Wood, 1987; Whitehurst & Miller, 1973; Zirpoli & Lloyd, 1987). The fact that punishment can be either positive or negative is discussed in two recent books on learning and memory (Gordon, 1989; Hall, 1989) and in one introductory text (Wade & Tavris, 1987).

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Table 1. A Comparison of Positive and Negative Reinforcement and Punishment

	Positive	Negative
Reinforcement	ON +	OFF −
Punishment	ON −	OFF +

Note: ON or OFF denotes onset or offset of a stimulus; the symbols + and − denote the subjective quality associated with the stimulus, either satisfaction (+) or dissatisfaction (−).

Presenting These Concepts in Class

When I discuss reinforcement and punishment in my introductory classes, I make two small changes in Catania's terminology. First, I substitute the terms *stimulus onset* and *offset* for *stimulus presentation* and *withdrawal*, because the latter phrases imply that reinforcement and punishment are limited to situations in which an experimenter does something to a subject. Second, I use the Thorndikean terms *satisfying* and *dissatisfying* rather than their operant equivalents, *positively reinforcing* and *aversive*.

Once students have mastered information in Table 1, they appear more receptive to the Skinnerian belief that *feelings* can be defined as external behaviors. Use of the table also helps students appreciate the fact that a given stimulus input may be both positively and negatively reinforcing. Food, for example, is a positive reinforcer because it tastes good (ON +; see Table 1), but it is also a negative reinforcer because it reduces hunger pangs (OFF −; see Table 1). Before I began presenting the table in class, most students assumed that food was only a positive reinforcer.

Conclusions

I draw two conclusions from my attempts to clarify the concept of negative reinforcement for my students. First, it would be simpler if we spoke of onset and offset reinforcement and punishment rather than positive and negative reinforcement and punishment. However, the older terms are so ingrained in the literature that it probably would be easier to add the adjectives *positive* and *negative* to punishment than to remove them from reinforcement.

Second, perhaps it is time to abandon Skinner's fuzzily defined concepts of reinforcement and punishment and return to Thorndike's (1935) terminology, namely *satisfiers* and *dissatisfiers*. Thorndike defined a *satisfier* as a stimulus or situation that the organism either approached or did nothing to avoid; he defined a *dissatisfier* as a stimulus or situation that the organism either avoided or did nothing to approach. These definitions are not only behavioral in viewpoint, they are simple to comprehend because Thorndike presumed that the organism's emotions mediate many of its behaviors. Furthermore, because Thorndike's terms are not widely used, adding the adjectives *onset* and *offset* to satisfier and dissatisfier should be a less formidable task than trying to do so with punishment and reward.

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Note

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A Classical Conditioning Laboratory for the Psychology of Learning Course

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Laboratory exercises in the psychology of learning course can help students understand the principles of conditioning, learning, and memory. This article describes a classical conditioning lab project

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