

PRIVATE BEHAVIORAL EVENTS

EVENTOS COMPORTAMENTAIS PRIVADOS

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**RESUMO**

Eventos comportamentais privados são aqueles eventos nos quais a estimulação com relação à qual um indivíduo responde não é acessível do ponto de vista de outra pessoa. Nestes casos, a estimulação pode ser verbal ou não verbal. Além disso, as respostas em relação a essa estimulação podem ser verbais ou não verbais e acessíveis ou não a outros. Um tipo de evento privado envolve relatos verbais ocasionados por condições do corpo, tais como desconfortos ou dores. Um segundo tipo envolve comportamento operante encoberto, tal como pensamento, resolução de problemas e devaneio (*daydreaming*). Para cada tipo, uma explicação naturalística pode ser desenvolvida baseada em conceitos derivados da análise do comportamento aberto.

*Palavras-chave:* B. F. Skinner, eventos comportamentais privados, problema da privacidade, resolução de problemas, pensamento, relatos verbais.

**ABSTRACT**

Private behavioral events are those events in which the stimulation with respect to which an individual responds is not accessible from the vantage point of another person. In such cases, the stimulation may be verbal or nonverbal. Further, the responses with respect to this stimulation may be verbal or nonverbal, and accessible or not to others. One type of private event involves verbal reports occasioned by conditions of the body, such as aches and pains. A second type involves covert operant behavior, such as thinking, problem solving, and daydreaming. For each type, a naturalistic account may be developed based on concepts derived from the analysis of overt behavior.

*Key words:* B. F. Skinner, private behavioral events, problem of privacy, problem solving, thinking, verbal reports.

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This article is taken from material I developed over the years to help in my own teaching on the topic of private behavioral events in behavior analysis. I offer it here in the hope others will find it useful. In keeping with the instructional goal of the article, references are at a minimum. In addition, both the language and the arguments are more informal than in other articles. If I have fallen short in the execution, I apologize and ask for the reader's tolerance. I can only say the contingencies haven't finished with me yet. Correspondence concerning the article should be addressed to the author at [jcm@uwm.edu](mailto:jcm@uwm.edu), or at his home address: 1861 E. Fox Lane; Fox Point, WI 53217; USA.

## **PRIVATE BEHAVIORAL EVENTS**

When we say we respond with respect to the environment, we are usually speaking of an environment that is publicly observable. However, in some instances we respond with respect to stimulation in a part of the environment that is not accessible from the vantage point of others. Rather, it is accessible only to ourselves, for example, because it is inside our skin. These instances may be called “private behavioral events.” These forms of stimulation may be either verbal or nonverbal. In addition, the responses we make to such stimulation may be either nonverbal or verbal, and either observed and accessible to others, or unobserved and inaccessible. This article seeks to describe the nature of and importance of these private behavioral events to an understanding of behavior (e.g., Skinner, 1953).

### **TWO TYPES OF PRIVATE BEHAVIORAL EVENTS**

Let us begin by identifying two types of private behavioral events. The first type involves the events that take place when we learn to talk about our sensations and feelings, such as when we talk about our aches and pains. The second type involves the events that take place when covert forms of behavior develop and influence us, such as when we think and solve problems. Both types of private events occur commonly enough, and it is incumbent on a science of behavior to account for them in naturalistic ways. We may do so using the same analytical and explanatory terms and concepts that we use to account for public behavioral events.

#### **Private Behavioral Events of the First Type: Verbal Reports About Our Sensations and Feelings**

What we feel are internal conditions of our bodies. These conditions arise during the process of living, for example, as our metabolic processes take place or as we contact environmental events, variables, and relations. In turn, we contact these internal conditions through our interoceptive and possibly proprioceptive nervous systems. The important question here concerns how we learn to talk meaningfully about these internal conditions. A moment’s reflection tells us that this question is important for parents, who want to encourage their children to talk about their aches and pains (“Where does it hurt?”) so that the parents can relieve their children’s problems.

We begin our answer by noting that verbal reports occasioned by our sensations and feelings are operant responses. Operant responses occur because of contingencies: the systematic relation among antecedent discriminative stimuli, the response, and the reinforcing consequence of the response. Verbal behavior of any sort develops and is maintained through the differential reinforcement delivered by the verbal community.

Consider how the verbal community teaches children to say that acai berries are purple. Here, the purple berries are public and directly accessible to both the

verbal community and the children. The verbal community can reinforce the children’s response of saying “purple” in the presence of purple acai berries and not otherwise.

A moment’s reflection suggests circumstances are different when the verbal community teaches children to say they are in pain. Here, the verbal community is not in direct contact with an internal condition as the occasion on which to differentially reinforce talk about it, such that the condition readily acquires the stimulus control necessary for us to talk meaningfully about it. This handicap is called “the problem of privacy.” Thus, the matter of how verbal behavior about our internal conditions develops represents a problem concerning how the appropriate stimulus control develops over verbal behavior when the discriminative circumstances are private. Yet, children obviously do learn to talk at least somewhat meaningfully about their internal conditions. It follows, then, that the verbal community works around this handicap. The relevant question is, How does it do so?

The verbal community circumvents the problem of privacy by using public circumstances correlated with the private, internal condition as the basis for delivering the necessary differential reinforcement. One case involves our “collateral responses.” When children have been injured, or when they have an ache or a pain, they might touch, massage, or hold the afflicted area. If their leg hurts, they might limp. If their back is sore, they might walk hunched over, with a stooped posture. If their tooth hurts, they might hold their jaw. Their behavior of touching, massaging, or holding the afflicted area, or of walking with a limp or stooped over, constitutes the “collateral response.” On these occasions and not otherwise, the verbal community reinforces children’s talk of being in pain (e.g., at least through its approval, understanding, and sympathy, if not also pain-relieving attention).

A second case involves “public accompaniments.” When children have been jabbed with a sharp object, the verbal community encourages children to talk of having a “sharp pain.” When children have been struck with a dull object, the verbal community encourages children to talk of having a “dull pain.” When children have been burned by a hot stove, the verbal community encourages children to talk of having a “burning pain.” Being jabbed the sharp object, being struck with a dull object, or touching the hot stove constitute the “public accompaniments,” and the verbal community differentially reinforces children’s talk of being in pain, and presumably does not do so otherwise. Moreover, the verbal community often encourages children’s talk about a particular quality of that pain, if only as a kind of metaphorical relation, as in sharp, dull, or burning. Parents encourage their children to talk of such pains because the parents may then be able to

alleviate the pain, or even to take action to prevent children from injuring themselves and experiencing such pains in the future.

We see that when collateral responses and public accompaniments are involved, the verbal community differentially reinforces speakers when both public and private stimulation are present. The public stimulation is the collateral responses and public accompaniments, and the private stimulation is the internal conditions that come about through the processes of living and interacting with the environment. Because both public and private stimulation are present, both acquire stimulus control. Later, individuals are able to talk under the discriminative control of just the private stimulation of the internal condition when it occurs, even though public correlates in the form of collateral responses or public accompaniments are not involved.

We can interject here to note that some individuals learn to exploit the processes described above. The terms *malingers* and *hypochondriacs* are sometimes applied to these individuals. These individuals make statements seemingly about such debilitating internal conditions as aches and pains because by doing so the individuals escape from an aversive situation or gain some benefit—if only the attention of others, rather than because their verbal behavior is under the discriminative control of some internal stimulus condition that is actually present. The individuals are later revealed as *malingers* or *hypochondriacs* when we do not observe collateral responses or public accompaniments that are ordinarily correlated with such statements.

A third case of private behavioral events is an extension of the two cases—collateral responses and public accompaniments - outlined above. This third case involves stimulus generalization. Here, after tacts are acquired regarding the internal conditions, we later talk in a similar way when we experience similar sensations and feelings, even though collateral responses or public accompaniments have not been directly involved. For instance, speakers may report a burning pain after scraping the skin on their knees, even though no hot stove is involved. In other instances, nervous speakers or performers may say “I feel like I have butterflies in my stomach” before an important lecture or recital, where the fluttering sensations in their stomachs resemble those of a butterfly landing on their arms.

As an aside, we note that intimately related processes take place during toilet training, when caregivers teach those under their care how to eliminate full bladders or bowels in socially acceptable ways, given the presence of private stimulation. For example, caregivers might look for fidgeting that indicates full bladders, or have children drink large amounts of fruit juice, to predispose socially acceptable modes of urination that can then be reinforced.

#### **Private Behavioral Events of the Second Type: Covert Behavior**

We also sometimes engage in covert behavior, typically covert operant behavior. Covert behavior is

generally acquired in overt form. Often, it then becomes covert based on experiences during our lifetimes. What experiences might lead overt behavior to become covert? In some cases, the behavior becomes covert because the overt form is punished. For example, we learn to read aloud. However, if others around us punish our reading aloud, for example, in a library, we shift to reading silently. We can also covertly explore alternative possibilities, such as which card to play in a card game or which piece to move in a chess match. By so doing, we avoid potentially punishing consequences of losing the trick or piece. In other instances, the behavior becomes covert because it is expedient. For example, we can often solve simple math problems “in our heads” faster than writing out the solution with paper and pencil, and especially so when we don’t have paper and pencil. An important point is that the covert behavior is executed by the same response system as overt behavior, just reduced in scale. In this regard, consider so-called “mental math”. The term is a misnomer. It is behavioral math. The activity typically consists of breaking down a math problem into a series of smaller steps that can be carried out covertly without the loss of stimulus control that often accompanies covert stimulation.

In some cases, the function of covert behavior is to contribute to discriminative control, as in “thinking” and problem solving. We typically make contact with covert behavioral events through our proprioceptive and possibly interoceptive nervous systems. The discriminative function of covert behavior does not ultimately differ from that of overt behavior, and covert behavior does not achieve anything beyond the overt form, apart from possibly avoiding punishment. Often but not necessarily our covert behavior is verbal. Special cases are perceptual processes, as when our past history leads us to visually imagine a solution to a problem, such as when we move a piece on a chess board. Classically conditioned seeing might also occur, as when we glance at a circle that has a gap and is incomplete but perceive it as complete because the circles we have seen and with which we have had experience to that point in our lives have always been complete. Finally, covert behavior does not always occur. Even when it does, it may not influence the overt behavior. When it does occur and influence overt behavior, its influence may be viewed as a link in a chain.

In other cases, covert behavior can be reinforcing in its own right, as when we daydream or fantasize about some favored object, event, person, or course of action. One related case is Freudian rationalization, where individuals supply a reason after the fact to justify their actions. By so doing, the individuals avoid the unpleasantness of demonstrably irrational actions, as well as possibly the punishment from others. Another related case is that of obsessive-compulsive tendencies, where individuals talk themselves into performing some action because they fear what will happen if they don’t perform the action. Again, individuals probably feel better after saying or perhaps only

starting to say such things to themselves, much as they would feel if someone else said the same things to them. Therapy is often aimed at correcting such troublesome forms of private events.

Often the question arises as to how our own behavior can be a stimulus. The answer is straightforward: just as any other event can be a stimulus. To clarify this matter, let's consider an example. Close your eyes. Now raise one finger or two, your choice. Keep your eyes closed. How many fingers did you raise? Now think about raising one finger or two, your choice, but don't actually raise a finger. How many fingers did you think about raising? Your behavior of actually raising your finger(s) is a discriminative stimulus - an event, hence an occasion - for a subsequent response, in this case your verbal report about how many fingers you raised. We can say the same thing concerning your behavior of thinking that you are raising your finger. In each case, you were in contact with your behavior, whether in its overt or covert form, through your proprioceptive-kinesthetic sense, plus possibly your interoceptive sense, rather than exteroceptive sight, sound, touch, taste, or smell. Exactly how central (e.g., inchoate, incipient, fragmentary, unobservable to others, as in thinking about raising your finger) as opposed to peripheral (e.g., fully executed, observable to others, as in actually raising your finger) a response must be for an individual to be in contact with it and have it exert discriminative control over subsequent behavior depends on individual circumstances. Feeling a sneeze coming on is surely a common enough example. In exceptional cases mathematicians may solve complicated problems or generate proofs very quickly, based on incipient properties of covert responses. Skilled computer programmers do much the same. Composers may generate a musical score in similar ways. Again, such skills depend on a lengthy history. The time-honored "Aha!" experience may be understood as another example of a response to incipient stages of a response.

### CONSCIOUSNESS

A final topic is consciousness. Consciousness is indeed another time-honored topic in the history of psychology. It is often taken in traditional psychology to be a kind of private phenomenon from another domain, such as a mental or cognitive domain, that mediates the relation between environmental circumstances as input and behavior as output. Radical behaviorists have quite a different understanding of consciousness. For radical behaviorists, consciousness means responding with respect to oneself, where the responses are private or public, verbal or nonverbal.

In some instances, the responding is with respect to the internal conditions of our bodies, such as when we verbally report our sensations and feelings. When we respond to ourselves, our responding may well be verbal. When it is verbal, it owes its strength to the verbal community. For example, the verbal community may ask us

how we are feeling. The processes that are involved in this case are reviewed earlier, when we reviewed how verbal reports about internal conditions develop.

As an aside, we note that early in the history of psychology, some researchers thought that individuals could verbally report as many as 42,415 different sensations. Radical behaviorists think this number is fanciful for two reasons. First, we don't have enough nerves going to the right places to allow us to discern this many internal conditions of our bodies, apart from whether that many conditions could even be produced. Second, even if we did have enough nerves, the verbal community can't reinforce responses precisely enough to bring about such fine-grain discriminations, as it might be able to do with such public stimulation as colors or musical notes.

In other instances, the responding is with respect to our past, present, or likely future behavior and the circumstances of which that behavior was, is, or is likely to be a function. The verbal community may also ask us what we have done in the past, what we are doing now, and what we are likely to do in the future, and what contingencies are responsible for such behavior. The verbal community may then reinforce through approval of socially reasonable answers.

When we respond with respect to our own behavior, the behavior with respect to which we are responding may be either overt or covert, and the responses we make to our own behavior may be either overt or covert, verbal or nonverbal. The processes that are involved in these cases are reviewed earlier, when we reviewed how covert behavior develops and influences us. Discriminative control that emerges from that covert behavior is the critical feature.

Being conscious may therefore be understood as behavioral not mental in nature and a social product. Again, overt responding with respect to ourselves is not a measure of an unobservable mental state of consciousness. Rather, it is what consciousness has always and only ever meant, despite the many mischievous other ways that traditional psychology conceives of its meaning. Consciousness is an important topic because our behavior with respect to ourselves is relevant to self-knowledge and self-management. If we know more about ourselves, in the sense of what we are feeling, what we are doing, and why, we can better manage our lives and more effectively interact with features of our material environment and other persons in our social environment.

### WHY DO RADICAL BEHAVIORISTS ARGUE IN FAVOR OF PRIVATE BEHAVIORAL EVENTS?

Radical behaviorists do not conceive of an organism as literally empty, do not ignore or deny events inside the skin, and do not remain strictly at the level of observable relations involving stimulation and responses. Private behavioral events may be undeniably relevant to an understanding of a given instance of behavior as an act in context, even though they are inaccessible or unobservable from the vantage point of another. As real events, they may

be included in the understanding of behavior using the same terms and concepts as external, observable events, variables, and relations.

The radical behaviorist position on private behavioral events is neither mentalism nor methodological behaviorism. The position is not mentalism because (a) the responses are part of the behavioral domain, not a mental domain; (b) the responses are executed by the same response systems as overt responses, just reduced in magnitude; and (c) both the origins and effects of private behavioral events on subsequent behavior are functionally related to environmental circumstances. Thus, for radical behaviorists private behavioral events are very different from the wide variety of causal mental or cognitive states and processes that traditional psychology posits as necessary for an explanation.

Similarly, the radical behaviorist position on private behavioral events is not methodological behaviorism because the radical behaviorist position speaks directly about the possible functional relevance of covert behavioral events, even though they are unobservable to others. Radical behaviorism does not try to gain agreement and make analytical or explanatory talk of phenomena from an unobservable mental domain scientifically respectable by appealing to observable data in an operational definition. Thus, overt behavior is not a measure of the mental or cognitive process of thinking. Rather, thinking is a form of behavior in and of itself, distinguished by its discriminative or reinforcing function. To be sure, until our technology improves and a second person can directly access the otherwise private events of a first, from the vantage point of the second person the private events of the first are an inference, but for the first, the private events are no inference.

#### WHAT IS THE CAUSAL STATUS OF PRIVATE BEHAVIORAL EVENTS?

What then is the causal status of private events? With respect to the first type of private behavioral event—verbal reports about sensations and feelings, the conditions felt serve as forms of discriminative stimulation for verbal reports about them. However, for analytic purposes we need to trace the source of the behavior often attributed to the feelings and sensations back in time to the environmental events, variables, and relations that give rise to the feelings and sensations, not stop at the level of the feelings and sensations themselves.

With respect to the second type of private behavioral event - covert behavior, such behavior is causal in the sense it can contribute to discriminative control over subsequent behavior, for example, through its participation as a link in a chain of responses extended over time. Whether it actually does is an empirical question. Again, covert behavior does not automatically and necessarily occur in every instance of behavior. When it does occur, it does not automatically and necessarily influence subsequent

behavior. Rather, covert behavior may contribute to discriminative control through individuals' experiences during their lifetimes. The extent to which it actually does so depends on those experiences.

#### SUMMARY AND CONCLUSIONS

In conclusion, if we cannot explain in a naturalistic way how we learn to talk about what we feel, or how we learn to think, the alternative is some sort of mentalistic account that we just do, perhaps according to some type of private language, but this is not a reasonable account at all. The concept of private behavioral events offers a comprehensive scientific account based on thoroughgoing behavioral principles, rather than an account based on the explanatory fictions of mental states and processes.

**Important terms and concepts:** Problem of privacy, private behavioral events, collateral responses, public accompaniments, coincident properties, stimulus generalization, thinking, problem solving, discriminative function of covert operant behavior, automatically reinforcing function of covert operant behavior, conditioned seeing, operant seeing.

#### REFERENCE

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Submitted: 03/28/2018

Accepted: 04/21/2018