5. Conditioning Compliance

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5.1 INTRODUCTION

Compliance is a subject that can be analyzed from many different angles. It aims at compliance with rules in many different aspects of life. Sometimes we want our children to be compliant; the police want citizens to be compliant in traffic or after having attended a football game; supervisory bodies in finance, healthcare, safety and many other layers of society wish people to obey to the rules.[1] Supervisors take – sometimes elaborate – actions to achieve these goals, however, with mixed results.

This chapter explains compliance from a behavioral perspective and aims to offer concrete approaches on how to stimulate compliance and even behavior that goes beyond compliance. These approaches are embedded in scientific rules on behavior, discovered by the likes of physiologist Ivan Pavlov and behaviorist B.F. Skinner).[2] These scientific rules, especially those on behavior, are also known as 'conditioning'. These rules can assist supervisory bodies and others involved in upholding compliance in achieving their compliance goal.

These scientific rules explain why and when people comply, what the limitations of compliance are for both the supervisor and the compliant employee, and also how people can *enjoy* compliance, thereby obtaining maximum compliance through minimal requirements. Whether consciously or unconsciously, people comply with these rules of conditioning. These rules can assist in understanding behavior in general, and compliant behavior in particular.

The rules discussed in this chapter are derived from the conditioning theory. This theory has been build up from scratch by Ivan Pavlov[3] and B.F. Skinner.[4] Key to this theory is the influence of stimuli (Pavlov) and incentives (Skinner) on animal and human behavior. This scientific field has since exploded because of the enormous

1. Bleker 2009, pp. 14–22.
2. Skinner 1938.
3. Pavlov 1927.
4. Skinner 1938.

practical applications in areas such as education, raising children, sports, mental health (behavioral therapy)[5] This knowledge was made available for improving organizational performance by Daniels and Rietdijk.[6]

Life, as described by biology in chapter 1 *supra*,[7] is based on the rules discussed by Darwin. On an epigenetic scale, our species has been selected because we live and work together, cooperatively and efficiently in organizations, so that individual genes of the members are protected[8] and members of the species that deal with the organization benefit as well.

A specific fine-tuning of evolution is that organisms learn from experience[9] on an ontogenetic scale. If there were no learning mechanisms, we would be very inflexible and unable to adapt to changing circumstances. Therefore learning is a specific subdivision of biology.[10]

In this chapter the basic behavioral rules will be explained that clarify why people behave ethically or unethically, how we can stimulate compliance, and more promising methods for moving unethical behavior in the right direction.[11]

Learning theory has been studied most rigorously in psychology.[12] At the start of the twentieth century Pavlov discovered the rules of respondent conditioning, how reflexes and emotions are learned.[13] He taught dogs to salivate by ringing a bell after linking the bell to an unconditioned stimulus, like a piece of meat.

Later B.F. Skinner and colleagues[14] broadened the field of learning tremendously by discovering and applying the rules of operant conditioning. During operant conditioning 'voluntary' behavior, behavior operating on its environment, in contrast with the reflex behavior studied by Pavlov, is shaped by a combination of positive reinforcement, negative reinforcement, punishment and extinction. Reflex behavior and operant behavior are the two main behavioral classes that living organisms, including humans, show. The contributions of Pavlov and Skinner gave rise to behaviorism as a philosophy of science and behavior analysis as the science of learning. Experimental analysis of behavior studies the basic rules of change in laboratories. Applied behavior analysis is directed at the utilization of these rules for socially relevant purposes.

In nature the rules of Darwin shape species by variation, selection, and retention on an epigenetic scale. The rules of learning shape behavior during life by varying, selecting and retaining behavior on an ontogenetic scale.[15]

5. Martin & Pear 2015, pp. 12–21.
6. Daniels 2016; Daniels & Bailey 2014; Rietdijk 2009.
7. Inaugural speech Prof. S.C. Bleker-van Eyk: 'Why Humans get Organized: from Cave-Dweller to Mars Explorer', June 23, 2015.
8. Dawkins 1976, pp. 189–202.
9. Catania 2013.
10. Skinner 1966, pp. 1205–1213.
11. Mayer et al. 2014, pp. 39–51.
12. Gray & Bjorklund. 2014.
13. Pavlov 1927.
14. Fester & Skinner 1957; Skinner 1938; Skinner 1951, pp. 185, 26–29; Skinner 1953; Skinner 1957; Skinner 1966, pp. 1205–1213; Skinner 1968.
15. Skinner 1966, pp. 1205–1213; Moore 2007.

Putting another parakeet into the cage

Talking to the parakeet

Moving like the parakeet as an example

Putting a stick into the cage

Giving food

Heating the cage from beneath

On hearing these sometimes hilarious answers, I indicate that the right answer is not included. The audience is surprised and curious what I did do to move the parakeet. Then I explain the basic behavior analytical model of change.

Behavior is initiated in two ways: by antecedents and by consequences. Antecedents change the behavior *before* it occurs, consequences influence behavior *after* it occurs. All the suggestions for changing the parakeet's behavior were *antecedents.*

Antecedents	**B**ehavior	**C**onsequences
Shuffling the cage		
Opening the cage		
Putting a cat into the cage		
Putting another parakeet into the cage		
Talking to the parakeet		
Moving like the parakeet as an example		
Putting a stick into the cage		
Giving food		
Heating the cage from beneath		

Then I ask my audience to specify the observable behavior that we want from the parakeet. I ask the same of you. What is meant by *compliance*? The first step in stimulating compliance is *specifying* compliance. The observable behavior of the parakeet that I changed were *movement* and *making noises.*

Operant behavior, including compliance, is controlled by its consequences. Because consequences are so important in understanding and changing behavior. But first: the concept of *control.*

5.4 CONTROLLING BEHAVIOR

In changing behavior we have to address the concept of *control.* In a scientific account of behavior we must assume that every form of behavior – like any other natural phenomenon – has causes. We must therefore assume that behavior is controlled by causes. By natural causes. Like the law of gravity, and other consequences. That is the essence of behavior analysis. After describing current behavioral consequences of undesired and desired behavior, we can change the behavior in the desired direction by changing the consequences.

5.5 THE FOUR BEHAVIORAL CONSEQUENCES AND THEIR EFFECTS ON BEHAVIOR

All our behavior has consequences. Sometimes we get what we want, other times we don't get what we don't want, we get what we don't want or we don't get what we want. In the first two instances we will probably increase our behavior, after the other two consequences we will probably decrease the behavior. This is shown schematically in Figure 1.

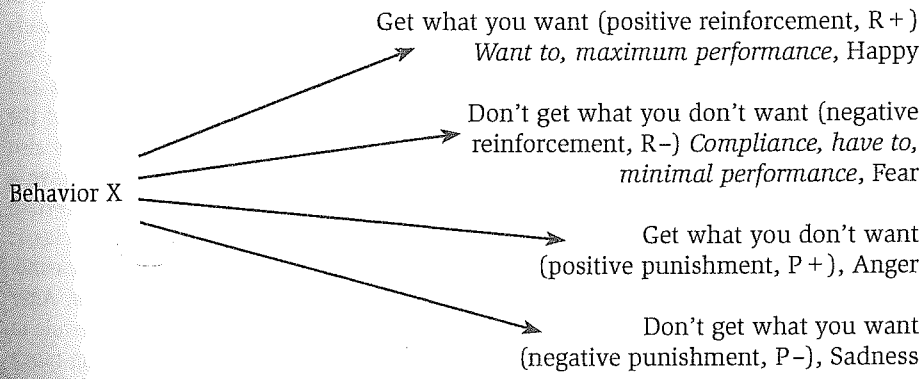

Figure 1: The four behavioral consequences

Compliance is classified as the second consequence category. During compliance people *have to* perform according to the rules of regulatory bodies. When people have to execute a task, they are less motivated than if they want to execute a task. When they want to execute a task, they do the maximum, when they have to execute a task they do the minimum necessary to avoid punishment or other adverse consequences. The four major emotions, happiness, fear, anger and sadness fit well within the four behavioral consequences. If you observe sadness in an organization you may assume that there is little reinforcement. If you observe anger, there probably exists extensive punishment. If there is a fear, the culture will probably entail excessive (threats of) punishment and in case of happiness, positive reinforcement will prevail. If we want people to perform to the maximum of their ability by not merely being compliant but by going the extra mile, positive reinforcement, R+, is the only practicable method.

We have to assess the culture of the organization, including leadership behavior and conduct change programs in order to obtain sustainable positive and ethical behavior.

5.6 CHANGING THE PARAKEETS BEHAVIOR, THE SOLUTION

If we want to encourage the parakeet to fly, we are inclined to use antecedents. As demonstrated again and again we use at least four times more antecedents than consequences. When it is assumed that consequences determine behavior and antecedents are only associated with consequences, a second mistake is made by choosing the wrong consequences. Four times more R–, P+ and P– than R+, when R+ is four times more effective than the other three. Here lies a third pitfall. When R+ is four times as effective as the other consequences, and sixteen times more effective than antecedents, the first association with R+ and rewards is money, whereas compliments and appreciation are much more effective than salaries and bonuses. The reason behind this phenomenon is that immediate and certain consequences are much more effective than future uncertain consequences. Salaries and bonuses are received a considerable time after the performance and are not directly connected to specified observable performance.

The specified performance of the parakeet is *moving* and *making sounds*. As a result, the best way to train the parakeet is by giving it attention as soon as it moves or makes sounds. When it started to make movements or sounds I immediately responded with a loud cry: 'YES!!!' At first, the bird was puzzled, but after a few pairings it started to understand that it was controlling my behavior as much as I was controlling its behavior. We could have some 'fun'. After 5–10 pairings of the R+ of mine, the bird moved more and more. In behavior analysis researchers also discovered the rules that preserve behavior.[19] Schedules of reinforcement have a profound influence on our behavior. Every relationship that we maintain has a certain order of reinforcement. Most of the time it is somewhat unpredictable. A classic example of a variable ratio schedule of reinforcement is to be found in the casino. This is the same schedule as I used for maintaining the parakeet's behavior. After continuous reinforcement during the first 5–10 responses I changed my schedule to 2, 3, 5, 8, 12 responses for the next reinforcement. Then the parakeet started to move faster and faster. When I changed to a variable schedule (such as 1, 6, 3, 12, 8, 8, 2 responses before reinforcement) there was a danger of it hurting its wings and neck when it tried to get out of the cage between the bars. My friend urged me to calm it down and I succeeded in doing so. Not by ignoring the moving animal, but by actively reinforcing quieter behavior. The conditioning of the parakeet took only 45 minutes, the time of the first half of the soccer match. An enlightening experience for me, the parakeet, and my friend.

5.7 CHANGING TO COMPLIANT BEHAVIOR

In order to change behavior for the better, including compliant behavior, the same rules of behavior should be applied in a certain order.

19. Fester & Skinner 1957.

The following protocol may prove to be useful in this endeavor:

1. specify the behavior;
2. measure the behavior;
3. analyze the behavior in terms of A's and C's (ABC analysis high to low);
4. feed the data back to the performers;
5. set (sub)goals with the performers;
6. reinforce when a group has succeeded in reaching the goals.

1. We should specify in a certain context what we mean by compliance. Every situation is different, but governed by the same rules of change.
2. We should measure the number of times or occasions that people behave in a compliant way as specified in step 1.
3. We should analyze the antecedents and consequences of current non-compliant as well as compliant behavior.
4. When people see how much they behave correctly it helps them to change for the better. Feedback alone however is not sufficient for a sustainable behavioral change. We need to take two more steps:
5. Based on the baseline measure in step 2, the goals we set in the more distant future may be ambitious, but not attainable. Therefore subgoals should be set, beginning with a subgoal just above baseline standard.
6. As a result of the previous subgoals, ample opportunity will exist regarding R+ desirable behavior. A prerequisite for change. Without using enough R+, the change simply will not take place. Plans for sustaining the behavior should entail more elaborate reinforcement schedules, that not only include money, but also other – softer – reinforcers, such as compliments, appreciations and celebrations. This requires a change in corporate culture and leadership from antecedents, R–, P+ and P– towards positive reinforcement as change philosophy and competence.

5.8 LESSONS AND CONCLUSIONS

Compliance is learned behavior and susceptible to the same rules of conditioning as other operant behavior. In order to change behavior into compliant behavior, awareness of the rules regarding the changes that govern our behavior is essential. These basic rules of change were first discovered by Pavlov (respondent conditioning) and Skinner (operant conditioning). Since their discoveries more than 50,000 replicable laboratory and field experiments have been executed. We stand at the beginning of a scientific revolution in understanding and changing human behavior. Compliance officers and others such as regulators should remember these rules, so that they can promote not only compliance, but bring out the best in people, and themselves as well.

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