# Learning Objectives

Welcome to **Concepts in Psychology**. This introductory course is designed to strengthen your understanding of human nature and, from a psychological perspective, show how people feel, think, and behave. Like many academic disciplines, psychology systematically studies the human mind and behavior using scientific methods. At the same time, psychology is a unique scientific field that combines natural science, social science, and the humanities. It means that a large part of psychology overlaps with other disciplines, such as sociology, economics, and biology, then turns into interdisciplinary science, like social psychology, industrial-organizational (I-O) psychology, and biological psychology.

The goal of this coursebook is to help you develop a fundamental and comprehensive understanding of psychology as a science and discover the field’s essential applications in people’s work and life in the 21st century. By covering many topics, the coursebook will help you effectively build up a scientific view of what psychology is and support your self-regulated learning process. Five units/modules are organized in a well-planned sequence.

The coursebook starts with the fundamental concepts and theories in general psychology (units 1 and 2), then moves on to the importance of social psychology (unit 3), and further explores how industrial-organizational psychology is relevant to 21-century work (units 4 and 5). While actively studying the above units, you will develop a solid and systematic psychological framework. Along with the key concepts and theories, the coursebook also includes relevant case studies, compelling examples, and up-to-date academic research to support your learning and comprehension. More importantly, the selected content and learning activities are adapted to your level of prior knowledge and learning needs. Please enjoy your learning process.

# Unit 1 – General Psychology I

**Study Goals**

On completion of this unit, you will be able to …T

… identify the significance of psychology as a science and the goals of psychologists.

… describe how people perceive visual and nonvisual stimuli.

… distinguish between different types of memory and understand how memory works.

… describe Piaget’s stages of cognitive development.

… understand the significance and characteristics of attention.

… explain how to improve problem-solving skills.

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# 1. General Psychology I

**Psychology**: The scientific study of the individual’s mental processes, behaviors, and experiences. It provides crucial application to important issues of individuals and society.

## Introduction

What do you suppose psychology as a science is attaining to study? How could psychology help people to solve cognitive-behavioral issues? Do you expect psychologists to find out the causes behind every human behavior? The word *psychology* is derived from two ancient Greek roots: psyche, which refers to the human mind, spirit, or soul; and logo, which means reason, study, or word. Conceptually, **psychology** is the scientific and systematic study of individuals’ mental processes, behaviors, and experiences in natural or nurtured conditions (Gerrig et al., 2015). As experts who work in social science, psychologists frequently combine their particular interests and practical concerns in various settings. For instance, social psychologists deal with how others influence human emotions, thoughts, and behaviors. Educational psychologists focus on the enhancement of learning processes and outcomes in schools. Industrial and organizational (I-O) psychologists are concerned with human performance in the workplace (Aamodt, 2015). Many specialists work in different occupational settings to explain human-related issues from a psychological perspective. Their psychological research has vital applications to essential issues in people’s lives. Perhaps you have interests in a specific psychological field. In contrast, the current unit first explores three fundamental psychological topics that provide a glimpse into the human mind: perception, memory, and cognition.

## 1.1 Perception

## The Basics of Sensation and Perception

From a psychological perspective, people experience the external environment around them through perceptual processes (shown in Figure 1.1). Studying the processes of perception helps us to open the black box of the human mind. First, we live in a physical world full of stimuli, such as light, sound, scents, and temperatures . When people are surrounded by these stimuli and information, sensation appears. **Sensation** refers to the reception of stimuli and the further conversion of them into signals for the human nervous system that result in a reaction inside or outside the body (Goldstein & Cacciamani, 2021). For instance, light hits a tree and simultaneously reflects from the tree to a person’s eyes. Once the stimulus hits the human sensory organs, such as the eyes, ears, nose, or skin, the sensory receptors transform the energy into specific signals. For instance, visual receptors in the human eyes transform the light energy into electrical energy and send it to the brain via the neuronal system. After the sensory stage, people need to figure out the meaning of the information gathered from the receptors. The next step is **perception**, which refers to the interpretation of stimuli that reach human sensory organs (Gerrig et al., 2015). Whereas sensation consists of collecting signals directly from the environment, perception involves adding and processing information based on experience, prior knowledge, and other personal traits (Goldstein & Cacciamani, 2021). In other words, we as human beings receive information from the world via the sensation process and construct the perception of the world in our own way.

**Sensation:** The processes whereby a sensory receptor is stimulated and triggers the physiological impulses that result in a reaction inside or outside the body.

**Perception**: The processes that organize information from sensory organs then interpret the information based on prior knowledge and experience.

Figure 1.1 The perceptual process

### Vision

As discussed above, we as human beings feel and experience the external environment via multiple sensory channels, such as seeing, listening, smelling, and touching. Knowing how we perceive different stimuli from the physical world is crucial for our survival. Among our various sensory channels, vision is probably the most important sense (McKenna, 2020). During the day, we use our eyes all the time and receive enormous amounts of environmental information. As shown in Figure 1.2, the outer surface of the eyeball covers a transparent and fixed structure named the cornea (Gerrig et al., 2015). We see an object when the light is reflected from that object and passes through the cornea and pupil. Surrounding the pupil is the iris which is the colored structure (e.g., blue or brown). A normal pupil is adjustable and open for external light to enter the eye. Behind the pupil is the lens – a flexible structure that adjusts the focus for objects at various distances. For instance, the lens becomes thinner when we look at a near object. Finally, the object will be projected onto the retina, the visual receptor at the back of the eyeball. The visual information will then transfer from the receptor to our brain.

Figure 1.2 Structure of the human eye

Diagram

Description automatically generated

#### Perception of colors

People use their eyes to observe the external world. In daily life, seeing color is a unique sensory experience. Our ability to perceive different colors relies on the visual receptors of the eyes. When the human eyes function normally, we still need visible light to see the colors of various objects. On the electromagnetic spectrum (see Figure 1.3), the receptors of the human eyes can respond to very limited wavelengths between 400 and 700 nanometers (Gerrig et al., 2015). The colors located within this range are detected and become visible. For instance, a lemon looks yellow because it reflects the color yellow and absorbs all others. Similarly, a cat appears white because it reflects all colors and absorbs none. We cannot see shorter wavelengths, such as Gamma rays (nm), or longer wavelengths, like radio waves (FM=nm).

Figure 1.3 Electromagnetic spectrumTimeline

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### The nonvisual senses

We have briefly considered how people perceive color and light. In addition to the visual sense, people experience the environment via nonvisual senses such as hearing, smelling, tasting, and touching. These sensory systems also play crucial functions when people come into contact with the world. For hearing, the ear is a complicated organ that converts sound waves into vibrations and impulses (Gerrig et al., 2015). There are three main dimensions of sound: pitch (e.g., high or low sound), loudness (loud or quiet sound), and timbre (e.g., flat or complex sound wave). Theoretically, we can hear sound from 15-20 hertz to about 15,000-20,000 hertz (Gan et al., 2004).

In addition, the sense of smell relies on the process of olfaction. It happens when molecules interact with odor receptors and send chemical signals to the human brain (Gerrig et al., 2015). Have you ever drunk a glass of orange juice right after brushing your teeth? The taste receptors activate the sense of taste on the tongue (McLaughlin & Margolskee, 1994). Across different cultures, people have different tastes and food preferences. The sensitivity of human sensory organs enables people to feel and perceive the outside world.

### Self-Check Questions

1. What are the six steps of the human perceptual process?

*Answer: (1) Stimulus from external environment occurs: (2) Stimulus reaches the receptors of sensory organs; (3) The stimulation triggers impulses and results in response inside or outside the body; (4) The sensory information is organized and interpreted based on people’s prior knowledge and experience; (5) Recognition occurs to attach meaning to percepts; (6) With the available information, people take action or have a specific behavior.*

1. What is the range of human visible wavelength?

*Answer: The range of limited wavelengths for healthy human eyes is between 400 and 700 nanometers.*

## 1.2 Memory

According to the annual World Memory Championship results, the best competitors can spend ten minutes memorizing 456 cards and recall them correctly within half an hour, repeat 130 random words within five minutes, and remember 187 faces within fifteen minutes (World Memory Championships, 2022). These world records show the superior level of human memory and simultaneously raise the question of how memory works. By exploring human mental processes and different types of memories, the current section guides you to understand how people remember and forget things.

### The Information-Processing View of Human Memory

What is memory? According to the **information-processing framework**, human memory is viewed as a computer receiving, storing, encoding, and retrieving information in a sequence (see Figure 1.4). Nevertheless, the difference between human learning and machine learning appears in whether the processes are active or not. As mentioned, the physical world has different sensory stimuli, such as light, sound, scents, and temperature. When we are exposed to an external stimulus, we temporarily construct a **sensory memory** in our minds (Lindsay & Norman, 2013a). The sensory memory lasts less than a second and quickly fades away. As we selectively pay attention to some of the external inputs we store them in **short-term memory (STM)**. In much academic literature, STM is substituted with another term: **working memory** (Baddeley, 2002; Schüler et al., 2011). Similarly, STM has limited capacity, and the selected information is only temporarily available. Most people’s STM capacity ranges from five to nine items (Miller, 1956). For example, try to memorize the following numbers then write down as many as you can in the correct order:

**Information-processing framework**: A basic analytical model of human learning and memory that presents people’s mental processes as a sequence similar to how computers process information. The human cognitive process involves sensory memory, short-term memory, and long-term memory.

**Sensory memory**: The memory that receives external stimuli and addresses initial information in the cognitive system. It briefly holds information awaiting the process of short-term memory.

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**Short-term memory (STM)**: The memory that is involved in attention and associates meaning with stimulation. STM has limited capacity and is able to last up to 20 seconds without rehearsal.

How many of these apparently random numbers did you recall correctly? Fortunately, the forgetting of information can be optimized by rehearsal activity in STM.

Let us go back to information processing. After perceiving the stimulus, how does information get stored in the human brain? When information is repeated enough, it turns into **long-term memory (LTM)**, which has a relatively unlimited capacity and stores data permanently. When information is transferred from STM to LTM, the mental process integrates the new information with prior knowledge and can represent later retrieval when required (Lindsay & Norman, 2013b). This cognitive process is called *encoding*. For instance, when selecting a smartphone, you might need to combine the new function of the product with your past experiences when using the smartphone. In other words, the encoding process helps people imagine the real thing and build a connection with their experience. Once the information is encoded and stored in LTM, it is possible to retrieve it when needed. For instance, the moment you actively recall a scene of the first party you went to is a retrieval process. When people try to remember what happened at the party, the retrieval process is more straightforward when a particular clue is provided, such as the organizers and location of the event. In sum, the information processing model opens the black box of human memory by explaining how people receive, store, encode, and retrieve information (Lindsay & Norman, 2013b).

**Long-term memory (LTM)**: The memory that stores information over long periods of time. LTM has unlimited capacity and duration.

Figure 1.4 The flow of human memory

Forgetting

Sensory memory

Short-term memory

Long-term memory

Stimulus

Retrieval

Encoding

Attention

Rehearsal

Forgetting

### Memory Improvement

Let us go back to the memorizing task mentioned previously at the beginning of this section (also see Figure 1.5). On average, people can correctly repeat five to nine items. However, is it possible to overcome the limitations of short-term memory? Cognitive psychologists suggest you break the numbers down into sequences and link them with important events in human history. It might be easier to memorize more than nine items (Gobet et al., 2001). This mechanism of grouping meaningful units is called **chunking**. Compared to a list of random numbers, chunking allows people to remember more items by constructing meaningful chunks that connect to prior knowledge (Burtis, 1982). Doing so turns the information into significant material that is easier to process (Siegler, 1996). The strategy of chunking or generating meaningfulness is widely used to help learning and professional training, such as enhancing expert chess memory (Gobet & Simon, 1998). With further training and practice, prior knowledge is easier to activate and retrieve. Thus, people can remember longer chunks (Dingfelder, 2005; Nuthall, 2000).

**Chunking**: A strategic mechanism of grouping meaningful information into units to improve memory.

Figure 1.5 The limited capacity of short-term memory and the chunking mechanism

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Besides chunking, cognitive psychologists suggest another strategy to promote memory: the recency effect (Baddeley & Hitch, 1993). According to the empirical results of foreign language studies, previous researchers found that studying as close as possible to the examination can help one remember the learning content. However, forgetting knowledge also occurs rapidly after the test is over (Conway et al., 1992).

### Memory Loss

According to the information processing model, forgetting refers to a failure to recall information at a particular time (Lindsay & Norman, 2013b). It happens not only in short-term memory (STM) but also in long-term memory (LTM). What are the causes of memory loss? In sensory memory, the loss of information occurs when attention is not directed to items in this memory store. Furthermore, memory decay is also caused by the limited capacity of STM and the lack of rehearsal in STM. “Use it or lose it” vividly explains memory loss. In addition, cognitive psychologists found that the effect of aging describes the decay of LTM over time (Maylor et al., 2002). For instance, with increasing age, people have more difficulty remembering names and words in their 60s and 70s (Craik, 1994). Another possible explanation for forgetting is the absence of relevant retrieval cues. For instance, when you try to recall details of your fifth-grade classroom setting, the related contextual clues (e.g., information about your classmates and the city where the secondary school is located) are missing too.

### Self-Check Questions

1. What is the difference between short-term and long-term memory?

*Answer: Information in STM is available only temporarily. The capacity of STM is limited to around seven items in a healthy adult, and the duration is about 20 seconds if not rehearsed. In contrast, for LTM, there is no limit on the capacity, and the duration can be a lifetime. The information stored in LTM can be available whenever a retrieval cue is provided.*

1. When people forget the password of their IU campus account, which memory process is most likely to cause this problem?

*Answer: The campus account is forgotten from the long-term memory.*

## 1.3 Cognition

### Piaget’s Cognitive Development Theory

Jean Piaget (1976, 2013) developed one of the most influential theories of cognitive development. He suggested that cognition and intelligence develop through four main stages (see Table 1.1), each of which deals with specific mental activities. The first stage of cognitive development is the sensorimotor stage which lasts from birth until 2 years. In this stage, infants show simple motor responses to sensory stimuli in the external environment, such as light, sound, scents, temperature, and the texture of objects. The second stage is the preoperational stage which covers early childhood between the ages of two and seven. Most children develop their language abilities at this stage and can distinguish appearance from reality. For instance, a three-year-old child who sees a red color on his nose in the mirror will touch his nose instead of pointing at the mirror.

The third stage is the concrete operations stage which starts at age seven and ends at age 12. At this stage, children understand the concept of conservation with respect to physical objects. For instance, when children in this stage of development are told that the taller but thinner container has the same amount of water as the shorter but wider container, they will not be confused (conservation of volume). Similarly, children in the concrete operations stage understand that changing the shape of dough will not change its weight (conservation of mass). Starting from age 12, most individuals enter the stage of formal operations. Piaget contended that children would gradually develop logical reasoning, systematic planning, and an understanding of abstract concepts during this stage. For example, a teenager might be capable of sharing his or her opinion about “what is freedom” in the philosophy classroom. In summary, Piaget’s theory provides a classic milestone for cognitive development and has wide educational applications, informing teachers’ preparation of adaptive teaching materials based on learners’ cognitive abilities (Houtveen et al., 1999; Ojose, 2008).

Table 1.1 Piaget’s stages of cognitive development

|  |  |
| --- | --- |
| Stage (Ages) | Characteristics and achievements |
| Sensorimotor (0-2) | Response to sensory stimuli |
| Preoperational (2-7) | Develop language skills (e.g., ability to speak and understand conversation), distinguishing appearance from reality |
| Concrete operations (7-12) | Understand the conservation of number, volume, and mass. |
| Formal operations (12-adult) | Understand abstract concepts; able to do hypothetical thinking, planning, and reasoning. |

### Attention

**Attention**: A cognitive state of awareness that focuses on the available perceptual information in the physical world.

As mentioned earlier, attention plays a vital role when people process external stimuli from the external environment in sensory memory. From a psychological perspective, **attention** refers to a natural state of focused awareness of the available perceptual information in the external environment. For instance, people are susceptible to their names in a loud background. This perceptual ability to pay attention to a specific person and situation is called the “cocktail party effect” (Shapiro et al., 1997).

In addition, according to the split-attention effect, people’s working memory processes information via separate visual and auditory channels (Pouw et al., 2019). In other words, paying attention to the separated information resources (e.g., text, picture, and audio) will increase the learners’ cognitive load and harm their learning effectiveness. Therefore, in everyday situations, people’s concentration ability will decrease when they focus on two things simultaneously. Thus, this reduction of learner attention brings debate to the design of multimedia learning environments in the educational field (Ayres & Sweller, 2005; Mayer & Moreno, 1998).

How do people perceive objects and distinguish them from the background? This identification process requires attention. Consider the picture in Figure 1.6. Initially, you are probably like most people who will first see a white tree as against a black background. However, it is also possible to see two faces when changing the relationship between the figure and the background. Note that depending on what you are looking for, you may pay attention differently.

Figure 1.6 Tree-face stimulus

A picture containing text, silhouette

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#### Selective attention

Although most people can simultaneously notice several stimuli, certain information is still lost because of the limits of human attention (Most et al., 2005). On the one hand, selective attention helps individuals focus on a specific task and filter out irrelevant information sources (e.g., background noise). With this cognitive ability, some people can read on public transportation. On the other hand, since capturing information requires mental effort and perceptual load, most people have experienced “looking without seeing” (Cartwright-Finch & Lavie, 2007; Mack, 2003). For instance, when a driver listens to the radio, a car that shifts the lane in front will not grab his or her attention. Especially when the phenomenon and event are highly relevant to the people, inattentional blindness is very likely to happen, and they would fail to notice the changes occurring in their visual field.

### Problem-Solving

Problem-solving is an essential cognitive ability that largely influences how people deal with problems in real-life circumstances (van Gog et al., 2005). Problem-solving is a dynamic process that moves an original issue from an unsatisfied condition to the desired state using, ideally, an optimal approach or strategy (Gerrig et al., 2015). Theoretically, people solve their daily or unfamiliar problems through a four-step process: (1) understanding the problem, (2) generating a plan, (3) carrying out the plan, and (4) checking the results (Polya, 2004). Imagine you need to carry 90 empty water bottles simultaneously, with only a five-meter rope. When faced with this task, how would you find an effective solution? Alternatively, you might easily conclude that it is an unsolvable problem. Using Polya’s four problem-solving steps, let us figure out the task.

First, you can simplify the problematic situation by collecting concrete answers. For instance, what is the circumference of a water bottle? How do you tie a bottle sling knot with a rope? Later, develop a plan: Use the string to fix twenty-five water bottles as the boundary and fill the middle part with the rest of the bottles. Then, you can carry out your plan to check whether it will work (Polya, 2004). Throughout the above problem-solving process, several personal skills are required and can be applied to other similar problems.

#### How to improve problem-solving skills?

How can we improve our ability to solve day-to-day problems? The first possibility is to be more creative. Creativity refers to a person’s ability to generate novel ideas, approaches, or products suitable for the current situation (Cropley, 2000). When considering improving creativity, people should be encouraged to use divergent and convergent thinking, which are the two crucial components of creative potential (Mumford, 2001). Divergent thinking is conceptualized as the ability to generate new and novel solutions to a problem (Runco & Acar, 2012). For instance, during brainstorming, people expand their minds to think of multiple possible solutions to increase job satisfaction. By contrast, convergent thinking refers to a person’s capability to integrate various existing sources of information and apply them to solve a problem (Cropley, 2006). For instance, people recall their knowledge of human resources management and industrial-organizational psychology to enhance employees’ job satisfaction. In the area of both divergent and convergent thinking, multidisciplinary knowledge is required. In recent years, more empirical studies found that general domain-independent skills are essential for people to problem-solving success (Brophy, 1998).

From novice to expert, the second possibility to enhance problem-solving skills is through prolonged practice (Benner, 1984). If people need to solve similar problems habitually, a helpful approach is to practice so that the procedure requires fewer resources. Researchers have suggested that experts (e.g., musicians and athletes) are made, rather than born, by ten years of repeated practice, which is the so-called 10,000 hours threshold to perfection (Gerrig et al., 2015; Margulis, 2013; Patterson & Lee, 2007).

### Self-Check Questions

1. According to Piaget’s cognitive development theory, at which stage can most children master their first language?

*Answer: Preoperational stage.*

1. What are the two types of thinking used in enhancing creative problem-solving?

*Answer: Divergent and convergent thinking are two cognitive abilities to enhance people’s creative potential.*

Summary

In this unit, you have learned that psychology is a science that investigates the human mind and behaviors. Empirical research in psychology provides an evidence-based application to essential issues in people’s life. People experience the external environment via perceptual processes. Once the human sensory organs (e.g., eyes, ears, and nose) receive stimuli, people start interpreting the information based on their prior knowledge, experience, and other personal traits. While experiencing the physical world, human memory plays a crucial role in perceiving, storing, and retrieving useful information.

According to the information-processing framework, individuals temporarily construct their sensory memory when exposed to external stimuli. Later, people pay attention to the relevant information and store it in short-term memory (STM). With further encoding and rehearsal, information and concepts are organized and connected with prior knowledge in long-term memory (LTM) that can be retrieved when necessary. Since both sensory and short-term memories have limited capacity, attention plays a significant role while people selectively process external stimuli from the environment. Experts frequently use chunking to group meaningful units and associate the new information with prior knowledge to improve memory.

In addition, cognition involves thinking, planning, and problem-solving activities. According to Piaget, the development of cognition and intelligence is through four main stages: sensorimotor, preoperational, concrete operations, and formal operations. Problem-solving is an essential cognitive skill. To enhance problem-solving skills and creativity, people can not only train their divergent and convergent thinking but also conduct prolonged practice.

# Unit 2 – General Psychology II

**Study Goals**

On completion of this unit, you will be able to …

… identify the major learning approaches and learning theories.

… explain classical conditioning and identify the critical factors of the theory.

… outline the nature of operant conditioning and modeling.

… describe the milestones of human language development.

… use self-determination theory and Maslow’s hierarchy of needs theory to understand human motivation.

… identify basic human emotions and recognize their influence on behaviors.

# 2. General Psychology II

## Introduction

In general, the goals of psychologists investigating individuals’ mental processes are to describe, explain, predict, and control human behavior (Gerrig et al., 2015). For instance, how do people behave when they are learning? Psychologists can best explain what happens in the invisible human mind by observing and describing human behavior. For example, what goes on in the human mind when people learn? What conditions could lead to effective learning? Psychologists answer these questions by discovering people’s knowledge, desires, needs, and feelings that cause their observable behaviors. Learning, motivation, and emotion cannot be observed; thus, some psychologists investigate behavior and draw inferences from it (Feldon, 2010). More importantly, an accurate understanding of mental processes could predict what will happen in future behavior (Van Knippenberg, 2000). The discussion of learning processes focuses on classical conditioning, operant conditioning, and modeling. Motivation plays a crucial role in acquiring knowledge and skills when people learn. Human emotions are the vital signs of people’s psychological states and make possible behaviors happen or not (Humphreys & Revelle, 1984; Pessoa, 2008). To open the black box of the human mind, the current unit begins with an overview of three general topics: learning, motivation, and emotion. These basic concepts will help you understand individuals' motivational, cognitive, and social functioning.

## 2.1 Learning

Have you ever wondered how people learn? From a psychological point of view, learning is a lifelong process that covers the acquisition of norms, skills, and other social abilities (Bransford et al., 2000). Generally, knowledge acquisition brings relatively permanent changes in people’s cognition or behaviors. Moreover, learning can occur when an intended or unintended personal experience happens, or people indirectly perceive information from the external environment (Hidi, 2001). A better understanding of how people learn is critical because it provides insights into the nature of problem-solving. For instance, teachers in science, technology, engineering, and mathematics (STEM) subjects can purposefully apply learning principles to construct an effective learning environment (Seidel & Shavelson, 2007). In the rest of this section, we shall further uncover the learning process to understand better how people receive knowledge in formal or informal situations.

### Learning Theories

Over the past decades, researchers have explained individual learning processes via a merging of psychological and educational perspectives (Bednar et al., 2013; Schunk, 2012). As a result of this integration, learning theories have adopted the fundamental views of behaviorism (Skinner, 1976), cognitivism, and constructivism (Harel & Papert, 1991). These theories have become the conceptual learning frameworks used to explain the nature of learning and what happens during the learning processes (McVee et al., 2005).

#### Constructivism

As one of the most well-accepted frameworks, cognitive constructivism has been applied to explain human learning processes and the crucial factors influencing learning effectiveness (O’Donnell 2012; Schunk 2012). Constructivists such as Lev Vygotsky view learning as the cognitive construction of knowledge and understanding that the learners actively build up by themselves (Vygotsky, 1978).

#### Behaviorism

During the early 20th century, psychologists created a conceptual framework to explain how learning takes place by studying observable behaviors (Watson & Kimble, 1998). This learning theory is behaviorism. Behaviorist pioneers, such as Ivan Pavlov, B.F. Skinner and John Watson conducted different empirical experiments to investigate the influence of external stimuli (e.g., reward and punishment) on behavioral changes. By examining human adjustment to a given stimulus, psychologists can predict and control the response in the general environment. Behaviorism further develops and offers a wide application in teaching and learning processes (Duit & Treagust, 1998).

#### Social Learning Theory

Generally, social learning theory understands learning as a consequence of the interaction of individuals and the social environment (Bandura & Walters, 1977). From the social-cognitive perspective, learning is a modeling process that assists people in gaining knowledge and understanding many social behaviors.

### Classical Conditioning

Many people will come experience positive feelings when listening to Christmas music in the street. How can we explain this phenomenon and the relationship between mood and holiday music? According to Ivan Pavlov, learning is a behavior-changing process, and creatures are born with specific automatic reactions to some stimuli (Clark, 2004; Gerrig et al., 2015). The learning process that pairs two stimuli – (1) a stimulus that triggers a biological response and (2) a neutral stimulus that subsequently leads to the same reaction – is called **classical conditioning**. Pavlov designed an experiment to study the relationship between stimulus and reflexive response using dogs. During the investigation, he first selected a dog that began to salivate in the presence of food. This connection between food and salivation was an automatic or unconditioned reflex. During this process, the food is the **unconditioned stimulus (UCS),** and the salivation is the **unconditioned response (UCR).**

Pavlov then introduced a new stimulus – a bell, which does not stimulate the dog’s salivation response (see Figure 2.1 a). He then served the food a few seconds after ringing the bell. This pairing process was repeated in front of the dog until it started to salivate once it heard the sound of the bell without the presence of food (see Figure 2.1 b). Pavlov called the sound of the bell the **conditioned stimulus (CS)** because the dog’s reaction to this neutral object is learned via the preceding conditions. Then, he named the salivation after the ring the **conditioned response (CR)** because this response is the result of the training but appears automatically. In this classical conditioning experiment, the dog learned to associate the food with the sound of ringing a bell which further caused salivation (Clark, 2004; Gerrig et al., 2015).

Figure 2.1 Pavlov’s experiment of classical conditioning



Followed by

Conditioned stimulus (CS)

Unconditioned stimulus (UCS)

Unconditioned response (UCR)

aa

ba

Conditioned stimulus (CS)

Conditioned response (CR)

Going back to the example of holiday music at the beginning (see Figure 2.2), how can we explain the relationship between positive feelings and Christmas songs based on the theory of classical conditioning?

Figure 2.2 Example of classical conditioning

**Positive reinforcement**: The presence of a pleasant stimulus that consequently increase the probability of repeating the same response over time.

Unconditioned stimulus (spending quality time with family)

Unconditioned response (pleasant and exciting)

Conditioned stimulus (Christmas song)

Conditioned response (pleasant and exciting)

After annually repeated pairing of pleasant time and music,

### Operant conditioning

**Operant conditioning** is another representative learning theory introduced by a behaviorist, B.F. Skinner. In the 1940s, Skinner designed a series of experiments to examine the shaping of responses from the environment. In his investigation, he placed a hungry rat in a chamber equipped with a response lever, a food dispenser, and an electrified grid (see Figure 2.3). In the first condition, the rat randomly moved and touched the equipment in the box. It did not take long for the rat to learn that pressing the lever led to the reward of a food pellet. When the rat repeatedly pressed the lever, it received food every time. In this condition, Skinner called the consequence of receiving food **positive reinforcement**, which increases the future probability of a response, or a particular behavior (Gerrig et al., 2015). Positive reinforcement also works in human beings. For instance, if your parent gives you ten euros each time you clean the bedroom (i.e., a reward), you will be more likely to repeat this cleaning behavior in the future.

**Negative reinforcement**: The removal of an unpleasant stimulus that consequently increase the probability of the escape response over time.

Figure 2.3 The Skinner box and operant condition

Diagram

Description automatically generated

Food cup

Electric grid

Lever

The rat was arranged in the same box in the second condition, but an electric shock came from the grid. After a random movement, the rat accidentally pressed the lever that switched off the electric shock. To escape from the unpleasant pain, it would repeatedly press the lever. In this setting, Skinner called the elimination of unpleasant events **negative reinforcement** (Gerrig et al., 2015). Let us take cleaning behavior as an example. You must give your parent ten euros if you do not clean your bedroom. Consequently, you will clean your room on time to avoid the payment.

Furthermore, during Skinner’s investigation, he found that **punishment** (i.e., giving an electric shock to the rat once it pressed the lever) is the opposite of reinforcement. The punishment significantly weakens the rat’s future pressing behavior. Human learning behavior is much the same as how rats learn not to press a lever. For instance, you will receive a fine from the police whenever you exceed the speed limit on the highway. The payment of penalties is the punishment that suppresses undesirable behavior (Gerrig et al., 2015).

**Punishment**: The delivery of an unpleasant consequence that reduces the probability of undesired behavior over time.

In short, Skinner concluded that learning occurs as a consequence of a positive (e.g., reward) or negative response (e.g., pain). This is also the fundamental difference between classical conditioning and operant conditioning: Subjects in operant conditioning need to make some responses before their behavior is reinforced or punished (Gerrig et al., 2015). Could you think of more day-to-day examples that can explain operant conditioning?

Table 2.1 Four categories of operant conditioning

|  |  |  |
| --- | --- | --- |
| Consequence | Adding a stimulus | Removing a stimulus |
| Reinforcement (Increase the probability of desired behavior) | Positive reinforcement (The presence of a pleasant consequence, such as a reward, increases the probability of the behavior.) | Negative reinforcement (The presence of an unpleasant consequence decreased, such as using a fan to escape the heat.) |
| Punishment (Reduce the probability of undesired behavior) | Positive punishment  (The future response is followed by an unpleasant consequence, such as pain and getting caught) | Negative punishment  (The future response is followed by removing a desired consequence, such as withholding dessert after a refusal to eat carrots.) |

### Modeling

Development in human behavior studies revealed that learning could occur through direct experience and also by observing or imitating other people (Bandura, 1965). According to Bandura’s social learning theory (1977), the modeling procedure involves four phases: (1) In the learning phase, the observer selects an appropriate model and pays attention to that person’s behaviors. (2) In the implementation phase, the observer adopts the model’s behavior, and reinforcement is given when the modeling behavior is achieved; (3) In the reproducing phase, the desired behavior has firmly stayed in the observer’s mind so that he or she can repeat the behavior if wanted. (4) Finally, reinforcement of model behavior and motivation of repetition can be continuous. The modeling procedure revealed human aggression and violent behaviors in Bandura’s famous Bobo doll experiment.

Are aggression and violence inborn or learned behavior? In 1963, Bandura and his colleagues designed an experiment to investigate the role of imitation in learning aggressive behavior in preschool-age children. In the aggressive condition (experimental group), children watched a cartoon that the character violently hit a Bobo doll and verbally used aggressive words. In contrast, the children in the non-aggressive condition (control group) watched a cartoon that the character did not show any aggressive behavior. After watching the video, the researchers left the children from both groups in a playroom where they placed a Bobo doll. They observed that the children in the experimental group would mimic the cartoon character’s behavior and attack the doll aggressively. Moreover, the observers reported that the boys engaged in more than twice as many aggressive behaviors as the girls. In sum, the results of the Bobo doll experiment support that much of human learning results from observing and imitating other people in society (Bandura 1965; Bandura 1997).

### Language Learning and Development

Language learning is essential for everyone who wants to engage in social interaction and communication. How does a human learn to understand language and develop language skills? From birth to early childhood, individual children’s language development goes through various stages and has specific milestones (see Table 2.1).

Table 2.1 Milestones of children’s language development

|  |  |
| --- | --- |
| **Average age** | **Characteristics of language development** |
| Three to six months | Random vocalizations and babbling |
| One year | Beginning to understand language and can say one to two words, such as “Mama.” |
| One and a half year | Able to speak single nouns, but no phrases |
| Two years | Reaching a fifty-word vocabulary and being able to speak two-word phrases |
| Two and a half years | Developing comprehension and ability to phrase short sentences |
| Three years | Reaching around a thousand-word vocabulary |
| Four years | Close to essential adult language ability |

Lev Vygotsky developed a sociocultural theoretical concept – **the zone of proximal development (ZPD)** – to explain people’s range of potential in language learning (Vygotsky & Cole, 1978). For learners, their language or other skill development requires scaffolding activities from teachers, parents, or competent peers. Vygotsky believed that individual learners could achieve the ideal learning performance when there is a balance between their actual developmental level (e.g., knowledge and skills) and task difficulty. In other words, effective teaching should be adaptive depending on individual students’ prior knowledge, learning styles, and level of potential development (Brühwiler & Blatchford, 2011; Houtveen et al., 1999).

**The zone of proximal development (ZPD):** In Vygotsky’s learning theory, individual learners can achieve the ideal learning performance when their actual development level and task difficulty reach an equilibrium.

### Intelligence

In the current section, the discussion of individual learning and cognitive development is closely related to the issue of intelligence. What is intelligence? From the psychological perspective, **intelligence** refers to a person’s general competence to think, plan, reason, acquire knowledge, solve problems, and conduct other cognitive processes (Gottfredson, 1997; Legg & Hutter, 2007). Intelligence varies between individuals and can be shaped by the time, place, and culture in which they grow up (Neisser et al., 1996). To understand the concept of intelligence, psychologists have proposed different theories (Gardner, 2000; Sternberg et al., 1981). According to the multiple intelligences (MI) theory, Gardner (2000) argued that human beings have developed seven forms of intelligence:

**Intelligence:** A general cognitive competence to think, plan, decide, reason, solve problems, think abstractly, understand complex ideas, and learn from experience.

1. Linguistic intelligence: the ability to use language well (e.g., poet, journalist)
2. Logical-mathematical intelligence: the ability to process abstract symbols (e.g., scientist and IT programmer)
3. Musical intelligence: the ability to create music (e.g., musician and composer)
4. Spatial intelligence: the ability to perceive well visual-spatial relationships (e.g., architect and airplane pilot)
5. Bodily-kinaesthetic intelligence: the ability to use motor skills well (e.g., athlete and dancer)
6. Interpersonal intelligence: the ability to communicate with other people and work collaboratively (e.g., teacher and salesman)
7. Intrapersonal intelligence: the ability to understand one’s inner thoughts and emotions and can control them consciously (e.g., philosopher)

In sum, Gardner and his colleagues (2006; 2000) identify seven intelligence types and use them as a framework to describe individual patterns of strengths and weaknesses. By exploring different facets of human intelligence, the theory of multiple intelligences has been examined and applied in education and plays a role in shaping vocational training (Almeida et al., 2010; Chen et al., 2009).

### Self-Check Questions

1. Please complete the following sentences.

*Conditioned response* (CR): In *classical conditioning*, a response elicited by some previously *neutral stimulus* occurs due to pairing the neutral stimulus with an unconditioned stimulus.

*Conditioned stimulus* (CS): In classical conditioning, a previously neutral stimulus elicits a conditioned response.

*Unconditioned response* (UCR): In classical conditioning, the response is elicited by an unconditioned stimulus without prior training or learning.

*Unconditioned stimulus* (UCS): In classical conditioning, the stimulus elicits an unconditioned response.

1. In Gardner’s theory of multiple intelligences, what kind of intelligence might determine whether a person could be a successful airplane pilot?

*Answer: Spatial intelligence.*

## 2.2 Motivation

The previous section discussed the learning process and the essential prerequisites of effective learning. The current section will further examine another vital factor that influences learning and development of human cognition – motivation. Generally, **motivation** refers to a person’s psychological state that directs, changes, and maintains human behavior (Mitchell, 1982; Peters, 2015; Schunk & Mullen, 2013). Two representative theories of motivation are selected to explain the construction of motivation and how these theories have broad implications in modern society.

**Self-determination theory (SDT):** people’s behaviors are either motivated by internal factors, such as interests and enthusiasm (intrinsic motivation), or external factors such as rewards (extrinsic motivation).

### Self-Determination Theory

Ryan and Deci (2002; 2017) introduced the well-known **self-determination theory (SDT)** to systematically explain the crucial motivational factors that contribute to human behavior. SDT is an empirically-derived theory of human motivation and personality in social contexts that differentiates motivation from being autonomous and controlled. According to SDT, motivations are categorized into two types: intrinsic and extrinsic (Ryan & Deci, 2000). **Intrinsic motivation** is a person’s internal reasons, such as personal interests, enthusiasm, and curiosity toward a task (Heckhausen, 1991; Lepper et al., 1996). For instance, you may play football simply because you enjoy the sport and experience the excitement of playing with your team members. Your interest and joy in playing football stem from intrinsic motivation. Alternatively, **extrinsic motivation** results from external stimuli that encourage and trigger human behavior, such as gaining rewards or avoiding failure (Lee et al., 2010; Ryan & Deci, 2000). Let us continue to take football as an example. If you practice your football-playing skills because of the desire to win rewards, your motivation is extrinsic. Please remember that sometimes extrinsic rewards can undermine an original intrinsic motivation (Lepper et al., 1999; Lepper et al., 1996).

### Maslow’s Hierarchy of Needs

In 1943, Abraham Maslow proposed a now-classic theory to explain some human needs that motivate individuals to pursue one after another throughout life. He arranged five hierarchical categories of needs (see Figure 2.4). According to **Maslow’s hierarchy of needs theory**, human beings’ behaviors are motivated by a hierarchy of needs that appear in a sequence from the primary level (e.g., physiological needs and safety needs) to the psychological level (e.g., social and love needs, esteem needs), and eventually to the level of self-fulfillment (e.g., self-actualization needs; Benson & Dundis, 2003; McLeod, 2007).

**Maslow’s hierarchy of needs theory:** Basic human motives result from a hierarchy whereby the needs at each level of the hierarchy must be satisfied before the next level can be achieved; these needs progress from basic biological needs to the need for self-actualization.

Figure 2.4 Maslow’s hierarchy of need theory

Specifically, the most fundamental need category consists of a person’s physiological needs, such as food, water, sleep, and warmth. These biological requirements are essential for human survival. According to Maslow, lower-level needs dominate people’s motivation as long as they are unsatisfied. Once the basic needs are adequately met, individuals will try to satisfy their second level of needs: Safety needs, including security and safety. For example, a person desires a secure apartment and a safe working environment (Benson & Dundis, 2003; McLeod, 2007).

After satisfying the first two levels of basic needs, the third category is social and love needs, which include belongingness, intimate relationships, friends, and other interpersonal factors. For instance, people wish to be accepted by their colleagues at work or try to develop a sense of connection with friends. On the fourth level, a person’s esteem needs are the other psychological needs associated with prestige and feeling of accomplishment, as well as self-esteem. For example, people are eager to be respected for their professional knowledge or hope to have an excellent social reputation from others. After the previous four levels of needs have been fulfilled, the peak is *self-actualization needs*. This highest level of needs refers to a person’s self-fulfillment, and only a tiny proportion of people will reach this part. For instance, a self-actualized person desires to expand their full potential to find an essential meaning in life. It could happen to any unique person, such as an artist, a scientist, or an athlete. Now, we know that human needs can be organized hierarchically. Since Maslow’s hierarchy of needs theory was introduced, it explains why people behave in a certain way and the significant drives behind certain behaviors. His model is frequently used in consumer and advertising psychology to guide business practices (Benson & Dundis, 2003).

### Self-Check Questions

1. According to self-determination theory (SDT), what are the two categories of motivation?

*Answer: Motivation is categorized into intrinsic motivation and extrinsic motivation.*

1. What are the five hierarchies of needs in Maslow’s needs theory?

*Answer: From the bottom to the top, the five levels of needs are physiological needs, safety needs, social and love needs, esteem needs, and self-actualization needs.*

## 2.3 Emotion

Now we shall focus on another unobservable factor that is very important for people’s psychological states. Some people may say that an essential difference between human beings and artificial intelligence is that humans have emotion. How many basic emotions do people have? How can emotions be studied and interpreted? Do people from different cultures identify and understand facial expressions similarly? What is the relationship between human emotion and behavior? The current section will help you to answer these questions and develop a comprehensive understanding of emotion.

### Basic Human Emotions

Suppose you are walking along the hallway and meet a classmate who asks you: “How are you feeling today?” Can you imagine how you would respond in this situation? You are likely to describe your current psychological or physical state, such as happy, unhappy, stressed, or even feeling sick. The state you are in is the emotion you are feeling and experiencing. People generate and receive feelings daily that change their inner states (Plutchik, 2001). From a biological perspective, the nature of human emotion is the physiological arousal of the autonomic nervous system that evolved over millions of years to increase human survival (Gerrig et al., 2015). In other words, people’s interpretation of external stimuli triggers autonomic reactions and further evokes emotional and physiological responses. For example, when people see a snake, they interpret their heart pounding as feelings of threat and fear that further help them to stay away from danger.

From a psychological point of view, **emotion** refers to a complex feeling state associated with internal and external events or people that elicit psychological changes (Ekman, 1999; Plutchik, 2001). Psychologists have identified six basic human emotions: happiness, sadness, anger, fear, disgust, and surprise (see Figure 2.5). According to cross-cultural studies, scholars report a high level of agreement and accuracy in identifying basic emotions across groups of people (Ekman, 1971). Across diverse populations, primary emotions are frequently expressed via visible facial expressions (Ekman, 1992) and behavioral reactions, such as hand gestures and postures (Gerrig et al., 2015). In other words, facial expressions as indicators of emotions are primarily shaped by social interaction and cultures (Keltner et al., 2003).

**Emotion:** A complicated psychological state that is triggered by internal and external events or people.

Figure 2.5 Six basic human emotions

A collage of a person

Description automatically generated with medium confidence

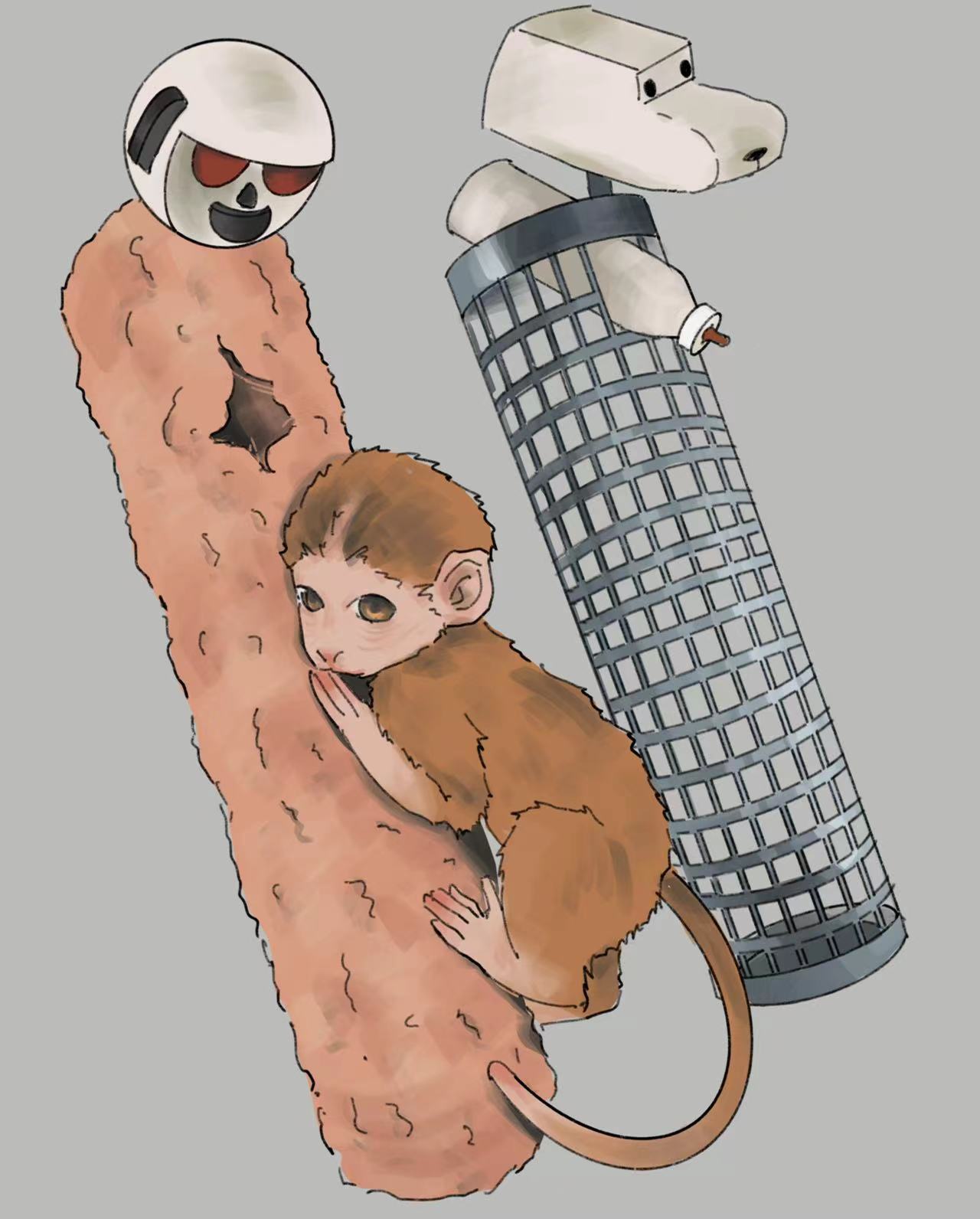
Ärger = Anger, Angst = Fear, Ekel = Disgust, Überraschung = Surprise, Trauer = Sadness, Freude = Happiness

### Emotional Behavior

The interpretation of external stimuli can evoke arousal mechanisms and bring emotional and behavioral changes. What, then, is the relationship between emotion and behavior? In other words, what is the impact of emotions on our daily behaviors? Harlow (1958) addressed attachment theory and studied the corresponding emotional behaviors. In Harlow’s attachment experiment (see Figure 2.6), several newborn monkeys were separated from their mothers. During the study, half of the monkeys stayed in a space with two artificial mothers: (a) a wire mother made of metal and equipped with a milk bottle in front, and (b) a cloth mother covered with cloth but without a milk bottle. The other half of the monkeys also stayed with two artificial mothers in the opposite setting: (a) a cloth mother with a milk bottle and (b) a wire mother without a bottle. While observing both conditions, a team of researchers was interested in how long the baby monkeys spent with the artificial mother with the milk. The results showed that whether the little monkeys received milk from the cloth mother or wire mother, they stayed longer with the cloth mother. In other words, Harlow’s experiment provided evidence of the origins of attachment which is seeking contact comfort (Hazan & Shaver, 1994).

Similarly, human attachment also develops between an infant and a mother or father. The attachment bond between a child and his or her caregiver significantly ensures survival, such as fulfilling physical and safety needs (Bretherton, 1992). Furthermore, the attachment relationship (e.g., secure or insecure) continually affects adults when they establish a close emotional relationship (Gerrig et al., 2015).

Figure 2.6 Harlow’s attachment experiment



### Self-Check Questions

1. From the psychological perspective, what are the six basic human emotions?

*Answer: The six basic emotions are happiness, sadness, anger, fear, disgust, and surprise.*

1. According to Harlow’s attachment experiment results, did the baby monkey spend a longer time with the artificial mother that fed them with milk?

*Answer: No, the results showed that whether the little monkeys received milk from the cloth mother or wire mother, they stayed longer with the cloth mother.*

Summary

In this unit, you have learned that learning is a lifelong process of acquiring knowledge, norms, skills, and other social abilities. When people actively experience or perceive the external environment, it brings relatively permanent changes in their cognition or behaviors. Psychologists have investigated the relationship between stimuli and behavior changes. In classical conditioning, researchers suggested that behavior change is achieved through stimulus repetition (habituation) or an increase in stimulus receptivity (sensitization). In operant conditioning, behaviorists understand learning as a consequence of reinforcement or punishment. In other words, a significant influence on human behavior is learning from the external environment. According to Bandura’s (1977) theory, social learning requires attention and behavioral representation. In addition, learners need motivation and the ability to reproduce the behavior.

Motivation explains the causes and drives of human behavior. Ryan and Deci’s (2002; 2017) self-determination theory (SDT) emphasizes the importance of intrinsic (e.g., interests) and extrinsic motivation (e.g., rewards) in encouraging and triggering human behavior. In addition, Maslow’s theory provides a helpful framework for summarizing motivational forces. According to his hierarchy of needs theory, human behaviors are motivated by different levels of fulfillment: physiological needs, safety needs, love, and social needs, esteem needs, and self-actualization needs (Benson & Dundis, 2003).

Emotion is a complex interplay of people’s physical arousal, cognitive evaluation, and reactions at the psychological and behavioral levels. Across diverse populations and cultures, there are six basic emotions: happiness, sadness, anger, fear, disgust, and surprise. However, affect is more intense and of shorter duration than emotions, whereas moods are less intense and less directed than emotions. Children often establish an attachment relationship with their caretakers as a crucial emotional behavior to ensure survival and receive contact comfort. The security of attachment also influences adults when they establish close relationships.

# Unit 3 – Social Psychology

**Study Goals**

On completion of this unit, you will be able to …

… describe the attribution process.

… explain the theory of self-fulfilling prophecies.

… know the power of social influence on individuals.

… understand how stereotypes, discrimination, and prejudice arise.

… apply information to reduce personal biases.

… identify which situations promote prosocial behavior.

# 3. Social Psychology

## Introduction

What is social psychology? Defined broadly, **social psychology** is a branch of psychology that uses scientific methods (e.g., observation, experiment, and survey) to study individuals in social situations (Gerrig et al., 2015). More specifically, social psychologycovers the topics of social beings’ feelings, thoughts, perceptions, and behaviors and how these factors are influenced by other people or the environment (Aronson et al., 1994). For example, why do some people perform worse in a group than they would have alone? In addition, social psychology focuses on the role of social context in people’s processes by addressing real social issues (Aronson et al., 1994). For instance, social psychology answers why people have stereotypes and prejudices. Studies of social phenomena are based on empirical and evidence-based research. For example, Milgram’s (1963) shocking study revealed how obedience to authority occurs between teachers and learners.

**Social psychology:** the scientific study that investigates the influence of social context on individuals’ feelings, thoughts, and behaviors.

What are the research interests of social psychologists? From infancy through adulthood, people cannot isolate themselves from the social world in which they interact closely and participate. Based on this context, social psychologists attempt to investigate and understand the phenomenon of social influence. Scientists aim to examine assumptions and hypotheses about individual human beings’ behaviors in the social context. For example, researchers try to explain why people hurt or help others. Over the past decades, social psychologists have engaged in studying many social issues, such as the power of social influence, conflict, aggression, prosocial behaviors, and other social interactions. For instance, why do the bystanders not call the police when they hear the call for help? The current unit helps you to construct a comprehensive understanding of social psychology by expanding on the basic concepts and related theories in subsequent sections.

## 3.1 The Power of Socialization

As noticed, social psychology is a scientific study that focuses on interpersonal interactions in the social context. During interactions, the power of socialization appears and influences people’s perception of society. Social psychologists have attempted to explore the causes of human behavior or events, including internal and external factors. They are interested in knowing the whys of social behavior (Gerrig et al., 2015). Based on the available theoretical frameworks, the current section introduces several fundamental concepts of socialization and how people use these principles to explain the behavior of self and others.

**Social perception:** the process by which people actively collect, interpret, understand, and categorize other people’s behavior in different situations.

### Social Perception

**Social perception** refers to the processes by which individuals actively collect, interpret, and understand other people’s behaviors in a particular social context (Gerrig et al., 2015). People can make different judgments about the situation or form first impressions of people with this collected social information. Usually, a person’s social perception is affected by their beliefs and expectations (Aronson et al., 1994). People tend to process information from the outer world via automatic, as opposed to reflective, thinking (Kahneman, 2011). People construct assumptions about other people and events based on prior knowledge and experience to save time and effort. These assumptions, called **schemas,** assist people in interpreting information and retrieving relevant information from long-term memory (Aronson et al., 1994; Guo & Wang, 2022). Not surprisingly, schemas have limitations and can be biased, which may lead to stereotypes and prejudice (Wheeler & Petty, 2001). We will further discuss these critical issues in section 3.4 in detail.

### Self-Fulfilling Prophecies

Are schemas always correct? **Self-fulfilling prophecy theory** explains how people actively make their predictions about people or events come true (Gerrig et al., 2015). Think back to the first time when met your close friends. What is your impression of them? Does this first impression influence your further interaction and expectation about them? Figure 3.1 explains the process of self-fulfilling prophecies and their consequences.

**Self-fulfilling prophecies** refers to a person’s prediction made about a target person, some future behavior, or event that modifies interactions so as to produce what is expected.

Figure 3.1 The process of self-fulfilling prophecies

Moreover, self-fulfilling prophecies are not limited to the way people build their social networks with other people. This phenomenon of automatic thinking appears in the discussion of education equity in school settings. Here is an example of a classroom-observation study that revealed a gender stereotype in mathematics learning (Sadker & Zittleman, 2009). During the observation, a fifth-grade teacher assumed that girls’ mathematic ability was not as good as boys. This expectation significantly affected the students’ learning opportunities in the classroom. For instance, the teacher showed more attention and patience to boys but turned back to the girls while explaining the mathematical questions. Over half of the academic year, the boys had a better learning outcome than the girls in mathematics. Thus, this teacher’s assumptions about her students’ learning abilities came true by treating female students differently from male students. At this moment, the self-fulfilling prophecy is complete, and the circle is closed.

### Attribution Theory

How do you explain why people behave as they do? Heider (1958) introduced **attribution theory** to explain people’s judgments about the causes of behaviors. He suggested that people usually make one of two attributions to explain why a person behaves in a certain way. One type of attribution is internal attribution – the causes of people’s behavior are their attitude, personal traits, and personality. For instance, when you observe a man giving money to a beggar, you assume he is a generous person. Alternatively, the other attribution is external – the cause of a person’s behavior is something about the situation, such as the external stimuli from the environment. When you make an external attribution to the example of charity, the perceived cause of that man’s merciful behavior is his desire to impress his friends. In day-to-day routine, internal and external attributions play a crucial role in people's conclusions and expectations about behavior in different situations (Kelley & Michela, 1980).

**Attribution theory:** The psychological theory that describes the judgments people use information to generate causal explanations about other people’s behaviors.

### Self-Check Questions

1. Please give an example of each attribution type to explain a person’s judgment about the causes of their failure in the final examination.

*Answer:*

*Internal attribution: The causes of a person’s failure could be laziness, poor memory, and other internal factors.*

*External attribution: The causes of a person’s failure could be the construction noise, the difficulty of the examination, and other accidents caused by external situations.*

1. Please mark the correct statement: Self-fulfilling prophecies may be wrong with teachers because…

* most students perform better than their teachers expect them to perform.
* *teachers usually have biased expectations about how students will achieve.*
* teachers rarely have expectations about students.
* students do not allow teachers to treat them differently from their classmates.

## 3.2 Social Influence

As a social being, you engage in extensive, interactive relationships with other human beings (Aronson et al., 1994). Please recall the last time you tried to convince people around you to change their behaviors, such as persuading your friends to accept your recommended restaurant on Friday night. Your attempt to use social influence may have been conscious or unconscious. **Social influence** is a psychological phenomenon in which social forces change one’s attitudes, judgment, decisions, or other behaviors (Cialdini & Goldstein, 2004). In addition to the example of persuading friends, you can find examples of advertising campaigns on television or social media that have a powerful influence on people’s behavior and perception, such as shaping young women’s body image (Myers & Biocca, 1992). By promoting the thin ideal image, mass media conveys cognitive biases that could negatively affect young women’s self-perception and increase their body dissatisfaction (Devine et al., 2021). The current section discusses the power of social influence and how it changes individuals’ thoughts and behaviors.

**Social influence:** A psychological phenomenon whereby people’s attitudes, judgements, decisions, or other behaviors are affected and changed by social forces.

### Informational Social Influence

When interacting with other people in society, we need to know what is correct and appropriate. For instance, should you address your professor in an email as “Prof. Dr. Myers,” “Mr. Myers,” or “David”? People require lots of information to reduce uncertainty and act correctly in daily situations. Asking and observing how others work in a particular case can help people choose an appropriate response. Since many believe interpreting an ambiguous situation from experienced others is more reliable and accurate, they will conform to others’ behavior. This psychological phenomenon is called **informational social influence** (Aronson et al., 1994). When do people tend to conform to informational social influence? Researchers have suggested that the more critical the decision is to us, the more we rely on other people’s information and judgments (Levine et al., 2000). Especially when other people are experts (e.g., doctors and scientists), they have a more substantial informational social influence on others under ambiguous situations (Savolainen, 2022). The principle of informational social influence has been widely applied in marketing to affect consumer decision-making, such as creating a professional dentist image in the advertisement of toothpaste to enhance credibility (Lee et al., 2011; Rosen & Olshavsky, 1987).

**Informational social influence:** the influence of other people that we tend to rely on because we view their information as a source of knowing what is right, especially in an ambiguous situation.

### Normative Social Influence

During your teenage years, did you ever do something to conform and receive social approval? For instance, some people start to smoke because they want to be liked and accepted by their peers. People sometimes do what others do because they do not want to be rejected or become an outsider. This psychological phenomenon is called **normative social influence** (Aronson et al., 1994). In other words, when individuals value the importance of accuracy and try hard to align with other group members, conformity appears in the group (Coultas & van Leeuwen, 2015).

**Normative social influence:** the influence of other people that leads us to conform because we need to be accepted or liked by them.

In Figure 3.2, you see two cards, one with a single line and the other with three lines. Please select one line on the right card that looks the same length as the line on the left. Not surprisingly, you would say “Line 2,” which is the correct answer. However, Asch (1956) conducted a series of classic studies which showed surprising results.

Figure 3.2 The judgment task in Asch’s line study

Left: Standard line

Right: Comparison lines

1

2

3

In Asch’s line studies, there was only one actual participant, and he was asked which line had the same length as the standard line. After comparing the two cards, the participant gave the same answer as you and said, “Line 2”. However, in the same group, there were several fake participants. The first one reported that “Line 1 is the correct answer”. As the experiment continued, more “participants” also said “Line 1”. Surprisingly, after hearing it six times repeatedly, the actual participant changed his answer and conformed to other group members who gave the apparent wrong answer on the line task. Asch’s line judgment study revealed the importance of being accurate in public and staying consistent with others (Aronson et al., 1994).

### Self-Check Questions

1. Please complete the following sentence.

When people believe that an expert's interpretation of an ambiguous situation is more reliable and accurate, they will conform to that expert’s choice. This psychological phenomenon is called *informational social influence*.

1. When a person does what others do because they do not want to be rejected or become an outsider, itis referred to as...

* private acceptance
* public compliance
* informational social influence
* *normative social influence*

## Conflict, Aggression, and Cooperation

When you watch TV shows or films, you have probably seen warnings at the beginning, noting that the show is inappropriate for people under a certain age. This aim of this warning is to protect teenagers and children from harmful information. Much research evidence has revealed that exposure to media violence significantly increases the risk of aggression in the audience, especially for non-adult viewers (Huesmann, 2007). The current section focuses on aggressive behavior and discusses whether aggression is innate or learned.

### Aggressive Behavior

From the perspective of social psychology, **aggressive behavior** refers to people’s intentional behavior (e.g., verbal and physical actions) aimed at causing psychological injury or physical pain to others (Geen, 1999a). Violent acts, such as fighting, shooting, and pushing, are considered to be aggressive behavior. Non-physical behaviors can also be aggressive. For instance, sexual harassment or verbal insults in the workplace and the spreading of harmful rumors cause damage to people (Neuman & Baron, 2005).

Aggressive behavior: people’s intentional behavior aimed at causing physical or psychological damage to others.

### Situational Causes of Aggression

Living in modern society, people directly or indirectly experience aggression and violence daily (Geen, 1999b). You may be wondering why the phenomenon of aggression is common in a particular area or at a particular social event. To answer this question, social psychologists attempt to investigate the causes of aggression across various situations.

#### Pain and discomfort

When humans face danger or feel uncomfortable, the situation triggers a fight-or-flight response (McCarty, 2016). This response consists of a sequence of internal activities when an organism faces a threat and must prepare the body for combat or for running away from the danger. Under some circumstances, people will choose to fight when subjected to unexpected pain or other feelings of discomfort (Berkowitz, 1989). For instance, the previous scholar found that during the long and hot summers in the United States, domestic crimes and violence are more frequent than in the winter (Anderson, 1989, 2001). Thus, discomfort in hot temperatures is highly associated with aggressive behavior.

#### Social situation

Social psychologists suggest that aggressive behavior usually accompanies negative emotions such as anger (Averill, 2012), frustration (Berkowitz, 1989), and fear (Simunovic et al., 2013). Particular social situations trigger these unpleasant feelings. Let’s take a day-to-day scenario as an example. When you are blocked in a bad traffic jam on the way to the airport, a sense of frustration and worry can elicit an aggressive manner, such as pressing the horn and frequently changing lanes (Tyson, 1998). When an extreme situation meets provocative behavior without reason, it could lead to road traffic violations, such as fistfights or even shootings (Lawton et al., 1997). Another social situation that causes aggression is war. When a nation is at war, the country's population is overexposed to violence and becomes more accepting of aggressive responses (Archer & Gartner, 1992). Compared with people who live in peace, wars can have lasting consequences on people’s attitudes and behavior even after the battles are ended (Akresh et al., 2012; Archer & Gartner, 1984).

#### Violence in the media

When watching TV, individuals are likely to see aggressive behaviors and objects (e.g., the presence of weapons). According to social learning theory, people learn behavior by observing and imitating other people's behavior (Bandura, 1977). As discussed earlier, Bandura and his colleagues designed the famous Bobo doll experiment to investigate the role of imitation in learning aggressive behavior in preschool-age children. The results of the experiment support the claim that much aggressive behavior results from imitating other people in society. This social learning process occurs either when directly experiencing aggression or via indirect exposure to mass media violence. In addition, the repeated presence of objects associated with aggressive behavior (e.g., guns) in people’s childhood may increase their likelihood of participating in aggression years later as adults. Since violence is a crucial societal issue, psychologists have dealt with people’s anger and other negative feelings.

### How to Reduce Aggression

So far, we have discussed several situational causes of aggressive behavior. How are we supposed to peacefully solve private conflicts (e.g., problems between couples) and public conflicts (e.g., in long-standing tension between two nations)? If taking a deep breath, running outdoors, or listening to soothing music does not work for you, what will you do with your anger? Regarding the issue of conflict and aggression, empirical studies on empathy and prosocial behavior have shown that the ability to have the same feeling that other people are experiencing can control aggressive behavior (Baron, 1976; Eisenberg & Fabes, 1991). Picture the following scenario: A classmate was pushed and laughed at by others in the hallway. You watch this school bully and remember being taught about empathy last semester. Would you be able to put yourself in the shoes of that classmate? Would empathy education reduce school bullying? The answer is yes. In schools, teaching children to think from other people’s points of view can promote their contextual empathy for aggressive behavior (Phillips & Giancola, 2007) and enhance their empathy-related responses (Malti et al., 2016).

Building feelings of empathy is the first step to reducing violence. To further minimize aggression, social psychologists suggest problem-solving communication training (Foster et al., 1983; Robin & Foster, 1984). For instance, workers in organizations can practice their negotiating skills and defuse their anger by apologizing for the situation (Lee & Chung, 2012). Anger and frustration are part of being human and must be accepted (Aronson et al., 1994). Once the problem comes from expressing anger and frustration in violent ways, learning nonaggressive strategies (e.g., putting negative feelings into words) can significantly solve interpersonal conflict (Perry, 2019).

### Self-Check Questions

1. What are the situational causes of human aggression?

*Answer: The causes of aggression are pain and discomfort, social situations (e.g., traffic jams and war), and the presence of aggressive objects in the media (e.g., guns and other weapons).*

1. What shall we suppose to do with our anger?

*Answers: (1) Try to put yourself in another person's shoes and build a feeling of empathy. Empathy can be taught in schools. (2) Accept the negative feelings and receive problem-solving communication training, such as learning negotiating skills.*

## Theories of Social Psychology

As mentioned, human behavior is influenced by the social environment. Stop for a moment and think about what you do when facing an important decision. Would you prefer to analyze it by yourself or ask for advice from others? If you choose the latter, you engage in a group decision. Theoretically, a **group** refers to two or more people interacting to achieve a common goal that causes them to share similar identities, norms, and benefits (Aronson et al., 1994). During the interaction between group members, social norms are the shared expectation about which behaviors are acceptable and what attitudes are appropriate in a group (Gerrig et al., 2015). Since most people are frequently involved in group activities, it is necessary to consider the influence groups have on individuals.

**Group:** refers to two or more interdependent people who interact with each other and share common goals, identities, and needs.

### Social Loafing Theory

Let’s imagine a scenario in which you take a psychology examination that determines your semester's final grade. In this case, you work on the exam as an individual and (hopefully) put in your maximum effort. Alternatively, what if your final grade depended on the output of a group project? Would you invest less individual effort in it? Moreover, have you ever seen some people perform worse in a group than they would have alone? This phenomenon is called social loafing, which occurs in groups when the presence of others relaxes individuals and results in a decline in member effort (Comer, 1995). Figure 3.3 shows the social loafing process to explain how groups influence the behavior of individuals. When individual contributions to a group project cannot be identified, students may become more relaxed, leading to poor performance on simple project work. However, when solving complex tasks, people working collectively can improve performance (Jackson & Williams, 1985; Williams & Karau, 1991).

Figure 3.3 The process of social loafing

### Stereotypes, Discrimination, and Prejudice

As discussed in section 3.1, automatic thinking and schemas are essential in people’s decision-making and judgment processes. However, ready-made assumptions or expectations are not always current and can lead to mistaken judgments, such as stereotypes, discrimination, and prejudice. Personal bias is an attitude towards people, events, or phenomena. Specifically, a **stereotype** is the cognitive component of attitude. It refers to a vague generalization about a group of people with some identical and outstanding characteristics and further assigns them to all group members (Devine, 1989). For instance, close your eyes and imagine the characteristics of a preschool teacher in a kindergarten or a data scientist in an IT company. It is not difficult to link these careers with a specific gender, appearance, and remarkable context.

**Stereotype**: the cognitive component of attitudes toward a group of people who have identical characteristics, regardless of their actual variation.

**Prejudice**: people’s negative attitudes toward another group of people only based on their membership and minority member in that group.

**Prejudice** is defined as an affective component of people’s attitude about a specific group of people or events, merely based on a minority member in that target group. Often, prejudice is explained as a negative emotion bound to particular reactions. For example, when we say someone is against Asians, we mean that person assumes Asian immigrants are frequently denied leadership opportunities but ignore their traits and contextual information (Gee & Peck, 2017). Besides the biases against particular ethnic groups, researchers have found prejudice based on gender, age, mental illness (Bissell & Parrott, 2013), and social class (Carvacho et al., 2013). Different to stereotypes and prejudice, **discrimination** is the behavioral component of people’s attitudes that can bring physical injury and harmful action towards specific group members (Aronson et al., 1994). Take an example in the workplace. Inequities in women employers’ salaries and promotions are deeply rooted in gender discrimination (Heilman & Caleo, 2018).

**Discrimination:** people’s harmful behavior toward a group of people, solely based on their membership in that group.

You may wonder what causes these biases. One cause of prejudice is inter-group bias: the differentiation between “them” and “us”. As human beings, we tend to feel favorable and comfortable toward others with similar characteristics, such as biological features, cultural background, and past experiences (Allen & Wilder, 1975).

#### How do people reduce cognitive biases?

As noticed, cognitive biases could harm people, especially with negative consequences to the minority and weak ones (Heilman & Caleo, 2018). How can people adjust their original judgments and control personal biases? Fortunately, people can think about and interpret new information via slow and critical thinking processes (Kahneman, 2011). On the individual level, this high-effort thinking provides deliberate checks and balances for automatic thinking (Aronson et al., 1994). Additionally, more effort could be invested at the social level, such as using education to diminish prejudice (Pettigrew et al., 2007). Social psychologists suggest that when individuals are appropriately educated (e.g., in schools and families) and exposed to accurate information about values, beliefs, and attitudes, it will vastly enhance their willingness to be inclusive and accept social diversity (Jenssen & Engesbak, 1994; Soliz & Harwood, 2003).

### Self-Check Questions

1. Please complete the following sentences.

According to social loafing theory, when individual effort in a group project cannot be identified, group members may become more relaxed, leading to *worse performance* on *simple tasks*.

However, people working collectively can *improve performance* when solving *complex tasks.*

Personal bias is attitudes toward people, events, or phenomena. Specifically, *prejudice* is defined as an affective component of people’s attitudes about a specific group of people or events; a *stereotype* is the cognitive component of attitude, and *discrimination* is the behavioral component of people’s attitudes.

## Prosocial Behavior, Helping Behavior, and Altruism

This section provides a comprehensive overview of basic concepts and theories on prosocial behavior with examples. **Prosocial behavior** is defined as a wide range of human actions taken to benefit others, such as helping, donating, sharing, and volunteering (Penner et al., 2005). Furthermore, some people may desire to help others even if this action involves a cost. This tendency to assist and cooperate is human altruism (Batson & Shaw, 1991; Fehr & Fischbacher, 2003). Here, you may ask: Why do people help others? Is prosocial behavior innate or learned?

**Prosocial behavior:** Human behavior that is carried out with the goal of helping other people.

### Basic Motives of Prosocial Behavior

*Instincts and genes.* From an evolutionary psychology perspective, people’s prosocial behaviors can be explained by genetic factors, such as kin selection (Foster et al., 2006). People willing to help other genetic relatives have higher chances of survival. Moreover, individuals who hold a reciprocity norm expect that helping others will increase their likelihood of receiving assistance in the future (Ashton et al., 1998).

*Social exchange.* Except for the personal factor, prosocial behavior can be motivated by situational and normative influence factors, such as evaluating the costs and rewards of helping. When people behave generously, they have a higher chance of receiving rewards and appreciation from others in the future (Aronson et al., 1994). In other words, prosocial behavior is learned via social interaction.

*Empathy and altruism.* At this point, you may be concerned about whether people have a pure motive for helping or not. Batson and Shaw (1991) proposed the empathy-altruism hypothesis and explained that people’s prosocial behavior is because of a feeling of empathy for others. For example, if you see a woman drop her shopping bag, and all her oranges roll onto the floor, you feel empathy for her situation. Thus, you will likely help her regardless of whether you will be appreciated.

### When Do People Help?

Previously, we discussed why people engage in prosocial behaviors. However, these explanations are not the only reasons people choose to help others – or not –especially in an emergency. Thus, social psychologists conducted experiments to understand further when people help. They found a surprising result that the more people witness an emergency, the lower chance of the victim receiving help (Darley & Latane, 1968). This social phenomenon is called the **bystander effect** (Darley, 1970). Specifically, when people believe that they are the only witness of an emergency, most of them help the victim immediately. Nevertheless, when people assume many others notice the emergency, they are less likely to offer help or react slowly (Latané & Nida, 1981).

**Bystander effects:** The phenomenon that the chance of helping behavior in an emergency decreases when the number of witnesses increases.

Besides the number of bystanders, another situational determinant of prosocial behavior is people’s living environment. Studies have revealed that compared with urban areas (e.g., cities), people in rural areas (e.g., small towns) are more likely to help others (Amato, 1983; Steblay, 1987). For instance, compared with people who live in urban settings, small-town residents are more willing to help strangers involved in an accident or getting lost.

### How to Increase Prosocial Behavior?

As mentioned, the diffusion of responsibility decreases the likelihood of people’s helping behavior (Darley & Latane, 1968). Would it be possible to enhance the chances of helping, especially in an emergency? Latané and Darley (1970) suggested five decision-making steps that affect whether people will stop to help or not.

Figure 3.4 Bystander intervention decision process

### Self-Check Questions

1. Imagine you just received your first-aid certificate and witnessed a man suffering heatstroke in the summer. Simultaneously, you do not see any others on the street. Please use Latané and Darley’s decision-making steps to evaluate the above situation and decide whether you will offer help.

*Answer: Latané and Darley suggested five steps to go through an emergence. (1) You already noticed the man is suffering heatstroke and lays down on the floor, (2) You interpret the heatstroke as an emergency, (3) You are the only potential help-giver and assume you have the responsibility to help, and (4) You know the appropriate form of assistance, such as calling an ambulance, giving the man cardiopulmonary resuscitation (CPR), or getting the man out of the sun. Therefore, you decide to implement the help.*

Summary

In this unit, you have learned that social psychology is a branch of psychology that studies the influence of social context on individual people’s thoughts, feelings, and behaviors by using scientific approaches. The power of socialization appears when we consider what other people might think and significantly change our judgments and decisions. We construct our social perceptions when we actively collect, interpret and understand other people’s behaviors under a particular social context. Self-fulfilling prophecies happen when people actively make their schemas about people or events come true. It strongly affects people’s interactions. In addition, according to attribution theory, if people believe the causes of behavior are their attitudes and personality traits, they have internal attributions. Conversely, external attribution explains that the reasons for behavior are stimuli from the environment.

The need to know what is suitable and appropriate brings informational social influence. People conform to other people to receive information about ambiguous situations. Besides, normative social influence occurs when individuals need to be accepted and liked by others. In daily life, social media and advertisements use the effects of conformity to change people’s attitudes toward – for example – ideal body image standards.

When people differ in opinions, beliefs, interests, and goals, conflicts arise and lead to aggressive behavior, which refers to people’s intentional behavior aimed at causing psychological or physical pain to others. Pain, discomfort, frustrating situations, and the appearance of media violence are all causes of aggression. Also, aggression is a learned social behavior and can be reduced by building empathy and managing effective communication. According to social loafing theory, the presence of others relaxes individuals and results in decline in member effort. Another crucial issue in interpersonal relationships is a negative attitude. Stereotypes and prejudice toward people, events, or phenomena are caused by social categorization (e.g., us versus them). Individuals should encourage critical thinking and be careful about automatic thinking to reduce stereotypes, prejudice, and discrimination. At a broader level, school education and family should provide accurate information about diverse values, beliefs, and attitudes.

Finally, people sometimes help, donate, share, and volunteer. Underlying prosocial behavior, the primary motives for helping could be passing genes, social exchange, and empathy-altruism. Nevertheless, the bystander effect showed that assistance in an emergency would decrease when the number of witnesses increases. Fortunately, help can be increased when people go through five decision-making processes to evaluate an emergency situation.

# 4. Industrial Psychology

## Introduction

Psychology as a science does not only focus on academic research but also has essential applications in improving people’s daily work and solving practical problems for enterprises. The term *applied psychology* is frequently used when a large part of psychology overlaps with other disciplines, such as economics, business administration, and human resources, and is primarily concerned with effectiveness and efficiency. As a subarea of applied psychology, **industrial-organizational (I-O) psychology** focuses on human nature at work and explores solutions to practical problems in the workplace (Spector, 2021). I-O psychology can be split into industrial and organizational divisions. In this field, I-O psychologists apply scientific principles and psychological theories to explain and investigate people's emotions, motivations, and behaviors in the workplace. They have increasingly conducted empirical research and applied evidence-based principles and theories while supporting workers and managers in organizations.

**Industrial-organizational (I-O) psychology:** A sub-field of applied psychology that focuses mainly on human nature at work and explores solutions to practical workplace problems.

The current unit focuses on industrial psychology and discusses the topics of work analysis, motivation, job satisfaction, and some stress management skills used in management practices. In addition, this unit includes some basic assessment methods that correspond to particular topics and concepts. All the selected topics and methodologies are presented to strengthen your understanding of industrial psychology at both conceptual and methodological levels.

## 4.1 Basics of Industrial Psychology

You probably heard of “A happy employee is a productive employee.” However, have you critically thought about this saying from a psychological perspective and wondered why job satisfaction is crucial for individual workers? To increase our understanding of people at work, many scholars and practitioners dedicate their professional knowledge and experience to psychology and business. **Industrial psychology** is a sub-field of applied psychology that investigates the issues of employee recruitment, work environment, and the crucial factors that affect work performance (Spector, 2021). Based on the study and observation of individuals, the industry or managers can use them to match the candidates and specific job requirements. For instance, during the recruiting process, people from human resources (HR) can use a cognitive test designed by industrial psychologists to assess the candidates’ job-related knowledge and professional skills. For placement, psychological tests such as personality tests (Goldberg et al., 2006), emotional intelligence tests (Joseph & Newman, 2010), and vocational interest tests (Tracey & Rounds, 1993) are frequently applied to support human resource management. Other approaches such as interviews and work analyses are widely implemented to evaluate employees’ suitability for a particular position. After the successful applicants become part of the organization, industrial psychologists help companies to increase their new workers’ productivity by studying their motivation, job satisfaction, and work stress.

**Industrial Psychology**: A sub-field of applied psychology that investigates individual employees' knowledge, skills, abilities, and other personal characteristics (KSAO) at work.

KSAOs: A person’s knowledge, skills, abilities, and other personal characteristics that are required to succeed at work. These aspects are the main research focus of industrial psychologists.

In general, industrial psychologists attempt to improve organizational efficiency via the optimal use of human resources. Over the past decade, industrial psychologists have focused on the practical issues needed to improve organizational efficiency through the ideal staffing arrangement: selection, placement, training, performance management, and quality work-life (Landy & Conte, 2016). Industrial psychologists pay great attention to measuring employees' knowledge, skills, abilities, and other personal characteristics (**KSAOs**) at work (Krumm & Hertel, 2013). While working with managers and workers, industrial psychologists usually adopt a scientific approach to finding solutions instead of offering the existing answers. For example, industrial psychologists could support HR in conducting a work analysis that could be applied to the annual performance appraisals in the organization. More importantly, industrial psychologists use scientific methodologies to collect data, analyze individual behaviors, and explain organizational phenomena while designing and applying various assessments and evaluations.

### Self-Check Questions

What are the main research interests of industrial psychologists?

*Answer: Industrial psychologists are interested in applying evidence-based principles and psychological theories to explain and investigate people's emotions, motivations, and behaviors in the workplace, as well as supporting the work of practitioners and managers in organizations.*

What are the four job-related elements that KSAOs stand for?

*Answer: KSAOs refer to employees' knowledge, skills, abilities, and other personal characteristics at work.*

## 4.2 Concepts and Methods of Work Analysis and Evaluation

Imagine a scenario in which you are searching for a vacancy that fits your academic and career background, such as project manager in marketing. Then, when typing this keyword into the job search engine, you find a well-structured job description on the website. As you look into the details you see that this job description is broken down into a collection of responsibilities and tasks associated with the project manager position, such as planning and organizing the marketing campaigns and managing the project's budgets.

Regarding the above scenario, have you ever considered why those specific duties and tasks appear on the job description of a marketing project manager instead of on a mathematics schoolteacher job? In addition, why do identical job titles from different organizations share many typical duties and tasks? What exactly do people need to do in their positions? In the following section, these questions are addressed by discussing the concept of work analysis and its design and implementation in organizations.

### What is Work Analysis

**Work analysis** is a formal evaluation approach to explicitly collect necessary information about a work unit and present the essential skills of an efficient employee who responsible for the job.

**Work analysis** refers to a method for explicitly providing detailed information on the job unit and presenting the essential competencies of an effective worker (Harvey, 1991). Frequently, this term is interchangeable with **job analysis** in academic journals and the business press. According to Morgeson and his colleagues, a formal work analysis contains two characteristics: (1) a systematic analysis procedure; and (2) a thorough description of individual job units (Morgeson et al., 2019). During the work analysis procedure, the human resource (HR) department uses the collected information to solve practical problems in organizational management, such as job classification and performance evaluation (Fine & Cronshaw, 1999). At the same time, a work analysis offers essential information about the nature and detailed content of a specific job in an organization (Brannick & Levine, 2002). A work analysis generally aims to present an accurate picture of the job descriptions and list all the requirements for the employees who will do it.

#### Importance of work analysis

The information in a work analysis serves as the basis for many HR activities and can be used in multiple fields of organizational practices (Siddique, 2004). As mentioned earlier, the job description on a career website covers a list of duties and tasks that an individual employee will fulfill and complete at work. The summary of job requirements is the written product of a work analysis. From the job applicant's perspective, they can understand the constituent parts of a job, including the role, duties, tasks, daily activities, and other smaller work units.

In addition, the organization and HR department receive descriptive reports about specific workers’ capabilities (e.g., professional knowledge, skills) and job performance (e.g., what employees do at work). After knowing what the job requires, the HR department can effectively identify the potential candidates for the position during recruitment (Judge, 1994). Moreover, while reviewing the job analysis results, managers or recruiters get a complete picture of what employees do and the quality of their work (Sanchez & Levine, 2012). Furthermore, previous research found that a thorough and well-designed work analysis can facilitate the person-environment (PE) fit, person-job (PJ) fit, person-vocation (PV) fit, person-organization (PO) fit, and person-group (PG) fit (Judge, 1994; Lauver & Kristof-Brown, 2001). In sum, a formal work analysis can be used for writing a job description, employee selection, performance evaluation, promotion, training, and job assignment, which is very important for many management practices in organizations.

### Types of work analysis

In daily practice, depending on the specific purposes of organizational management, work analysis is implemented along two dimensions: work-oriented (sometimes called job-oriented) analysis and worker-oriented (sometimes called person-oriented) analysis (Harvey, 1991; Spector, 2021).

**Work-oriented work analysis:** An evaluation of the nature of the tasks and duties that are required for a specific position in the organization.

**Work-oriented work analysis** is an approach that focuses on the nature of tasks and duties that need to be done on the job (Harvey, 1991). Yet how can we break down a job into specifics? According to Brannick and Levine (2002), the work-oriented analysis contains a five-level hierarchy. The levels range from broad to specific: position, duty, task, activity, and element. Table 4.1 presents each level of specificity with the corresponding examples. With the guidance of this hierarchy, people can effectively identify different classes of units performed in a job.

Table 4.1. Five levels of work specificity

|  |  |  |
| --- | --- | --- |
| Levels of specificity | Definitions | Examples |
| Position | A given job title | Flight attendants work on a commercial airline |
| Duty | A description of significant responsibilities of a job that need to be done by an employee | Responsible for the cabin safety and comfort of passengers |
| Task | A specific piece of work to achieve a particular duty of the job | To avoid the potential risks that threaten the cabin's security |
| Activity | Individual units that combine to accomplish the task of the job | Conducting a set of pre-flight safety checks to ensure the cabin is ready for take off |
| Element | A sequence of actions to achieve the activity | Asking passengers to wear their safety belts and stow their bags under the seats |

As the other, fundamentally different, approach, **worker-oriented work analysis** concerns what employees do at work and systematically assesses the corresponding personal factors required in a job (Harvey, 1991). This work analysis approach typically provides a systematic description of a person's knowledge, skills, abilities, and other characteristics (KSAOs) that covers facts and information about a qualified worker (Krumm & Hertel, 2013). Table 4.2 briefly defines each category of KSAOs and illustrates the examples related to the flight attendant job.

**Worker-oriented work analysis:** An evaluation of what employees do at work and the corresponding knowledge, skills, abilities, and other characteristics that are required in a job.

Table 4.2 Definitions of KSAOs and the related examples

|  |  |  |
| --- | --- | --- |
| Category | Definition | Example |
| Knowledge | A collection of professional information that a person needs to know to accomplish a specific job | A flight attendant should have sufficient first aid and medical care knowledge |
| Skill | A practiced act so that a person can finish a particular task | Excellent communication and fluency in English |
| Ability | A stable capability, including both physical and psychological aspects | Able to handle emergencies and solve passengers' special needs |
| Other characteristics | Personality, related training, and work experience | To be friendly and have high emotional stability |

### Methods of work-oriented analysis

There are several approaches to conducting a work-oriented work analysis in organizations. Depending on the evaluation goals (e.g., providing employee feedback, determining salary increases, making promotion decisions), analysts select the optimal method to evaluate employees’ work performance (Aamodt, 2015).

#### Observation and shadowing

First, observing employees' work-related attitudes and behaviors is a common way of gathering information in organizations (Landy & Conte, 2016). During the observation, the job analyst seeks to examine employee performance and thus obtains first-hand knowledge that the employee has not previously mentioned. Usually, the results of a task analysis provide an objective baseline for performance appraisal. Yet it is difficult to observe someone without their notice. Regarding this problem, shadowing is another option to see how employees perform their job naturally (McKenna, 2020). During shadowing, the job analyst spends time participating in the same work as the target of the evaluation. Going through every aspect of a job routine makes it easier for the analyst to generate a complete picture of the task or project.

#### Protocol

The second approach to work-oriented analysis is to write a protocol. It is an effective method for job analysts or supervisors to systematically collect job-related data (McKenna, 2020). A properly written protocol for a specific task should cover several components: what is done, who is responsible for it, how it is done, why it is done, and when it is done. These critical components are documented in a log format, which could be used to qualify the employees’ long-term work performance. The advantages of administering protocols are that they are inexpensive and efficient. Moreover, since the protocol objectively records the individual employee’s actual working behaviors instead of their personal characteristics, it minimizes evaluation biases such as first impressions and the specific trait that is consistent with the supervisor’s preference (Aamodt, 2015).

### Methods of worker-oriented analysis

As mentioned earlier, worker-oriented analyses mainly focus on what employees do at work and the competencies required in their jobs. The techniques and methods used in worker-oriented analysis are primarily for the collection of information about the employees’ professional knowledge, skills, abilities, and other characteristics (KSAOs) necessary to complete their work. The following are several common approaches to obtaining information on workers’ KSAO dimensions.

#### Interview

The interview is a common approach for conducting a person-oriented work analysis (Campion et al., 1994). For a job analyst, a well-prepared, structured interview is a suitable means of collecting information by asking employees job-related questions. Based on the interviewee's responses in the selection interview, the job analyst can evaluate each of the answers to decide whether that person meets specific criteria or not (Campion et al., 1997). Usually, a structured interview can take place in a one-to-one format, which involves one analyst interviewing one employee. In addition, panel interviews (e.g., multiple analysts evaluate the same employee) and group interviews (e.g., one job analyst asks the question to several employees) are also effective ways for HR managers to gather the interviewee's latest information (Carson et al., 2005).

#### Questionnaires and Survey

Designing and administering a questionnaire is a scientific method of obtaining worker-related information, such as individual work performance (Rotundo & Sackett, 2002). Moreover, questionnaires can reduce time and cost since many workers are involved and can all be asked the same questions. To ensure the reliability and validity of the analysis, the assessment process should be objective and follow a structured method. For example, the individual work performance questionnaire (IWPQ) is a scientific self-report instrument commonly used to collect and analyze workers’ performance along four dimensions: task performance, contextual performance, adaptive performance, and counterproductive work behavior (Koopmans et al., 2011). The IWPQ contains 128 unique items that cover the crucial elements of jobs that predict individual work performance. While completing the questionnaire, workers must rate their agreement with a series of statements on a scale of 1 to 10 (Koopmans et al., 2013). An example of a statement on the task performance scale is “In the past three months, collaborating with others was very productive.” The company and HR department can reasonably evaluate employees' working behaviors based on the assessment results. A questionnaire could be a valuable tool for supervisors to understand their employers’ particular work behavior (e.g., time management and problem-solving skills) and involvement in the job (McKenna, 2020).

### Job Evaluation

As noted previously in this section, the written results of work analysis could be used for evaluating employees' job performance and determining the salary of employees accordingly. In general, **job evaluation** refers to a systematic process of determining the monetary value of a job concerning other jobs in an organization (McKenna, 2020). An objective and thorough job evaluation can be used to ensure both internal and external pay equity. For instance, while evaluating a job by comparing it to other positions within the organization (i.e., internal equity), the level of responsibility, physical and psychological demands, education, and experience requirements are the main factors that need to be considered. Yet external equity is achieved when comparing a job to similar positions in other organizations, such as the average salary of a specific position in the external market. In short, the reasons for job evaluation are determining salary increases and ensuring fair promotion decisions (Aamodt, 2015).

**Job evaluation**: A formal and systematic approach to evaluate the worth of a job in relation to other jobs in an organization.

Figure 4.1 The main steps of the job evaluation process

Once the purpose of the evaluation is confirmed, the following step (see Figure 4.1) is to conduct the evaluation process in a sequence (Aamodt, 2015). Depending on the requirement, the job evaluation process could take place annually or even quarterly if needed. Of course, the results of the evaluation will vary based on employee performance. In this respect, many I-O psychologists and managers are interested in the crucial factors that could largely influence individual performance in organizations: work motivation and satisfaction (McKenna, 2020). These critical concepts will be discussed in the next section.

### Self-Check Questions

1. What are the two characteristics of a formal work analysis?

Answer: *Formal work analysis is (1) a systematic analysis procedure; and (2) a thorough description of individual job units.*

1. What is the difference between work-oriented work analysis and worker-oriented analysis?

Answer: *Work-oriented work analysis focuses on the nature of the position, duties, tasks, and activities that need to be carried out in the workplace.* *Worker-oriented work analysis focuses on what employees do at work and aims to provide a systematic description of the corresponding knowledge, skills, abilities, and other characteristics (KSAOs) of a qualified employee that is required in a job.*

## 4.3 Concepts and Methods of Work Motivation and Satisfaction

### Motivation at Work

Work is one of the most common topics of many people's waking day. However, have you ever thought of why you work and what motivated you to work? Before answering these questions, you may also ask how best to define motivation. The answer depends on the individual. Some people view motivation as intrinsic needs that their try to fulfill. Some people understand motivation as an internal force that engages them in some work-related decisions. From a psychological point of view, **work motivation** is defined as the inner force that drives an employee's work-related behaviors and encourages them to achieve goals (Locke & Latham, 2002). In the workplace, two employees' actions can look the same, such as participating in vocational training in their free time. However, the drive, motive, or need behind the choice may vary between individual employees. Regarding this concern, I-O psychologists have continued to study motivation at work and have investigated its influence on individual employees' work behaviors (Pardee, 1990; Ryan & Deci, 2000).

**Work motivation:** the internal force or external factors that drive an employee’s job-related behaviors and encourage him or her to attain a goal.

#### The importance of work motivation

In organizations, employees’ work capacities and professional skills determine whether they can accomplish a particular task at work. Yet their motivation determines whether they are willing to finish the job (Donovan, 2002). When employees are motivated, they will actively respond to work-related conditions and generate positive emotions (e.g., satisfaction). Except for the influence on a person's psychological state, Van Knippenberg (2000)’s systematic review of empirical studies confirmed that employees' motivation is positively related to their work performance, persistence, and job satisfaction. Motivation is a significant concept, not only for the individual employee, but also for organizations. Thus, researchers and practitioners have continued to study work motivation.

### Motivation Theories

Recognizing the wide range of individual differences in motivation and realizing the importance of the concept, psychologists have proposed various theories of motivation (Pardee, 1990). Many ideas have been put forward regarding why some people perform better than others at work. The following two theories explain employee motivation in terms of job-related goals and needs.

#### Goal-setting theory

According to goal-setting theory, motivation comes from people's internal intentions, objectives, or goals (Locke & Latham, 2002, 2006; Lunenburg, 2011). For instance, increasing social media presence and promoting more products could be employees' goals in marketing. Furthermore, the theory states that a person's goal is what they consciously try to achieve. The concept of a goal refers to a desirable objective which is a priority concerns for a person. This goal can be general, such as "to improve the effectiveness of organizational communication," or specific, such as "encouraging employees to share their feedback at the meeting."

According to Locke and Latham (1990), employees’ work performance is shaped mainly by goal difficulty and goal specificity. Goal difficulty is the extent to which an aim is demanding and challenging. Goal specificity refers to an object's level of quantitative precision (Locke et al., 1981). Based on this definition, "do your best" is a vague goal with low specificity. Compared to a general goal, a specific and challenging goal is more likely to result in the expected performance of people at work (Klein et al., 1990). Over the past three decades, as one of the most popular motivation theories in I-O psychology, goal-setting theory has assisted organizations and managers in understanding the close relationship between goals and work performance (Clements & Kamau, 2018; Fried & Slowik, 2004; Tubbs & Ekeberg, 1991). Leaders can effectively motivate group members to attain the very purpose when using this theory under the appropriate situation. The following are essential prerequisites for goal setting to be successful in practice (Rubin, 2002).

1. Goals need to be specific

As noted previously, rather than making a vague goal, such as "try your best at work," setting a specific goal can help reduce misunderstanding and guide employees to evaluate whether they have achieved the goal (Kleingeld et al., 2011). At the same time, a particular goal means people require less response time to process and interpret the goal.

1. Goals need to be difficult but attainable

Research has suggested a positive relationship between the difficulty of the goal and job performance (Kleingeld et al., 2011). Compared to an easy goal, a more challenging goal that accomplishes an appropriate level of task complexity will result in better performance. However, instead of setting an unrealistic target that is nearly impossible to achieve, the goal should be attainable, based on the employee's capacity and the organization's current situation (Tubbs & Ekeberg, 1991).

1. Goals need to be accepted by the members of the organization

In addition to the characteristics of the goal, goal commitment among employees is essential in ensuring the goal's effectiveness (Rubin, 2002). For instance, to meet the group goal, each member must accept the goal and view it as a part of their individual goals.

1. Feedback needs to be provided

Hattie and Timperley (2007) defined feedback as information regarding a person's behaviors or performance. To increase goal-setting effectiveness, employers should regularly provide feedback regarding the employees’ progress towards their goals (Locke & Latham, 2002). With this feedback, employees can make timely adjustments when encountering challenging goals. Another function of helpful feedback is that it helps people to decrease the discrepancy between the current situation and the expected goal (London, 2003). Workers, group leaders, and other professionals in organizations can provide feedback. Some examples of effective feedback are: providing diagnostic information on work-related mistakes, rather than on the person's personality; giving additional resources and suggestions on how job performance can be improved (Kluger & DeNisi, 1996). Feedback also assists people in monitoring their progress (Holt et al., 2012).

#### Two-factor theory

Building on considerable evidence concerning human needs and values, Herzberg and his colleagues (1966) first proposed the two-factor theory, also named the motivation-hygiene theory, to explain the crucial elements behind people's perception of work. This theory divided the factors into two categories: Motivators and hygiene factors. *Motivators* are the task- and duty-related elements that influence people's positive attitudes, such as work achievement and the level of responsibility for making a decision. If people are offered adequate motivators, they will be more motivated and satisfied with their job. *Hygiene factors* are the environment-related elements that affect people's negative attitudes toward work conditions, such as security, salary, and interpersonal relationships in the workplace. If these hygiene factors are inadequate, it will cause dissatisfaction among people. More examples of motivators and hygiene factors are listed in Table 4.3.

Table 4.3 Examples of factors contributing to workplace motivation

|  |  |
| --- | --- |
| Motivators | Hygiene factors |
| Achievement  Control  Challenge  Responsibility  Personal growth  Interesting work itself | Salary  Security  Supervision  Working environment  Interpersonal relationships  Company policies and administration |

### Job Satisfaction

Many managers may seek to explain why some employees are satisfied with their job and others are not. Depending on various working conditions, the employees’ feelings about their current job can range from highly positive to extremely negative (Armstrong et al., 2015). As discussed earlier, a person's work motivation significantly influences job-related emotions, such as job satisfaction. From a psychological perspective, **job satisfaction** is generally defined as the degree to which a person likes their job (Faragher, 2013; Spector, 1997; Vroom, 1964). This positive job-related attitude is multidimensional, including affective, continuance, and normative commitment (Aziri, 2011).

**Job satisfaction:** refers to a person’s self-perceived job attitude toward his or her job.

#### Antecedents of job satisfaction

Since many factors affect people who like or dislike their jobs, individual employees from the same organization can show a large variety in job satisfaction. Previous research has shown that the common predictors of job satisfaction can be categorized into environmental and personal factors (Spector, 2021). For instance, the ecological antecedents influencing job satisfaction are job characteristics, salary, and perception of justice. In other words, the environmental factors focus more on the job per se. Some other researchers suggested that personal characteristics also significantly affect employees’ self-perceived job satisfaction (Staw & Cohen‐Charash, 2005). Examples of individual factors are personality, job expectation, gender, perception of equality, and interpersonal relations with coworkers (Spector, 2021).

The job characteristics model (JCM) provides a conceptual framework for designing work that enhances employees’ job satisfaction (Hackman et al., 1980; Hackman et al., 1978). Hackman and Oldham (1975) developed a Job Diagnosis Survey (JDS) to systematically assess several job-related factors that are crucial antecedents of work outcomes. To test the model, Hackman et al. (1980) assumed that job satisfaction is neither a direct outcome of the external work environment nor a direct result of the satisfaction of personal needs. Instead, job satisfaction is influenced by specific job characteristics: skill variety, task identity, task significance, autonomy, and feedback. These five job characteristics are significantly related to psychological outcomes (e.g., perceived meaningfulness of work, motivation, and job satisfaction) and behavioral outcomes (e.g., absenteeism). A meta-analysis on job characteristics suggested that with the increase in job complexity, employees’ job satisfaction, motivation, and work performance will increase (Fried & Ferris, 1987). Applying the job characteristics model across entrepreneurs provides employers with an evidence-based principle for designing jobs to promote individuals’ job satisfaction in organizations (Parker et al., 2017).

### Self-Check Questions

1. For goal-setting to be successful, what are the four prerequisites of the goals?

Answers:

*(1) Goals need to be specific; (2) Goals need to be difficult but attainable; (3) Goals need to be accepted by the members; (4) Feedback needs to be provided*

1. According to the two-factor theory, which of the following is NOT a motivator that produces positive employee feelings at work?
2. *Salary* (correct answer)
3. Challenge
4. Responsibility
5. Achievement

## 4.4 Concepts and Methods of Workplace Design

### The Design of the Working Environment

The working environment and its design can be divided into two broad categories: (1) the visible environment, and (2) the invisible environment. Office design usually involves a physical and visible environment, with elements such as privacy, color, temperature, and lightness (Davis et al., 2011; Jo et al., 2022). Researchers and practitioners frequently ignore the physical settings of a workspace (Davis, 1984). However, the organizational literature claims that the design of the working environment (e.g., enclosed office or open-plan office) is significantly related to workers' productivity (Roelofsen, 2002) and psychological outcomes, such as job satisfaction (Veitch et al., 2007). Specifically, researchers found that workplace color is highly associated with people's creativity (Küller et al., 2009), emotion (Hemphill, 1996), and perceived task demand (Stone & English, 1998). For instance, SIXT is one of Germany's largest car rental companies; its branches worldwide are designed in sharp orange color. Working within this warm color environment, enterprise employees reported higher performance and positive perceptions (Ainsworth et al., 1993). In addition to the office interior color, other factors such as a well-organized work schedule and work design are crucial to constructing a participatory workspace (Seim & Broberg, 2010).

### Changes in the Workplace

#### Digital working environment

During regular working hours, many employees work closely with information-communication technology (ICT), such as personal computers, tablets, mobile devices, and use various pieces of software (Long, 2018). Furthermore, the rapid development of new technology creates new forms of work. A new working requirement also facilitates the innovation of technology. One of the most apparent benefits of using digital equipment is enhanced human performance at work (McKenna, 2020). New technologies transfer most administrative work such as mailing, reporting, and archiving documents into paperless records. Consequently, office settings and work routines have become more customized, productive, and efficient over the past decade (Wheatley, 2017). Nowadays, there is a tendency to highlight the characteristics of the digital working environment. Innovative technologies shape how people work, substantially enhance their productivity, and decrease turnover (Stavrou & Kilaniotis, 2010). The broad implementation of digital technology changes the office environment and provides a new alternative to the workplace: The home office.

#### Home office

Due to occupational changes and organizational development, more people have started working from home, either full-time or part-time. This new working style has several prerequisites: residential homes, digital devices, and an internet connection. Rather than having a fixed office space and office hours, employees can work in a new time-space mode. Because of the easy arrangement, the home office (HO), also named remote work or telework, is frequently adapted and implemented in different business fields, especially in many technology companies. According to an OECD survey, there is an increasing number of employees who reported that the ideal amount of time to spend in the home office is two to three days per week. In general, the home office has many advantages for both employees and employers (Criscuolo et al., 2021):

* At the individual level, one desirable feature of the home office is flexibility with respect to work schedules and location. Employees can save time and expense by not commuting to work every day. The necessary communication among coworkers is available via email and online meetings, which contain essential social interaction.
* At the organizational level, the home office contributes to workplace substantiality. Telework results in a decreased need for office space and lower consumption of electricity and other resources. Each organizational member can connect with the central office merely with a computer. In addition, less need to commute to work also contributes to a reduction in the organization's carbon footprint.

### Self-Check Questions

What are the advantages of the home office (HO) for individual employees and organizations?

Answer: *For employees, the home office provides high flexibility in their working locations and schedules. For organizations, the home office contributes to the workplace's substantiality and lowers the organizational cost in the long run.*

## 4.5 Work and Health

### Current Working Conditions in Organizations

According to the OECD report, during the worldwide fight against the COVID-19 pandemic, healthcare professionals have experienced extremely high levels of stress and considerable mental health challenges. The pressure is caused by overtime work, quarantine isolation, fear of infection, lack of supplies, and inadequate information, among other factors (Beehr, 2020). Findings from studies have suggested that the high pressure on those front-line workers potentially increases the risk of physical and psychological burden that threaten their health outcomes (Buddeberg-Fischer et al., 2008). Besides the examples of healthcare professionals who have to deal with work stress, people in other careers, such as managers (Cavanaugh et al., 2000), police officers (Collins & Gibbs, 2003), and teachers (Liu & Onwuegbuzie, 2012) have reported unavoidable stress experiences in their routine work. In addition to professional workers in hospitals, previous research has suggested that half of the population in the United States has experienced at least one stress problem (Murphy & Sauter, 2003).

Therefore, in the current section, the coursebook uncovers a vital issue that closely affects employee performance and individuals' health: workplace stress. The significant factors contributing to work stress and their consequences will be systematically elaborated through examples of field studies and experiments. In addition, a self-report measurement of pressure is presented in this section. A set of scale items will assist you in recognizing the signs that indicate whether you are stressed out. Finally, building on recent research, how to manage stress in the work environment and achieve a work-life balance are also discussed.

**Stressor:** Physical and psychological factors generate discomfort to people and cause temporary or even permanent distortion.

### Stress and Stressors in the Workplace

**Work stress:** A person’s physical and psychological reactions to the imbalance between the self and the work environment.

Think about a scenario at work: When you are waiting to find out if you were successful in your request for a promotion, do you believe it depends on how lucky you are or how hard you work? In addition, which of these two beliefs brings you a higher stress level? From the beginning of a career, work stress is a common topic individual employees have to face and cope with. Theoretically, **work stress** refers to a reaction to the imbalance between a person and the work environment (Bickford, 2005; Lazarus, 2000). This discomfort reaction that happens in a job is also called occupational stress. According to Lazarus and Folkman (1984), work stress involves an overall transactional and dynamic process that arises not only within individuals (e.g., personal characteristics, beliefs, and motives) but also from the external environment (e.g., threats, harm, and challenges). To better cope with work stress, Lazarus and Folkman (1984) developed the transactional model of occupational stress to explain the internal and external factors that trigger stress, such as coping resources and emotional or cognitive-focused evaluation of the situation. Stress management will be discussed later in this section.

To better understand work stress, it is necessary to uncover the common factors that lead to the feeling of pressure. Previous literature conceptualized the internal and external factors that can generate stress as **stressors**. These factors can be broken down into two main categories: physical and psychological stressors (Beehr, 2020; Cooper et al., 2001; Frese, 1985).

#### Physical stressors

Physical stressors result from the biological demands associated with specific tasks or that are stimulated by working environments (Kahn, 1990). Previous investigations of physical stressors suggested that *noise* is one of the most common factors that brings strain (Evans, 2000), especially chronic noise (Evans et al., 1995). This stressor usually appears in manufacturing facilities or factories with poor working conditions and open offices. When surrounded by loud (over 80 decibels), uncontrollable, unwanted, and prolonged sounds, these circumstances will increase the workers' stress level even though the workers are often unaware of the fact (Palmer et al., 2002).

**Physical stressors:** the factors in the physical work environment that could stimulate discomfort feelings and biological reactions on workers, such as noise, temperature, and vibration.

Other everyday physical stressors include extremes of *temperature* (hot or cold) and *vibrations*, which threaten the workers' occupational health and reduce their productivity. For instance, in the context of global warming, people who work in high temperatures will be exposed to heat stress (Spector & Sheffield, 2014). In addition, vibration exposure is another physical stressor that construction workers are frequently exposed to (Burström et al., 2010), along with those who work with vibratory machines (Matoba, 2015). Other physical stressors include radiation exposure, heavy workload, continued work to meet deadlines, and prolonged sitting and standing positions (Bickford, 2005). Additionally, previous industrial health research also indicated that the impact of the above physical stressors could be accumulated and cause extensive injuries to employee health and well-being (McKenna, 2020).

#### Psychological stressors

In addition to poor working conditions, some psychological factors are also associated with stressful working experiences that further affect employees' well-being.

**Locus of control (LOC):** LOCis conceptualized as people's beliefs regarding whether their actions or events in their lives are caused by internal or external factors (Lefcourt, 1991, 2014; Weiner, 1982). Lefcourt (2014) argued that people vary in placing the responsibility for what happens to them. If a person believes that many facets (e.g., personal success, job performance, health condition) of his life are essentially under his control, he has an internal LOC. With this characteristic, people tend to work hard and be more persistent. Conversely, people who perceive that they have little or no influence over things that happen to them have an external LOC (Lefcourt, 2014). An example of this is an employee who considers that the success of his promotion is caused by luck or other random events. Not surprisingly, internal LOC is positively related to better health, and external LOC increases the burden on mental well-being (Spector, 1982). Numerous empirical studies support this argument, and researchers have found that a person's self-perceived locus of control is significantly related to his psychological well-being and job performance (Jex, 1998). In this view, a lack of control at work can indicate a higher stress level.

**Locus of control (LOC):** a psychological concept to explain the distribution of a person’s control of what happens in the environment. People with internal LOC perceive a high level of control on the events that happento them.

**Interpersonal conflict:** Interpersonal conflict is a second psychological stressor (Frone, 2000a). Throughout our lives, we are socialized and want to be involved as members of our social network. The quality of interpersonal relationships is crucial for our private lives and our professional careers. Interpersonal conflict includes unkind words and disrespectful behaviors from colleagues, leaders, or clients. Previous studies suggested that a poor social relationship at work, such as conflict with colleagues, supervisors, and clients, is an stressor for employees of all ages (Cooper et al., 1998; Michael R Frone, 2000; Spector & Jex, 1998; Thomas et al., 2005). Several studies have found that workplace interpersonal conflict is negatively related to psychological outcomes such as job satisfaction (Cortese et al., 2010), commitment (Cooper-Hakim & Viswesvaran, 2005), and self-esteem (Ganster & Schaubroeck, 1991)

**Role conflict:** Role conflict can happen in dual-career families and can potentially harm people's mental health, especially female employees. Women often struggle with the imbalance between their work and family (Bellavia et al., 2005). Since working women have more than one role (e.g., employee, wife, and mother), they can be stressed by both family responsibilities (e.g., childcare, housework) and career responsibilities (e.g., group leader) that are difficult to handle. With this in mind, the concept of **work-family conflict** was introduced (Duxbury & Higgins, 1991; Netemeyer et al., 1996). This psychological condition is heavily related to work stress (Lambert et al., 2010) and job satisfaction (Lambert & Paoline, 2008). Although much research consistently focuses on the relationship between work-family conflict and female employee health, some studies have indicated that work-family conflict negatively affects men as well, such as working men in Scandinavian counties (Frone, 2000; Knudsen, 2009). In addition, immigrants report more struggles in maintaining a work-life balance. In general, the experience of role conflict is a possible source of stress associated with both men's and women's well-being (Frone et al., 1992).

**Work-family conflict** occurs when individuals experience an imbalanced relationship between work and family responsibilities.

**Self-perceived stress scale**

Numerous self-report instruments are available to measure stress. According to organizational needs, the existing stress scales cover different topics in the workplace, such as enjoyment of work (Gross & Seebaß, 2016), interpersonal conflict, job control (Smith, 2000), workplace environment (Maslach et al., 1997), and effort-reward ratio (Siegrist et al., 2004). The evaluation of stressors can serve as the basis for self-perceived stress and help you to recognizing the red flag of work stress in your routines.

The following section presents a theory-driven self-scoring stress test adapted from the Maslach Burnout Inventory (MBI; Maslach et al., 1997). Examples of MBI items are selected (see Table 4.4) to capture your work stress level. Please indicate how frequently you have experienced the following statements.

Table 4.4. Example items of Maslach burnout inventory

|  |
| --- |
| 1. I feel emotionally exhausted because of my work. 2. I doubt the significance of my work. 3. I feel I am making an effective contribution to what this organization does. 4. I feel frustrated by my work. 5. I am not interested in what is happening with many of my colleagues. |
| \* Each item is assessed using a 6-point Likert scale, ranging from 0=never, 1=a few times a year, 2=once a month, 3=a few times a month, 4=once a week, 5=a few times a week, to 6=every day.  Sources: Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). *Maslach burnout inventory*. Scarecrow Education. |

### Consequences of Stress

The issue of work stress is vital to I-O psychologists and managers (Ganster & Schaubroeck, 1991). If an employee faces pressure that exceeds the tolerance level, it will reflect on facets of their daily life. More importantly, chronic stress can adversely affect employees' well-being. The negative consequences of work stress can be divided into physical, psychological, and behavioral responses.

#### Physical results

How do our physical bodies respond to stress? In an intensive care unit (ICU), the emergency doctors are responsible for patients’ lives and working in a constant high-pressure environment. Such stressful conditions can activate a state of being overwhelmed and some human biological activities. These high work demands and stress can cause a combination of sweat, headache, fast heart rate, high levels of stress hormones, and shrinking blood vessels (McKenna, 2020). Over the years, the above physical reactions could accumulate and leas to less energy, greater fragility, decreased concentration, forgetfulness, body aches, hair loss, strokes, and cardiovascular problems.

**Job burnout**: The state of being chronically overwhelmed by extremely stressful working conditions that cause negative consequences on employee well-being.

#### Psychological results

Stress exposure at work results in some psychological consequences, such as anger, dissatisfaction, anxiety, tension, depression, and burnout (see Table 4.5). Work stress affects many occupations, may present with varying levels of symptom severity, and significantly consumes people's energy resources. Previous literature defined the concept of "**job burnout**" as a chronic and affective response to a highly stressful working condition beyond a person's tolerance (Maslach et al., 2001). Exhaustion, pessimistic thinking, and inefficacy are the three dimensions in burnout that altogether decrease quality of work, such as engagement (Leiter, 2021). Burnout is reported in various occupations, such as healthcare professionals (Greenglass et al., 2001), teachers (Skaalvik & Skaalvik, 2010), social workers (Lloyd et al., 2002), and casino dealers (Taormina & Kuok, 2009). According to the results of a meta-analysis, prolonged burnout causes other psychological well-being problems, such as depression, anxiety, loss of control, lack of self-confidence, and feeling of frustration (Aronsson et al., 2017).

#### Behavioral results

Over time, the influence of occupational stress on work performance has been widely investigated. According to Jex (1998), the relationship between stress and performance at work is presented in an inverted U-shape. The figure indicates that employees' job performance increases when stress levels rise. But this positive relationship ends at a certain point. When the work stress level becomes too high, employees' performance and productivity on many tasks will significantly decrease. This inverted U-shape relationship between work stressors and job performance has been verified in many industrial professions, such as nursing and sales (Gilboa et al., 2008). Subsequently, the negative consequences of low productivity turn into high turnover (Parker & Kulik, 1995) and absenteeism (Bycio, 1992).

Table 4.5 Consequences of work stress

|  |  |  |
| --- | --- | --- |
| Physical | Psychological | Behavior |
| Less energy  Fragile  Decreased concentration  Forgetfulness  Body aches  Hair loss  Strokes  Cardiovascular problems | Anxiety  Depression  Loss of control  Lack of self-confidence  Feeling of frustration | Low productivity  Absenteeism  Turnover  Workplace violence |

### Stress Management

Bearing in mind the negative consequences of work stress, is it possible to get rid of stress in the workplace? Stress resistance is an essential issue for employees’ occupational health. Industrial psychologists have dedicated themselves to different models and methods of promoting healing conditions. As discussed earlier in this unit, work stress can result from both internal and external factors. Knowledge of its causes and consequences can help us to strengthen our stress resistance. In general, stress management strategies focus on three levels to construct a healthy workplace: (1) recognizing and solving the problems at the individual level (Van Yperen & Snijders, 2000), (2) encouraging positive interaction at the group level (Fox et al., 2021), and (3) achieving a person-environment fit at the organizational level (Biron & Karanika-Murray, 2014). On the one hand, the three levels of stress management strategy will help you disentangle the focus of practices and ensure the strategies can be implemented to enhance people's occupational health. On the other hand, the following prevention strategies are not isolated, but they will achieve an optimal effect when individual workers implement them flexibly.

#### Individual-level prevention strategy

When people face stress, they can apply Lazarus and Folkman's (1984) transactional stress model to evaluate the situation from both internal and external directions. According to the model, no stress will be triggered when people assess the situation and do not perceive any threat. This evaluation process is called the primary appraisal of the situation. However, once the threat is perceived, the secondary appraisal (coping responses) will be activated to assess whether the personal coping resources are sufficient or not. The perceived stress is positive and valuable for personal growth if effective solutions or coping strategies are available.

Conversely, if people perceive zero coping possibility, negative stress occurs. To visualize the model, Figure 4.2 shows a simplified procedure of how to evaluate the stressful situation in a sequence. Regarding effective problem-focused strategies, industrial psychologists encourage employees to increase control over their jobs by directly reducing the number of stressors (Johnson et al., 2005). For instance, dealing with physical stressors, individuals can actively reduce the noise, vibration, and other distractions in the work environment. These are practical approaches to protect employees' physical and psychological well-being from an intrapersonal perspective.

Figure 4.2 Transactional model of stress and coping

Situation

Primary appraisal

(e.g., Is the situation stressful?)

Secondary appraisal

(e.g., Am I able to cope with the stress?)

Yes

No

No stress

No

Yes

Positive stress

Negative stress

As we discussed previously when we looked at the causes of stress, loss of control is one of the main psychological stressors. Regarding this stressor, employees should increase their autonomy on work content and develop an internal locus of control (Schmitz et al., 2000). Specifically, employees can cope with stress by negotiating a flexible work schedule and setting reasonable goals to reduce time pressure (Joyce et al., 2010). With higher control over work characteristics, employees can engage in self-monitoring and pacing, and eventually control work outcomes. An optimal condition is to achieve a work-life balance. Another example of reducing stress at the individual level is to restructure negative thoughts or perceptions of a job and engage in expectation management (Xie & Johns, 1995). This approach encourages workers to develop a clear understanding of the relationship between self and situation, which helps avoid self-doubt or frustration when facing demanding tasks. Rather than solely eliminating stressors by individual efforts, a healthy workplace involves effective communication and supportive interpersonal interactions at the group level.

#### Group-level prevention strategy

Social relationships with coworkers and supervisors is an important issue for individual employees who work in groups (Buunk & Schaufeli, 1999). As mentioned in the previous section, interpersonal conflict is one of the psychological stressors in the workplace (Frone, 2000). Organizational psychologists recommend workers build communicable interpersonal relationships within a group to reduce conflict and manage stress (Aamodt, 2015). While resolving interpersonal conflict, each group member should positively interact with others by avoiding unfriendly behaviors and disrespectful arguments. Furthermore, a key to reducing stress via a group-level approach is developing clear role descriptions and avoiding social loafing (Thakore, 2013). For instance, when five coworkers are working as a team, it is necessary to be clear about the responsibilities and job requirements in advance. In sum, many psychological stressors are manageable in a supportive and fair group climate (Liden et al., 2000).

#### Organizational-level prevention strategy

In addition to limiting the work stress at individual and group levels, intervention from the organization is also a key component in promoting employees' well-being (Ivancevich & Matteson, 1987). Although work stress affects the individual, it can be effectively managed at the organizational level by changing the organizational structure and climate (Sutherland & Cooper, 2000). For instance, companies can facilitate a culture of support, respect, and reward fairness, and promote safety in the work environment. In addition, after studying an intervention in Danish businesses, a group of health psychologists found that providing performance feedback and appraisal at the organizational level significantly affects employees’ behavioral stress and job satisfaction (Nielsen et al., 2007).

### Self-Check Questions

Please give two examples of work stress's behavioral, psychological, and physical consequences.

*Answer:*

*Behavioral consequences are low productivity and absenteeism.*

*Psychological consequences are anxiety and depression*

*Physical consequences are fragile, and body aches.*

Job burnout is a significant consequence of which type of stressor at work?

A. Physical stressor *B. Psychological stressor* C. Both of them

Summary

In this unit, you have learned that work analysis can be conducted in two ways: work-oriented analysis, which focuses on the nature of the tasks and duties for a specific role , and worker-oriented analysis, which evaluates what employees do at work and the corresponding individual characteristics required in a job. Each type of work analysis has its own measurement approaches. In addition, motivation is an essential issue of work performance. The two-factor theory addresses two job-related elements which can affect a person's work motivation and categorizes them as motivators or hygiene factors. According to the goal-setting theory, goal-setting processes are most effective if the goals are specific, attainable, accepted by the members as legitimate, and accompanied by helpful feedback. While considering employee health, work stress is associated with specific physical and psychological stressors. If the stressors chronically occur in the workplace, they could negatively affect different facets of employee well-being. Fortunately, a person's work stress is manageable from the individual, group, and organizational levels.

# Unit 5 Organizational Psychology

**Study Goals**

On completion of this unit, you will be able to …

… define organizational psychology and its focus.

… describe the organizational culture and understand it from five facets.

… understand how people work as a team

... learn different levels of work conflicts and causes of conflict

… know how to manage workplace conflicts.

… understand mergers and acquisitions from a psychological perspective

# 5. Organizational Psychology

## Introduction

Nowadays, various organizations are set up and run in the industrialized world. Their sizes range from a convenience store that hires one cashier from the local community to an oil giant that could employ thousands of employees around the world. Managing a large enterprise is much more complicated than managing a store. To deal with human nature and ensure individuals work effectively in an organization, many psychologists assist managers in solving practical problems at work (Cascio, 1995; Sparks et al., 2001). In the United States, organizational psychology has become one of the most rapidly growing fields in psychology and largely influences people at work (Katzell & Austin, 1992).

On the one hand, along with organizational development, the research interests of organizational psychologists dynamically shift to people-oriented issues rather than merely focusing on how to enhance work efficiency. On the other hand, the research findings and latest techniques of organizational psychology can influence corporate practices and inspire managers' problem-solving processes. The current unit covers several basic concepts to present the close connection between psychology and organization and how organizational psychologists contribute to enhancing work effectiveness and work conditions for employees. Several case studies and examples are discussed in the unit.

## 5.1 Fundamentals of Organizational Psychology and Structure

An organization is a social entity composed of a group of individuals working on a joint mission. **Organizational psychology** is one of the two major divisions of industrial-organizational (I-O) psychology. It examines employees' emotional and motivational aspects and their relationship to organizational behaviors (Aamodt, 2015). While combining the research methods from psychology and executive management practices, psychologists insist on making **evidence-based conclusions** that can be used to address practical problems (McKenna, 2020). Evidence-based decision-making has become crucial for researchers in supporting practitioners' decision-making at work. The most notable characteristic of evidence-based research is that the results are drawn from an empirical study using the best available methodology (e.g., systematic observation, careful data collection, comprehensive analysis). It simply means that scientific publications prove the investigation and evidence for practices.

**Organizational psychology:** A sub-field of applied psychology that focuses on employees’ work-related emotions, motivations, and behaviors in organizations.

**Evidence-based conclusion:** The results have to be based on empirical study and scientific methods.It is a crucial principle for psychologists while conducting research and applying psychological principles to solve organizational problems.

Grounded in the evidence-based principles reflected in studies, researchers have different interests in understanding multiple phenomena in the workplace. Industrial psychologists are concerned with recruitment, selection, job analysis, and work performance (Landy & Conte, 2016). Rather than focusing on people's attributions and work behaviors, organizational psychologists embrace areas such as employee attitude, motivation, and leadership in the workplace. In some sense, organizational psychologists are also concerned with team communication, corporate culture, and climate, representing a scientific explanation of individuals and organizations.

In organizations, many discussions and work behaviors are assumed to correspond with the development of culture and climate. Therefore, the next section will explore the nature and characteristics of organizational culture, as well as the challenges faced by international organizations with respect to the issue of diversity. The selected perspectives and theories will help you to understand the interactions among individuals, teams, and the organizational environment.

### Self-Check Questions

What is the most critical principle for psychologists when addressing practical problems in organizations?

Answer: *While combining the research methods from psychology and executive management practices, psychologists insist on making evidence-based conclusions.*

What are the main concerns of organizational psychologists?

Answer: *Organizational psychologists focus on employee attitude, motivation, and leadership in the workplace. In addition, they are also concerned with team communication, corporate culture, and climate, representing a scientific explanation of individuals and organizations.*

## 5.2 Organizational Culture and Climate

### What is Organizational Culture and Climate

The organizational environment is a popular construct mentioned frequently in academic journals and the business press. Many researchers and practitioners assume that the corporate culture and climate are closely related to organizational members' work performance and productivity (Ogbonna & Harris, 2000; Shahzad et al., 2012). Therefore, they are highly interested in investigating and understanding the work environments of the organization. According to the literature, **organizational climate** is conceptualized as the corporate members' interrelated perceptions of the work environment that positively or negatively affects their work behaviors (Glisson, 2000). In other words, the climate is the aggregation of individuals' self-perceived experiences that they create and share at work, such as employees' perceptions of support, fairness, stress, and conflict. As another essential concept of the work environment, **organizational culture** refers to a collection of corporate members' shared assumptions, norms, values, beliefs, roles, and experiences (Schneider et al., 2013). These shared values and standards influence how employees behave at work.

**Organizational climate:** Employees’ self-perceived work environment and their organization as a whole. The primary aspects of organizational climate are organizational members’ perception of support, fairness, stress, and conflict.

**Organizational culture**: A collection of employees’ shared values, norms, beliefs, roles, and experiences that is distinguished from other organizations.

In sum, climate describes the psychological influence of the organizational environment, and culture addresses the social context of the corporate environment (McKenna, 2020). Theoretically, although the organizational culture and climate have different explanations, they are often interchangeable in practice. Based on a shared culture and climate, corporate members generate a similar way of viewing and interpreting work behaviors and events in practice that are usually distinguished from other organizations. A company's culture could stem from the vision of the founder(s), who had a belief about what the organization should be. The vision and mission are grounded in the organizational culture that guides the work behaviors of all members.

The work-related culture and climate serve numerous functions within an organization. First, the primary purpose of organizational culture is to convey employees' sense of identity and enhance individuals' commitment to the organization. For example, if an organization has a positive, open, and collaborative culture, the high levels of agreement in this culture can facilitate employee creativity (Tesluk et al., 1997) and enhance employee retention (Sheridan, 1992). Second, a transparent and sustainable culture helps the organization set boundaries which define its role and provide meaning to the actions of employees. In this sense, the core cultural values of an organization are frequently distinguished from those of other organizations. Every organization tries to create unique characteristics that reflect its culture in the workplace.

In international organizations, recruiting international employees from various backgrounds could benefit the people's substantial professionals, innovative ideas, massive experiences, and global perspectives. Simultaneously, diversity not only provides advantages but may also bring weaknesses and threats. Taking Toyota Motor Corporation as an example, domestic employees are more likely to pursue their individual goals after first considering the group's welfare. In contrast, employees from overseas may value their contribution more than the group. Thus, cross-national issues have become an essential topic for practitioners in international organizations. To address the practical problem of diversity, Hofstede (2011) investigated many organizations worldwide and proposed a multidimensional model that differentiates organizational cultures from five perspectives.

#### Hofstede's cultural dimensions theory

According to Hofstede (2011), organizational culture can be distinguished by some primary aspects rather than a vague concept. He identified five dimensions of organizational culture:

○ Individualism versus collectivism is related to the degree of integration of individuals into groups. For example, in an individualist culture, the connection between individuals is relatively loose, and everyone expresses more significant concern for self than for the group. On the opposite side, people in collectivist cultures are integrated into cohesive groups and concerned more about "we" than "I."

○ Power distance is related to the extent of inequality in power that is expected or accepted by low power members of organizations. For instance, employees who work in a small power distance culture expect to be consulted instead of being passively told what to do. In contrast, employees in significant power distance cultures tend to be more obedient and accept orders from the upper hierarchy of the organization.

○ Uncertainty avoidance is related to the degree of comfort the organizational members feel in ambiguous situations. For example, employees in a strong uncertainty avoidance culture refrain from unclear rules, unusual structures, and other unknown work conditions. Conversely, people in weak uncertainty avoidance cultures or so-called uncertainty accepting cultures are more open to unsure situations at work and are more willing to express deviant opinions.

○ Masculinity versus femininity is related to the distribution of values and emotional roles between men and women. For instance, the masculine culture is expected to be more competitive and ambitious and to emphasize achievement and success. The feminine culture expresses more modest and caring characteristics, and people in this type of culture focus on interpersonal relationships and emotional needs.

○ Long-term versus short-term orientation is related to organizational members' values that focus on an immediate or delayed sense of satisfaction. For example, people in short-term oriented cultures think the most critical event appeared in the past or the present. However, people in long-term-oriented cultures believe that gratification will occur in the future will be achieved with persistence.

The above five dimensions of Hofstede's cultural dimensions theory significantly support other researchers and practitioners in categorizing organizational cultures. At the same time, it helps you understand the cultural influence in organizations.

### Self-Check Questions

According to Hofstede's cultural dimensions theory, organizational culture can be explained from which five facets?

*Answer: The five facets of the cultural dimension theory are (1) individualism versus collectivism, (2) power distance, (3) uncertainty avoidance, (4) masculinity versus femininity, and (5) Long-term versus short-term orientation.*

## 5.3 Interaction and Communication in Organizations

### Basics of Communication

Imagine two situations: An employee is frustrated because his group leader has never taken his constructive suggestions or comments seriously. Simultaneously, the leader does not understand why his subordinate frequently interrupts his presentations during team meeting. The above situation represents a common communication problem between a speaker and a listener. In organizations, the communication process can be upward, such as the communication of subordinates to manager (Miles et al., 1996). The other type of organizational communication is downward, such as the communication of managers to subordinates (Lunenburg, 2010). When coworkers are involved in a communication process, the exchange of information may occur in various ways, such as spoken, written, or other nonverbal formats (Aamodt, 2015).

Effective communication significantly contributes to trust at work (Zeffane et al., 2011). The importance of communication in organizations has been widely recognized. Training and developing specific basic interpersonal skills are necessary to ensure communication effectiveness. Active listening is the first essential skill for successful practice (Castleberry & Shepherd, 1993). Unlike passive hearing, an active listener pays attention and tries to understand what the speaker intends to express fully (Weger et al., 2014). How, then, does one become an active listener in a conversation? One essential competency of the active listener is empathizing with the speaker in the workplace to grasp the picture from their point of view. Another value placed on active listeners is attentively hearing all conveyed information so as to receive the whole meaning of the message (Levitt, 2002). Usually, the message has two components: the content of the message itself and the attitude behind it. As an active listener, it is vital to respond to the factual content (e.g., show interest in what has been said) and be attentive to the subjective feeling underlying the content (e.g., note the speaker's facial expressions, gestures, and eye contact). More importantly, not talking over or interrupting the speaker are also characteristics of active listening.

The second communication skill is providing **performance feedback** (DeNisi & Kluger, 2000; Klueger & DeNisi, 1996). In organizations, performance feedback offers employees information about how well they perform in the workplace. Scholars and practitioners have suggested that effective feedback has several characteristics: Feedback focuses on objective task performance (e.g., job-related behaviors) instead of criticizing aspects of the person (e.g., an employee's personality). In addition, effective feedback should deliver enough information to improve performance and connect with the recipient's goals. For instance, organizations often develop performance appraisal systems to track individual employees' contributions and identify their strengths and weaknesses for future improvement (Mayer & Davis, 1999). During the feedback process, employees are given positive or negative responses in a short time interval and use the feedback to adjust their work performance. The success of communication is essential not only between two persons but also within a team in organizations (Devine et al., 1999).

**Team:** A collection of three or more organizational members who cooperate to achieve a common goal, such as developing product, plan, or service.

**Performance feedback:** A way of communication that provide organizational members the objective information about how well they perform at work.

### Teams in Organizations

In organizations, individual employees have roles and are responsible for different tasks. Yet there are few tasks that take place without any employee interaction. When the tasks are interdependent, a collection of three or more individuals may combine to form a unit to achieve a mutual goal. Then a **team** is generated for this purpose (Devine et al., 1999; Ilgen et al., 2005). Once the team is created, the members work together with shared identification, rights, and responsibilities (Kozlowski & Bell, 2003). Moreover, since the members' tasks and goals are interrelated, they frequently cooperate to support each other and share information and resources (Guzzo & Dickson, 1996).

In the modern industrial environment, teams can be formed in many sizes and shapes. A common type of team in organizations is the project team (Ericksen & Dyer, 2004). In a project team, people from different departments are grouped for one-time project results, such as upgrading an office automation system within a scheduled timetable. Compared with the worker that strives for individual excellence, the project team requires a balanced combination of employees' interpersonal and problem-solving skills. For instance, a project team member should communicate and cooperate with others with diverse working styles and preferences. After examining the Fortune 500 companies, one empirical study found that clear project goals, continuity of project leadership, and virtual office usage are significant predictors of project team effectiveness (Scott-Young & Samson, 2008). These elements are closely related to interaction and communication within the project teams.

In addition to the project team, with a temporary duration, another common type of team is a work team, such as customer service and marketing teams (McKenna, 2020). The work team is defined as a small work unit that includes three to fifty members with specific responsibilities and can simultaneously work interdependently. In this type of team, every member should be clear about the joint team goal and role (Krumm & Hertel, 2013). While working jointly, interpersonal problems may hinder collaboration, such as gender differences in communication styles, lack of empowerment, and distrust of team leaders (Frone, 2000; Thomas et al., 2005). These issues could be a potential risk for a failure of teamwork in organizations. The following section will further discuss why teams do not always work.

### Self-Check Questions

What are the essential communication skills in the workplace?

Answer: *(a)Becoming an active listener; (b) Providing performance feedback.*

How can one provide effective performance feedback?

Answer: *The feedback should contain two characteristics: The first is to focus on employees’ objective task performance instead of criticizing their nature and personal traits. Feedback should provide enough information for employees to improve their work performance and connect with the recipient's goals.*

## 5.4 Conflicts in Organizations

These days, working as a team member in an organization is necessary to face misunderstanding, misinterpretation, disagreements, dissatisfaction, and other unfavorable human behaviors throughout the day. The current section covers the basic concepts of work conflicts and discusses the skills that are necessary for conflict management. According to I-O psychologists, **conflict** in organizations commonly refers to a psychological and behavioral reaction related to friction and tension caused by actual or perceived differences in people's perspectives, claims, interests, and goals (Kolb & Putnam, 1992). However, the understanding and interpretation of work conflict could vary depending on the specific context and occasion.

**Conflict:** The psychological and behavioral reaction to disagreement in individuals’ perspectives, claims, interests, and goals.

### Levels of Conflicts

Organizational conflict can be categorized into three levels: individual, intragroup, and intergroup conflict (Rahim, 2017). Individual conflicts appear when a person's goal-achieving path is challenged or blocked. A typical example of individual conflict is work-family role conflict. A cross-cultural study of life satisfaction found a negative relationship between work-family conflict and employee well-being (Lu et al., 2006). In addition to internal obstacles, organizational conflict could occur between two persons within a group. The primary sources of frustration in the workplace are intragroup conflicts such as fairness, work autonomy, discrimination, and other ethical issues. The results of longitudinal studies show that intrapersonal problems within a group are negatively related to individual job satisfaction and agreement about the task (Jehn & Bendersky, 2003; Jehn & Mannix, 2001). The third level of organizational conflict is intergroup conflict, which occurs between competing groups (Bornstein, 2003). For instance, the organization's marketing and finance teams could generate intentions and frequent conflict while attaining their budgetary goals or competing for resources.

### Reducing and managing conflicts

The ideal solution for conflict is to avoid it before it occurs. For instance, many organizations make formal and transparent regulations and conflict policies for handling disagreements (Aamodt, 2015). Yet, working together in organizations is not always successful for people with diverse backgrounds and goals. When conflict first appears, conflict management is crucial for organizations that pursue effective human resources management and higher productivity (Rahim, 2017). Conflict management training and workshops are helpful for individual employees to learn practical skills they can use to solve their interpersonal conflicts (Thakore, 2013). Taking intergroup conflict as an example, emphasizing common goals and strengthening trust between two groups can help to resolve the conflict. Moreover, to minimize the destructive effect of organizational conflicts, scholars and practitioners are interested in the win-win resolution strategy that brings mutual beneficial outcomes between two parties (Davidson & Wood, 2004; Thakore, 2013).

### Self-Check Questions

What are the three levels of organizational conflict?

*Answer: The three levels of organizational conflict are individual, intragroup, and intergroup.*

Please provide a suggestion for HR when the conflict first occurs between coworkers.

*Answer: While facing interpersonal conflicts in organizations, HR could apply the win-win resolution strategy to create mutually beneficial outcomes for both sides of the dispute.*

## 5.5 Mergers and Acquisitions

With the rapid development of the economy, organizations and their members must face substantial changes, which is not only a choice but also a reality. These organizational changes could be either downsizing or upsizing, minor or major. In modern industry, there are two forms of organizational change: **mergers and acquisitions (M&As)**. Specifically, a **merger** refers to a process of integration of two or more separate organizations, which are approximately similar in size, joining their forces to move forward as a new single entity (Burke & Nelson, 1998; Burke, 2017). For instance, company A and company B are both concerned with reducing costs and creating higher economic value. Thus, they agree to combine their business and unlock their synergies. During this merging process, both companies make a relatively equal partnership. Ideally, the new combined company is worth more than the two original companies.

**Merger**: A form of organizational development whereby two or more independent organizations mutually integrate to become a new entity.

As another form of corporate combination, an **acquisition** is described as an business process in which a larger organization (the acquirer company) buys the assets (e.g., buildings, machinery, equipment, and patents) and shares of a smaller organization (the target company) in a specific market (Burke, 2017). For instance, if company A plans to enter a new market, it can take over company B's intangible assets, such as its brand, trademarks, licenses, and other corporate intellectual property. This deal helps company A to multiply as a new owner and simultaneously minimize the risk of developing the same internally. By contrast, company B loses ownership in this deal and becomes part of company A.

**Acquisition**: A form of organizational development whereby a larger organization takes over the ownership, assets, and shares of a smaller organization.

Among different organizational changes, M&As are usually very important, complex, and costly projects that bring massive changes to organizations' fields (Aamodt, 2015). They can be domestic or international. Identical to the large-scale M&A projects is their influence on employees' psychological conditions (Sue Cartwright & Cary L Cooper, 1993). In this regard, I-O psychologists and advisers from different areas help organizations focus their efforts on the crucial factors that significantly affect the success of M&As. We will now discuss M&As from the perspective of psychology.

### Psychological Preparation for Mergers and Acquisitions

As mentioned earlier, the overarching reasons for corporate combination are diverse. Whether the deals are done for strategic reasons, the combination processes influence people’s psychological states in the short-term or long-term (Sverke et al., 2002). During the deal-making part of M&As, the buyers and sellers typically have different or even opposite psychological perspectives and mindsets (Marks & Mirvis, 2001). In this context, understanding the employees who worked for their former or new company can better interpret their management behaviors, which eventually enhances the probability of a successful combination (Marks & Mirvis, 2001). Given this, I-O psychologists and managers are interested in the psychological factors affecting the success or failure of M&As, such as employees’ work-related attitudes (Rafferty & Griffin, 2006).

### Psychological Consequences of M&As

Throughout the combination process, many potential threats and difficulties may bring dilemmas to organizational members. According to the statistics, after reorganization, over half of the business combinations do not reach the original expectations (Schoenberg, 2006). This failure could be the negative consequence of lacking psychological preparation at the individual level. Or, saying it another way, since employees usually prefer predictable, stable, and secure working conditions, most large changes are likely to be viewed as uncertain, risky, and stressful (Bamberger et al., 2012). The uncertainty of whether jobs will be lost, the economic concern about wages, and the lack of trust in the new organizations are some of the possible reactions of employees. These negative perceptions of the job can affect employees' work-related behaviors as the employees are resistant to change (Giessner et al., 2006; Van Dam, 2005). When this resistance arises at work, employees will likely adopt a defensive stance and negative coping strategies in the long run (Fugate et al., 2008).

Another common psychological state of employees facing M&As is loss of organizational identification (Gautam et al., 2004). Employees need to feel a sense of belonging when encountering unknown working conditions. According to Riketta's (2005) meta-analysis, an employee’s organizational identification plays a crucial role in that person’s work-related attitudes and behaviors. For example, employees from the target company can have difficulty answering the questions of “who am I?” and “where do I belong?” in the new organization. In consequence, especially in cases of a hostile takeover, the employees will grow feelings of uncertainty and even anxiety about their career and tend to perceive a higher level of work stress (Cartwright et al., 2007). Regarding the importance of psychological preparation, Cartwright and Cooper (1993) commented that compatibility significantly predicts the success of the combination.

In summary, resistance to change and loss of organizational identification are the two expected psychological consequences for the employees that need to deal with it effectively. From the management level, researchers suggest that leaders should be responsible for raising employees’ awareness of future stressors and ensure a smooth implementation of the M&As (Ashkenas & Francis, 2000; Marks & Mirvis, 2001).

### The role of leadership in M&As

Building upon the previous topics and discussion, you could spend some time thinking about whether leadership matters in mergers and acquisitions. If your answer to the question is “yes, it does,” let’s further study the role of leadership during this complicated business process.

#### Transformational leadership and organizational commitment

According to a meta-analysis of modern leadership, among different leadership styles, transformational leadership was found to positively shape employees’ commitment to their organization (Jackson et al., 2013). A leader categorized as a transformational leader has some typical behavioral characteristics: First, idealized influence is demonstrated by the leader who cares about the organization and its members (Bass, 1999). Since the leader is concerned with the shared mission and vision of the group, their followers would be more likely to develop an attitude of trust and enhance their organizational identification. In addition, inspirational motivation occurs when the leader sets a challenging goal for the employees and encourages them to expand their potential at work. The third type of behavior is intellectual stimulation, which refers to fostering creativity and critical thinking among the employees. Finally, individualized consideration occurs when the leader observes and recognizes employees’ strengths and weaknesses through close supervision (Jackson et al., 2013).

### Self-Check Questions

What are the similarities and differences between mergers and acquisitions?

*Answer: Merger refers to a mutual integrating process of two or more separate organizations, which are approximately similar in size, joining their forces to move forward as a new single entity. An acquisition is described as an ongoing business process in which a larger organization (acquirer company) buys the assets (e.g., buildings, machinery, equipment, and patents) and shares of a smaller organization (target company) from the market.*

What are the two expected psychological consequences of organizational change among individual employees?

*Answer: Two possible psychological consequences of organizational change are (1) lack of psychological preparation; (2) loss of organizational identification.*

Summary

In this unit, you have learned that organizational psychology as an application-oriented science that primarily investigates employees’ work-related emotions, motivations, and behaviors in organizations. Another major topic of organizational psychology is organizational culture and climate, which can be described along five dimensions. During the work routine and social interaction, becoming an active listener and providing performance feedback to coworkers are crucial communication skills for individual employees. Furthermore, while communicating with others, work conflict is an unavoidable issue that every organizational member needs to cope with. Analyzing work conflicts from three levels helps employees effectively reduce and manage their internal and external conflicts in organizations. As the main formats of organizational change, mergers and acquisitions create uncertainty and can have an influence on employees’ psychological state. Under the changed circumstance, the expected psychological consequences are resistance to change and loss of organizational identification. While facing organizational changes, adequate psychological preparation can be carried out at both an individual and a leadership level.