

## *The Reflection of Mental Processes in Spoken Language: Perception Verbs*

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### **Abstract**

Words relating to actions – which occupy an important place among different types of words – not only provide information about the occupation, existence, action and current situation of an entity, but also confer a concept of person and time through suffixes. These verbs relating to action can have meaning associated with physical and non-physical activities. Examples of action verbs reflecting physical activities include “to run,” “to walk,” to “jump,” etc.; while action verbs reflecting mental activities include “to think,” “to understand,” “to know,” etc. Such verbs which describe mental processes are known as mental verbs.

Mental processes are further sub-divided into three different stages, which are perception, affection and cognition. Perception verbs formed during the perception stage (the first of these three stages) are associated with sight, hearing, touch, taste and smell. The aim of this study was to identify and evaluate the perception stage as well as the perception verbs associated with this stage in Modern Turkish. Our study was performed by using the 11<sup>th</sup> edition of the Turkish Language Association’s (TDK’s) Dictionary. Nearly 71 perception verbs were identified in this dictionary. The verbs, which involve the use of the five basic senses for perception, were evaluated using Viberg’s study of hierarchy. Thus, within this general hierarchy, we were able to identify the status and position of perception verbs in Modern Turkish

Key words: Mental verbs, perception, Modern Turkish, mental process

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## Introduction

In this paper, we first provide a classification regarding mental processes, and the mental verbs associated with these processes. We then describe the process of perception, which constitutes the first stage of the human mental process. Perception, which is performed with the aid of the five sensory organs, is expressed through the use of perception verbs, a form of linguistic element. We observed that most previous studies regarding perception verbs have focused more on the semantic aspect of these verbs; several examples of these studies are provided in this paper. We then provide a description of a hierarchy regarding these verbs developed by Viberg, who studied the semantic aspects of perception verbs. By taking this hierarchy into account, we investigated the perception verbs in Modern Turkish relating to five senses. A list of verbs perceived through these senses is provided at the end of this paper.

### 1. Mental Process and Mental Verbs

The human mind is based on highly complex system that operates according to a certain framework. This system enables us to perceive events and the surrounding world. The processes of this system are entirely mental, and is mainly the subject of study of psychologists. Although linguists have also studied these processes, their studies have generally focused on how these verbs were acquired/developed. The mental process involves various stages, and these stages might be described or designated differently by different researchers. This is due to the fact that mental processes represent a very large and complex area (Ayan; Türkdil 2015: 98). Based on their comprehensive study on mental processes, Booth and Hall have developed up with the following classification:

1. Perception: The speaker reports the act of perception.
2. Recognition: The speaker acknowledges familiarity with some person or concept.
3. Recall: The speaker refers to factual information that he or she remembers.
4. Understanding: The speaker refers to a conceptual framework or reasoning.
5. Metacognition: The speaker focuses on discussing the awareness of mental acts.
6. Evaluation: The speaker refers to attitudes and beliefs about the truth of statements. (Booth and Hall 1995: 532).

Emotions, thoughts and perceptions that appear during mental processes are expressed through the use of verbs, a linguistic element. Such verbs used in language are called *mental verbs*. Numerous previous studies have been performed regarding these verbs. The mental verbs classifications developed or identified in these studies generally have parallels with actual mental processes.

Although Levin does not organize mental verbs separately under a different group in his study on the classification of verbs, he nevertheless classifies verbs relating to mental processes as follows:

- ...
- 30. Verbs of Perception
- 30.1. See Verbs
- 30.2. Sight Verbs

- 30.3. Peer Verbs
- 30.4. Stimulus Subject Perception Verbs.
- 31. Psych-Verbs (Verbs of Psychological State).
- ... (Levin 1993: 185).

According to Halliday and Matthiessen (2004: 172), there are seven different process types in clause in representation. Mental processes are ones of the six processes proposed by Halliday and Matthiessen (2004: 197). Regarding to mental processes, Halliday and Matthiessen (2004: 208) divide four classes of verbs that are included in mental processes, namely cognition, perception, desiderative, and emotion. Cognition processes convey ‘thinking’. Verbs of cognition include the verbs of thinking, knowing, and understanding. Perception processes convey ‘perceiving through the five senses’ (Gerot and Wignell, 1995: 58). Verbs of perception include the verbs of hearing, seeing, tasting, and smelling. Regarding to desideration type, Halliday also mentions this as one of the types of mental processes in his latest version of *An Introduction to Functional Grammar* that was published in 2004. On the other hand, instead of using the same term, he uses the term desiderative as the type of verb such as want, desire, and wish. (Wanodyatama P. et al. 2013: 78-79)

The Grammar Book entitled *Longman Grammar of Spoken and Written English*, co-authored by *Douglas Biber, Stig Johansson, Geoffrey Leech, Susan Conrad and Edward Finegan*, provides a classification of verbs according to their meanings in the chapter regarding verbs. In the third item of this chapter, mental verbs such as “think, like, know, want, decide, work, believe, feel, prefer...” are defined as verbs that do not involve a physical action, and which instead have a more semantic meaning. Mental verbs can reflect communication (reading, hearing), certain emotional statuses, attitudes, wishes, desires (loving, wanting) and cognitive situations (thinking, knowing) (Biber et al., 2004:362-364; as cited by Şahin 2012:51)

According to Croft, the class of mental verbs (also known as ‘psych verbs’) includes verbs of perception, cognition and emotion. (Croft 1993: 55)

Turkish researchers studying the subject of mental verbs have also developed certain classifications regarding this subject.

Yaylagül evaluated mental verbs in Old Turkish by classifying them under four groups;

1. Perception verbs
2. Emotion verbs
3. Cognition verbs
4. Description verbs (Yaylagül 2005: 24)

Erdem similarly evaluated the semantic aspect of mental verbs in Turkmen Turkish, classifying them according to the following groups;

1. Perception
2. Cognition
3. Affection

Şahin also classified mental verbs in Turkmen Turkish as follows:

1. Cognition verbs
2. Affection verbs
3. Perception verbs (Şahin 2012: 52)

## 2. The Perception Process, and Verbs relating to Perception

Perception is defined as “sensing and comprehending an event or object through the use of the sense organs” (TDK Dictionary 2011: 92). Perception also has a similar definition in the Macmillan Dictionary: “to notice something using your senses (=your ability to see, hear, smell etc.)”. (<http://www.macmillandictionary.com/dictionary/british/perception>). As reflected by these definitions, perception constitutes the first step of the mental processes that enables us to make comments about the surrounding world. This process, which is referred to as perception process, involves the conscious or unconscious transfer with the aid of sense organs of stimuli from our surroundings and our body to the language centers in our brain for interpretation. In addition to being a physiological event, the process of perception is also strongly affected by the past experiences, the expectations, and the motivations of the individual

### Perception Process

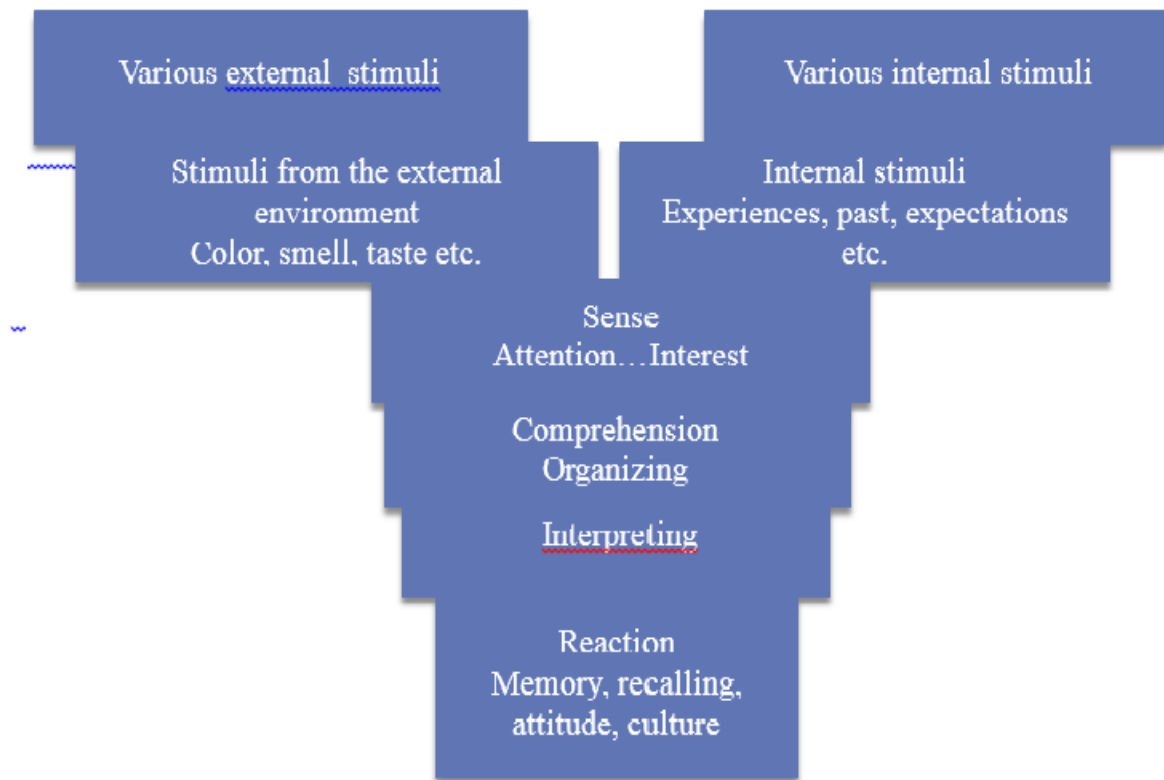


Figure 1: Perception Process (<http://notoku.com/algilama-sureci-ve-isleyisi/>)

As described above, external and internal stimuli reaching the language centers of the brain is organized and interpreted according to previously coded information in these centers. This stage is then followed by the process in which the person reacts to perceived stimuli and expresses him/herself. In the expression/communication stage, a person conveys his/her thoughts verbally. *Perception verbs* are the linguistic elements that allow thoughts to be conveyed and expressed. These verbs, which are

associated with basic senses such as sight, hearing, touch, smell and taste, are also designated as *sensory verbs* by certain researchers studying this subject.

Previous studies on perception verbs have generally focused on the semantic aspects of these verbs. There are two universal hypotheses on this subject. The first is Viberg's (1984) proposed unidirectional pattern of extension from higher to lower sensory modalities (i.e. intrafield extensions, like 'see > hear'). The second hypothesized universal is that put forward Sweetser (1990) regarding the extension of perception verbs to cognition readings (i.e. transfield extensions, like 'see' > 'know') Ibarretxe (1991), another researcher studying the semantic characteristics of perception verbs, describes that perception verbs are associated with meanings and concepts such as closeness, contact, inwardness, immediateness, evaluation, willingness, brevity, anticipation and skepticism (Ibarretxe 1999: 172). Kamchybekova also conducted a study regarding the semantic meaning of these verbs, where he classified perception verbs according to the following groups: movement, willingness, goals, contact, finiteness, sentimentality, and negativity (Kamchybekova 2011: 33).

We will now focus on the hierarchy and typology used by Viberg for perception verbs. We will also use his hierarchy of perception verbs to evaluate the perception verbs in Modern Turkish. Having worked on developing a typology for perception verbs in over 53 languages, Viberg also subjects these verbs to a particular hierarchy, providing a universal hierarchy applicable for them all. When establishing his hierarchy for perception verbs, Viberg especially focused on their evidentiality and reliability. Viberg's hierarchy ranks sight verbs in the highest position. Sight verbs are then followed by hearing verbs, which is in turn followed by the touch, taste and smell verbs.

Sight > Hearing >      Touch  
    Taste  
    Smell

Figure 2: Sense-modality hierarchy (Viberg 1984, 2001)(Citation from Gamerschlag, 2012: 5)

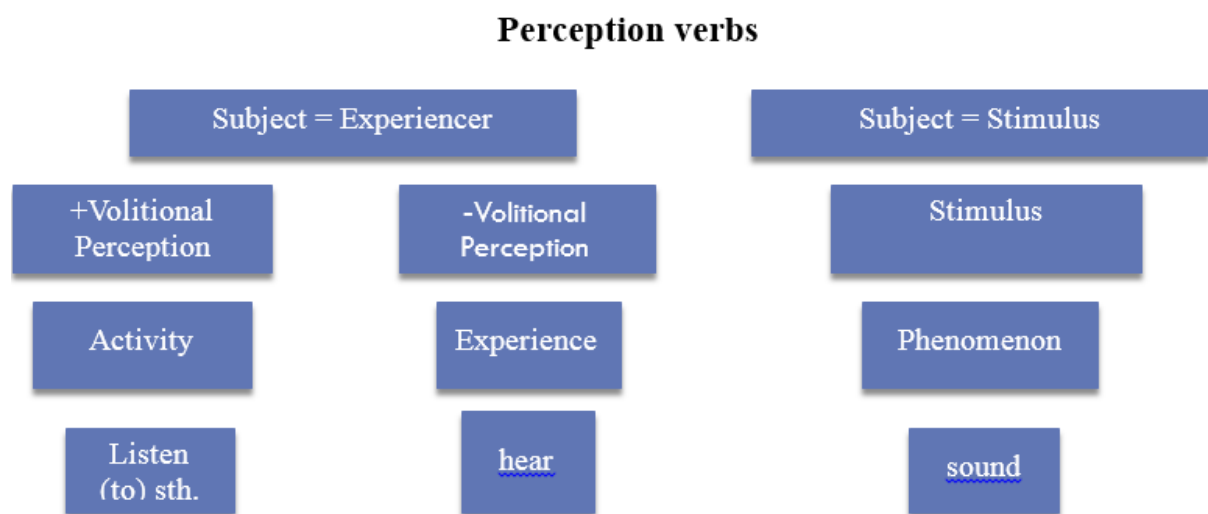


Figure 3: Types of perception verbs (Viberg 1984, 2001) (Citation from Gamerschlag, 2012: 5)

When forming the typology of perception verbs, Viberg evaluated and organized these verbs based on the person who is perceiving; the entity/person being perceived; and whether the perception process is taking place voluntarily or involuntarily. In the first group of perception verbs described by Viberg, the subject performs the act of perceiving involuntarily; this group of verbs is consequently referred to as “experience” verbs. Other terms used for “experience” verbs include “passive perception” (Palmer 1966: 99), “inner perception” (Leech 1971: 23), “cognition” (Rogers 1971:206, 1972: 304), and “stative with experience subject” (Lehrer 1990: 223).

In the second group described by Viberg, the subject performs the act of perceiving voluntarily; for this reason, this group of verbs is referred to as “activity” verbs. Other terms used for “activity” verbs includes “active perception verbs” (Poutsma 1926:341, Leech 1971: 23, Rogers 1972: 304), and “active experiencer subject” (Lehrer 1990: 223).

In the third group described by Viberg, the stimuli is the subject, with the action being performed/realized by the stimuli itself; for this reason, this last group of verbs is referred to as “phenomenon-based” verbs. Terms used by other researchers for “phenomenon-based” verbs includes “flip verbs” (Roger 1971:206), “stimulus subject” (Lehrer 1990:223), and “percept” (Gisborne 1996:1) (Citation from Tashi, 2010: 112).

We can apply Viberg’s classification regarding perception verbs to the perception verbs in Modern Turkish based on the five basic senses as follows:

	EXPERIENCE-BASED		PHENOMENON-BASED
	ACTIVITY	EXPERIENCE	
SIGHT	Ali <u>köpeğe baktı.</u> Ali <b>looked at</b> the dog.	Ali <u>köpeği gördü.</u> Ali <b>saw</b> the dog.	Ali <u>üzgün göründü.</u> Ali <b>looked sad.</b>
HEARING	Ali <u>annesini dinledi.</u> Ali <b>listened to</b> his mother.	Ali <u>gökgürültüsünü duydu.</u> Ali <b>heard</b> the thunder.	Ali’nin <u>sesi üzgün geldi.</u> Ali <b>sounded sad.</b>
TOUCH	Ali, <u>ağaca dokundu.</u> Ali <b>touched</b> the tree.	Ali <u>ayağının altında bir taş sezdi/hissetti.</u> Ali <b>felt</b> a stone under his foot.	<u>Kumaş yumuşak geldi./ hissedildi.</u> The cloth <b>felt soft.</b>
TASTE	Ali <u>yemeği tattı.</u> Ali <b>tasted</b> the food.	Ali <u>çorbadan sarımsak tadını aldı.</u> Ali <b>tasted</b> garlic in the soup.	<u>Çorbadan sarımsak tadı alındı.</u> The soup <b>tasted of garlic.</b>
SMELL	Ali <u>çiçeği kokladı.</u> Ali <b>smelled</b> the flower.	Ali <u>çorbadan sarımsak kokusu aldı/duydu.</u> Ali <b>smelled</b> garlic in the soup.	<u>Corba sarımsak koktu.</u> The soup <b>smelled of garlic.</b>

Figure 4: Verbs Relating to the Five Senses in Modern Turkish (English data partially adopted from Viberg 2001: 1295 and Gamerschlag 2012:4)

When Viberg's classification of perception verbs is applied to the perception verbs in Modern Turkish, we can see that in the "activity" group, there is structurally only a single verb in Modern Turkish for each sense.

When performing the verbs of "to look, to listen, to touch, to taste and to smell" ("*Bakmak, dinlemek, dokunmak, tatmak* and *koklamak*" in Modern Turkish, respectively), the subject (Ali) is aware of his actions, and performs them voluntarily. In other words, there is deliberate effort to carry out these verbs. The action in question is hence active. It is possible to include the verbs "to check, to watch, to caress, to observe to glance, etc." to this group ("*göz atmak, seyretmek, okşamak, gözetlemek*" in Modern Turkish, respectively).

The first three verbs (or senses) of the "experience" group, which are "to look, to hear, and to touch," there is structurally only a single corresponding verb in Modern Turkish ("*bakmak, duymak* and *dokunmak*" in Modern Turkish, respectively). For the senses of taste and smell, on the other hand, the very "*almak/ duymak*" is used instead. In this context, the verbs "*almak/ duymak*" are used differently from their original meanings.

On the other hand, when performing the acts of "Seeing, hearing, sensing, enjoying and sniffing" ("*Görmek, duymak, sezmek/ hissetmek, tadını almak, kokusunu almak/duymak*" in Modern Turkish, respectively), the subject (Ali) who is experiencing the events in question are not is performing the act of perceiving voluntarily. In other words, his actions are not deliberate; it is passive perception that is not based on an additional effort. For this reason, the action is passive; in other words, it is a momentary experience. It is possible to add "harking, glimpsing and noticing" to this group of verbs ("*işitmek, gözüne ilişmek, fark etmek*" in Modern Turkish, respectively).

In "Phenomenon-based" verbs, which is last group of verbs in Viberg's hierarchy, the person is not involved in the experience, and the stimuli itself is considered as the subject. It is known that structurally, there is no person performing or perceiving the relevant event; however, on the surface, the event is still described as being perceived or performed by someone. In Modern Turkish, these verbs are used together with structurally passive verbs (such as *görünmek, hissedilmek*) or with other structurally assisting elements (noun, adjective, postposition) that are associated with different verbs (*sesi... gibi gelmek, tadı alınmak*). In this group, it is possible to see that only the sense of smell has a structurally single verb (*koklamak*). To this group we can also add the examples of "*görülme, bakılmak, duyulmak*" etc. In this context, the verbs "*almak/ duymak*" are used differently from their original meanings.

## Conclusion

The process of perception constitutes the first stage of mental processes. A person with complete and healthy five senses will both consciously and unconsciously perceive external and internal stimuli, which will be conveyed to the language center of his/her brain. Following this, the ensuing stages of the mental process will take place, and perception verbs will be used. Perception verbs allows perception to be expressed through language. Our five basic senses are expressed with the verbs to see, to hear, to touch, to taste and to smell (*görme > görmek, duyma > duymak, dokunma > dokunmak, tatma > tatmak* and *koklama > koklamak* in Modern Turkish, respectively). Viberg classified these verbs according to a hierarchy, which places the

verb “to see” above all of the other verbs/senses. The second-ranking verb/sense is hearing, which in turn is followed by the other verbs/senses. We have applied this classification to perception verbs in Modern Turkish. While only a single verb is used for seeing and hearing (*görmek* and *duymak* in Modern Turkish, respectively), the other perception verbs used in other groups showed a diversity of structures. This difference and diversity is associated with the use of passive affixes, or the use of more than one word to express these verbs. To avoid overextending the scope of the study, we did not provide above all of the perception verbs we identified in Modern Turkish. These verbs are instead provided as a list at the end of our study.

List of Perception Verbs in Modern Turkish

Turkish	English	Turkish	English
<a href="#">abanmak</a>	to stop over	<a href="#">gözetlemek</a>	to peep
<a href="#">acılaşmak</a>	to go bitter	<a href="#">gözlemek</a>	to await
<a href="#">acımak</a>	to ache	<a href="#">gözlemlemek</a>	to observe
<a href="#">almak</a>	to take	<a href="#">gözlenmek</a>	be monitored
<a href="#">araştırmak</a>	to search	<a href="#">haşlanmak</a>	To be boiled
<a href="#">asılmak</a>	to be hanged	<a href="#">ısınmak</a>	to get warmer
<a href="#">avuçlamak</a>	to <a href="#">grasp</a>	<a href="#">işlemek</a>	to espy
<a href="#">bakınmak</a>	to look around	<a href="#">işitmek</a>	to hear
<a href="#">bakayazmak</a>	-	<a href="#">işitilmek</a>	-
<a href="#">bakışmak</a>	to look at one another	<a href="#">kakmak</a>	to inlay
<a href="#">bakabilmek</a>	(can) look	<a href="#">kakılmak</a>	-
<a href="#">basmak</a>	to step	<a href="#">koklamak</a>	to smell
<a href="#">bırakmak</a>	to leave	<a href="#">kokmak</a>	to smell
<a href="#">buruşmak</a>	to wrinkle	<a href="#">kokutmak</a>	to stink up
<a href="#">çarpmak</a>	to hit	<a href="#">kucaklamak</a>	to hug
<a href="#">çınlamak</a>	to tinkle	<a href="#">kucaklanmak</a>	-
<a href="#">dayanmak</a>	to hold	<a href="#">okşamak</a>	to fondle
<a href="#">değdirmek</a>	to touch	<a href="#">okşanmak</a>	to be fondled
<a href="#">değmek</a>	to touch	<a href="#">ovmak</a>	to rub
<a href="#">dikizlemek</a>	to peek	<a href="#">ovalamak</a>	to chafe
<a href="#">dokunmak</a>	to touch	<a href="#">ovalanmak</a>	-
<a href="#">dokunulmak</a>	to be touched	<a href="#">sarılmak</a>	to hug
<a href="#">donmak</a>	to freeze	<a href="#">sıcaklamak</a>	to warm
<a href="#">dövmek</a>	to beat	<a href="#">sürmek</a>	to finger
<a href="#">duymak</a>	to hear	<a href="#">sürtünmek</a>	to rub



<a href="#">duyulmak</a>	To be heard	<a href="#">sürtmek</a>	to rub
<a href="#">dürtmek</a>	to nudge	<a href="#">sürünmek</a>	to grovel
<a href="#">dürtüklemek</a>	to nudge	<a href="#">süzme</a>	to lay eyes on
<a href="#">ellemek</a>	to touch	<a href="#">tatmak</a>	to taste
<a href="#">elleşmek</a>	to touch	<a href="#">tatlanmak</a>	to sweeten
<a href="#">ellenmek</a>	-	<a href="#">tınlamak</a>	to ding
<a href="#">ermek</a>	to reach	<a href="#">uğuldamak</a>	to whistle
<a href="#">görmek</a>	to see	<a href="#">yanmak</a>	to burn
<a href="#">görünmek</a>	to seem	<a href="#">yemek</a>	to eat
<a href="#">gözetmek</a>	to look out for	<a href="#">yenilmek</a>	-
<a href="#">gözetlenmek</a>	-		

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