ANIMACY EFFECT ON SENTENCE STRUCTURE CHOICE: A STUDY ON TURKISH LEARNERS OF L2 ENGLISH

HİLAL GÜLŞEKER SOLAK

SEPTEMBER 2007

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A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

HİLAL GÜLŞEKER SOLAK

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN
ENGLISH LANGUAGE TEACHING

SEPTEMBER 2007

Approval of the Graduate School of Social Sciences

_____

Prof.Dr. Sencer Ayata
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Arts.

_____

Prof. Dr. Wolf Kurt König
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts.

_____

Prof. Dr. Deniz Zeyrek
Supervisor

Examining Committee Members

Prof. Dr. Wolf Kurt König	(METU, FLE)	_____
Prof. Dr. Deniz Zeyrek	(METU, FLE)	_____
Yrd. Doç.Dr. Nazan Tutaş	(Ankara University, ELIT)	_____
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ABSTRACT

ANIMACY EFFECT ON SENTENCE STRUCTURE CHOICE:
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Gülşeker Solak, Hilal
M.A. Program in English Language Teaching
Supervisor; Prof.Dr. Deniz Zeyrek
September 2007, 92 pages

This thesis aims to find out how animacy affects sentence structure choice in Turkish learners of L2 English. The study compares three different L2 English proficiency levels with each other as well as to L1 English and L1 Turkish. In this way, the effect of English, a rigid word order language, and Turkish, a free word order language on sentence structure choice have been compared.

A picture description task was applied on 94 participants. The pictures depicted a transitive action taking place between an inanimate agent and an animate patient (animate condition) or between an inanimate agent and an inanimate patient (inanimate condition). The subjects were given handouts with the pictures and were asked to write down what is happening in each picture. There were 60 Turkish learners of L2 English and 14 English participants in the study. Turkish learners of English belonged to level-1, (16 students), level-2 (25 students) and level-3 (19 students) proficiency levels. In addition, 20 Turkish subjects were consulted for their knowledge of Turkish.

It was hypothesized that in L2 English, animate entities would be accessed first and this will directly affect sentence structure choice through grammatical subject assignment or through word order. Thus, it was expected that when the learners are shown a picture depicting a transitive action taking place between an animate patient and an inanimate agent, they would tend to use the passive in English, which assigns both a sentence-initial position and a subjecthood role to the animate entity. L2 proficency level and native language were expected to play a role in determining the role of animacy on sentence structure choice.

Chi-square analysis and odds ratio calculations were made. The results showed that animacy of the patient affected sentence structure choice in L2 English by triggering the passive usage only in level-3 (the most advanced group in the study). Animacy of the patient affected native speakers of English in the same way, i.e. native English speakers tended to use the passive voice in the animate condition. No such affect was found in lower level learners of L2 English (i.e. level-1 and level-2) and Turkish native speakers. It was found that in the animate condition, Turkish native speakers tended to use the OSV word order more frequently than they did in the inanimate condition. This result suggested that in Turkish, animacy of the patient triggers the use of the OSV (Object, Subject, Verb) order rather than the passive voice. In short, the research results suggested that L2 proficiency level and native language could play a role in determining how animacy affects sentence structure choice in L2.

Keywords: animacy, word order, passive voice

ÖZ

CANLILIĞIN CÜMLE YAPISI SEÇİMİ ÜZERİNDEKİ ETKİLERİ
İKİNCİ DİL OLARAK İNGİLİZCE ÖĞRENEN TÜRKLER ÜZERİNE BİR ÇALIŞMA

Gülşeker Solak, Hilal
Yüksek Lisans, İngiliz Dili Eğitimi
Tez Yöneticisi; Prof. Dr.Deniz Zeyrek
Eylül 2007, 92 sayfa

Bu tez canlılığın ikinci dil olarak İngilizce öğrenen Türklerin cümle yapısı seçimini nasıl etkilediğini bulmaya çalışmaktadır. Çalışma üç farklı seviyede ikinci dil İngilizce grubunu birbirleriyle ve de birinci dil İngilizce ve birinci dil Türkçe gruplarıyla karşılaştırmaktadır. Bu şekilde, sabit bir kelime dizimi olan İngilizce ve serbest bir kelime dizimi olan Türkçe'nin cümle seçimi tercihi üzerindeki etkisi de karşılaştırılmaktadır.

Bir resim tasvir çalışması farklı seviyelerdeki 94 katılımcı üzerinde uygulanmıştır. Bu resimler bir cansız etkileyen ve bir canlı etkilenen (canlı durum) yada bir cansız etkileyen ve bir cansız etkilenen (cansız durum) arasında meydana gelen geçişli bir eylemi tasvir etmektedir. Katılımcılara üzerinde resimlerin bulunduğu çalışma kağıtları dağıtılmış ve her resimde ne olduğunu tasvir ederek yazmaları istenmiştir. Çalışmada 60 ikinci dil olarak İngilizce öğrenen Türk ve 14 İngiliz katılımcı yer almıştır. İngilizce öğrencisi Türkler seviye-1 (16 öğrenci), seviye-2 (25 öğrenci) ve seviye-3 (19 öğrenci) seviyelerinde gruplardan oluşmaktadır. Ayrıca 20 Türk katılımcı da Türkçe bilgileri için dahil edilmiştir.

İkinci dil olarak İngilizce'de canlı ögelerin ilk olarak edinileceği ve bunun doğrudan dilbilgisel özne ataması veya kelime dizimi yerleştirmesi yoluyla cümle yapısı tercihini etkileyeceği tahmin edilmiştir. Bu sebeple, katılımcılara canlı bir etkilenen ve cansız bir etkileyen arasında geçen geçişli bir eylemin tasvir edildiği resim gösterildiğinde, canlı ögeye özne statüsünü veren ve aynı zamanda da onu cümlenin başında bir konuma getiren edilgen yapıyı kullanacakları beklenmiştir. Ayrıca ikinci dil seviyesi ve anadilin de canlılığın cümle yapısı tercihini nasıl etkilediği üzerinde rol oynadığı öngörülmüştür.

Ki-kare analizleri ve odds oranı hesaplamaları yapılmıştır. Sonuçlar, etkilenenin canlılığının sadece seviye-3 (çalışmadaki en ileri seviyedeki grup) ikinci dil İngilizce grubunda edilgen yapı kullanımını teşvik ederek cümle yapısı seçimini etkilediğini göstermiştir. Etkilenenin canlılığı İngiliz konuşmacıların cümle yapısı seçimini de aynı şekilde etkilemiştir, örn. İngiliz konuşmacılar canlı durumda edilgen yapıyı kullanmaya yönelmişlerdir. Daha düşük seviyedeki ikinci dil İngilizce gruplarında (seviye-1 ve seviye-2) ve Türk konuşmacılarda böyle bir etki görülmemiştir. Canlı durumda, Türk konuşmacıların cansız durumda kullandıklarından daha sık NÖY (Nesne, Özne, Yüklem) dizimi kullandıkları bulunmuştur. Bu sonuç Türkçe'de etkilenenin canlılığının edilgen yapı kullanımından çok NÖY kullanımını tetiklediğini göstermektedir. Kısaca, çalışma sonuçları ikinci dil seviyesinin ve anadilin de canlılığın cümle yapısı tercihini belirlemesinde bir rol oynayabileceğini ileri sürmektedir.

Anahtar Kelimeler: canlılık, cümle dizimi, edilgen yapı

To my little son

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to Prof. Dr. Deniz Zeyrek, who bestowed on me the source of inspiration to start this thesis. During the course I took from her when she chose me to present the article "Animacy effects on the production of object-dislocated descriptions by Catalan speaking children", the complicated name of the article made me hesitate and tremble a little first. However, thanks to her encouraging guidance the issue became so enjoyable for me that I decided to work on it as my masters thesis. I am grateful to her for the invaluable guidance, the endless patience and the enthusiasm she provided throughout the thesis procedure as well.

I offer my sincere apperciation to all the committee members for accepting to be jury members and for their helpful suggestions and comments.

I owe special thanks to my husband, who helped me nearly at every stage of this study from drawing the pictures which were used as the research material, to finding the essential articles and books to teaching me how to enter data to SPSS. I also thank Gözde Şener and Zerrin Yalçınöz for assisting me in the statistical calculations.

Finally, my thanks go to my little son, who didn't cause me any problem during my pregnancy and after his birth so that I could complete this study.

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LIST OF ABBREVIATIONS

3SP	Possesive Suffix Third Person Singular
ABL	Ablative Case
ACC	Accusative Case
COM	Commitative/Instrumental Case
ELT	English Learners of Turkish
ENS	English Native Speakers
DAT	Dative Case
FUT	Future Tense
GEN	Genitive Case
L1	First Language
L2	Second Language
LOC	Locative Case
NEG	Negation Suffix
OSV	Object, Subject, Verb
OVS	Object, Verb, Subject
PASS	Passive Suffix
PROG	Progressive Tense
PST	Past Tense
REL	Relative Participle Suffix
SOV	Subject, Objcet, Verb
SPSS	Statistical Package for Social Sciences
SVO	Subject, Verb, Object
TNS	Turkish Native Speakers
VOS	Verb, Object, Subject
VSO	Verb, Subject, Object

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CHAPTER I

INTRODUCTION

1.1 Presentation

In the introduction part the background to the study and the purpose of the study are explained. Later, the significance and the limitations of the study are mentioned. Lastly, in order to provide a general overview about Turkish and make the Turkish data clear, a brief informative section on word order in Turkish is presented.

1.2 Background to the Study

"Animate" is an adjective describing numerous concepts in our daily lives. It will not be wrong to say it is the word used for life itself, meaning "living; having life" in the dictionary. How this word, so powerful in terms of its meaning, influences our speech has attracted attention and, subsequently, animacy has been studied by many linguists. It is not possible to give a clear-cut description of animacy effects because the concept of "animate" has different boundaries in different languages. The answer to "what is animate?" changes even according to the author. Some authors rank entities as to how animate they are such as "woman> monkey> dog> spider> bacteria> grass> dust> rock> tortilla> vase" (Tomlin, 1986) suggesting a relationship between being human and being animate. On the other hand, some researchers subdivide the "animate" category, describing humans as a higher form of animates: human>other animate (animals)>inanimate (Siewierska, 1988). van Nice and Dietrich (2003) observe the different usage of animacy and conclude that although animacy has a biological basis, it is a learned category in actual language usage. For example, in German "animates" include humans, animals and

immortal/imaginary beings that are human-like or animal-like. Thus, meat-eating plants are regarded as animate objects.

There are various studies in the literature questioning the influence of animacy on speech production going back to Cooper and Ross's (1975) "Me first" principle and animacy leadership argument. The most cited article among these studies can be accepted as Bock and Warren (1985), which suggests a hierarchical relationship between conceptual factors such as animacy and grammatical functions in the sentence and which finds a link between the accessibility of nouns and sentence structure. Many researchers followed Bock and Warren (1985)'s path in animacy effect research. However, some researchers like Levelt (1989) were suspicious about limiting animacy effect on sentence structure to grammatical function assignment only. In the following years, animacy effect research gained a new perspective and authors started to investigate animacy effect in different languages such as Spanish, German or Greek, which allow free word order variations. The new perspective differed not only in terms of the language studied but also in terms of the focus. Researchers such as Feleki and Branigan (1997), Prat Sala and Branigan (2000) or Nice and Dietrich (2003) suggested that animacy effect can be seen on word order. Recently, the question is "Can animacy affect grammatical function assignment and word order at the same time?" which is put forward by Tanaka (2006), Branigan, Pickering and Tanaka (2007) and Tanaka, Branigan and Pickering (in preparation). The present thesis also adopts a similar perspective to Prat Sala and Branigan (2000) and Tanaka, Branigan and Pickering (in preparation) and argues that animate entities are privileged in language production, and animate entities could be processed first either in the functional assignment or in the word order position assignment. Thus, animacy effect on sentence structure choice is questioned in terms of both grammatical function assignment and word order in this thesis.

1.3 Purpose of the Study

This thesis mainly aims at questioning the effects of a conceptual factor, animacy, on sentence production. It seems that researchers still cannot reach a consensus on the extent to which our speech is affected by animacy. It is possible to

categorise the researchers in two groups. One group such as McDonald, Bock, Kelly (1993) and Bock and Warren (1985) concentrate on the link between grammatical function assignment and animacy, and they mention only an indirect effect of animacy on word order. The other group consists of researchers such as Prat-Sala, Shillcock and Sorace (2000), who claim direct effects of animacy on word order. These studies were carried out in various languages such as English, German, Spanish, Catalan and Greek. An important intersection of all these researches is that they are carried out in the first language. There are only a few studies focusing on animacy effect in second language (MacWhinney, 2002; Su, 2001a).

With the aim of filling this gap about animacy effects in L2, this research focuses on how animacy affects the sentence structure choice of Turkish learners of L2 English. The fact that Turkish allows six different word order variations has also acted as an initiative for this research, having in mind that a study on word order and animacy would be interesting and fruitful if it is applied on a language with a variety of word orders rather than a language with a fixed word order like English. Studying the effects of animacy on the ordering of constituents in a rigid word order language like English may not be enough to clear the question marks about the validity of research results. With a poor inflectional and case marking system, the grammatical function assignment and word order relation becomes a little complex in English. Thus, it is not surprising that while studies analysing animacy effect in English do not find any direct effect of animacy on word order, the ones working on languages with free word orders such as Spanish, Catalan or Greek suggest a direct relationship between animacy and word order. In order to overcome this indeterminacy Turkish is chosen as the second language to be studied together with English in this thesis.

Using a picture description task the following issues have been investigated in this thesis:

1. Effects of animacy on sentence structure choice in L2 English
2. Effects of animacy on sentence structure choice in L1 Turkish and L1 English

The data have been collected from Turkish speakers of L2 English with different proficiency levels, Turkish native speakers and English native speakers. Finally,

statistically analysed results are discussed and pedagogical implications are explained.

1.4 Significance of the Study

Trying to understand language production one of the questions asked by researchers is "what makes us say what we say?" The accessibility of a concept relative to other concepts is one of the possible answers psycholinguists have put forward recently. There are various reasons what makes a concept accessible such as animacy or given information. What changes animacy leads to on the linguistic form of a message is the main concern of this thesis. There are various researches focusing on this issue in the literature, but the multi-perspective characteristic of this thesis makes it a significant work. This study investigates animacy effect on sentence structure looking at the issue from various points of views. When the literature on animacy effect is reviewed it becomes clear that most of the studies focus on only one aspect, either grammatical function assignment or word order. Moreover, animacy effect is studied in only one language in the majority of the literature. The present thesis can be considered to be a multi-perspective study analysing animacy effect on grammatical function assignment and on word order at the same time using L1 and L2 data. Importantly, this thesis includes Turkish data i.e. data about animacy effect in a free word order language and compares it to the native speaker and learner data in English, a fixed word order language. Moreover, as the learner data are comprised of three proficiency levels, this study also has a developmental perspective.

In addition to these, the present thesis also contributes to ESL education in Turkey investigating the conceptual factors on sentence production of Turkish learners of L2 English and bringing psycholinguistic explanations as to the reasons underlying the sentence structure choices of Turkish learners.

Lastly, being the first study carried out on animacy effect in Turkish this study takes a first step. There are no studies conducted on the effect of animacy on sentence structure choice in Turkish yet. Thus, it is hoped that this study will also open the gate for animacy effect studies in Turkish for future researchs.

1.5 Limitations of the Study

The major limitation of the study has been related to the methodology used. The pilot study which was carried out using the interview method indicated that applying the task on each participant took approximately half an hour. With participants belonging to different language groups and different L2 proficiency levels gathering spoken data in a picture description task that would be conducted on more than 100 subjects was nearly impossible. Although it is clear that spoken data would provide the researcher with more reflective and accurate data, due to the number of the participants written data was used instead of the spoken data. All subjects were given handouts, they were asked to fill in the handouts in 25 minutes, and return them to the experimenter. They were expected to write down what comes first to their minds after they see the pictures, and they were warned not to delete what they wrote.

Another limitation to the study could be the different data collection methods used. All groups except the native English speakers were involved in the research through a paper-pen administration. All groups were controlled by the researcher during the application process. However, the English native speaker group was sent the picture handouts through e-mail. They were asked to describe the pictures in 25 minutes and send their answers by e-mail. The researcher did not have so much control on this group. Fortunately, the results were in line with other studies (e.g. Prat Sala, Shillcock, & Sorace, 2000) applied on English native speakers questioning animacy effect. This suggests that even if data collection methods differed, overall results were not affected negatively.

1.6 Word Order in English and Turkish

Since this thesis primarily aims to understand the effect of animacy on sentence structure (namely word order) and the related issue of voice choice of Turkish learners of English, this section provides a brief comparison of Turkish and English word orders available to the respective speakers.

1.6.1 English as a Rigid Word-order Language

English is a strict word-order language. The subject precedes the verb phrase, and the verb phrase is followed by other constituents such as objects, complements or adverbials. Although the unmarked word order in English is SVO, there are also some marked word orders, which provide the speakers with various sentence structure choices. In order to add cohesion, emphasis or contrast to a sentence, the constituents are sometimes placed in different positions such as in fronting, inversion, cleft sentences, dislocations or extraposition.

The passive voice, for example, is a sentence structure choice available to speakers of English enabling them to prepose the grammatical object. In English, nearly all transitive verbs can be passivized. Especially, high transitivity verbs, which assign the agent role to their subject and the patient role to their objects construct unmarked passive sentences (Kibort, 2004:10):

(1)

The window was broken by the boys from next door.

Ditransitive verbs, which have two objects, can also be passivized in English. In the following sentences both objects can be used in the subject position (Kibort, 2004:82):

(2)

Peter gave a book to John.

John was given a book by Peter.

A book was given to John by Peter.

In addition to these, the agentless passive is also used in English. Huddleston (1984) argues that 70-80% of passives in English are agentless. Agentless passives are used when the doer of the action is not clear, when the agent is not important to be uttered or when there is a vague agent as shown in the following sentences:

(3)

Someone has stolen my books.

My books have been stolen. (Allen, 1992: 268)

(4)

The prime minister has often been criticised recently. (Quirk et al., 1985:165)

Although "be" passives are considered to be the most stereotypical examples of the passive in English, "get" and "have" passives may appear in passive sentences as well:

(5)

I had my hair coloured.

I got my hair coloured.

Another feature of the English passive is the "by" phrase, which is used to clarify the subject of the active sentence as in the following examples:

(6)

This poem was written by Keats (Allen, 1992:271).

(7)

Romeo and Juliet was written by William Shakespeare (Pollock, 1997:183).

1.6.2 Turkish as a Free Word-order Language

The canonical word order in Turkish is described by many authors as SOV (Erguvanlı, 1984; Hoffman, 1995; Kornfilt, 1997; Kılıçaslan, 2004). However, Turkish has a free-word order and Turkish sentences can scramble rather freely. The arguments do not have to appear in a fixed word order. For instance, all six variations of the sentence below are possible in Turkish (Göksel & Özsoy, 2003):

(8)

a. Hasan *öykü-yü beğen-me-di. (SOV)*
Hasan story-ACC like-NEG-PST
'Hasan did not like the story.'

b. Öyküyü Hasan beğenmedi. (OSV)

c. Hasan beğenmedi öyküyü. (SVO)

d. Öyküyü beğenmedi Hasan. (OVS)

e. Beğenmedi Hasan öyküyü. (VSO)

f. Beğenmedi öyküyü Hasan. (VOS)

Permutations in the order of constituents are regarded to happen as a result of some grammatical processes such as topicalization, focusing and backgrounding (Erguvanlı, 1984). Kılıçaslan (2004) describes focus as "the portion of the sentence that encodes a piece of new information that bears a high degree of relevance to the discourse context". Background is described as "a complement of focus: all that is not in focus". Topic is depicted a "discourse entity which the sentence is about" (Kılıçaslan, 2004: 718).

While some authors suggest that the topic, background and focus are located onto the sentence- initial, postverbal and immediately preverbal positions respectively (Erguvanlı, 1984), some point out that there is no relation between the information-structure functions and sentential positions (Kılıçaslan, 2004).

There are languages which use different strategies to focus a constituent such as syntactic strategies and prosodic strategies. English assigns the focus feature through pitch accent. However, the type of the strategy used for focalization in Turkish is not an issue of consensus. Although Göksel and Özsoy (1998) argue that there is no focus location in Turkish, but instead it is achieved prosodically, Valduvi and Engdahl (1996) suggest that Turkish employs both syntactic and prosodic strategies. Issever (2003) argues that both syntax and phonology are responsible for the realization of the information structures in Turkish, but these strategies cannot be used interchangeably. According to Issever, the focusing phenomena in Turkish cannot be explained if the distinctions between presentational-focus and contrastive focus are not drawn. P-focused elements are not accessible, while c-focused elements

are accessible in the sense that they are members of a set defined by the context (Issever, 2003: 1034). Presentational focus and contrastive focus are marked by different focusing strategies, i.e. syntactic and prosodic.

The position of focus in the sentence is a controversial issue. While some authors define the location of focus in the sentence as the preverbal position (Erguvanlı, 1984; Hoffman, 1995; Kornfilt, 1997), some linguists do not limit the place of focus to the immediately preverbal position (Göksel & Özsoy, 1998; Göksel & Özsoy, 2003; Kılıçaslan, 2004). Kılıçaslan (2004) gives an appropriate question and determines the entity that is part of the providing answer as the focus of a declarative sentence:

(9)

- *Kaya-yla KİM evlendi?*
  Kaya-COM who marry-PST
  'Who married Kaya?'

a. *Kaya-yla OYA evlen-di.*
   Kaya- COM OYA marry-PST
   'OYA married Kaya'

b. *OYA Kaya-yla evlen-di.*

As seen in the examples, Oya serves as the focus of the sentences, and both responses are acceptable. Thus, Kılıçaslan (2004) concludes that the focused constituent could appear in a non- immediately preverbal position as in (9b).

In addition to this, according to Kılıçaslan (2004) multiple-focus constructions also indicate that foci do not have to appear in the preverbal position only. For example, in the following sentences two separate constituents are marked as focal at the same time, and in such sentences one constituent has to occupy a position other than pre-verbal (Kılıçaslan, 2004:720):

(10)

- *KİM KİM-LE evlen-di?*
  Who who-COM marry-PST
  'Who married who?'

a. OYA KAYA-YLA evlen-di.
OYA KAYA-COM marry-PST
'OYA married KAYA.'

Some authors suggest that the location of backgrounded constitiuents in a sentence is the post verbal postion (Erguvanlı, 1984), however some do not agree on this point, and suggest that background constituents can also appear in other positions as in the example given by Kılıçaslan (2004: 728):

(11)

- Kaya-yla KİM evlen-di?
Kaya-COM who marry-PST
'Who married Kaya?'
a. Kaya-yla OYA evlen-di.
Kaya-COM Oya marry-PST
'OYA married Kaya.'
b. OYA Kaya-yla evlendi.

As seen in the example, a backgrounded constituent, which corresponds to "Kaya-yla" in the present situation, can appear pre-verbally as well.

"Topic" is another type of information structures on which Turkish linguists have not been able to reach a consensus. Topic position is accepted as the sentence-initial position by many authors (Erguvanlı, 1984; Hoffman, 1995; Kornfilt 1997). How the topic ("ıstakozu") could move from another position to sentence-initial position is described in the following example: (Kornfilt, 1997: 200)

(12)

- Istakoz-u Hasan Ali-ye ver-di.
Lobster-ACC Hasan Ali-DAT give-PST
('Speaking of) the lobster, Hasan gave (it) to Ali.'

However, some other linguists like Kılıçaslan (2004) argue that sentence-initial position is not the only place for topics in Turkish. The following example supports this thesis (Kılıçaslan, 2004:731):

(13)

Birkaç gün önce birisi ALİ-YE verdi istakoz-u.
Several day before somebody ALİ-DAT give-PST lobster-ACC
'Several days ago someone gave the lobster to Ali.'

As seen in the examples, Turkish speakers do not use a single word order, but choose among six different possibilities. Then, what makes one word order more appropriate than the others in Turkish? According to Hoffman (1995) the word order in Turkish is chosen in accordance with the element on which the speaker wants to place the focus. For example, if the speaker wants to answer the wh-question in (14a) placing a focus on the new object, Ahmet, SOV order is chosen putting the new object in the preverbal position as in (14b) (Hoffman, 1995:2):

(14)

a. Fatma kim-i gör-dü?
Fatma who-ACC see-PST
'Who did Fatma see?'

b. Fatma AHMET-'i gör-dü. (SOV)
Fatma Ahmet-ACC see-PST
'Fatma saw AHMET.'

However, if the speaker is asked a different wh-question as in (14c), the subject, Fatma, is the focus of the answer and the speaker choses the OSV order as in (14d):

c. Ahmet-'i kim gör-dü?
Ahmet-ACC who see-PST
'Who saw Ahmet?'

d. Ahmet-'i FATMA gör-dü. (OSV)
Ahmet-ACC Fatma see-PST.
'As for Ahmet, FATMA saw him.'

Although there appears to be a consensus on where to use which word order, linguists are still debating on which word order structure is the basic one in Turkish. However, it seems that the majority of Turkish linguists accept SOV as the basic word order. For example, Lewis (1967) lists the typical position of elements in a literary sentence in Turkish as subject, expression of time, expression of place, indirect object, direct object, modifier of the verb and verb, and argues that the concept of "inverted sentence" allows flexibility in the positioning of entities yielding to different word orders (Lewis, 1967).

The common denominator of the above works appears to be that word order variations are possible particularly due to information packaging. In addition, there is also the passive, which stands out as another sentence structure choice for Turkish speakers. The passive voice in Turkish is constructed by adding the suffixes –n, -in, -il to the verb. Almost all transitive sentences can be passivized in Turkish. The most important requirement is that verbs should assign the agent role to their subjects and the patient role to their objects. The object is moved to the subject position just like in English:

(15)

Ekmek doğra-n-ıyor.
Bread slice-PASS- PROG
'The bread is being sliced"

Ditransitive verbs can also be passivized in Turkish as in English:

(16)

Patron-a bir hediye ver-il-di.
Boss-DAT one present give-PASS-PST
'The boss was given a present.'

In addition to these, impersonal passives are also found frequently in Turkish, and they are generally used not to locate the focus on the agent (Keenan & Dryer, 2006: 346)

(17)

Bu duvar boya-n-acak.
This wall paint-PASS-FUT
'This wall will be painted'

Impersonal passives are not restricted to transitive sentences only, but they appear in intransitive sentences as well (Keenan & Dryer, 2006: 346).

(18)

Ankara'ya gid-il-di.
Ankara-DAT go-PASS-PST
'There was a trip to Ankara.'

Lastly, although it is not used frequently in spoken discourse, in order to express the agent "tarafından" is used in the Turkish passive sentences:

(19)

Kitap öğrenciye bir öğretmen tarafından verildi.
Book student-DAT one teacher by give-PASS-PST
'The book was given to the student by a teacher.'

To summarize, although English is a rigid word order language, Turkish as free word order language enables the speaker to choose among six word orders available. For the English speaker, if there is a need to mention the object at the beginning of the sentence the option is using alternative marked structures such as inversion, cleft sentences, etc. or altering the sentence voice to the passive. On the other hand, Turkish speakers have at least two options, namely the OSV word order or the passive. Given these differences in English and Turkish the specific question in this thesis is, will animacy effect create a need to bring the animate patient before the inanimate agent in English?, and if there is such an effect of animacy on sentence structure which option would Turkish learners of L2 English would choose? How is this choice influenced by their L1 and proficiency level in L2? Answers to these questions are seeked in the following parts.

CHAPTER II

REVIEW OF LITERATURE

2.1 Presentation

This chapter provides a backbone to this thesis giving an explanation of the special terms used in this study such as animacy effect, conceptual accessibility and animacy hierarchy, summarising speech production process which is essential to animacy effect research, and describing earlier studies with the same focus.

2.2 Conceptual Accessibility and Animacy Effect

While working on animacy, the two terms one could come across most frequently are "conceptual accessibility" and "animacy effect". Conceptual accessibility is described as the ease with which the mental representation of some potential referent can be activated in, or retrieved from memory (Bock and Warren, 1985). Bock and Warren (1985) suggest that language production is incremental and in parallel with the conceptual accessibility hypothesis, easily retrieved items are processed first. Less easily retrieved items are processed later. Prat-Sala and Branigan (2000) argue that there are two determinants of an entity's overall conceptual accessibility: inherent accessibility and derived accessibility. Inherent accessibility consists of intrinsic semantic characteristics such as animacy; concreteness and prototypicality. Prat-Sala and Branigan (2000) argue that the inherent accessibility of an entity does not change across context within a language. Derived accessibility is described as a "temporary property of an entity with respect to a particular non-linguistic or linguistic context." (Prat Sala and Branigan, 2000; 169) "Givenness" may be regarded as one factor adding to derived accessibility. "Givenness" is related to the referential status, which shows an entity's status within a participant's discourse model. Given information is the information which is

already available to the hearer, but new information is the information which is not yet available to the hearer. The following figure summarizes the brances of conceptual accessibility.

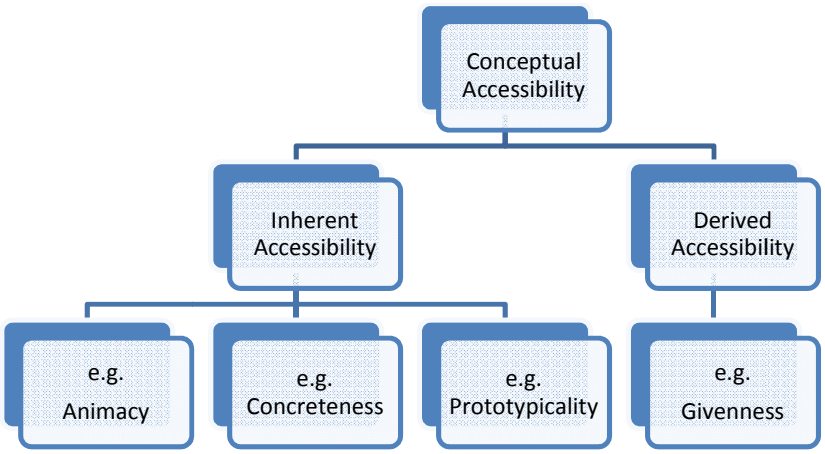


Figure 2.2 Conceptual Accessibility

Among all these branches of conceptual accessibility, animacy effect is chosen and analysed especially in this thesis.

2.3 Animacy Hierarchy

Animacy effect arises in many languages. The most frequently found animacy effect is the "animate first" tendency, which is mostly explained by a hierarchical relationship theory taking place between conceptual factors and grammatical relations. Feleki (1996) explains this relationship linking Keenan and Comrie's (1977) hierarchy of grammatical functions and Keil's (1979) conceptual hierarchy. The complete hierarchy of grammatical relations suggested by Keenan and Comrie (1977) can be listed as the following: subject, direct object, indirect object, oblique object and genitive. According to Keenan and Comrie (1977) if a language allows the relativisation of a grammatical function which is low in the hierarchy, e.g. oblique object, then it will allow the relativisation of all the grammatical functions ascending the hierarchy tree such as indirect object, direct object and subject. Keil's (1979) conceptual hierarchy, on the other hand, focuses on ontological categories

ascending from human entities, to animals, to concrete nouns, to events and to abstract nouns. Keil (1979) argues that humans have more knowledge about animate entities than inanimate entities. Thus, one's knowledge of lower levels in the conceptual hierarchy is assumed to be richer than higher levels (abstract nouns and events) and the categories low in the conceptual hierarchy are assumed to be more accessible. In the intersection of these two hierarchies, it is suggested by Bock and Warren (1985) that the categories which are low in the conceptual hierarchy and more accessible occupy grammatical functions which are high in the functional hierarchy. Feleki (1996) summarizes the relationship between the two hierarchies using the following schema:

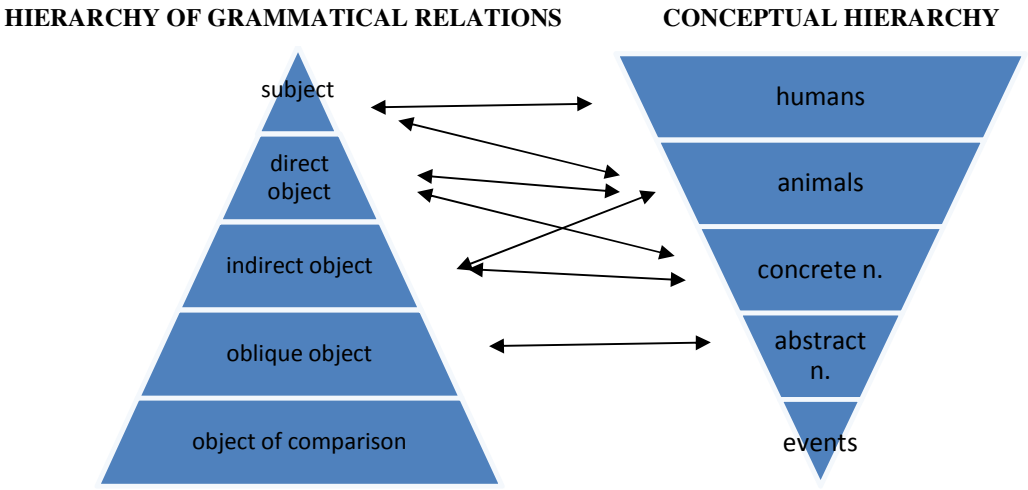


Figure 2.3 The relationship between hierarchy of grammatical functions and conceptual hierarchy (Feleki, 1996; 26)

Bock and Warren (1985) study the relationship between grammatical functions and conceptual hierarchy as well using the following categorisation:

- Humans and animals are typical agents and are readily expressed as subjects.
- Plants, artifacts, and natural inanimates are normally recipients or results of human action and are typically expressed as direct objects.
- Abstract nouns (e.g. love, fear) are most natural as oblique object (e.g. in love, out of fear, for pleasure)
- Events form the highest concepts in the hierarchy, and are expressed as verbs.

Bock and Warren (1985) base their study on the idea of conceptual accessibility and argue that the objects which belong to the lower levels in the hierarchy are more accessible, because it is easier to remember them. In their experiment they used three different types of sentences:

(20)

a. Simple transitive declaratives and passivization:

1. the doctor administered the shock.

2. the shock was administered by the doctor.

b. Double dative constructions:

1. the hermit left the property to the university.

2. the hermit left the university the property.

c. Phrasal conjuncts:

1. The lost hiker fought time and winter.

2. The lost hiker fought winter and time.

These sentences contained one highly imaginable and one less imaginable noun. Subjects were given the sentences and later they were asked to recall and produce them again. Sentences in the first and second groups differed in their syntactic construction, but the last group differed in the serial positioning of the nouns. Thus, the first and the second groups were used to test the effects of imageability on the grammatical function assignment and the last group was used to test the effects of imageability on word order. It was expected that when a highly imaginable noun was assigned a low grammatical function (object instead of subject for sentence type 20a, indirect object instead of direct object for sentence type 20b) subjects would recall "1" instead of "2". It was found that subjects produced more inversions in the first type of sentences and placed the more imaginable noun before the less imaginable one. Bock and Warren (1985) related this result to the hierarchy of grammatical relations and conceptual accessibility. As they could not find such an effect for the third group of sentences they concluded that word order is only indirectly influenced by conceptual accessibility. Thus, the researchers limited conceptual accessibility to functional level only looking at its effect on syntax.

2.4 How Does Animacy Affect Sentence Structure?

It seems that linguists have still not reached a consensus on how animacy effects are reflected onto sentence structure. While some relate animacy effects to thematic role assignment (e.g. Ferreira, 1994), some focus on grammatical function assignment (e.g. Bock, Loebell, & Morey, 1992; McDonald, Bock, & Kelly, 1993; Teufel, Branigan, & Feleki, 1996). As opposed to Ferreira some studies (e.g. Bock et al 1992, Teufel, Branigan and Feleki, 1996; Prat Sala & Shillcock, 1997) suggest that animacy effects cannot be explained by agent firstness. Among these researchers Prat Sala, Shillcock and Sorace (2000) and Feleki & Branigan (1997) study how animacy affects word order directly.

2.4.1 Animacy Effect and Thematic Role Hierarchy

Thematic roles such as agent, presenter, beneficiary, recipient, etc. are ranked in the thematic hierarchy, which is a priority hierarchy of which thematic role is mapped onto the subject. Thematic roles can be described as the roles that the referents of the arguments (such as direct object, subject…) of a verb play in the event or in the state that the verb denotes. Although the thematic hierarchy is thought to be universal, there are different versions proposed. Givon (2001) proposes a thematic hierarchy as in the following:

Agent>Recipient>Patient>Location>Instrument>Others

According to the thematic hierarchy model, if an argument has an agent, the highest role in the hierarchy, then it is mapped onto the subject. If there is no agent, then the highest role is mapped onto the subject. Some thematic roles are prominent in the hiearachy as seen in the example:

break:

break< agent, theme, instrument>

“George broke the window with the hammer.”

break<instrument, theme>

“The hammer broke the window.”

break<theme>

“The window broke

Ferreira (1994) argues that the "animate-first" effect is mediated by verb type or thematic role. Ferreira (1994) has worked on the reasons underlying the choice of the passive instead of the active, and tried to find out "how speakers choose among the syntactic options they have available for conveying some propositional content" (Ferreira, 1994:715). Ferreira (1994) concentrated on "theme-experience" verbs. These verbs assign the role of the theme to the subject of an active sentence and experiencer to the object. Ferreira (1994) gives the example, "Bill amazed Tom" and says, "Tom is the experiencer of the emotion of amazement and Bill is the theme." According to Ferreira (1994) a theme can be inanimate but an agent cannot; thus unlike experiencer-theme or agent-theme verbs, theme-experiencer verbs accommodate inanimate subjects in the subject position of active clauses. It is predicted that in parallel with thematic hierarchy theory, passives would be more common than actives with theme-experiencer verbs.

Ferreira (1994) conducted four experiments, gave the subjects two nouns and a verb on the monitor, and asked them to construct a sentence using the given words only. The verb type was manipulated as either "normal" (agent-theme or experiencer-theme) such as *"avoided"* or theme-experiencer such as *"challenged"*, and the syntactic form of the sentences formed by the participants was analyzed. It was found that passives occurred more frequently with the theme-experiencer verbs than with the normal verbs, and passives occurred more frequently when the two nouns differed in animacy rather than both being animate. In addition, participants formed passive sentences in longer durations than active ones. Ferreira (1994) concluded that thematic structure affects the frequency of passive sentences and speakers place more prominent thematic roles (agent, experiencer) in the subject position of a sentence.

However, some authors such as van Nice and Dietrich (2003) point out that animacy effects are in no way reducible to thematic role effects. The authors support their point referring to various studies and suggest that "the sentence priming study of Bock et al (1992) and a number of other animacy studies (Teufel, Branigan and Feleki, 1996; Prat Sala, 1997; Prat Sala and Branigan, 2000) all show that animacy effects increase the occurrence of patient-first structures (e.g. passives), clearly indicating that animacy effects are not simply agent-first effects" (van Nice and

Dietrich, 2003:10). On the other hand, the authors suggest that animacy-role affinities exist at least for animates and certain thematic roles such as agent and experience and for inanimates and other thematic roles such as patient and theme. van Nice and Dietrich refer to Dahl (1997), who found out that transitive sentences favoured animate subjects and inanimate objects, and claim that may be "the strength of animacy-role affinity is larger than one might expect"(van Nice and Dietrich, 2003:10).

Although Ferreira (1994) suggests a relationship between animacy effect and thematic role hierarchy, the majority of the literature focuses on the relationship between animacy effect and grammatical subject assignment or word order. This thesis also concentrates on grammatical subject assignment and word order especially. The following section gives a briefline of the literature on animacy-grammatical subject assignment relation.

2.4.2 Animacy Effect and Grammatical Function Assignment

The researchers focusing on animacy effect and grammatical function assignment argue that in parallel with the conceptual accessibility hypothesis easily accessible items are retrieved first and thus they undergo functional processing first. Also more accessible items are assigned to higher grammatical relations. Bock and Warren (1985)'s experiment making use of three different types of sentences is a good example for animacy and grammatical function focused researches. Finding no reversed pattern for the third group, where the linearization of the nouns differ, Bock and Warren argue that animacy affects the level where the grammatical function assignment occurs, but it disappears at the level where the ordering processes occur. Bock and Warren (1985) suggest that the special prominence of surface subjects underlines the link between animacy and subjecthood: they tend to be more animate, concrete and imaginable. Mc Donald et al (1993) explain the relationship between animacy and subjecthood with animate first tendency. It is claimed that animate entities tend to appear in the first position in the sentence.

Some eye-movement studies also suggest a relationship between animacy and subjecthood. Mak, Vonk and Schriefers (2002) conducted such a research studying the influence of animacy on relative clause processing. They suggest that animacy

influences the processing difficulty of relative clauses and argue that subject relative clauses are easier to process than object relative clauses. First, they present a corpus study of Dutch and German newspaper texts, in which they evaluate the effects of animacy on the distribution of subject and object relative clauses. Then, they present two processing studies in which they evaluate the effect of animacy on the processing of Dutch relative clauses. Reading times for relative clauses with animate object and inanimate object were compared to find out the effect of animacy of object. It was seen that the sentences with an animate object were read significantly slower than the sentences with an inanimate object.The eye-movement experiment suggests that the processing difficulties of subject and object relative clauses are different when both protagonists are animate. When the object is inanimate, there is no difference in processing difficulty between the two types of relative clauses. Mak, Vonk and Schriefers (2002) relate animacy effect to subjectivity and objectivity.

In Corrigan (1986)'s research "goodness" ratings for sentences whose subjects varied in animacy were analyzed and higher ratings for animates rather than inanimates were found. In Itagaki and Prideaux (1985)'s study, students used animates as subjects more often than inanimates while composing sentences choosing among many animate and inanimate nouns. Dewart (1979), Harris (1978) and Lempert (1989) also relate animacy and subjecthood and suggest that when speakers decide on the assignment of event roles to syntactic relations, they assign the subject role to animate entities mostly.

McDonald, Bock and Kelly (1993) also pointed at the link between animacy and grammatical functions, but they base their study on what they term "lexical accessibility". Lexical accessibility involves the retrieval of lemmas and lexemes. Lemmas and lexemes are both portions of a lexical entity, but their contents are different. Lemmas contain semantic and syntactic information; lexemes contain phonological information (Levelt, 1989). Mc Donald, Bock and Kelly (1993) suggest that animate entities are chosen as subjects in English, because animacy influences function assignment. Moreover, they put forward that word length influences word order, not the assignment of grammatical roles. They conducted an experiment similar to the one carried out by Bock and Warren (1985) They believed the ease with which the lexeme of a word is retrieved from memory influences word order,

but its lemma does not. They found similar results with Bock and Warren (1985). They concluded that word length does not influence word order and suggested that conceptual accessibility affects grammatical function assignment, but lexical accessibility has no effect on grammatical functions.

Teufel, Feleki and Branigan (1996) are another group of researchers who studied the relationship between animacy and grammatical function assignment in German. They carried out a recall experiment in which they used materials containing one animate and one inanimate noun. There were four different types of sentences expected to be uttered by the subjects: active sentence with animate subject and animate agent, active sentence with inanimate subject and inanimate agent, passive sentence with inanimate subject and animate agent, passive sentence with animate subject and inanimate agent.

(21)

a. Active- Animate Subject (Animate Agent)

e.g. Die Filmkritikerin fand, dass der Regisseur den Film bekannt gemacht hatte.

'The film critic found that the director has made the movie famous.'

b. Active-Inanimate Subject (Inanimate Agent)

e.g. Die Filmkritikerin fand, dass der Film den Regisseur bekannt gemacht hatte.

'The film critic found that the film had made the director famous.'

c. Passive- Inanimate Subject (Animate Agent)

e.g. Die Filmkritikerin fand, dass der Film von dem Regisseur bekannt gemacht wurde.

'The film critic found that the film was made famous by the director.'

d. Passive- Animate Subject (Inanimate Agent)

e.g. Die Filmkritikerin fand, dass der Regisseur von dem Film bekannt gemacht wurde.

'The film critic found that the director had been made famous by the film.'

Sentences were recalled in the alternative syntactic structure more often when the effect was to assign the grammatical function of subject to the animate entity. There

were significantly more inversions when the inversion made the animate entity the subject than when the inversion made the animate entity the object. For example a sentence such as “Barrel squashed man” was recalled as “Man was squashed by barrel” and a sentence such as “Barrel squashed by man” was recalled as “Man squashed barrel”. More accessible items were related to higher grammatical functions in the experiment in parallel with the conceptual accessibility hypothesis. The authors concluded that animacy affects grammatical function assignment in German, but they left the question of whether animacy had an effect on word order open to be studied in a free word order language.

2.4.2.1 The Passive and Animacy

Animacy effect on grammatical function assignment is studied in relation to the passive in various studies. The fact that the passive enables the object to appear at the beginning of the sentence instead of the subject makes the passive a good testing method to be used for the analysis of animacy effect on sentence structure. This section on the passive revises the studies on the link between the passive and animacy effect and hence, provides a background to the passive data used in the thesis.

Before explaining the studies on the passive and animacy effect, the question demanding an answer is “why is the passive voice needed and used?” Dewart (1979) describes the passive briefly as the reversed word order of the simple active. The order grammatical subject-verb-grammatical object corresponds to actor-action-acted upon in active sentences, but it corresponds to acted upon-action-actor in the passive. There is no change in meaning between a passive form and active form of a sentence. Dewart (1979) suggests some reasons for why speakers tend to use the passive instead of the active although the two are the same in terms of meaning. First, truncated passives as in the sentence “The man was murdered” make the usage of the passive essential. The actor is unknown, or it is not easily stated in such sentences and the passive comes out as a solution. Allowing the acted upon to assume the initial nominal position in the sentence; the passive helps the speaker put the emphasis on the object. Tannebaum and Williams (1968) provide evidence for the theory that the passive may be motivated by thematic considerations.

Another function of the passive which is of central importance to this research is suggested by Dewart (1979). He argues that in sentences with one animate and one inanimate entity, the animate noun would be used first in the ordering of the nouns, and in sentences with an inanimate actor the passive voice enables the animate acted upon to take the first place as in the example;

(22)

a. *The alarm clock awakened the boy*
b. *The boy was awakened by the alarm clock*

Dewart (1979) conducted a similar experiment to find out the roles of animate and inanimate nouns in determining sentence voice. In the experiment, Dewart gave children aged six and eight years a long term memory task. Children were required to recall a series of sentences with animate noun actors and inanimate acted upons as in (23a) and, the reverse as in (23b)

(23)

a. *The gardener mows the grass*
b. *The blanket covers the baby*

It was predicted that in the recall sentences the ones belonging to the first group would keep their original ordering, because they have the preferred ordering with the animate noun followed by the inanimate noun. If the test sentence is a passive sentence, it was predicted to be recalled in active form. In the same way, the ones in the second group were expected to be recalled in the passive form, because the passive would enable the participants to use the animate noun first. Sentences were presented in either the active or the passive. The children saw a picture of the situation described while hearing a sentence, and later recall was cued with a picture of either the actor or the acted upon element in the sentence.

Dewart (1979) found out that when children saw pictures of the acted upon element they tended to recall the active sentences in the passive form more often than they did when they saw the pictures of the actor. Passive sentences with the animate actor and the inanimate acted upon were recalled as actives, but active sentences with the inanimate actor and the animate acted upon were changed to passives. Dewart

(1979) concluded that rather than theme or saliency, animacy of the subject and object nouns influences the choice of voice. Looking at the strong influence of the ordering of the animate and inanimate nouns in the experiment, Dewart (1979) suggests "In the production of a sentence, the semantic features associated with the nouns to be cued may have an important influence on the choice of sentence structure, in particular, on the voice of the verb" (Dewart, 1979;136).

Harris (1978) also conducted a similar experiment requiring spontaneous description of action pictures. Harris (1978) found that the relative animacy of actor and acted upon was an important factor in determining children's choice of the passive. In the same way, Dayez (cited by Dewart, 1979) gave French adults active and passive forms of the same sentence and asked which one they preferred. It was found that when animate was followed by inanimate in the passive sentence, 83% chose the passive form instead of the active.

2.4.3 Animacy Effect and Word Order

The reason underlying animacy effect on word order hypothesis is that conceptually accessible items are retrieved first and thus they undergo grammatical encoding first. Also more accessible items appear in early word order positions. Feleki (1996) conducted a sentence recall task in Greek. Like Turkish, Greek was a suitable choice for a study investigating effect of animacy on word order allowing six different word orders, which are SVO, SOV, VSO, VOS, OVS and OSV. 24 Greek native speakers participated in the study which included 32 items in 4 conditions. Each participant heard 8 sentences from each condition, which were recorded on the tape, and they were asked to recall the sentences. The sentences in four conditions were as follows:

(24)

a. Sta dimokratika politevmata, o politis sevete to nomo.

In democratic regimes, the citizenNOM respects the lawACC.

'In democratic regimes, the citizen respects the law.'

b. Sta dimokratika politevmata, o nomos sevete ton politi.

In democratic regimes, the lawNOM respects the citizenACC.

'In democratic regimes the law respects the citizen.'

c. Sta dimokratika politevmata, to nomo sevete o politis.

In democratic regimes the lawACC respects the citizenNOM.

'In democratic regimes, the citizen respects the law.'

d. Sta dimokratika politevmata, ton politi sevete o nomos.

In democratic regimes, the citizenACC respects the lawNOM.

'In democratic regimes the law respects the citizen.'

24a and 24c, 24b and 24d were the same in terms of meaning, but they had different word orders. Feleki (1996) focused on SVO and OVS orders especially. It was hypothesized that the subjects would recall the sentences in a form that would bring the animate entity in front of the inanimate entity, and their results supported the hypothesis. SVO sentences were recalled as OVS when the change in the word order enabled the animate entity to appear the first, and OVS sentences were recalled as SVO when the change in the word order enabled the animate entity to appear the first. Feleki (1996) concluded that animate entities got the first position in the sentence irrespective of their grammatical functions.

Prat Sala, Shillcock and Sorace (2000) conducted experiments in English, Spanish and Catalan and concluded that animacy affects word order directly. The researchers focused on two main points: the effects of animacy on the production of different syntactic structures and word orders by Catalan speaking children and the relationship between age and the production of different syntactic structures by these children. The subjects were 80 native speakers of Catalan children aged 4 to 11. They used 30 test pictures depicting a transitive action involving an inanimate agent and an either animate or inanimate patient such as:

(25)

a. A ball hitting a man (Animate condition)

b. A ball hitting a vase (Inanimate condition)

They asked the subjects "what is happening in the picture?" They grouped the answers as actives, object-dislocated structures, passives and others. They found that the participants tended to produce object-dislocated sentences more frequently when the patient was animate than when it was inanimate and that the production of

passives by Catalan speaking children occurred much later than the production of object dislocated sentences. As a result, they concluded that animate entities are conceptually more accessible than inanimate ones and as the first item retrieved from the mental lexicon would appear in an early position in the sentence, animate-first tendency may appear.

A similar study by Prat Sala and Branigan (2000) focused on the conceptual accessibility effect on word order analyzing conceptual accessibility in terms of inherent accessibility and derived accessibility at the same time. (refer to p.g.21) Prat Sala and Branigan (2000) argued that both inherent and derived accessibility would contribute to accessibility. Participants were shown the picture, and they listened to a story, which had two versions making either the patient or the agent salient. For example if the participant were shown a picture depicting a "swing hitting a scooter" they listened to the following stories:

(26)

a. *(Agent salient) There was this old rusty swing standing in a playground near a scooter, swaying and creaking in the wind. What happened?*
b. *(Patient salient) There was this old red scooter standing in a playground near a swing, with rust wheels and scratched paint. What happened?*

Prat Sala and Branigan (2000) found that the subjects produced more passives than the actives when the patient was salient in English. However, in Spanish participants uttered more dislocated sentences when the patient was salient than when it was not salient. Thus, researchers concluded that inherent and derived accessibility influenced both grammatical function assignment and word order in English and Spanish.

In addition to these, van Nice and Dietrich (2003) studied the effects of animacy on word order in German using three different picture description tasks. In the written picture description from memory and in the oral description with pictures in view they found that the animacy of agent and patient influenced verb form choice and there were more passives used in animate-inanimate pairs than in inanimate-animate pairs. However, there was no thematic role interaction in these two tasks. On the other hand, in the oral description from memory task van Nice and Dietrich

(2003) found an interaction between animacy and thematic role, but they could not find an increased passive usage in the pictures with animate agents as in the previous tasks. The researchers related this difference to task-dependency and argued that when a task involves accessing elements in memory, sentence structure is planned in advance and word order is not influenced significantly. On the contrary in tasks that involve sequential processing of elements, animacy affects word order independent of the thematic role or the linguistic properties of the message.

So far we have seen that various answers have been suggested by researchers as to the question of how animacy affects sentence structure. While some have argued that an animacy effect occurs only on the grammatical function assignment, some carried this effect onto the word order as well. However, a recent study by Tanaka, Branigan, & Pickering (in preperation) adopts a different perspective and questions whether animacy could affect both grammatical function assignment and word order. Tanaka (2006) revised this study in his article and commented on the effects of animacy. The authors investigated whether animacy influences word order in Japanese (Japanese is a free word order language. SOV is the basic word order in Japanese, but without changing any meaning the object can also appear at the beginning of a sentence leading to an OSV order) and whether animacy affects both grammatical function assignment (the passive and the active sentences are possible in Japanese) and word order at the same time. The subjects listened to Japanese sentences in which the animacy of subjects and direct objects was manipulated including both OSV and SOV sentences, and they were asked to recall these sentences. The researchers found that there was a strong tendency to use SOV structure irrespective of the animacy factor, but OSV orders were strongly inverted to SOV order when the inversion put the animate entity in the first position in the sentence. Thus they concluded that animacy had an effect on word order. In the second experiment Tanaka, Branigan and Pickering (in preparation) found that when conceptually accessible nouns were not assigned to the subject position, speakers tended to recall active sentences as passive and passive sentences were recalled as active. Tanaka (2006) concludes that conceptual accessibility affects both word order and grammatical function assignment, and argues that these results have important implications for the language production process. First, due to animacy effect found

on both grammatical function assignment and word order choice, compared to the top-down model of production, in which the message generation, the functional processing and the positional processing take place respectively, a more flexible and parallel grammatical encoding structure is suggested. Secondly, due to the fact that more accessible entities affected both grammatical function assignment and word order, an incremental language production processing is supported, in which the processor goes to the next level when the minimal information is available rather than waiting for all of the information to be completed.

The present thesis investigates animacy effect with a perspective similar to Tanaka, Branigan and Pickering (in preparation) with the hypothesis that animacy affects both word order and grammatical function assignment, but the target language and the proficiency level in L2 are also taken into account questioning the the effect of animacy on sentence structure.

2.4.3.1 How Is the Word Order Chosen?

In order to provide a clear picture of animacy effect on sentence structure choice it would be meaningful to review how we decide on what to say. There are lots of syntactic options to form a sentence in every language, and somehow one of these options is chosen for the conveyance of the intended message by the speaker. How people decide on what structure to use while speaking has been questioned frequently by linguists recently. This choice process was regarded as happening in a vague way before, now it is thought to be effected by many factors.

The priming effect is thought to be one of the determinants of word order. Priming can be described as the tendency to repeat the type of sentence construction used in the preceding sentences. Bock (1986) conducted an important syntactic priming experiment, quoted in many studies. Bock (1986) asked subjects to describe a group of pictures. Each picture was preceded by a prime sentence. First, the sentence was uttered by the experimenter, and then the subjects repeated it. The prime sentences and target sentences were not related to each other. Some of the prime sentences were given in active form, and some were given in passive form. The speakers could choose the form they want to describe the given pictures. It was found that the uttered sentences were in parallel with the prime sentence in terms of

syntactic structure. For example, if the prime was a passive sentence, the picture description was mostly done in passive form. Hartsuiker, Kolk, Herman and Huiskamp (1999) also conducted a primed picture description experiment. Dutch speakers first repeated prime sentences and then described target pictures. It was found that speakers tend to use a given word order when the prime sentence had that same word order.

Haviland and Clark (1974) and Collins (1995) focused on the speakers' tendency to keep the given-new order. Tannebaum and Williams (1968) also conducted an experiment indicating the tendency to keep the given-new order. The participants read a preamble that focuses on the agent, on the patient or on neither. Later, they described a picture depicting a transitive action between two entities. The authors found that active descriptions were produced faster after an agent-focused preamble, but passive descriptions were produced faster after a patient-focused preamble.

Perceptual accessibility is accepted as another determinant of word order. It is claimed that perception of visual stimuli can be manipulated by localising eye gaze on some features of a given context (Georgiades & Harris, 1997). Some researchers also worked on the effect of perceptual factors such as colour on the ordering of noun phrases (Gleitman, Gleitman, Miller, & Ostrin, 1996). In a study discovering the effect of attention on language production, speakers were presented with scenes eliciting the use of one of two perspective verbs (e.g. "A dog is chasing a man"/ "A man is running from a dog") As the attention manipulator, a crosshair was located on one or the other character before the display. It was found that crosshair position affected word order and verb choice. When the crosshair position was located next to the dog, the subjects tended to start the sentences with "dog". However, when the crosshair was next to the man they preferred to bring "man" at the beginning of the sentence (Nappa, January, Gleitman, & Trueswell, 2004).

2.5 Language Production and Animacy Effect

In order to understand to what extent our speech is manipulated by the animacy factor it seems useful to revise some studies about language production trying to find an answer to the questions of "Where does accessibility happen?",

"Does it happen during functional processing stage as suggested by the researchers focusing on the effect of animacy on grammatical function assignment, or does it occur during the positional processing stage as argued by the researchers claiming an effect of animacy on word order?".

It is assumed that the production system consists of different levels of processing (Bock & Levelt, 1994). Adapting from Bock and Levelt (1994), Prat Sala (1997) summarizes the basic architecture of the language production system under three main headings: the message level, grammatical encoding and phonological encoding. It is suggested that the levels may be thought to correspond to the semantic- pragmatic level, the syntactic level and the phonological level.

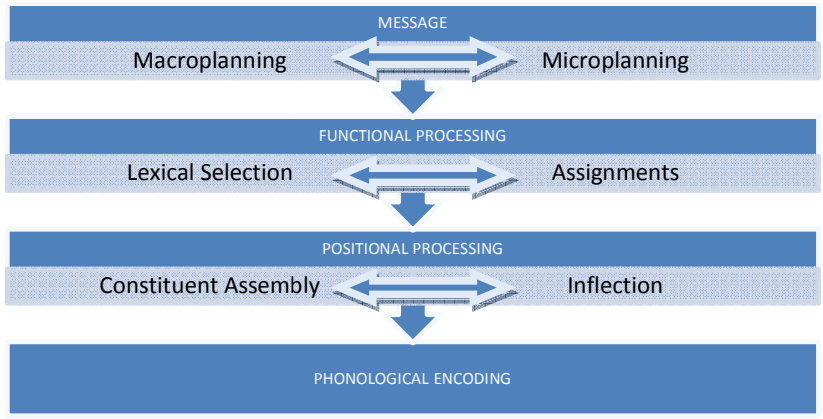


Figure 2.5 The Components of the Language Production System (adapted from Bock and Levelt, 1994)

At the message level, macroplanning and microplanning take place. First, the speaker gains the intention of communication. Then, he decides on how to communicate the message and what to include in it. This decision is called macroplanning. Later, the speaker decides on the informational perspective he will take, which is called microplanning.

Now that the message is ready, the next step is to convert it into spoken words. This process is divided into two levels: grammatical encoding and phonological encoding. Grammatical encoding consists of two sublevels: functional processing and positional processing. During functional processing conceptual

representation takes its first abstract linguistic form. In order to achieve this, first lemmas are retrieved from the mental lexicon. Another event occurring during the functional processing is the functional assignment. Chosen lemmas are linked to grammatical roles or to syntactic relations (e.g. subject, direct object, etc.) (Prat Sala, 1997).

The next step is to put these set of lemmas into an order. Prat Sala and Shillcock (1997) describe "positional processing" as the stage which "involves the construction of a framework of the utterance from the syntactic information contained in the retrieved lexical items and the placement of lemmas in the right order." (Prat Sala & Shillcock, 1997;10) After the lemmas are placed in the right order, morphological information is added. If it is accepted that the production of a sentence involves a top-down serial processing, the last stage is the phonological level, where prosodic contour and rhythm is added and a phonetic plan for each lemma and for the whole sentence is formed.

According to the top-down model it may be suggested that animacy effect occurs during grammatical encoding. It renders either functional processing or positional processing or both. van Nice and Dietrich (2003) suggest a more general answer to the question of "where does accessibility happen" and comment that it occurs at the interface between thinking, perception and memory. The findings of this thesis may provide helpful hints related to this question in the following parts.

To sum up, animacy effect is studied from various perspectives in relation with various topics by many researchers. Some put forward various hierachies trying to explain the role animacy plays in speech production. Some focus on the relationship between grammatical function assignment and animacy. Some question how animacy affected word order. Some try to find out how speech production occured using animacy as an index. However, the intersection point of all these studies is the idea that there is an animacy effect on speech production and it is as alive as the dictionary meaning of the word itself. This thesis investigates the place of this "alive word" in speech production adding new perspectives to the issue. The following section explains the details of this study.

CHAPTER III

METHOD OF RESEARCH

3.1 Presentation

In this chapter first the research design is explained. After a list of the research questions, participants taking place in the research are introduced. Next, research instruments are presented. Lastly, the criteria used for classification and data analysis methods are explained.

3.2 Research Design

This was a quantitative study based on a picture description task administered to:

1. Turkish speakers of L2 English with different proficiency levels
2. native speakers of Turkish
3. native speakers of English

Evaluating both L1 and L2 data in English and Turkish, this research aimed at finding out the effect of animacy on sentence structure choice in both languages, and it also tried to find out whether proficiency level in L2 and native language lead to differences in the way animacy affects sentence structure choice.

This thesis assumed that animate constituents have a priority in language production as they are accessed first and thus animacy effect could reflect onto either grammatical subject assignment or word order positioning or both as suggested by Prat Sala (2000) Tanaka (2006), Branigan et al (2007). In this respect, animacy effect on language production in L2 was questioned both in terms of grammatical function assignment and word order with a focus on the roles of L2 proficiency level and native language. Prat Sala (2000)'s study on Catalan speakers and English speakers concerning the effect of conceptual accessibility on speeech production was taken as

the model for this thesis, and a similar task was applied on Turkish and English speakers.

The main concern of the researcher was "Will the participants be able to comprehend the drawings?" In order to make sure that there was no problem about the comprehension of the drawings a pilot study was carried out on Turkish students at a secondary school in Turkey. The subjects were 16 native speakers of Turkish aged 13-14. Instead of giving all participants handouts with pictures, the participants were interviewed individually by the experimenter. They were shown the pictures one by one and they were asked to describe what was happening in the shown picture. They were warned to use only one sentence while describing the pictures and their responses were written down by the researcher. It was concluded that the participants experienced no difficulties in comprehending the content of the pictures in the study, and they described the pictures as expected. However, the problem was that interviewing each participant one by one would take too much time since the researcher was planning to interview 100 participants. In order to overcome this difficulty, the design of the study was changed and the researcher decided to give participants handouts with pictures and asked for written responses rather than interviewing each participant individually.

With the new experiment design, a second pilot study was carried out on the students of TOBB University Preparatory School. They were 32 native speakers of Turkish learning English. They were given the handouts with pictures, and they were asked to write an answer to "what is happening in each picture?" in English onto the blank spaces next to the pictures. They were warned to use only one sentence. The question "what is happening in the picture" was not written for each picture on the paper, but it was written only at the beginning of the handouts given to the students. When the papers were gathered by the experimenter, it was found out that most of the responses were commentaries on the pictures rather than descriptions. In order to make sure that the participants wrote only simple descriptions of the pictures, another change in the design was made. Rather than writing the question "what is happening in the picture?" only for once at the top of the first handout, the question was written for each picture in order to refresh the mind of the participants and keep them focused on the question.

Finally, the research design was ready to be administered. All participants were given handouts which included a picture description task. There were 26 pictures on the handouts and the question asked was "What is happening in the picture?" The subjects saw the question after every single picture, and they wrote their answers in the blank parts. They were warned to use only one sentence for the description of each picture. They had 15 minutes to answer all of the questions and the handouts were gathered by the researcher when the time was up.

3.3 Research Questions

The research questions can be listed as the following:

- Does animacy affect sentence structure choice in L2 English, L1 English and L1 Turkish?
- If yes, how does animacy affect sentence structure choice in English, a rigid word order language, and Turkish, a free word order language?
    - Does animacy affect voice choice? Will passive voice be produced more in the animate condition?
    - Does animacy affect word order choice? Will OSV order be used more in the animate condition?

3.4 Participants

The experiment was administered to five different groups. As table 3.4 shows, there were three L2 English groups, an L1 Turkish group and an L1 English group. Group ELT1 (English Learners of Turkish, level-1), ELT2 (English Learners of Turkish, level-2), and ELT3 (English learners of Turkish, level-3) were L2 English groups. The participants of all these groups answered the questions in L2 English. Group ELT1 and ELT2 were students at the English preparatory school of TOBB University with an age range of 18 and 23 and their English proficiency levels were determined by a three-stage exam given by TOBB University. This is an institutional test performed for placement purposes. It is composed of different parts on listening, reading, vocabulary, structure, writing and speaking. Group ELT1 consisted of 16 "level-1" students who got less than 60 in the English Proficiency

Exam administered by TOBB. Group ELT2 consisted of 25 "level-2" students who got 60 and higher points in the same exam. Group ELT3 consisted of 19 EFL teachers of the same university, and their English level was entitled as "level-3". Group ENS (English native speakers), consisting of 14 speakers, was included in the study as the control group. Group TNS (Turkish Native Speakers) also took place in the experiment. The participants of group TNS answered the questions in their native language. Group TNS consisted of 20 adults between the ages 18-32. The profile of all groups can be seen in the following table:

Table 3.4 The Profile of the Research Groups

	Sex		***Age***	***Native Language***	***Second Language***	***Task Language***
	male	female				
Group ELT1	10	6	18-20	Turkish	English (Level-1)	L2
Group ELT 2	11	14	18-23	Turkish	English (Level-2)	L2
Group ELT3	7	19	22-35	Turkish	English (Level-3)	L2
Group ENS	7	7	18-37	English	-	L1
Group TNS	9	13	18-32	Turkish	-	L1

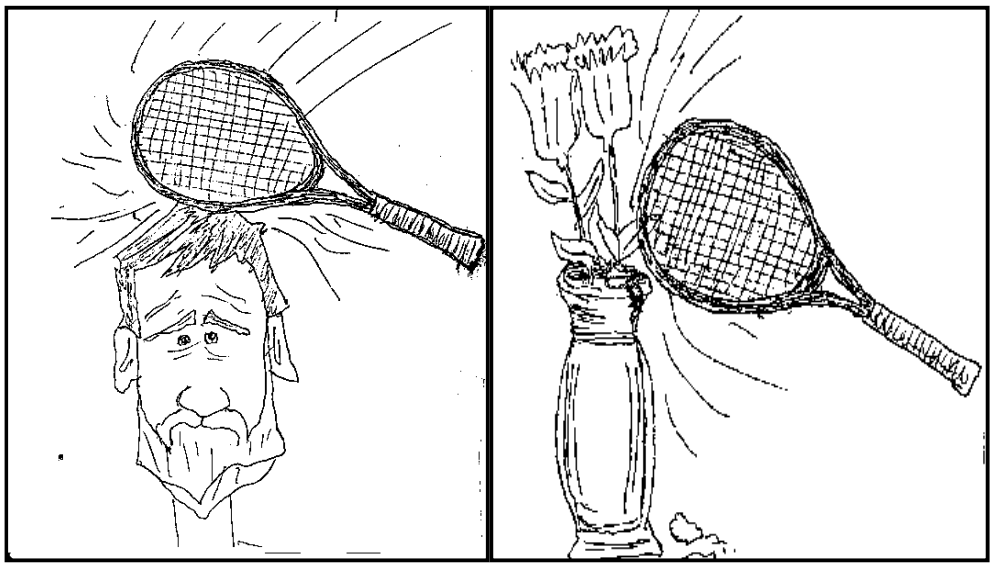
3.5 Research Instruments

In this study, an adapted version of *the pictures used by Prat Sala, Shillcock and Sorace (2000) in the study looking for animacy effects on word order in Catalan were used. The pictures were re-drawn with a larger size to attract the attention of the participants. During the drawing process special attention was paid to the relative size of the objects in the pictures. This was considered to be important, because a

*the pictures were adapted with permission from Merce Prat Sala

distortion in the size of the objects could lead to an undesirable effect, e.g. the participants might choose the larger object as the agent of the sentence.

Among the 26 pictures used, 6 were filler pictures depicting an intransitive action such as "a phone ringing, a woman running." The remaining 20 pictures depicted an action taking place between an inanimate agent (e.g. a tennis racket) and an either animate (e.g. a man) or inanimate (e.g. a vase) patient.The former set of pictures was grouped as the "animate condition" and the latter as the "inanimate condition" (see Figure 3.5).



ANIMATE CONDITION INANIMATE CONDITION

Figure 3.5 Sample pictures in the animate and inanimate conditions

3.6 Assumptions

In parallel with the conceptual accessibility hypothesis it was expected that animate entities would be privileged in both functional processing and positional processing. Thus, when the participants were shown a picture in the animate condition they would prefer changing the voice of the sentences to the passive using the animate noun first and assigning the subject role to the animate noun, or they would prefer using the OSV order rather than the SOV order using the animate noun first. It was also expected that L2 proficiency level and native language of the L2

learners could lead to differences in the way animacy affects sentence structure choice.

3.7 The Criteria for the Categorisation of Responses:

A set of criteria similar to the one used by Prat Sala (2000) was employed to group the sentences written by the participants:

1. For English data:
   - to be scored as *active*, the grammatical subject had to appear in pre-verbal position, and the object in post-verbal position, yielding an SVO order.
   - to be scored as *passive*, the patient had to appear in subject position and the agent in the by-phrase.
2. For Turkish data:
   - to be scored as *active*, agent had to be used as the subject and patient had to be used as the object yielding a SOV, SVO, OSV, OVS, VSO or VOS word order. Since the object is marked by the accusative case (-ı) in Turkish, all word order permutations may be used in active voice: S O-acc V; S V O-acc; O-acc S V; O-acc V S; V S O-acc; V O-acc S.
   - to be scored as *passive*, the verb had to take the suffixes –ıl or –ın: S O V-ıl/ın; S V-ıl/ın O; O-ıl/ın S V; O-ıl/ın V S; V-ıl/ın S O; V-ıl/ın O S.
3. The descriptions not meeting the required criteria were categorised as *other* answers and they were excluded from the analyses:
   - Descriptions had to contain two entities. All descriptions involving only one entity such as “a train going” instead of “a train running over a woman” were excluded.
   - The entity that was designated as the agent had to be grammaticalized as the subject; and the entity that was designated as the patient had to be grammaticalized as the object in active sentences. This criterion excluded descriptions such as “somebody throws a ball to a boy.”

- Only the first full sentence produced on a trial was scored. All descriptions involving coordination were excluded such as “A lightning goes down and strikes a house” instead of “a lightning striking a house” due to the reason that coordinations allow two different verbs, which could make the place of subject and object ambiguous.
- A description had to contain a verb that expressed the action carried out by the inanimate agent. The sentences without a verb were excluded.
- A valid answer had to include only the description of the given picture. Commentaries on the picture such as “What a terrible situation for the woman!” or “This man must have problems with his wife” were excluded.

3.8 Data Analysis

In order to evaluate the results statistically the Statistical Package for Social Sciences (SPSS) 13.0 was used. Chi-square analysis and odds ratio calculations were applied on the results. As the data were not numeric but categorical, chi-square analysis turned out to be the most appropriate analysis. The relationship between animacy, word order and passive voice was studied using the chi-square analysis calculating odds ratios. While the chi-square analysis indicated whether there was a relationship between animacy and sentences structure choice, odds ratios demonstrated the size of the effect. For all odds ratio calculations a significance interval at 95% confidence was predetermined.

CHAPTER IV

RESULTS

4.1 Presentation

In this chapter, the statistical analyses of the students' responses to the pictures are presented. First, chi-square and odds ratio results about animacy effect and passive voice and secondly chi-square analysis focusing on animacy effect and word order are reported.

4.2 Analyses on Animacy Effect and Passive Voice

The responses given by the participants to the picture description test were first analysed in terms of the relationship between animacy effect and passive voice.The data gathered from L2 English, L1 English and L1 Turkish groups were analysed using chi-square tests.

4.2.1 Results for L2 Groups

4.2.1.1 Group ELT1 (Level-1)

There were 320 utterances produced by the participants of Group ELT1. 160 sentences were produced as response to pictures in the animate condition, the other half were responses to the pictures in the inanimate condition. In the animate condition, there were 5 'no' responses, 109 'other' responses, 36 'active' and 10 'passive' responses. In the inanimate condition, there were 13 'no' responses, 80 'other' responses, 55 'active' and 12 'passive' responses. For example, in the animate condition for a picture depicting "a tank running over a soldier" (see picture 5 in the Appendix) some of the sentences were as the following:

(28)

a. A tank is killing a civil man. (ACTIVE)

b. He was killed by the tank. (PASSIVE)

c. This is a big cruelty. (OTHER)

In the inanimate condition, for a picture depicting "a tank running over a car" (see picture 13 in the Appendix) some of the sentences uttered were as the following:

(29)

a. The tank is going over the car. (ACTIVE)

b. The car is destroyed by the tank. (PASSIVE)

c. There is an accident with a tank and a car. (OTHER)

Table 4.2.1.1a below shows the number of answers given by Group ELT1 in the animate and inanimate conditions:

Table 4.2.1.1a ELT1: The number of all answers

	active	**passive**	**other**	**no response**
Animate	36	10	109	5
Inanimate	55	12	80	13
TOTAL	**91**	**22**	**189**	**18**

The first point that needs mentioning in the table is the small number of passives used in total. Group ELT1 uttered 22 passive structures in total, which is only 7% of all the answers given by Group ELT1. However, actives constitute 29% of the total. Looking at the results it is possible to suggest that level-1 L2 English learners did not prefer using passive voice frequently.

The following pie charts show the division of answers in the animate and inanimate conditions:

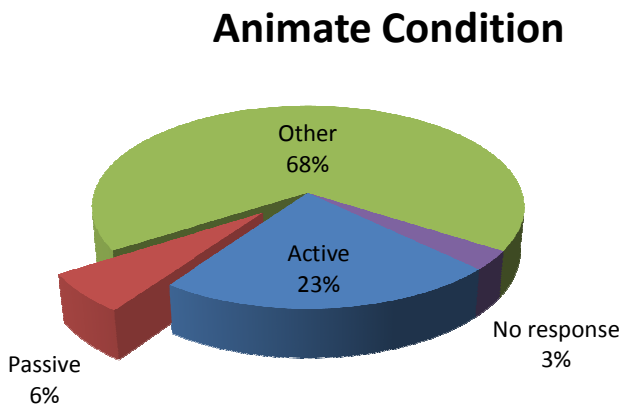


Figure 4.2.1.1a ELT1: Pie chart for all answers in the animate condition

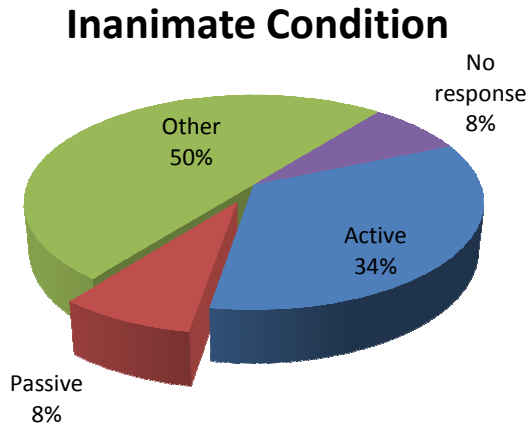


Figure 4.2.1.1b ELT1: Pie chart for all answers in the inanimate condition

Looking at the charts, another important point to mention is the difference between the numbers of passives in both conditions. There is nearly no difference between the animate and the inanimate conditions in terms of passive voice usage. While the passive percentage is 6% in the animate condition, it is 8% in the inanimate

condition. There is clearly no increase in the number of passives in animate condition.

Table 4.2.1.1b below provides the results of chi-square tests and table 4.2.1.1.c gives the results of odds ratio calculations about the relationship between animacy and passive voice choice:

Table 4.2.1.1b ELT1: animacy/passive chi-square

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,255(b)	1	,614		
Continuity Correction(a)	,069	1	,792		
Likelihood Ratio	,253	1	,615		
Fisher's Exact Test				,636	,393
N of Valid Cases	113				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,96.

Table 4.2.1.1c ELT1: animacy/passive odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	1,273	,498	3,254
For cohort structure = active	1,049	,868	1,267
For cohort structure = passive	,824	,389	1,745
N of Valid Cases	113		

When the number of active and passive responses in the animate and the inanimate conditions are analysed using the chi-square analysis the difference between both conditions turns out to be insignificant ($X^2(1,N)=113=0,255,p>0,05$). In addition to this, an odds ratio of 1.273 is found. This means that when an animate picture is shown to group ELT1 the probability of choosing a passive sentence is 1.273 times more than when an inanimate picture is shown to them. However, as the significance interval for the odds ratio significance interval (0,498-3,254) includes value 1, these results are not significant. The participants of group ELT1 did not use passive sentences more frequently in the animate condition than they did in the inanimate condition.There was no significant effect of animacy on the usage of the passive voice for this group.

4.2.1.2 Group ELT2 (Level-2)

There were 500 data entries for Group ELT2. In the animate condition 4 'no' responses, 115 'other' responses, 101 'active' and 30 'passive' answers were produced. In the inanimate condition 1 'no' response, 81 'other' responses, 134 'active' and 34 'passive' sentences were produced.

Table 4.2.1.2a gives information about the number of answers in the animate and inanimate conditions:

Table 4.2.1.2a ELT2: The number of all answers

	Active	**Passive**	**other**	**no response**
Animate	100	30	115	4
Inanimate	134	34	81	1
TOTAL	**234**	**64**	**196**	**5**

Group ELT2 produced 64 passives in total, which is 13% of the total answers. On the other hand, there were 234 active answers, which is 47% of the total answers. Active sentences are prefered over the passive ones as in the responses of Group ELT1. However, it is possible to argue that the passive usage became more frequent in the level-2 group (13%) compared to the level-1 group (7%) For instance, in the animate condition for a picture depicting "a meteorite hitting a man" (see picture 8 in the

Appendix) some of the descriptions produced by the participants were as the following:

(30)

a. A stone is falling on the man's head. (ACTIVE)

b. He is being threatened by a meteor. (PASSIVE)

c. He is about to die. (OTHER)

In the inanimate condition for a picture depicting "a meteorite hitting a pole" (see picture 4 in the Appendix) such answers were uttered by the participants:

(31)

a. The meteorite is going to break the electric cables. (ACTIVE)

b. Electric Line is being destroyed by a meteorite. (PASSIVE)

c. A meteor is falling. (OTHER)

To analyze the responses of the participants in each condition seperately, the following pie charts were produced:

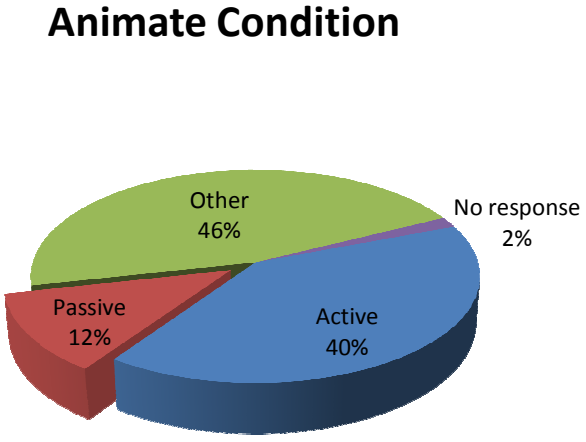


Figure 4.2.1.2a ELT2: Pie chart for all answers in the animate condition

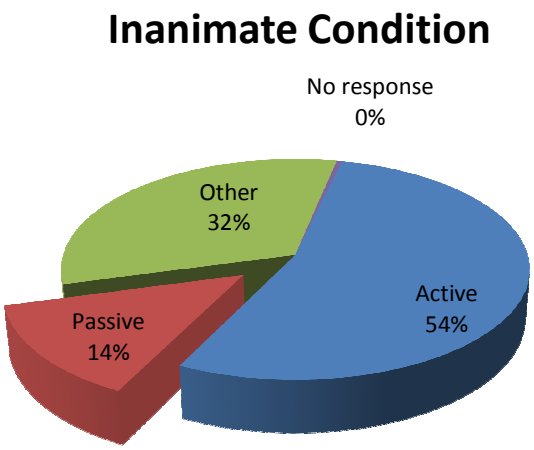


Figure 4.2.1.2b ELT2: Pie chart for all answers in the inanimate condition

As to the use of passive in the animate and inanimate conditions, the result is similar to the one in Group ELT1. There is not an important difference between the number of passives in the two conditions. While the passives are 12% of the total answers in the animate condition, 14% of the total answers in the inanimate condition consist of passive sentences.

Table 4.2.1.2b below gives information about the results of chi-square tests and table 4.2.1.2c presents the results of odds ratio calculations about the relationship between animacy and passive voice:

Table 4.2.1.2b ELT2: animacy/passive chi-square

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,350(b)	1	,554		
Continuity Correction(a)	,202	1	,653		
Likelihood Ratio	,349	1	,555		
Fisher's Exact Test				,572	,326
N of Valid Cases	298				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 27,92.

Table 4.2.1.2c ELT2: animacy/passive odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	1,182	,679	2,060
For cohort structure = active	1,037	,919	1,170
For cohort structure = passive	,877	,568	1,354
N of Valid Cases	298		

The chi-square analysis applied on the results of Group ELT2 in order to find out the relationship between animacy and passive voice suggested that there was not a relationship between voice choice and animacy ($X^2(1,N=298)=0,350$, $p>0,05$). In addition to this, an odds ratio of 1.182 is found. It means that the possibility of choosing a passive response in the animate condition is 1.182 times more than the possibility of choosing a passive response in the inanimate condition for the participants of Group ELT2. However, as the significance interval (0,678492-

2,059162) incudes value 1, there was no significant effect of animacy on the production of passive voice for L2 English speakers in level-2.

4.2.1.3 Group ELT3 (Level-3)

380 sentences were produced in the animate and inanimate conditions by the participants of Group C. In the animate condition 2 'no' responses, 73 'other' responses, 65 'active' and 50 'passive' entries were recorded. In the inanimate condition 4 'no' responses, 55 'other' responses, 106 'active' and 25 'passive' entries were recorded. For example, in the animate condition a picture depicting "a paper plane hitting a man" (see picture 10 in the Appendix) was described in the following ways by the participants:

(32)

a. The paper plane has just hit the man's chin.(ACTIVE)

b. A man was hit by a paper plane. (PASSIVE)

c. The boy missed the target and hit the man. (OTHER)

In the inanimate condition a picture depicting "a paper plane hitting a vase" (see picture 19 in the Appendix) was described in the following ways:

(33)

a. A paper plane hits the lamp. (ACTIVE)

b. The lamp is about to be knocked down by a paper plane. (PASSIVE)

c. Someone has hit the lamp with a paper plane. (OTHER)

Table 4.2.1.3a lists the numbers of each type of answers given by ELT3 in the animate and inanimate conditions:

Table 4.2.1.3a ELT3: The number of all answers

	active	**passive**	**other**	**no response**
Animate	65	50	73	2
Inanimate	106	25	55	4
TOTAL	**171**	**75**	**128**	**6**

Participants of group ELT3 uttered 75 passive sentences, which is 20% of the all answers. This is a higher percentage then the passive use recorded for ELT1 (7%) and ELT2 (13%) groups. With 20% passives and 45% actives in total, it is possible to claim that participants of Group ELT3 used passive voice frequently.

The pie charts below indicate the difference in the animate and inanimate conditions:

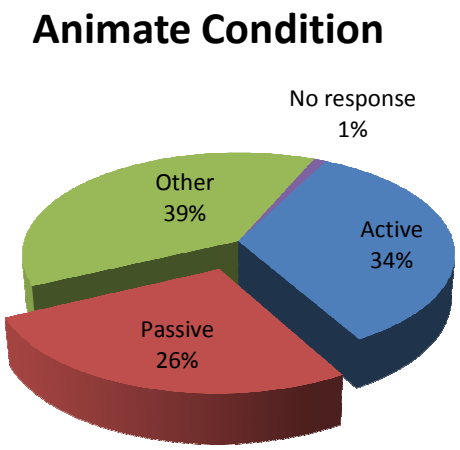


Figure 4.2.1.3a ELT3: Pie chart for all ansers in the animate condition

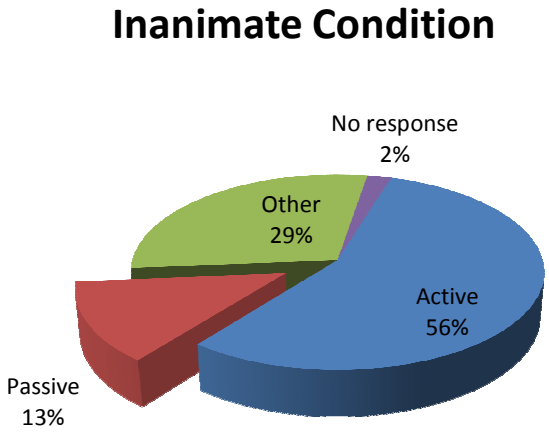


Figure 4.2.1.3b ELT3: Pie chart for all answers in the inanimate condition

While the proportion of passive responses equals 13% in inanimate condition, it equals 26% in animate condition. The percentage of passives in the inanimate graph is half of the percentage of passives in the animate graph. Although the passive percentage increased in animate condition compared to inanimate condition, the active usage decreased in animate condition. 56% of the answers given by Group ELT3 in animate condition were active sentences, but this number decreased to 39% in animate condition.

Table 4.2.1.3b provides the chi-square tests and table 4.2.1.3c portrays the odds ratio statistics found for Group ELT3 concerning the relationship between animacy and passive voice:

Table 4.2.1.3b ELT3: animacy/passive chi-square

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	17,196(b)	1	,000		
Continuity Correction(a)	16,064	1	,000		
Likelihood Ratio	17,380	1	,000		
Fisher's Exact Test				,000	,000
N of Valid Cases	246				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 35,06.

Table 4.2.1.3c ELT3: animacy/passive odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	3,262	1,843	5,772
For cohort structure = active	1,432	1,195	1,715
For cohort structure = passive	,439	,291	,661
N of Valid Cases	246		

The chi-square analysis questioning the effect of animacy on passive voice indicated that there was a significant relationship between animacy and sentence structure choice ($X^2(1,N=264)=17,196$, $p<0,05$). Moreover, an effect size analysis resulted in an odds ratio of 3,261. In other words, the possibility of choosing a passive structure rather than an active one when a picture in the animate condition is shown is 3,261 times more than the possibility found when a picture in the inanimate condition is shown to the participants of Group ELT3. As the significance interval was a value higher than 1(1,842661 ; 5,771067), this result was found to be significant with 95% confidence. According to these results it is possible to say that animacy effected voice choice in Group ELT3.

When the resuts for L2 English groups are evaluated together in terms of animacy and passive voice relation, it is seen that in Group ELT1 and Group ELT2 there was no significant effect of animacy on passive voice. However, in Group ELT3 there was a clear effect of animacy on passive voice. Unlike the level-1 and level-2 L2 English learners' groups, the level-3 group prefered to use passive voice when they came across with an animate patient and an inanimate agent. Thus, for Turkish speakers of L2 English, animacy effect on passive voice appeared above a certain level of L2 proficiency. It was hard to find an animacy effect on the passive voice in the less advanced levels. Animate patient used together with an inanimate agent did not trigger passive usage in level-1 and level-2 groups.

4.2.2 Results for L1 Groups

4.2.2.1 Group ENS (English Native Speakers)

For native English speakers, 140 responses in the animate condition and 140 sentences in the inanimate condition were recorded. In the animate condition 12 'no' responses, 23 'other' responses, 36 'active' and 69 'passive' entries were recorded. In the inanimate condition 8 'no' response, 38 'other' response, 72 'active' and 22 'passive' responses were recorded. For example, in the animate condition for the picture depicting "a lightning striking a golfer" (see picture 16 in the Appendix) some of the sentences produced by the participants can be listed as:

(34)

a. Lightning struck a golfer. (ACTIVE)

b. The golfer is being struck by the lightning. (PASSIVE)

c. Golfer having problems. (OTHER)

In the inanimate condition, for the picture depicting "a lightning striking a house" (see picture 20 in the Appendix) some of the sentences produced by the participants can be listed as:

(35)

a. Lightning is hitting a house. (ACTIVE)

b. The house has just been struck by ligtning. (PASSIVE)

c. A stormy day. (OTHER)

Table 4.2.2.1a gives information about the number of each kind of answers given by Group ENS in the animate and inanimate conditions:

Table 4.2.2.1a ENS: The number of all answers

	active	**passive**	**other**	**no response**
Animate	36	69	23	12
Inanimate	72	22	38	8
TOTAL	**108**	**91**	**61**	**20**

The table above summarizes the number of answers given by Group ENS. An important point worth mentioning about the table is the number of passives used in total. Native English speakers uttered 91 passive sentences in total, which equals to 33% of total answers. This a much higher number compared to Group ELT1, Group ELT2 and Group ELT3, in which these percentages were 7%, 13% and 20% respectively. On the other hand the actives constitute 39% of the total responses in Group ELT3. Looking at the number of active and passive responses in Group ENS, it is possible to suggest that the passive was used almost as frequently as the active by native English speakers and the passive was used most frequently by native English speakers.

There is a notable difference between the number of passives used in the animate and in the inanimate conditions. The following pie charts demonstrate this difference:

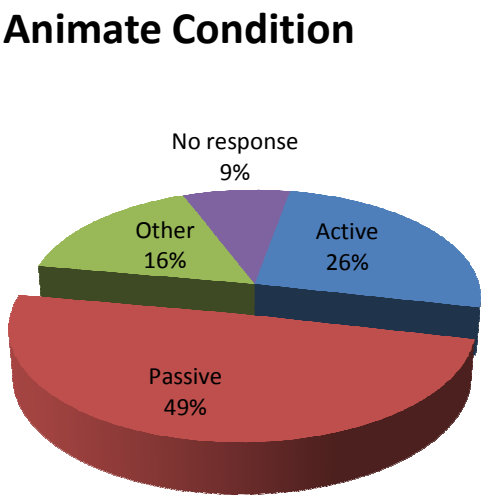


Figure 4.2.2.1a ENS: Pie chart for all answers in the animate condition

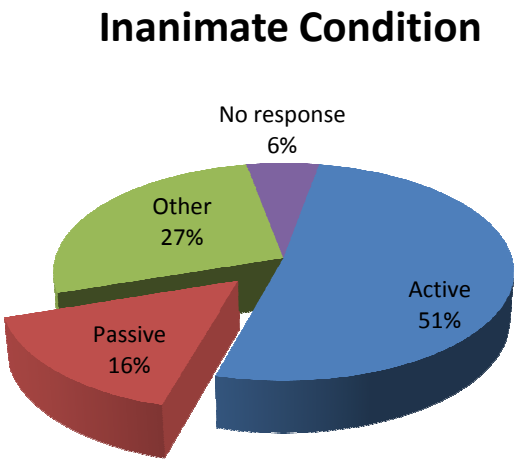


Figure 4.2.2.1b ENS: Pie chart for all answers in the inanimate condition

Although the percentage of passive sentences equals to 16% in the inanimate condition, it equals to 49% in the animate condition. In other words, the percentage of passive responses in the animate condition is three times of the passive percentage in the inanimate condition. That is, when the condition is changed from animate to inanimate a great increase in the number of passive responses was observed in native English speakers group. This increase is larger than all the other groups examined in the study.

Table 4.2.2.1b below portrays the chi-square test results and table 4.2.2.1c lists the odds ratio calculations about the relationship between animacy and passive voice:

Table 4.2.2.1b ENS: animacy/passive chi-square

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	35,776(b)	1	,000		
Continuity Correction(a)	34,091	1	,000		
Likelihood Ratio	37,113	1	,000		
Fisher's Exact Test				,000	,000
N of Valid Cases	199				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 42,98.

Table 4.2.2.1c ENS: animacy/passive odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	6,273	3,358	11,716
For cohort structure = active	2,234	1,676	2,978
For cohort structure = passive	,356	,241	,527
N of Valid Cases	199		

The chi-square analysis indicated that there was a significant relationship between animacy and passive usage ($X^2(1,N=199)=35,776$, $p<0,05$). In addition, an odds ratio of 6,273 was obtained. In other words, with 95% confidence, native English speakers used a passive structure in the animate condition 6,273 times more than they did in the inanimate condition. The odds ratio significance control test supported the findings with a significance interval value higher than 1(3,358406-11,71702). Looking at the statistical analyses it is possible to argue that animacy effected voice

choice in Group ENS. Group ENS chose passive voice more frequently in the animate condition than they did in the inanimate condition.

4.2.2.2 Group TNS (Turkish Native Speakers)

Native Turkish speakers' data was analysed for the effect of animacy on voice choice. 22 'no' responses, 99 'other' responses, 82 'active' and 17 'passive' data were obtained for the animate condition. 45 'no' responses, 62 'other' responses, 100 'active' and 13 'passive' data were obtained for the inanimate condition. For example, in animate condition some of the descriptions given for a picture depicting "a train running over a woman"(see picture 1 in the Appendix) were as the following:

(36)

a. Tren kadın-ı ez-iyor. (ACTIVE)
train woman-ACC run over-PROG
'The train is running over the woman'
b. Kadın tren tarafından ez-il-iyor. (PASSIVE)
woman train by runover-PASS-PROG
'The woman is run over by the train'
c. Kaza ol-uyor. (OTHER)
Accident happen-PROG
'An accident is happening'

In inanimate condition, some of the descriptions given for a picture depicting " a train running over a phone" (see picture 12 in the Appendix) were as the following:

(37)

a. Tren telefon-u ez-iyor. (ACTIVE)
train phone-ACC run over-PROG
'The train is running over the phone'
b. Telefon tren-in alt-ı-nda ez-il-iyor.(PASSIVE)
phone train-GEN sub-3SP-LOC run over-PASS-PROG
'The phone is being run over by the train'
c. Ray-lar-ın üst-ü-nde gid-en bir tren var.(OTHER)
Rail-PLUR-GEN top-3SP-LOC go-REL a train exist.

'There is a train going on the railways.'

Table 4.2.2.2 below gives information about the number of each thype of response given by TNS:

Table 4.2.2.2a TNS: The number of all answers

	active	**passive**	**other**	**no response**
Animate	82	17	99	22
Inanimate	100	13	62	45
TOTAL	**182**	**30**	**161**	**67**

As the table indicates Turkish native speakers uttered 182 active sentences, which correspond to 42% of the total answers. On the other hand, 30 passive sentences were produced in total by Turkish native speakers. This number equals to 7% of the total answers. Moreover, it is interesting that the percentage of passive answers in total in Group ELT1 was 7% also. It seems that like level-1 L2 English speakers, native Turkish speakers also did not use passive voice frequently.

A comparison of active and passive answers in the animate and inanimate conditions is provided in the charts below:

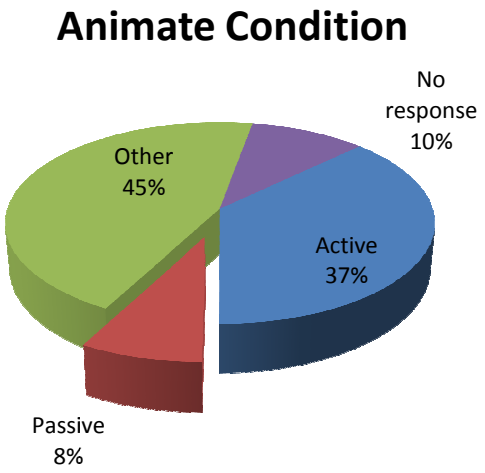


Figure 4.2.2.2a TNS: Pie chart for all answers in the animate condition

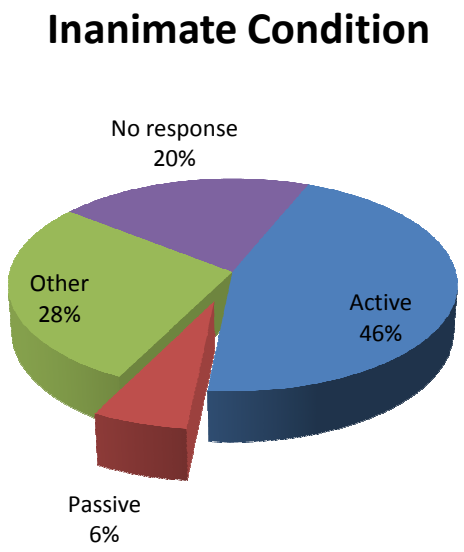


Figure 4.2.2.2b TNS: Pie chart for all answers in the inanimate condition

According to the charts, while the percentage of passive responses in the inanimate condition is 6%, it is 8% in the animate condition. In percentages, the number of passives in both conditions is not very different from each other. In other words, animacy did not result in an increase in the number of the passive sentences produced by Turkish native speakers.

The statistical analyses performed on the answers of Group TNS supports the finding that animacy did not lead to a change in the number of passive responses in Group TNS. Table 4.2.2.2b provides the chi-square tests and table 4.2.2.2c provides the odds ratio findings about the relationship between animacy and the passive:

Table 4.2.2.2b TNS: animacy/passive chi-square

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,395(b)	1	,238		
Continuity Correction(a)	,968	1	,325		
Likelihood Ratio	1,393	1	,238		
Fisher's Exact Test				,245	,163
N of Valid Cases	212				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 14,01.

Table 4.2.2.2c TNS: animacy/passive odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	1,595	,732	3,475
For cohort structure = active	1,068	,956	1,195
For cohort structure = passive	,670	,343	1,309
N of Valid Cases	212		

The chi-square analysis applied on the answers of Group TNS indicated that there was no significant relationship between animacy and passive usage ($X^2(1,N=212)=1,395$, $p>0,05$) In the size effect estimate test the odds ratio was found as 1.595. That is, the possibility of choosing a passive structure in the animate condition is 1.595 times more than the possibility in the inanmiate condition.

However, this result is insignificant statistically as the significance interval includes value 1 (0,731932 -475765). It does not seem possible to mention a significant effect of animacy on passive voice choice for native Turkish speakers.

4.2.3 Summary

To sum up, analyses on animacy effect and passive demonstrated that the results for L2 English groups approached to native English group as the proficiency level increased, but the results for the lower level groups were similar to native Turkish speakers group. Passive voice was not a frequently used structure by Turkish native speakers with only 7% passive sentences in total. In addition to this, there was no significant effect of animacy on passive in native Turkish speakers group. Passive was not a frequently used structure in L2 English groups either. However, as the proficiency level got higher the passive usage ratio in total increased from 7% to 13% and to 20% in Group ELT1, ELT2 and ELT3 respectively. In the same way, although a significant effect of animacy on passive could not be found for the level-1 and level-2 L2 groups, there was a significant effect of animacy on passive in the level-3 group. With a 33% passives in total, passives were uttered most frequently by native English speakers and similar to the English speakers there was a significant effect of animacy on passive in the level-3 L2 English group.

In other words, only in English native speakers and level-3 L2 English groups animacy affected sentence structure choice through voice choice. Such a tendency was not observed in native Turkish speakers and lower level L2 English groups.

4.3 Analyses on Animacy Effect and Word Order

A significant effect of animacy on passive production could not be found for Turkish native speakers. It was hypothesized that animacy could effect word order choice instead of voice choice in Turkish native speakers group due to the fact that Turkish is a free word order language. Animacy effect on word order choice was analysed using chi-square analyses and calculating odds ratios.

The answers of Group TNS were analysed to find out whether there was a relationship between animacy effect and word order choice. Participants of Group

TNS produced 82 active sentences in the animate condition. There were 48 SOV, 33 OSV and 1 SVO active sentences. In the inanimate condition out of 100 active sentences there were 78 SOV and 22 OSV active structures. For instance, in the animate condition for a picture depicting "a tennis racket hitting a man" (see picture 11 in the Appendix) the following sentences were uttered by the participants of group TNS:

(38)

a. Raket adam-ın kafa-sı-na çarp-ıyor. (SOV)
racket man-GEN head-3SP-ACC hit-PROG
'The racket is hitting the man's head.'
b. Adam-ın kafa-sı-na raket düş-müş. (OSV)
man-GEN head-3SP-DAT racket fall-PST
'The racket has fallen on the man's head.'

c. Kadın koca-sı-na sinirlen-miş ve rake-ti
woman husband-3SP-ACC get angry-PST and racket-ACC
koca-sı-na at-mış. (OTHER)
husband-3SP-DAT throw-PST
'The woman got angry with her husband and threw the racket to him'

In inanimate condition for a picture depicting "a tennis racket hitting a vase" (see picture 2 in the Appendix) the following sentences were uttered by Group TNS participants:

(39)

a. Raket vazo-ya vur-uyor. (SOV)
racket vase-DAT hit-PROG
'The racket is hitting the vase'
b. Vazo-ya bir tenis raket-i çarp-ıyor. (OSV)
vase-DAT one tennis racket-3SP hit-PROG
'A tennis racket is hitting the vase'
c. Raket, tenis oyna-yan biri-nin el-i-nden fırla-mış
racket tennis play-REL someone-GEN hand-3SP-ABL fling-PST

ve vazo-yu kır-mış .(OTHER)

and vase-ACC break down-PST.

'The racket flung out of the hands of a person who was playing tennis and broke the vase.'

The number of SOV and OSV word order sentences produced by Group TNS is seen in the table 4.3.1a:

Table 4.3.a TNS: The number of active answers

	OSV	**SOV**	**SVO**
Animate	33	48	1
Inanimate	22	78	-
TOTAL	**55**	**126**	**1**

As the table indicates, native Turkish speakers produced 55 OSV sentences, which equals to 31% of all responses. On the other hand, the same group uttered 126 SOV sentences, which equals to 69% of all responses. Looking at these results it is possible to conclude that SOV was the most frequently used word order by Turkish native speakers. Other than SOV and OSV there was only one SVO sentence.

When the number of OSV sentences and SOV sentences are calculated for animate and inanimate conditions, the effect of animacy on word order will become clear. The division of active sentences in both conditions is demonstrated in the pie charts:

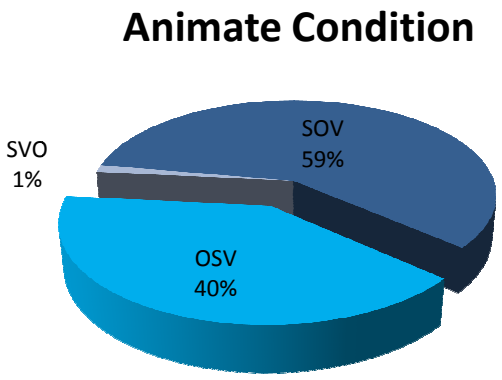


Figure 4.3.a TNS: Pie chart for active answers in the animate condition

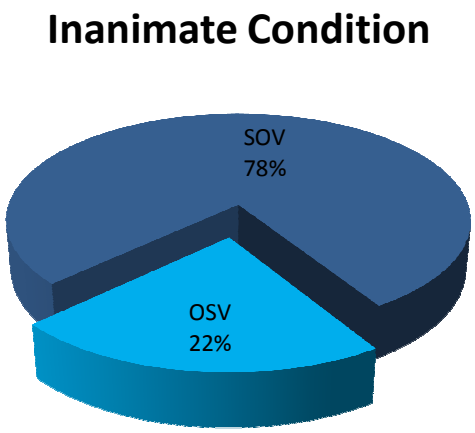


Figure 4.3.b TNS: Pie chart for active answers in the inanimate condition

As seen in the graphs, OSV structures occur in the animate condition more frequently than the inanimate condition. While 22% of all the answers in the inanimate condition are OSV sentences, 40% of the sentences in the inanimate condition have OSV order. Apparently, the animacy of the patient gives rise to the doubling of the number of OSV sentences. In the OSV sentences, the animate object is placed at the beginning of the sentence followed by the inanimate subject.

Table 4.3.1b below gives information about the chi-square tests and table 4.3.1c provides information about the odds ratio calculations concerning the relationship between animacy and word order:

Table 4.3.b TNS: animacy/word order chi-square

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,111(b)	1	,008		
Continuity Correction(a)	6,273	1	,012		
Likelihood Ratio	7,113	1	,008		
Fisher's Exact Test				,009	,006
N of Valid Cases	182				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 24,78.

Table 4.3.c TNS: animacy/word order odds ratio

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for animacy (animate / inanimate)	2,388	1,250	4,560
For cohort wordorder = osv	1,305	1,062	1,604
For cohort wordorder = sov	,547	,347	,860
N of Valid Cases	182		

Testing the significance of these numbers using chi-square analysis, it is found that there was a significant relationship between animacy and word order choice ($X^2(1,N=182)=7,111$, $p<0,05$). Furthermore, calculating the size of effect, an odds ratio of 2.388 was found, which means that with 95% confidence the possibility of choosing the OSV word order in the animate condition was 2.388 times more than

the possibility in the inanimate condition. As the significance interval for the odds ratio does not include value 1, it is possible to say that this is a significant number (1,250321-4,560865). The statistical analysis suggets that the animacy of the patient triggered the use of OSV structures in Group TNS.

To sum up, although a significant effect of animacy on passive could not be found in native Turkish speakers, there was a significant effect of animacy on word order. The percentage of OSV sentences increased from 22% to 40% when the condition changed from inanimate to animate. When Turkish native speakers came across with a picture of an animate patient and an inanimate agent, they prefered to use OSV sentences rather than using passive.

Animacy effect on sentence structure choice in English and Turkish has been questioned in this thesis and it has been found that animacy affect on sentence structure choice is not the same in different levels of L2 English, in L1 English and in L1 Turkish groups. The implications of the research results are discussed in the following section.

CHAPTER V

CONCLUSION

5.1 Presentation

In this chapter first a brief summary of the study is given. Later, results of the study are summarised and discussed. Lastly, implications for foreign language teaching and suggestions for further research are presented.

5.2 Summary

This thesis aimed at finding out the effect of animacy on sentence structure choice in L2 English learners of Turkish. In this respect, animacy effect was studied both in English and Turkish. In an attempt to explain how animacy affects sentence structure choice in L2 the role of native language and proficiency level in L2 were also questioned. To this end, a picture description task was administered to 94 participants consisting of five different groups. These groups were level-1, level-2 and level-3 L2 English speakers of Turkish; native speakers of English; and native speakers of Turkish. There were 16 subjects in ELT1, 25 subjects in ELT2, 19 subjects in ELT3, 14 subjects in ENS and 20 subjects in TNS. All subjects were shown pictures depicting a transitive action taking place between an inanimate agent and an either animate or inanimate patient, and they were asked to describe each picture using one sentence. Participants' answers were evaluated using chi-square analysis and odds ratio calculations to find out whether animacy had an effect on sentence structure choice manipulating voice choice or word order choice.

Chi-square analyses concentrating on animacy effect and sentence structure choice indicated that animacy affected sentence structure choice in L2 English above a certain L2 proficiency level. No effect of animacy was found in the lower proficiency levels. It was hypothesized that participants would tend to use passive

voice more often in the pictures with an animate patient and an inanimate agent than they did in the pictures with an inanimate patient and an inanimate agent, if animacy affected voice choice. The hypothesis turned out to be true in native English and level-3 L2 English groups. Animate patients resulted in more passive voice production in these groups in parallel with the findings of Harris (1978), Dewart (1979), Ferreira (1994) and Prat Sala, Shillcock and Sorace (2000), who found that animacy effect triggered the use of passive voice. However, there was not a significant effect of animacy on voice choice in native Turkish speakers and level-1 and level-2 L2 English groups. In other words, in terms of the effects of animacy on voice choice, Turkish native speakers and lower level L2 English speakers were alike. So, how did animacy effect reflect onto Turkish speakers' speech? Analyses of word order and animacy effect relation suggested a possible answer for this question. Native speakers of Turkish uttered more OSV sentences for the pictures with an animate patient and an inanimate agent than they did for the pictures with an inanimate patient and an inanimate agent. Thus, it is possible to argue that animacy affected word order variation in Turkish native speakers. Turkish native speakers chose using the OSV word order rather than using the passive structure in the animate condition.

Animacy effect on either voice choice or word order choice can be explained in the light of the conceptual accessibility hypothesis. The findings of this thesis revealed a conceptual accessibility effect not only on grammatical subject assignment but also on word order. The results for Turkish native speakers support conceptual accessibility effect on word order as also suggested by Ferreira (1996); Branigan and Feleki (1999) and Prat Sala et al (2000) who, found that conceptual accessibility affected word order in Greek and Spanish. According to the conceptual accessibility effect on word order, more accessible entities, namely animate patients, are expected to precede conceptually less accessible entities, i.e. inanimate agents. This could be a possible answer for why OSV order was used more frequently for the pictures with an animate patient and an inanimate agent rather than for the pictures with an inanimate patient and an inanimate agent. On the other hand, the results for English native speakers and level-3 L2 English speakers of Turkish support conceptual accessibility effect on grammatical subject assignment as suggested by

McDonald et al (1993), Bock and Kelly (1993) and Bock and Warren (1985). According to the conceptual accessibility effect on grammatical subject assignment hypothesis, animate patients are accepted to be more accessible compared to inanimate agents, so they get a higher grammatical function in the sentence formulation. As passive voice is the only option in a rigid word order language enabling the assignment of animate patient to a subject position, English native speakers and level-3 L2 English speakers of Turkish could have preferred to use passive voice for the pictures with an animate patient and an inanimate agent. However, although the fact that animate patients triggered the use of the passive could be explained in terms of an animacy effect on grammatical subject assignment as suggested above, it could also be explained as an effect of animacy on word order. It does not seem possible to differentiate between whether the speakers aimed at bringing the animate patient to a sentence initial position or assigning it a subject position in the sentence while deciding on the usage of the passive. Voice choice could have resulted from either an animacy effect on grammatical subject assignment or an animacy effect on word order. What the results of this thesis suggest is that animate entities are privileged and they would be accessed first either in the functional processing assigning the subject position to the animate entity or in the positional processing bringing the animate entity to the sentence initial position as also suggested by Tanaka (2006) and Branigan et al (2007).

In an attempt to explain the processes underlying animacy effect on sentence structure choice in L2 this thesis mainly investigated the role of L2 learners' proficiency level and native language on sentence structure choice. The results of the study showed that level-3 L2 speakers exhibited animacy effect on voice just like native speakers. This effect was not observed in lower proficiency L2 group subjects. Instead lower proficiency L2 groups exhibited infrequent use of the passive structure. These findings suggest that at lower proficiency levels, subjects are more prone to the effects of native language. As their proficiency level increases, the effect of native language is likely to disappear.We will have more to say on this in the following section.

5.3 Animacy Effect, L2 Proficiency Level, Native Language and Sentence Structure Choice

In order to shed light on the reasons underlying the different reflections of animacy effect on sentence structure choice in English and Turkish the role of L2 proficiency level and native language on sentence structure choice was questioned using an additional chi-square analysis applied on the research data. Group-answer crosstabulation and chi-square analysis were used to find out whether there was a difference between Group ELT1, ELT2 and ELT3 in terms of the structures of the sentences used while describing the pictures. Cross tabulations display the joint distribution of the variables. As cross tabs is a good method to list the results clearly, first cross tabs are produced and then chi-square analysis is conducted on the answers. Table 5.3a portrays the group-answer crosstabulation and table 5.3b provides the chi-square statistics:

Table 5.3a ELT1, ELT2, ELT3: Group-answer crosstabulation

	ACTIVE	***PASSIVE***	***OTHER***	***TOTAL***
ELT1	91	22	189	302
ELT2	234	64	197	495
ELT3	171	75	127	373
TOTAL	496	161	513	1170

Table 5.3b ELT1, ELT2, ELT3: group/answer chi-square

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	69,104[a]	4	,000
Likelihood Ratio	68,638	4	,000
Linear-by-Linear Association	35,349	1	,000
N of Valid Cases	1170		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 41,56.

As $X^2(4, N=1170)=69,104$, $p<0,05$ there was a significant difference between Group ELT1, ELT2 and ELT3 in terms of the answers given. Looking at the fact that the sentence structure choices made by Turkish speakers of L2 English with different proficiency levels were not the same, it can be suggested that proficiency level in L2 could be a factor influencing the speakers' sentence structure choice.

In order to measure the difference between the L2 English groups and the native English group in terms of the answer profiles (active/passive) chi-square analysis was applied on the results. As Cramer's V values indicate the strength of the association between two categorical variables, Cramer's V values were also calculated in the context of the chi-square analysis. Tables 5.3c, 5.3d and 5.3e demonstrate the Cramer's V values for ELT1 and ENS; ELT2 and ENS; ELT3 and ENS respectively:

Table 5.3c ELT1 and ENS: Symmetric Measures Analysis

		Value	Approx. Sig.
Nominal by Nominal	Phi	,435	,000
	Cramer's V	,435	,000
	Contingency Coefficient	,399	,000
N of Valid Cases		562	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Table 5.3d ELT2 and ENS: Symmetric Measures Analysis

		Value	Approx. Sig.
Nominal by Nominal	Phi	,270	,000
	Cramer's V	,270	,000
	Contingency Coefficient	,261	,000
N of Valid Cases		755	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Table 5.3e ELT3 and ENS: Symmetric Measures Analysis

		Value	Approx. Sig.
Nominal by Nominal	Phi	,176	,000
	Cramer's V	,176	,000
	Contingency Coefficient	,173	,000
N of Valid Cases		634	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

When the symmetric measures of L2 English groups and L1 English group are analysed in detail it is seen that there is a relationship between the sentence structure choice and L2 learners' proficiency level. As supported by the statistical analyses participants of L2 groups with different proficiency levels chose to describe the pictures using different answer profiles. It is found that the difference between the native group and the L2 group lessened as the proficiency level of the L2 group increased. Although the difference between Group ENS and Group ELT1 was 0.435, and the difference between Group ENS and Group ELT2 was 0.270, the difference between Group ENS and Group ELT3 was 0.176. When L2 English and L1 English groups' answer profiles were analysed it was seen that in terms of active and passive voice usage in L2 groups level-3 resembled the native English group the most, in that both groups used passive voice frequently. However, level-1 and level-2 L2 English groups preferred to use passive voice rarely like L1 Turkish speakers. It seems to show that at lower proficiency levels L1 affects L2. Also chi-square analysis demonstrated that as the L2 proficiency level got higher the speakers' answer profiles resembled to the answer profiles of the native speakers of the target language. These results hint L1 interference on sentence structure choice in L2. Turkish native speakers could have carried their linguistic tendencies to L2 English. Rare usage of passive voice in L1 Turkish and in lower levels of L2 English groups could be a demonstration of this native language affect. Moreover, as a free word order language Turkish provides many other options other than passive voice usage such as changing the word order from SOV to OSV, if the speaker feels a need to bring the animate patient before the inanimate agent. This would be a possible explanation for why Turkish native speakers preferred to change the word order than the voice of the sentence when they came across with a picture of an animate patient and an inanimate agent. It is possible to argue that they could have carried this linguistic tendency onto L2 English as well, and this could also explain why an animacy effect on voice choice couldn't be found in level-1 and level-2 L2 English speakers.

Another explanation for why animacy affected sentence structure choice in English and Turkish groups is suggested by Odlin (2005). Odlin puts forward the following question: are conceptual factors (e.g. animacy effect) transferred from

native language to second language? Odlin (2005) answers this question giving a description of "conceptual transfer" and "linguistic relativity". Linguistic relativity is described as "the hypothesized influence of language on thought". Odlin argues "such influence might affect either comprehension or production, and such influence could, of course, affect comprehension or production in a second language (or a third, a forth, etc.) ; moreover the influence might be where the L1 is influenced by L2". Odlin describes conceptual transfer as "those cases of linguistic relativity involving, most typically, a second language" and puts forward that learning a foreign language requires attainment of a new perspective in one's existing world view (Odlin, 2005:5). Slobin (1993) also suggested that different languages make certain kinds of meaning more salient than others. He argues that while acquiring a language children develop an L1-specific world view, which will possibly affect acquisition of another language. In parallel with the suggestions of Odlin (2005) and Slobin (1993) a conceptual transfer hypothesis raises the questions, "Is the concept of animacy an attained perspective in L1, and does it affect L2 acquisition?", "Could it be an explanation for why animacy affected sentence structure in different ways in English and in Turkish?" These questions are left open for the time being, but the conceptual transfer hypothesis suggests that there could be a relationship between animacy effect on sentence structure choice and native language.

The Competition model, which is a functionalist model, could also offer possible explanations as to the differences in the way animacy affected sentence structure choice in English and Turkish (Mac Whinney, 2002). Although this is a model focusing on comprehension rather than production, its arguments concerning the role of native language and proficiency level in L2 may provide useful suggestions for this thesis.* The model focuses on the cross linguistic variations in sentence processing and puts forward that sentence processing strategies could be transferred from L1 to L2. It views both first and second language learning as "constructive, data-driven processes that rely not on universals of linguistic structure, but on universals of cognitive structure". It attributes development to learning and

*These sources are only mentioned here, not in Chapter 2, which is restricted to explanations of the effects of animacy on production. This was deemed necessary as the thesis is about production rather than comprehension.

transfer rather than to the principles and parameters of Universal Grammar (MacWhinney, 2002:1). This model mainly focuses on the detection of a series of cues and how the reliability and availability of these cues determine the strength of cues in comprehension.The cues that are highest in reliability and availability are the ones that most strongly control comprehension and which are acquired first during language production. Mac Whinney studies the use of cues in sentence processing in various languages such as Arabic, Bulgarian, Dutch, Chinese, English, French, Hebrew, Hungarian, Russian, Italian or Japanese. The role of cues in identifying the agent and the patient is the main concern of many researches focusing on the Competition Model. Cues to agent-patient relations converge when they indicate a common agent-patient configuration, and they compete when they indicate a different configuration. Su (2001a) explains the competition model giving the following examples:

> In the sentence "the boy hits the balls" there are three surface cues that converge to suggest "the boy" as the agent of the sentence. These cues are word order (the noun preceding the verb is usually identified as the agent in English), verb agreement and noun animacy (an animate noun is more likely to perform an action on an inanimate noun.) However, in the sentence "the kite chases the mouse" the word order cue and animacy cue compete with each other. While the word order cue indicates "the kite" as the agent, the animacy cue indicates "the mouse" as the agent (Su, 2001a: 84).

Mac Whinney has questioned form-function mappings using a sentence interpretation task in different languages. Subjects were asked to find out the agents in the active sentences in which certain cues such as animacy or word order converged or competed. Mac Whinney has concluded that different languages assign different weights to syntactic and semantic cues. For example, while English speakers rely on the word order cue rather than the animacy cue, Chinese speakers rely on the animacy cue rather than the word order cue. The author has pointed out that these sentence processing strategies are transferred from L1 to L2 and learners of a second language carry the weights of these cues from their native language to the target language while interpreting the sentences. MacWhinney (2002) also finds a relationship between L2 learners' proficiency level and the transfer of sentence

processing strategies. He suggests: “the learning of sentence processing cues in a second language is a gradual process. The process begins with L2 cue weight settings that are close to those for L1.Over time, these settings change in the direction of the native speakers’ settings for L2” (MacWhinney, 2002:13) . In parallel with the competition model I-Ru Su (2001b) gave a sentence interpretation task to English native speakers, Chinese native speakers, English learners of L2 Chinese and Chinese learners of L2 English. Su (2001b) found out that although English speakers relied on the word order cue the most, Chinese learners relied on the animacy cue the most. Interestingly, although beginner level Chinese learners of L2 English relied on the animacy cue, advanced learners relied on the word order cue. As the L2 proficiency level got higher, the speakers’ sentence processing strategies resembled the sentence processing strategies used by the native speakers of the target language. The relationship between L2 proficiency level and the sentence processing strategies suggested by the competition model may also account for the differences in the way animacy affected sentence structure choice in different L2 proficiency groups in this thesis. Like the findings of MacWhinney (2002) or Su (2001b) the speakers’ sentence structure choices of L2 English learners of Turkish resembled to the sentence structure choices used by the native speakers of English in this study. Although the competition model focuses on comprehension rather than production as different from this thesis, the explanations it brings to the crosslinguistic variations in sentence processing and its focus on the transfer of these strategies (including animacy) from L1 to L2 could be employed while explaining the differences found in animacy effect on sentence structure choices in English and Turkish in this thesis. The competition model brings forward the following questions: “Do Turkish learners of L2 English transfer language production strategies from their L1 to L2?”, “Does it explain why the way animacy affects sentence structure choice in L2 learners resemble the way it affects sentence structure choice of the target language as the proficiency level gets higher?”. The context of this thesis is not apt to answer these questions, but what the competition model suggests concerning the results of this thesis is that based on the transfer of sentence processing strategies there could be a relationship between animacy effect on sentence structure choice and native language or L2 proficiency level.

The additional chi-square analysis performed within the context of this thesis, the conceptual transfer hypothesis suggested by Odlin (2005) or the Competition Model put forward by (Mac Whinney et al) point out a relationship between animacy effect on sentence structure choice and L2 proficiency level or native language. It is too early to give a clear-cut description of this relationship in this research, but what is clear is that animate entities are privileged in language production and they are accessed first either in functional processing or in positional processing. All in all, the results of this thesis suggest that animacy affects language production both in L1 and L2 either through voice choice or through word order choice and that sentence structure choice in L2 is a complex process in which many different factors such as conceptual factors, native language, or proficiency level in L2 may interact.

5.4 Implications for Foreign Language Teaching

One of the main points attracting the attention of language acquisition researchers trying to find out more efficient ways of teaching a foreign language has been the differences between L1 and L2. The significance of this research in terms of foreign language teaching lies in the fact it questions the effect of animacy on sentence structure comparatively in both English and Turkish. Native Turkish speakers' data, L2 Turkish speakers of English data, and English native speakers' data were analysed in comparison to each other to find out how animacy affects the sentence structure choice made by the speakers of each language. It was thought that there could be a relation between sentence structure choice and animacy of the patient in the sentence. The existence of such an animacy effect in L2 could explain why certain structures (e.g. the passive) are preferred in certain contexts (e.g. animate patient, inanimate agent sentences) by L2 learners and it also sheds light on the processes underlying sentence structure choice in L2 focusing on the interaction between conceptual factors, L2 proficiency level and native language.

In addition to explaining the reasons underlying L2 speakers' sentence structure choices, this research also looks for the ways that could help ESL and EFL teachers to teach some essentials of sentence structure such as word order or passive voice. This study has found that animacy has an effect on sentence structure choice. This information could be employed in the design of course material to be used while

teaching syntactic structures. Especially, having a native language with various word orders, Turkish learners have problems in adapting to a rigid word order language in English classes. The presence of animacy effect on language production could be used in material development, which could make various difficult syntactic structures easier to learn for language learners. In order to find out more information on the effects of animacy on sentence structure choice in L2 and to determine whether this effect could be used in favor of second language teaching, controlled experiments involving the teaching of syntactic structures with animate patients and inanimate agents is necessary. For example, teaching the passive using example sentences with animate patients and inanimate agents may make the production and comprehension of the passive structure easier for the language learners rather than the examples with inanimate patients and animate agents. The priority of the animate entities in parallel with the conceptual accessibility hypothesis seems to be an important factor for material developers which could provide helpful suggestions, if its contribution on material development is studied in more detail.

5.5 Implications for Future Research

This thesis questioned to what extent animacy affected speech production in L2 evaluating English L2 data against English native speakers and Turkish native speakers. During the literature review stage it was seen that there are various studies questioning animacy effect in various languages such as English, Greek, German or Spanish. However, there was no study on the effects of animacy in Turkish. As a free word order language allowing six different word order permutations an animacy effect study on Turkish could provide the researchers focusing on animacy effect with valuable information. This thesis opens the way for animacy studies in Turkish taking the first step. The present study dealt with animacy effect on sentence structure choice in Turkish focusing on the passive and word order especially. Further research should be conducted, which investigates the effect on animacy on other syntactic structures as well.

Furthermore, most of the research on animacy concentrates on L1. However, animacy effect could offer fundamental explanations for L2 as well. Although the competition model makes important suggestions as to the role of animacy in L2,

there is not much research on the role of animacy in L2 production in the literature. Further research can be carried out on animacy effects in L2 production. The study in hand investigates L2 production making use of Turkish and English data. Further research can question animacy effect in L2 production crosslinguistically.

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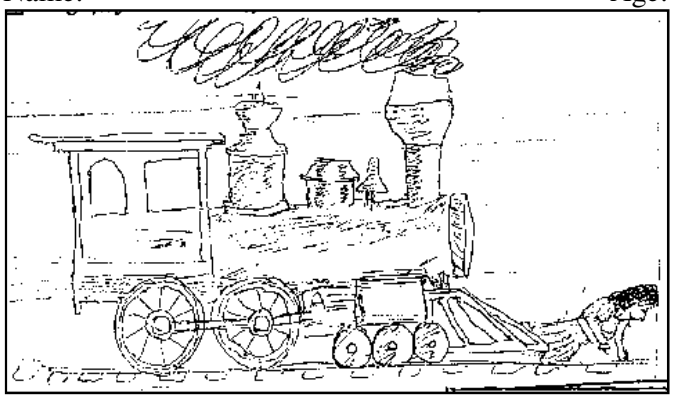
APPENDICES

APPENDIX A

Picture Descripton Task

ANSWER THE QUESTIONS USING ONLY ONE SENTENCE
NO MORE THAN ONE SENTENCE!

Name: Age:



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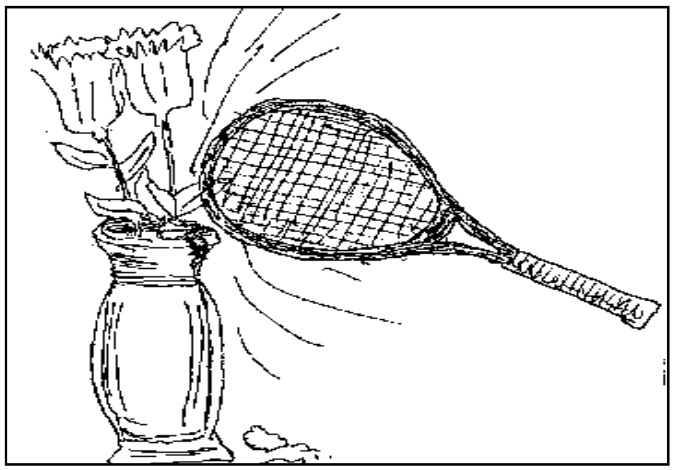

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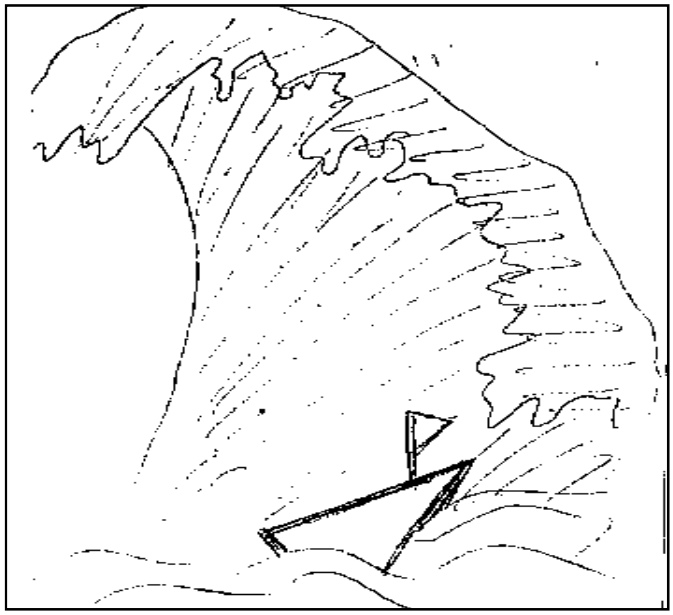

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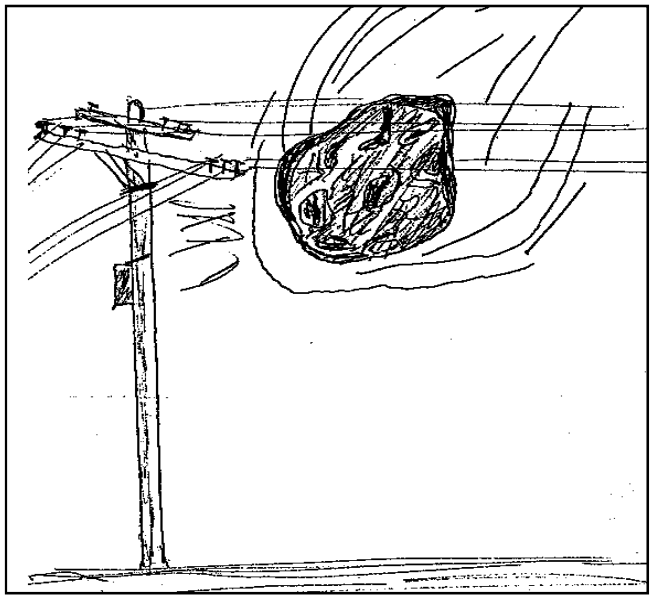

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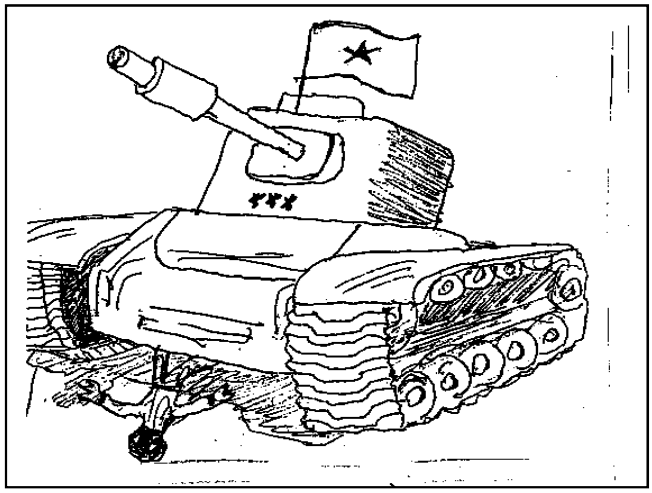

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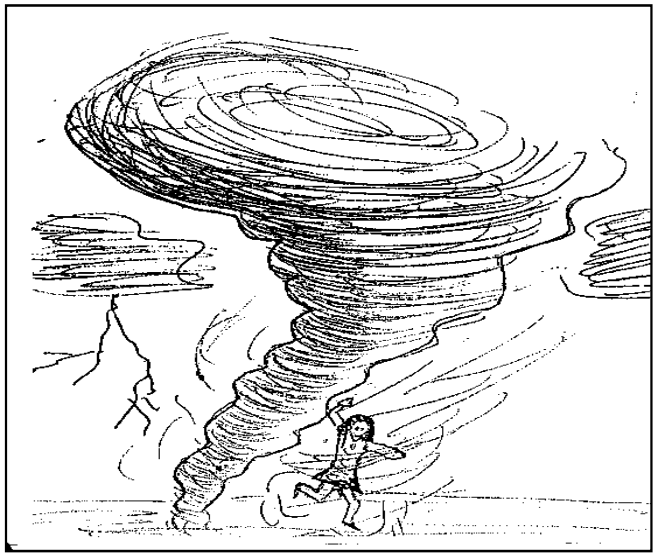

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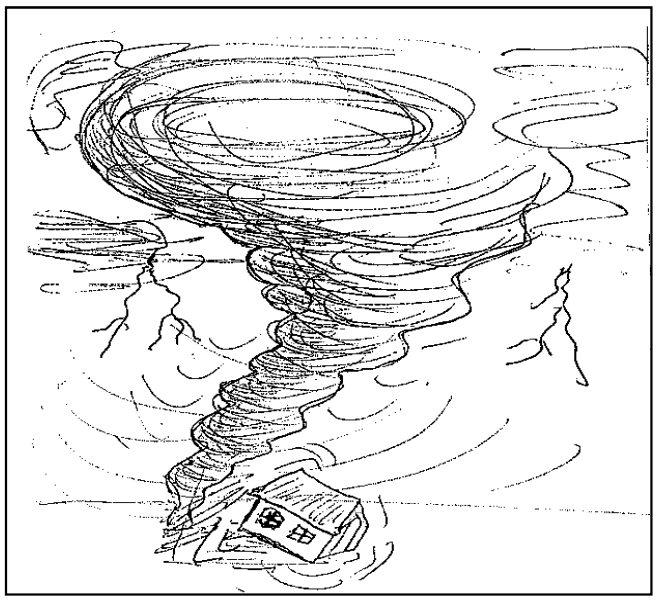

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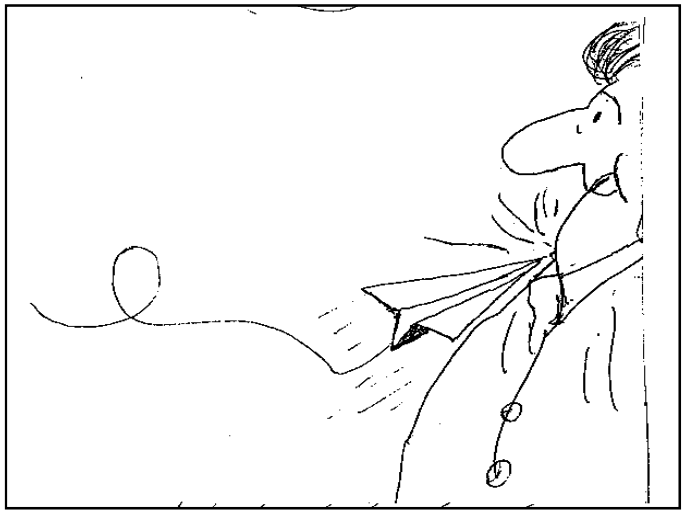

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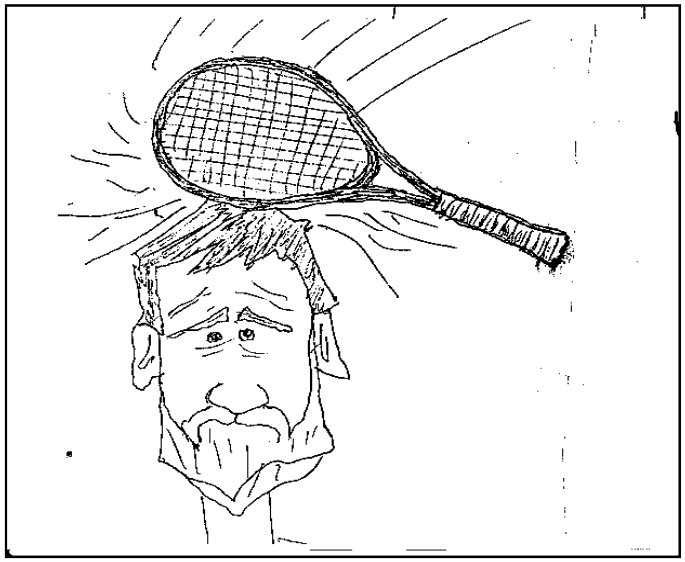

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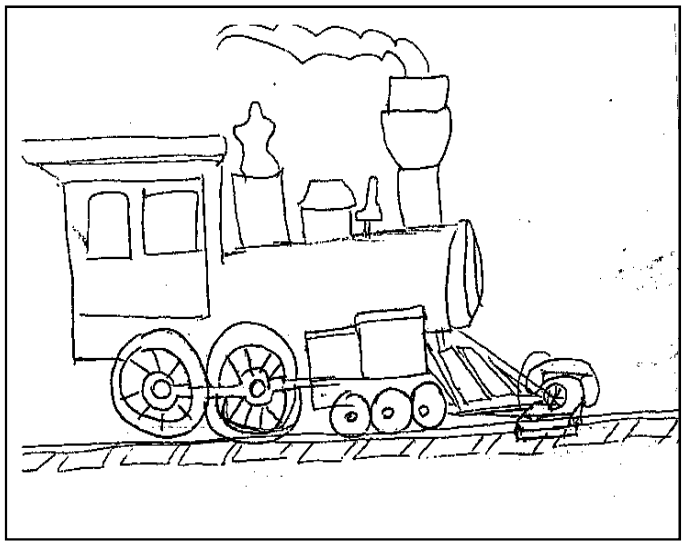

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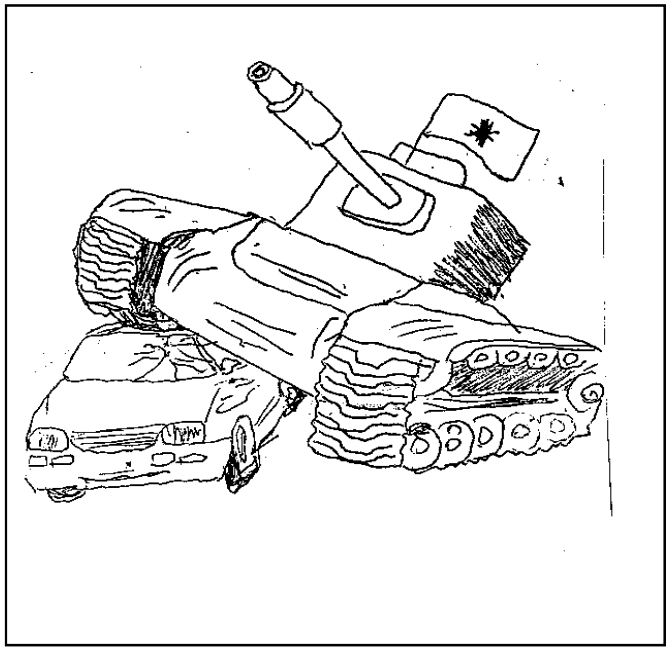

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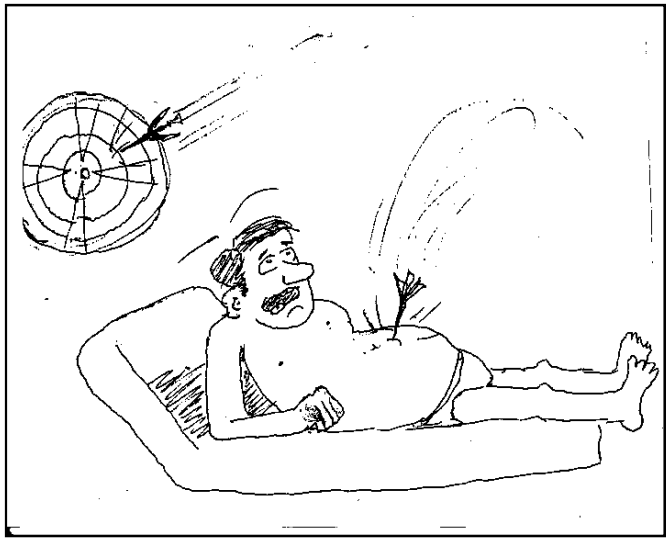

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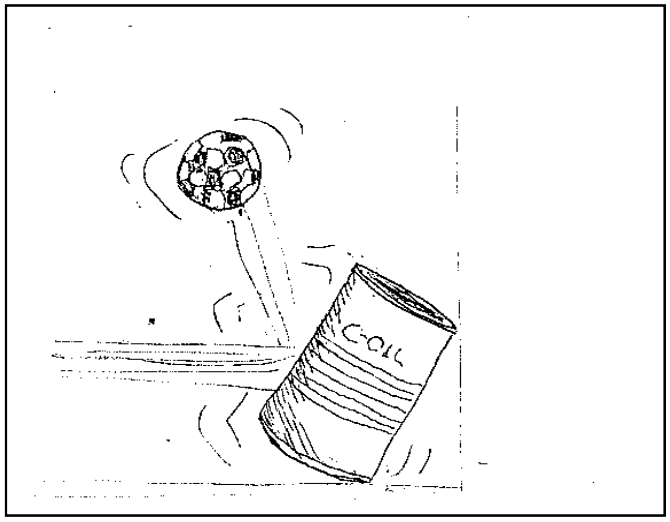
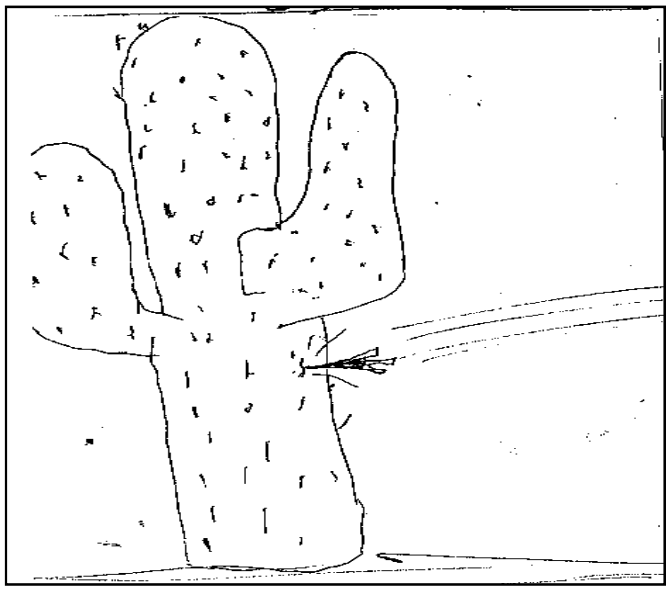


15.What is happening in the picture?

16.What is happening in the picture?

17.What is happening in the picture?



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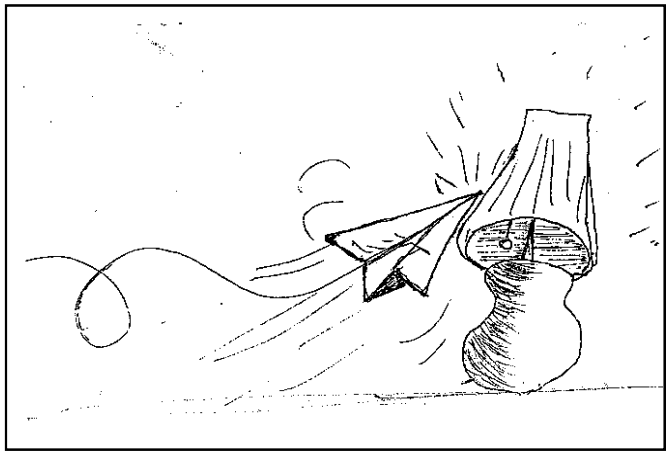

19.What is happening in the picture?

20.What is happening in the picture?