The Logic of Turkish

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Preface

It is a mystery how a young child can learn a language, seemingly without effort, and without any sense of the analysis that adult scholars will use to understand the language.

These notes are an analysis of the majority language of Turkey, made by a native speaker of English. To me, Turkish is remarkable in a number of ways:

1. It is an *inflected* language, like Greek or Latin (or French, as far as verbs are concerned). Turkish nouns are *declined,* and verbs are *conjugated*: a noun or verb from the dictionary takes on various forms when actually in use.
2. However, while Greek is taught as having three *declensions* [32],* and Latin as having five [21], Turkish has only one (see Ch. 5, p. 35).
3. Likewise, while Greek has two *conjugations,* and Latin has four, and French has three [20], Turkish has only one (Ch. 6, p. 42).
4. In Turkish there are no such irregularities as in English, where *am, are, is,* and *were* are understood as forms of *be,* while *went* is a form of *go.*
5. A Latin noun is *feminine* or *masculine,* and a Greek noun may also be *neuter.* Thus Latin and Greek nouns have *gender*; but Turkish nouns have none. English retains three genders in the third-person pronouns *she, he,*

*Bracketed numerals refer to the Bibliography at the end.

and *it*; but Turkish has only one third-person pronoun (p. 19).

6. Beyond inflexion, Turkish has manifold regular ways of building up complex words from simple roots (p. 19).
7. Thus, although much Turkish grammar and vocabulary can be explained through *morphology,* the explanation need not be cluttered up with many paradigms illustrating the various means to the same end.
8. There is no Turkish verb like *have*; possession is indicated by personal suffixes (pp. 25 & 42).
9. Turkish has eight written vowels, like Finnish [17], and their use (in both languages) shows regular variations that correspond to *vowel harmony* in speech (pp. 12 & 20).
10. Turkish has many regular formulas for use in social interactions (Ch. 2, p. 14).

The present document may be of practical value to the visitor to Turkey. It may help the reader puzzle out what a sign or a package label might mean. I assume the reader will be interested in the variety of ways that humans have developed to express themselves in words.

I first visited Turkey in 1998, and I moved here in 2000, joining the mathematics department of Middle East Technical University in Ankara. But the language of instruction there is English. I have used Turkish for communicating with my students only since 2011, when I moved to Istanbul and joined the mathematics department of Mimar Sinan Fine Arts University.

I first learned Turkish from Bengisu Rona's *Turkish in Three Months* [30], and then from Geoffrey Lewis's *Turkish Grammar* [19]. Lewis can be read for literary pleasure. He succeeds in sharing the excitement of the discoveries that he has made

about the uses of Turkish. Although I have benefited from other works too (which are found in the Bibliography), Lewis is the main source for the grammatical analysis that I present. I have however made some adjustments and simplifications to suit my purposes and understanding.

I dedicate this work to the memory of Chaninah Maschler (October 13, 1931—August 7, 2014), my language tutor during my first year at St. John's College (Annapolis & Santa Fe). From her I learned Ancient Greek, and I learned about language itself and the life of inquiry.

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1 Preliminaries

1.1 Origins

Persian is an Indo-European language; Arabic is a Semitic language. Turkish is neither Indo-European nor Semitic, but Turkic. However, Turkish has borrowed many words from Persian and Arabic.

English too has borrowed many words from another language, namely French, but for opposite or complementary reasons. In the eleventh century of the Common Era, in 1066 to be precise, the Normans invaded England, thus making their dialect of French the language of the ruling class. Meanwhile, Seljuk* Turks overran Persia; but rather than imposing their language on the country, they themselves adopted Persian, with its Arabic borrowings, as their administrative and literary language [19, p. xx]. Seljuks under Alp Arslan also invaded Anatolia, defeating the Byzantine Emperor Romanus IV Diogenes in 1071 at the Battle of Manzikert.†

Soon Anatolia was invaded from the west as well. In 1095, in what is now Clermont-Ferrand, Pope Urban II preached the first Crusade. The first Crusaders reached Constantinople (Istanbul) in the following year [31]. Ultimately, from the ruins

*The founder of the Seljuk dynasty is Selçuk in Turkish, but the adjective derived from his name is Selçuklu. See the suffix -l# on p. 23.

†The Turkish name for the town is *Malazgirt*; the order of battle there is shown in an historical atlas [5, p. 38] used by schoolchildren in Turkey.

of the Byzantine and Seljuk Empires, there arose the Osmanlı İmparatorluğu, the Ottoman Empire. Osman himself died as his followers took Bursa in 1326. They went on to take Adrianople (Edirne) in Thrace in 1360, and then Constantinople itself in 1453 [15].

The last Ottoman Sultan was deposed in 1922. The Turkish Republic was declared by Mustafa Kemal, the future Atatürk, in the following year.

Ottoman Turkish freely borrowed words from Persian and Arabic [3]. Many of the borrowings were abolished in the Language Reform, which got going around 1930. As Lewis writes in *The Turkish Language Reform: A Catastrophic Success* [18, p. 2], this reform "could more accurately be termed a revolution than a reform, since 'reform' implies improvement"; and indeed, Language Revolution (Dil Devrimi) is what the transformation is called in Turkish. Some Arabic and Persian words have been retained in the language of the Turkish Republic; others have been replaced, either by neologisms fashioned in supposedly Turkic style, or by borrowings from European languages like French.

1.2 Alphabet

Ottoman Turkish was written in the Arabic or Arabo-Persian alphabet.* Since the Harf Devrimi *Letter Revolution,* culminating in the law "On the Adoption and Application of the New Turkish Letters" of 1928 [18, pp. 27, 37], Turkish has been written in an alphabet derived, like the English alpha-

*The Greek alphabet could also be used, as for example in the inscription on a stone that I once saw in the museum in Milas (the Mylasa mentioned in Herodotus) in the Muğla province of Turkey.

bet, from the Latin alphabet. To obtain the 29-letter Turkish alphabet from the 26-letter English alphabet:

1) throw out (Q, q), (W, w), and (X, x);
2) replace the letter (I, i) with the two letters (I, ı) and (İ, i); and
3) introduce the new letters (Ç, ç), (Ğ, ğ), (Ö, ö), (Ş, ş), (Ü, ü).*

In alphabetical order, the 29 Turkish letters are:

A B C Ç D E F G Ğ H I İ J K L
M N O Ö P R S Ş T U Ü V Y Z.

There are 8 vowels, namely a, e, ı, i, o, ö, u, and ü, and their names are themselves. The remaining 21 letters are consonants. The name of a consonant x is xe, with one exception: ğ is yumuşak ge, *soft g*.

1.3 Pronunciation

Turkish words are spelled as they are spoken. They are *usually* spoken as they are spelled; but some words taken from Persian and Arabic are pronounced in ways that are not fully reflected in spelling.† Except in these loanwords, there is no variation between long and short vowels.‡ There is hardly any variation between stressed and unstressed syllables.

*The dotless ı being hard to read in handwriting, Atatürk wrote it as ɪ̈. This can be seen in samples of his writing in museums.

†This is by design: the alphabet was intended for transcribing "pure" spoken Turkish [36, pp. 189 f.]. However, a circumflex might be used to indicate a peculiarity, or a distinction such as that between the Persian kâr *profit* and the Turkish kar *snow*. Still, the circumflex does not affect the alphabetical order of a word.

‡I shall say presently that ğ lengthens the preceding vowel; but one can think of the extra length as belonging to the consonant.

<table>
<tr><td rowspan="4">#</td><td>ı</td><td>back</td><td rowspan="2">unround</td><td rowspan="4">close</td></tr>
<tr><td>i</td><td>front</td></tr>
<tr><td>u</td><td>back</td><td rowspan="2">round</td></tr>
<tr><td>ü</td><td>front</td></tr>
<tr><td rowspan="2">@</td><td>a</td><td>back</td><td rowspan="2">unround</td><td rowspan="4">open</td></tr>
<tr><td>e</td><td>front</td></tr>
<tr><td colspan="2">o</td><td>back</td><td rowspan="2">round</td></tr>
<tr><td colspan="2">ö</td><td>front</td></tr>
</table>

Figure 1: The vowels

According to their pronunciation, the eight Turkish vowels can be understood as labelling the vertices of a cube. I propose to think of all of the vowels as deviations from the dotless letter ı. As fits its simple written form, ı is pronounced by relaxing the mouth completely, but keeping the teeth nearly clenched: the opening of the mouth can then be conceived of as a sideways ı. The Turkish (unofficial) national drink rakı is *not* pronounced like *rocky*: in the latter word's latter syllable, the tongue is too far forward. Relax the tongue in the latter syllable, letting it fall back; *then* you can properly ask for a glass of rakı.*

The letter ı is the **back, unround, close** vowel. Other vowels deviate from this by being **front, round,** or **open,** as tabulated in Figure 1. Physically, the deviations correspond to movements of the tongue, lips, and jaw, respectively; in the geometric conception of Figure 2, the deviations correspond respectively to movement right, up, and forward. For later discussion of *vowel harmony,* I let # stand for a generic close

*In my experience, Turks who work with tourists may adopt tourists' mispronunciation of rakı.

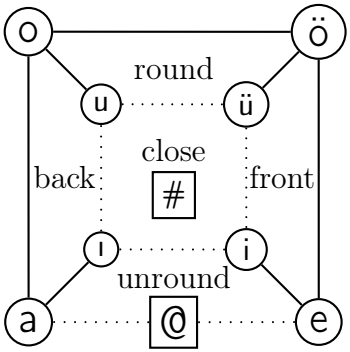

Figure 2: The vowel cube

vowel; @, for a generic unround, open vowel.*

The vowel a is like *uh* in English; ö and ü are as in German, or are like the French *eu* and *u*; and Turkish u is like the English *oŏ* of *put* and *soot.* Diphthongs are obtained by addition of y: so, ay is like the English *ī* of *sky,* and ey is the English *ā* of *state.*†

The consonants that need mention are: c, like English *j;* ç, like English *ch;* ğ, which lengthens the vowel that precedes it (and never begins a word); j, as in French; and ş, like English *sh.* Doubled consonants are held longer: elli *fifty* is different from eli *[somebody]'s hand.*

*I do not know of anybody else who uses this notation. Göksel and Kerslake [11, pp. xxxiii, 22] use capital I and A respectively. According to Lewis [19, I, 34, p. 17], some people write -ler^2, for example, to indicate that there are two possibilies for the vowel; instead, I shall write -l@r. Likewise, instead of -in^4, which has four possibilities, I shall write -#n.

†The English pronunciation symbols here are as in Fowler's scheme: "ā ē ī ō ū o͞o (*mate, mete, mite, mote, mute, moot*), "ă ĕ ĭ ŏ ŭ o͝o (*rack, reck, rick, rock, ruck, root*)" [10, p. iv].

2 Everyday expressions

By learning some of the following, you can impress or amuse Turkish people, or at least avoid embarrassing yourself when trying to open a door or visit the loo.

2.1 Interactions

Lütfen/Teşekkürler *Please/Thanks.*
Bir şey değil *You're welcome, it's nothing* (literally *One thing it-is-not*).
Evet/hayır *Yes/no.* Var/yok *There is/there isn't.*
Affedersiniz *Excuse me.* Af, aff- is from an Arabic verbal noun, meaning *a pardoning;* and edersiniz is the second-person plural or polite aorist form of et- *make.* Turkish makes a lot of verbs with et- this way. For example, thanks is also expressed by Teşekkür ederim *I make a thanking.* Grammatically, affedersiniz is a statement, *You pardon,* and not a command.
Efendim *Madam or Sir.* A polite way to address anybody, including when answering the telephone; the literal meaning is *my effendi,* from the Greek αὐθέντης, whence also English *authentic.*
Beyefendi/Hanımefendi *Sir/Madam.*
Merhaba *Hello.*
Günaydın *Good morning* (literally *Day [is] bright*).
Hoş geldiniz/Hoş bulduk *Welcome*/the response to this (literally *You came well/We found well*).
İyi günler/akşamlar/geceler *Good day/evening/night.* The suf-

fix -lAr makes these expressions formally plural.
Güle güle *Fare well* (literally *[Go] smilingly*). Said to the person who is leaving.
Allaha ısmarladık or Hoşça kalın *Good bye* (literally *To-God we-commended* or *Pleasantly stay*). Said to the person who is staying behind.

2.2 Signs

Bay/Bayan *Mr/Ms,* or *gentlemen's/ladies'* toilet, clothing, &c.
İtiniz/çekiniz *Push/pull* the door. Giriş/çıkış *entrance/exit.*
Sol/sağ *left/right.* Soğuk/sıcak *cold/hot.*

2.3 Pleasantries

Nasılsınız?/İyiyim, teşekkürler; siz?/Ben de iyiyim.
How are you?/I'm fine, thanks; you?/I'm also fine. The second-person forms here are plural or polite; the familiar singular forms are Nasılsın?/. . . sen?
Elinize sağlık *Health to your hand.* This is a standard compliment to a chef, who will reply: Afiyet olsun *May it be healthy.* Anybody may say Afiyet olsun to somebody who is eating, is about to eat, or has finished eating. The closest expression in English is not English, but French: *bon appétit.*
Kolay gelsin *May [your work] come easy.* Said to anybody at work, whether as a friendly acknowledgment or as a prelude to an interruption.
Geçmiş olsun *May [your sickness, difficulty, &c.] have passed* (this can also be said *after* the trouble has passed).
İnşallah *If God wills*: if all goes according to plan.
Maşallah *May God protect from the evil eye.* Used to avoid

jinxing what one praises; also written on vehicles as if to compensate for maniacal driving.
Allah korusun *May God protect.* Also written on vehicles.
Rica ederim *I request* and Estağfurullah can be used with the sense of *I don't deserve such praise!* or *Don't say such [denigrating] things about yourself!* The former is literally *I make a request,* on the pattern of affedersiniz.
Çok yaşayın!/Siz de görün *Live long!/You too see [long life].* The response to a sneeze, and the sneezer's acknowledgement. The familiar forms are Çok yaşa/sen de gör.
Tanrı/tanrıça *god/goddess.* The latter is a neologism derived from the former by use of a Serbo-Croat feminine suffix, on the model of kraliçe *queen* from kral *king* [19, II.1, p. 23].

2.4 Numbers

Sıfır *zero.*

Bir	iki	üç	dört	beş	altı	yedi	sekiz	dokuz
1	2	3	4	5	6	7	8	9.
On	yirmi	otuz	kırk	elli	altmış	yetmiş	seksen	doksan
10	20	30	40	50	60	70	80	90.

Yüz/bin/milyon 100/1000/*million.*
Yüz kırk dokuz milyon beş yüz doksan yedi bin sekiz yüz yetmiş *one hundred forty nine million five hundred ninety seven thousand eight hundred seventy.*

2.5 Comparisons

Büyuk/küçük *large/small.*
Az / en az *less/least.*
Alt/üst *bottom/top.*
Daha/en *more/most.*
Aşağı/yukarı *lower/upper.*
Dış/iç *outside/inside.*

2.6 Verbs

Verbs are given here as *stems* (Ch. 6, p. 42).
Al-/sat-/ver- *take, buy / sell / give.*
Alış/satış/alışveriş *buying/selling/shopping.*
Git-/gel- *go/come.*

İn-	bin-	gir-	çık-
go down, get off	*get on*	*go into*	*go out or up.*

2.7 Colors

Renk *color.*
Kahve *coffee;* portakal *orange;* turunç *bitter orange.*
Kırmızı / portakalrengi, turuncu / sarı *red/orange/yellow.*
yeşil/mavi/mor *green/blue/purple.*
kara, siyah / ak, beyaz / kahverengi *black/white/brown.*

2.8 Interrogatives and demonstratives

O/bu/şu *that / this /* pointed-to (thing).
Ne/kim/kaç? *what / who / how many (or much)?*

Ne zaman	nerede	nereye	nereden	neden	ne kadar?
When	*where*	*whither*	*whence*	*why*	*how much?*
O zaman	orada	oraya	oradan	ondan	o kadar
Then	*there*	*thither*	*thence*	*from that*	*that much.*
Şimdi	burada	buraya	buradan	bundan	bu kadar
now	*here*	*hither*	*hence*	*from this*	*this much.*

Nasıl *how?* (ne + asıl = *what + basis*).
Niçin *why?* (ne + için = *what + for*).
Öyle/böyle/şöyle *Thus / this way / this* indicated *way.*
Şöyle böyle *so-so.*

3 Grammar

3.1 Relatives

The **interrogatives** given above—kim, ne, &c.—also function as rudimentary relatives, at least colloquially:

> Ne zaman gelecekler *When will they come?*
> Bilmiyorum *I don't know.*
> Ne zaman gelecekler bilmiyorum *I dunno when they'll come.*

Such a sentence is an instance of what Lewis calls *asyndetic subordination* [19, Ch. XXI, p. 269]. In precise speech, one says

Ne zaman geleceklerini bilmiyorum,

where

> geleceklerini is a case (§ 5.1, p. 35) of
> gelecekleri, the 3rd-person plural (pp. 24 and 25) of
> gelecek-, the future participle (§ 6.5, p. 46) of
> gel-, the verb listed earlier (p. 17).

Most of the work done in English by relative clauses is thus done in Turkish by verbal adjectives, or participles: *the book that I gave you* in Turkish becomes

size verdiğim kitap:

you-wards given-by-me book, or *the book given to you by me,* where

verdiğim is the 1st-person singular of verdik, the past-present participle of ver-, another verb listed earlier.

3.2 Gender

In Turkish, you can describe somebody for a long time without giving any clue to the sex of the person: there is no grammatical **gender.** Even accomplished Turkish speakers of English confuse *he* and *she.* In Turkish there is a unique third-person singular pronoun, (o, on-), meaning indifferently *he/she/it* (as well as *that* [person or thing]). In translations in these notes, I shall use *he* and *she* alternately; one should remember that *it* may also be an option. (I am using a LaTeX package called `he-she`, by Alan Munn, which allows alternation of gender to be made automatically.)

3.3 Polysyllabism and euphony

Turkish builds up long words from short meaningful units: the language is **agglutinative** or **synthetic.** For example (taken from [30, p. 10]), the question

Avrupalılaştıramadıklarımızdan mısınız?

is written as two words, but pronounced as one, and can be analyzed as a *stem* with 11 *suffixes,* which I number:

Avrupa^{0}lı^{1}la^{2}ş^{3}tır^{4}ama^{5}dık^{6}lar^{7}ımız^{8}dan^{9} mı^{10}sınız^{11}?

The suffixes become mostly separate words in English, in almost reverse order: *Are*^{10} *you*^{11} *one-of*^{9} *those*^{7} *whom*^{6} *we*^{8} *could-not*^{5} Europeanize, that is, *make*^{4} *be*^{2}*come*^{3} *Europe*^{0}*an*^{1}*?*

The numbered correspondence between Turkish and English here is admittedly somewhat strained. The interrogative particle mı strictly corresponds to the *inversion* of *you are* to form *are you.* Also, one might treat -laş as an indivisible suffix.

Each of the suffixes above displays **vowel harmony:** each of its vowels adjusts to harmonize with the preceding vowel, as described below. The interrogative mısınız *are you?* is not written as a suffix, but it still exhibits vowel harmony, and so it is called **enclitic.** If we change *Europeanize* to *Turkify,* the question becomes

Türkleştiremediklerimizden misiniz?

In Avrupalı *European,* I understand the suffix -lı as a specialization of -l#. The last vowel of Avrupa is one of the two back, unround vowels, the other being ı, as in Figure 1 (p. 12); so, when -l# is attached to Avrupa, then #, the generic close vowel, settles down to the close vowel that is back and unround, namely ı.

Likewise, the suffix -laş is a specialization of -l@ş, with a generic unround, open vowel. Since ı is a back vowel, the @ in -l@ş becomes the back unround, open vowel when the suffix is added to Avrupalı *European.*

When the modern Turkish alphabet was invented, something like the "generic" vowels # and @ could have been introduced for use in writing down the harmonizing suffixes. But then the Turkish alphabet would have needed 31 letters, since the distinct "specialized" vowels are still needed for root-words such as the following:

an	*moment*	bal	*honey*	al-	*take, buy*
en	*most, -est*	bel	*waist*	el	*hand*
		bıldırcın	*quail*	ılık	*tepid*
in-	*go down*	bil-	*know*	il	*province*
on	*ten*	bol	*ample*	ol-	*become*
ön	*front*	böl-	*divide*	öl-	*die*
un	*flour*	bul-	*find*	ulaş-	*arrive*
ün	*fame*	bülbül	*nightingale*	üleş-	*share*

There are also non-harmonizing suffixes.

As for consonants, they may change **voice,** depending on phonetic context. In particular, some consonants oscillate within the following pairs:

t/d; p/b; ç/c; k/ğ.

Agglutination or synthesis can be seen on signs posted everywhere. An

indirim (in^{0}dir^{1}im^2)

is an instance^2 of causing^1 to go-down^0, that is, a reduction, a *sale*; you will see the word in shop-windows. From the same root,

inilir (in^{0}il^{1}ir^2)

means *it-is*^{2} *got*^{1} *down-from*^{0}*, it is an exit*: the word may be written at the rear door of city busses, warning you not to enter there. (Instead of a finite verb, inilir can be understood as an *aorist participle,* meaning a thing *descended from,* as on p. 47.)

As the last two examples suggest, not only can one word feature more than one suffix, but many different words can be formed from one root. From the root öl- *die* spring the following words. (The dots indicate syllable divisions and, like the hyphens on verb stems, are not part of normal spelling.)

öl·dür- *kill*
öl·dür·en *killer*
öl·dür·esiye *murderously*
öl·dür·men *executioner*
öl·dür·men·lik *(his post)*
öl·dür·t- *have* (someone) *killed*
öl·dür·ücü *deadly, fatal*
öl·dür·ül- *be killed*
öl·dür·ül·en *murder victim*
öl·esiye *to death*
öl·et (provincial) *plague*
öl·eyaz- *almost die*
öl·gün *lifeless, withered*
öl·gün·lük *lifelessness*
öl·mez *immortal*
öl·mez·leş·tir- *immortalize*
öl·mez·lik *immortality*
öl·müş *dead*
öl·ü *corpse*
öl·ük *deathly looking*
öl·ü·lük *morgue*
öl·üm *death*
öl·üm·cül *mortal*
öl·üm·lü *transitory*
öl·üm·lük *burial money*
öl·üm·lü·lük *mortality*
öl·üm·sü *deathlike*
öl·üm·süz *immortal*
öl·üm·süz·lük *immortality*
öl·ün- (see below).

Actually the words öldürmen, öldürmenlik, and öl·ülük are disused neologisms for cellât, cellâtlık, and morg. The verb ölün- would be *passive,* if öl- were transitive; it is instransitive, so öl·ün- must be *impersonal,* referring to the dying of some generic person; see Chapter 6 and § 7.1.

3.4 Some common suffixes

The following suffixes are used all the time. Three of them have already been seen among the words derived from öl- in the previous section. The meanings of the root-words in the examples below are probably obvious, but they are given later in the Dictionary (Ch. 8, p. 62):

-c# *person involved with*:

kebapçı	*kebab-seller,*
kilitçi	*locksmith,*
balıkçı	*fishmonger,*
dedikoducu	*rumor-monger,*
gazeteci	*journalist or newsagent.*

-c@ *language of*:

Türkçe	*Turkish* (the language of the Turks),
Kürtçe	*Kurdish,*
Ermenice	*Armenian,*
İbranice	*Hebrew,*
Yunanca	*Greek,*
Hollandaca	*Dutch.*

-l#/-s#z *including/excluding*

sütlü/sütsüz	*with/without milk,*
şekerli/şekersiz	*sweetened/sugar-free,*
etli/etsiz	*containing meat/meatless*;
Hollandalı	*Dutch (person),*
köylü	*villager,*
sarılı	*(person) dressed in yellow.*

Somebody who does not wish to confuse ethnicity with nationality will refer to a citizen of Turkey as Türkiyeli rather than the usual Türk.

-l#k *container of, pertaining to*:

tuzluk	*salt cellar,*
kimlik	*identity,*
kitaplık	*bookcase,*
günlük	*daily, diary,*
gecelik	*nightly, nightgown.*

-daş *mate*:

yol/yoldaş	*road/comrade,*
çağ/çağdaş	*era/contemporary,*
meslek/meslektaş	*profession/colleague,*
karın/kardeş	*belly/sibling,*
arka/arkadaş	*back/friend.*

"I am one, sir, that comes to tell you your daughter and the Moor are now making the beast with two backs": thus Iago in Shakespeare's *Othello.* In Turkish, a friend is not necessarily a lover, but is rather somebody with whom you would stand back to back while fending off the enemy. Oddly, there is no vowel harmony in meslektaş or kardeş.

-l@ (makes verbs from nouns and adjectives):

başla-	*make a head (begin),*
kilitle-	*make locked (lock),*
temizle-	*make clean (clean),*
köpekle-	*make like a dog (cringe or dog-paddle).*

The last example is in [19, XIV.22, p. 227] with English meaning *cringe* only.

-l@r *more than one of.* This is not normally used if a definite number is named:

başlar	*heads,*	beş baş	*five head,*
kişiler	*people,*	on iki kişi	*twelve person.*

-#nc# *-th*:

1., birinci	*first, 1st,*
2., ikinci	*second, 2nd,*
3., üçüncü	*third, 3rd,*
kaçıncı	*in which place ("how manyeth")?*
sonuncu	*last.*

Two more suffixes are used with numbers, like -#nc#, though they are not so common as this:

-(ş)@r *(of, for) each*: Birer *one each,*
ikişer *two each,*
kaçar? *how many (much) each?*

-(#)z from a multiple birth: İkiz *twin(s),*
üçüz *triplet(s).*

3.5 More Suffixes

Turkish grammarians distinguish between **constructive** and **inflexional** suffixes (yapım ekleri and çekim ekleri [29, p. 131]). Words with inflexional suffixes do not appear in the dictionary; words with constructive suffixes (usually) do. Of the common suffixes listed in the previous section, -l@r is inflexional, and -c@ may be so (see p. 36).

There are several series of **personal** inflexional suffixes; they are in Figure 3, with the personal pronouns for comparison. The **plural** ending -l@r (p. 24) combines with the third-person forms listed in the last column to make

onlar, -l@r#, -l@r, -l@r, -@l@r, -s#nl@r,

respectively; but the distinct plural forms of the third-person endings are not always used.

The four series of suffixes in the last four rows of the table do not seem to be given names elsewhere. Neither have I seen them gathered together with the possession suffixes and the pronouns in this way. For example, Lewis [19] has the pronouns on his page 64, the possession suffixes (which he calls personal suffixes) on his page 37, and the remaining suffixes on his pages 105–6, where they are simply said to be of Types I, II, III, and IV, respectively. The corresponding page numbers for Özkırımlı [29] are 211, 158, and 162; he does use the term

person:	1st		2nd		3rd
number:	sing.	pl.	sing.	pl.	
pronoun	ben	biz	sen	siz	o, on-
possession	-(#)m	-(#)m#z	-(#)n	-(#)n#z	-(s)#
predicative	-(y)#m	-(y)#z	-s#n	-s#n#z	-
verbal	-m	-k	-n	-n#z	-
subjunctive	-(y)@y#m	-(y)@l#m	-(y)@s#n	-(y)@s#n#z	-@
imperative			-	-(y)#n(#z)	-s#n

Figure 3: Personal pronouns and suffixes

possession suffix (iyelik eki), but numbers the other suffixes 1–4.

Second-person plural forms are used politely to address individuals, as in French. In examples below, I use the archaic English second-person singular forms—*thou, thee,* &c.—to translate the corresponding Turkish singular forms.

A **suffix of possession** attaches to a noun to show the person of the *possessor of* the named entity:

kitabım	kitabımız	kitabın	kitabınız	kitabı
my book	*our book*	*thy book*	*your book*	*her book*

A possession suffix does *not* indicate that an entity is a possessor of something else: this job would be done by the *possessive case-ending* (p. 35).

A **predicative suffix** can make a complete sentence: it turns an expression into a predicate whose subject is the person indicated:

kitabım	kitabız	kitapsın	kitapsınız	kitap
I am a book	*we are a book*	*thou art a book*	*you are a book*	*he is a book*

While the example of kitabım is ambiguous, being either a noun or a sentence, examples with nouns ending in vowels are not ambiguous:

ağam *my lord*; ağayım *I am lord.*

Su *water* is an exception, its possessed forms being

suyum, suyumuz, suyun, suyunuz, suyu,

although suyum can also mean *I am water.*

The ending -d#r is also predicative (it derives from an ancient verb-form meaning *she stands* [19, VIII, 3, p. 93]):

Abbas yolcu *Abbas the traveller*;
Yolcudur Abbas *Abbas is a traveller.*

Here Abbas yolcu is a proverbial name for a traveller: see 20, p. 59. See §5.3, p. 37, for the interaction of the plural ending -l@r with the possession suffixes, the predicative suffixes, and -d#r.

Predicative suffixes are also used with some verb-forms. The remaining personal suffixes in Figure 3 are used *only* with verb-forms. See Ch. 6, p. 42.

Nouns are **declined,** roughly as in Latin: they take the **case**-endings discussed in Ch. 5, p. 35. However, a big difference from Latin is that Turkish *adjectives* are *not* inflected to "agree" in any way with the nouns that they modify. Thus, Turkish adjectives as such are indeclinable. The native English speaker may have a jolt upon realizing that, when used as an adjective, the Turkish bu (pp. 17 and 37) is translated by either *this* or *these,* depending on the number of the associated noun.

These as a noun is in Turkish bunlar. In the same way, other Turkish adjectives may be used as nouns, in which case they are declinable, like every noun.

Comparison of adjectives is achieved with the particles daha, en, and az given above on p. 16; these precede adjectives.

3.6 Word order

In a Turkish sentence, the modifier *usually* comes before the modified. This means:

- adjective (used attributively) precedes noun;
- adverb precedes verb;

- object of postposition precedes postposition.

In a sentence,

- subject precedes predicate;
- objects precede verb;
- indirect object precedes direct object.

These are not absolute rules; see for example the sayings numbered 3 and 20 in § 7.1 (p. 57).

4 Ancillary parts of speech

Besides nouns, adjectives, verbs, and pronouns, Turkish has adverbs, conjunctions, particles, and interjections. Such at least are the approximate English names for the Turkish parts of speech listed in Figure 4. Atabay *et al.* [2] use the terms ad, sıfat, belirteç, adıl, ilgeç, bağlaç, ünlem, and eylem, but give the Ottoman terms zarf, edat, rabıt, and nida in footnotes. Özkırımlı [29] gives both modern and Ottoman terms, except rabıt and nida. Redhouse [3] says *conjunction* is not simply rabıt, but rabıt edatı, *i.e. conjoining particle.*

4.1 Conjunctions

Some Turkish **conjunctions** are given in Fig. 5, along with the Boolean connectives used to symbolize them. (My main source for propositional logic in Turkish is Nesin [22].) In the table, de and da are specializations of the enclitic d@; for ise, see Ch. 6, p. 42.

4.2 Interjections

To Turkish **interjections,** Göksel and Kerslake devote a short paragraph [11, 7.1.5, p. 51]; Lewis [19] remarks on individual examples at five places. The enormous *Cambridge Grammar of the English Language* [14], weighing in at 1842 pages, spends one paragraph on English interjections. But Atabay *et al.* [2]

Ottoman	modern	English
isim	ad	*noun*
sıfat	önad	*adjective*
zarf	belirteç	*adverb*
zamir	adıl	*pronoun*
edat	ilgeç	*particle*
rabıt	bağlaç	*conjunction*
nida	ünlem	*interjection*
fiil	eylem	*verb*

Figure 4: Parts of speech

devote almost ten percent of their book to Turkish interjections, mostly by giving literary examples of about forty of them. Those that seem most common in my experience are as follows, with some possible translations of some instances of their use:

E *What's this all about?*
Eh *So-so*
Ay *Ouch*
Of *I'm fed up*
Tu *That's too bad*
Aman *That's terrible*
Eyvah *Oh no*
Haydi *Come on, let's go*
Bravo *Bravo*
Yazık *What a shame*
Yahu *Look here now*
Yaşa *All right, excellent*

4.3 Particles

Among the **particles** may be listed the **postpositions,** which are somewhat like prepositions in English. Some common examples are in Figure 6. They follow their objects instead of preceding them, but they still do work that might otherwise

$\neg A$	A değil	*not* A
$A \wedge B$	A ve B A ile B	A *and* B
	A; B de	A; B *too*
	A ama B A fakat B A ancak B	A *but* B
	hem A hem B	*both* A *and* B
$A \vee B$	A veya B A ya da B	A *or* B
	ya A ya B	*either* A *or* B
$\neg A \wedge \neg B$	ne A ne B	*neither* A *nor* B
$A \rightarrow B$	(eğer) A ise (o zaman) B	*if* A *(then)* B
$A \leftrightarrow B$	A ancak ve ancak B	A *if and only if* B

Figure 5: Connectives and conjunctions

		case of object
gibi	*like*	possessive or bare
kadar	*as far as*	dative
doğru	*towards*	dative
dolayı	*because of*	ablative
göre	*according to*	dative
için	*for*	possessive or bare
ile	*with*	possessive or bare

Figure 6: Postpositions

be done with *cases,* such as are given in Ch. 5, p. 35. Like the object of a Greek or Latin preposition, the object of a Turkish postposition may itself be a case of a noun.

The objects of gibi, için, and ile are possessive when they are pronouns, bare when they are nouns. Also, ile can also be suffixed as -l@ and understood as a case-ending; see p. 36:

onun gibi *like him,*
yağmur yağacak gibi görünüyor *it looks like it will rain,*
benim için *for me,* Türkiye için *for Turkey,*
sizin ile, sizinle *with you.*

A difference from Greek and Latin (and for that matter English) is that some Turkish postpositions themselves may take personal suffixes:

gibisi yok *she has no peer.*

This shows that the classification of words like gibi as postpositions is inadequate. In the *Concise Oxford Turkish Dictionary,*

Alderson and İz define gibi as *The similar; the like. Similar, like. As; as soon as; just as; as though* [1, p. 113]. In an article all about gibi, Van Schaaik interprets the definition just given as meaning that gibi is a noun, postposition, or conjunction [35, p. 1]; he himself argues that gibi should be understood as a *predicate.*

5 Inflexion of nouns

A Turkish noun can take inflexional endings, usually in the following order:

1) the plural ending, -l@r (p. 24);

2) a possession suffix (§ 3.5, p. 25);

3) a case-ending (below);

4) a predicative suffix (§ 3.5, p. 25).

5.1 Declension

The **cases** of Turkish nouns that do *not* have the third-person possession suffix -(s)# are as follows.

1. **Bare.** The dictionary-form of a noun, used for subjects and *indefinite* direct objects.

2. **Clarifying.** In (y)#, for *definite* direct objects.

3. **Dative.** In -(y)@, for indirect objects.

4. **Ablative.** In -d@n, for that *from which.*

5. **Locative.** In -d@, for *place where.*

6. **Possessive.** In -(n)#n.

7. **Relative.** In -c@, with meanings like *according to* or *in the manner of;* one use was given in § 3.4, p. 22.

8. **Instrumental.** In -(#)n, this case is obsolescent, but can be seen in examples like yaz·ın *during the summer* [19, p. 20] and the neologism örneğ·in *for example* [19, p. 195]. The instrumental sense is achieved now with the postposition ile *with,* which can be suffixed as -l@.

For example:

Gül·ler güzel·dir *Roses are beautiful.*
Bana bir gül al *Buy me a rose.*
Gül·ü koparmayın *Don't pick the rose.*
Gül·e/gül·den/gül·de *to/from/on a rose* or *the rose.*
Gül·ün diken·i *Rose's thorn.*
Gül'ce *according to Gül;* çocukça *childishly* or *baby-talk.*
Gül'le Ayşe *Ayşe and Gül;* bıçak·la kes- *cut with a knife.*

The third-person possession suffix -(s)# is followed by -n before the case-endings are added, except for ile:

gülünü, gülüne, gülünden, gülünde, gülünün, gülünce, gülüyle.

The singular personal pronouns from Figure 3 are declined as follows:

1	2	3	4	5	6	7	8
ben	beni	bana	benden	bende	benim	bence	benimle
sen	seni	sana	senden	sende	senin	sence	seninle
o	onu	ona	ondan	onda	onun	onca	onunla

Concerning ben and sen, note that

- they show a vowel change in the dative;

- their possessive forms take the corresponding *possession* suffixes from Table 3 (although the second-person singular possession suffix is the same as the possessive suffix anyway);
- the postposition ile is suffixed to the possessive forms, as in the rule given on p. 33.

The Turkish term for *case* is dur·um *state of affairs.* Turkish names for the cases are (1) yalın durum, then (2) belirtme, (3) yönelme, (4) bulunma, (5) çıkma, (6) tamlayan, (7) benzerlik durumu, then (8) araçlı durum [29, p. 155]; but some variation is possible. Atabay *et al.* [2, p. 35] give also the Latin terms (1) *nominativus,* (2) *accusativus,* (3) *dativus,* (4) *locativus,* (5) *ablativus,* (6) *determinativus,* and (7) *aequativus* for the first seven; they do not give Özkırımlı's eighth case. Grammarians Demir [6, p. 120] and Lewis [19, p. 194] do not recognize the seventh case as such.

5.2 Demonstratives

The third-person pronoun o/on- is also the demonstrative adjective *that,* as indicated on p. 17; other demonstratives are

bu/bun- *this/these*

şu/şun- (for the thing pointed to).

See also p. 28.

5.3 Two kinds of person

Nouns can indicate *person* in two senses:

1. A possession suffix shows the person of a possessor of the named entity.

gül·üm/gül·ümüz/gül·ün/gül·ünüz *my/our/thy/your rose;*
gül·ü/Deniz'in gül·ü *his rose/Deniz's rose.*

2. A predicative suffix shows the person of the entity itself.

Gül·üm/Gül·üz/Gül·sün/Gül·sünüz
I am/We are/Thou art/You are a rose.

Recall from p. 25 that the plural suffix -l@r combines with

1) the third-person possession suffix -(s)# to make -l@r#,

2) the third-person predicative suffix (which is empty) to make -l@r.

Thus the plural ending -l@r can show multiplicity of three different things:

1) the entity itself:

gül·ler *roses*, gül·ler·i *her roses*;

2) its (third-person) possessor:

gül·ler·i *their rose*;

3) the (third-person) subject of which the entity is predicated:

Gül·ler *They are roses.*

The plural ending will not be repeated. Thus also:

gül·ler·i *their roses.*

Whether -l@r denotes plurality of subject or predicate can be indicated by use of -d@r:

Gül·dür·ler *They are roses*
Gül·ler·dir *They are the roses.*

The four kinds of noun suffixes are used in order in:

Gül·ler·im·de·siniz *You are in my roses.*

5.4 Negation

A sentence made from a noun with a predicative ending is negated with değil; the predicative ending is added to this:

Gül değil·im *I am not a rose, I am not Rose.*
Gül·ler·im·de değil·siniz *You are not in my roses.*

5.5 Annexation

When two nouns are joined, even though the first does not name a possessor of the second, the second tends to take the third-person suffix of possession:

böl·üm *department;*
matematik böl·üm·ü *mathematics department.*

You can see this feature in many names of things:

İş Banka·sı *Business Bank;*
Tekirdağ rakı·sı *Tekirdağ [brand] rakı;*
Eski İmaret Camii *Old Soup-kitchen Mosque.*

The last is a little mosque in Istanbul, off the tourist trail, built in the 11th century as the Church of St Savior Pantepoptes [33, p. 220]. Note that cami is usually construed, as here, as ending in a consonant, albeit a consonant not shown in spelling: the *glottal stop* [19, pp. 7, 31]. Thus we usually have camii rather than camisi.

One does sometimes see camisi instead camii, as for example in Günay's *Guide to the Works of Sinan the Architect in Istanbul* [12]. The English *mosque* shares its ultimate Arabic origin with the Turkish mescit *small mosque* [13, 26], while cami is related, through its Arabic source, to Cuma *Friday.* Thus a cami would appear to be, strictly, a Friday mosque, a mosque where communal Friday prayers are made. This is made explicit in Iran, where a grand mosque may be called *Masjed-e Jameh, Mosque of Friday*; the Turkish would be Cuma Mescidi. Thus Persian and Turkish alike join nouns by adding an ending to the noun being qualified; but then they write the nouns in opposite order. The Persian construction was nonetheless used in Ottoman Turkish and can still be seen in some names, as of the Abide-i Hürriyet *Monument of Liberty* in Şişli, Istanbul, and of the road that runs south from it, Abide-i Hürriyet Cadde·si. The monument commemorates the Constitutional Revolution of 1908 [36, p. 93] and is normally closed to visitors, though I was invited in by the caretaker when I walked up to the gate. It memorializes a progressive development in Turkey that predated Atatürk's rise; but it also contains the last remains of two of the instigators of the Armenian Genocide of 1915, namely Enver and Talât.

On the principles that we are now considering, the modern form of the name ofAbide-i Hürriyet would be hürriyet an·ıt·ı or even özgür·lük anıtı. If the second noun in each combination were made plural, the plural ending would precede the suffix

of possession, as before:

deniz ana·sı, deniz ana·lar·ı *jellyfish,* literally *sea mother(s).*

If the two nouns are written as one word, they may or may not still be treated grammatically as two:

ata·söz·ü *father saying (proverb)*, ata·söz·ler·i *proverbs*;
ayak·kab·ı *foot container (shoe)*, ayak·kab·ı·lar *shoes.*

The word atasözleri appears in the titles of the sources [16, 27, 34] for § 7.1, p. 57.

The possession suffix is not normally repeated:

Türk sözü, Türk atasözü *Turkish saying, Turkish proverb.*

From doğ·um gün·ü *birthday* I have seen the formation Nida'nin doğum günüsü *Nida's birthday* as a grafitto near the Süleymaniye Camii in Istanbul: the correct form is supposed to be Nida'nin doğum günü.

Sometimes two bare nouns are combined without change:

mercimek çorbası or mercimek çorba *lentil soup.*

6 Conjugation of verbs

6.1 Possession and Existence

There is no Turkish verb corresponding to the English *have.* Possession is normally indicated by suffixes of possession (§ 3.5, p. 25). The *existence* of possession, or of anything else, is expressed by the predicative adjective var; non-existence is expressed by yok.

Gül·üm var *My rose exists; I have got a rose.*
Gül·üm yok *I have not got a rose.*

One can also express ownership by means of the noun sahip *owner,* or else the postposition ait *belonging to,* which follows nouns in the dative case:

Gül bana aittir *The Rose belongs to me.*
Gülün sahibi benim *I am the owner of the rose.*

6.2 Verbal nouns

The dictionary-form of a verb is usually the **infinitive,** ending in -m@k; remove this ending, and you have a *stem.* However, not every stem is found in this way; some stems are further analyzable, and they might not be found as part of a dictionary form. We shall consider these in the next section. Meanwhile, there are (at least) two more kinds of verbal noun that may be in the dictionary, with endings

-m@ resembling the *-ing* of the English **gerund,** and

-(y)#ş indicating manner.

So we have

okumak/okuma/okuyuş *to read / reading / way of reading.*

(See also saying 10 on p. 58.) The common stem in the examples is oku-. This is the dictionary-form in one dictionary [3], and I wish it were so in all dictionaries, since then simple verbs would always come before those obtained from them by means of constructive suffixes (§ 3.5, p. 25). I give verbs as stems in this document. (See the Dictionary starting on p. 62.)

6.3 Stems

A finite Turkish verb generally consists of a *simple* stem, followed in order by endings that I shall call

1) *vocal,*
2) *modal,*
3) *characteristic,* and
4) *personal.*

Dictionaries seem to treat the vocal endings, or *voice suffixes* [11, p. 145], as constructive suffixes, while the modal endings are inflexional suffixes. Neither vocal nor modal endings need be present in a verb.

A verb with only vocal or modal endings, and no characteristic and personal endings, is a **stem.** Although stems with modal endings are not found in the dictionary, they can still be made into verbal nouns with -m@k, -m@, or -(y)#ş.

6.3.1 Vocal endings

One or more **vocal endings** may be found in a stem in the following order:

1) **reflexive:** -(#)n;

2) **reciprocal:** -(#)ş;

3) **causative:** -(d)#r or -(#)t or -@r, depending on the verb;

4) **passive** or **impersonal:** -#l or -(#)n.

Two or more causative endings can be used. A reciprocal and a causative ending together make the **repetitive** ending, namely -(#)ş·t#r.

oku·n- *be read,* oku·t- *make* (somebody) *read,*
öl-/öl·dür-/öl·dür·t-/öl·ün- (see § 3.3, p. 21);
sev- *love,* sev·iş- *make love;*
bul- *find,* bul·un- *be;*
ara- *look for,* ara·ş·tır- *do research.*

6.3.2 Modal endings

I call certain endings **modal,** having failed to find better terminology. Lewis groups these endings together [19, p. 155], but does not give them a name. They indicate affirmation, denial, impossibility and the *possibility* of these. Strictly, *lack* of a modal ending indicates affirmation; denial is with -m@; impossibility, -(y)@m@; possibility, -(y)@bil:

oku-	read;
oku·ma-	not read;
oku·yama-	cannot read;
oku·yabil-	can read;
oku·ma·yabil-	may not read;
oku·yama·yabil-	may be unable to read.

Early in the morning in Ankara once, when a taxi driver found out he would be taking me all the way to the airport, he told his friend,

Gelemeyebilirim *Maybe I can't come*

—come, that is, to drink the tea the friend was brewing. An example that I made up is,

At iç·tir·il·eme·yebil·ir·dir
A horse can perhaps not be made to drink.

The modal endings can be analyzed as follows, at least according to Lewis [19, pp. 109, 153 f.]. The suffix -m@ negates; the obsolete verb u- *be able,* negated, becomes the impotential suffix -(y)@m@; the (living) verb bil- *know,* with a buffer, becomes the potential suffix -(y)@bil. But you cannot combine these just as you please; only the six given formations are available. However, there are a few other verbs that can be suffixed as bil- is; one example is yaz- in öl·eyaz- (§ 3.3, p. 21).

Göksel and Kerslake group the suffixable verbs together [11, 8.2.3.2, p. 79], but analyze the impotential suffix -(y)@m@ into two suffixes, -(y)@ and the negating -m@, which they consider separately [11, 8.2.3.1, 8.2.2].

6.4 Verbs from verbal nouns

Again, a simple stem, possibly with vocal and modal endings added, is still a stem. From this, we can make verbal nouns, such as the infinitive and the gerund. Both

- the locative case (in -m@k) of the infinitive, and
- the instrumental case (in -l#, p. 36) of the gerund,

can take predicative endings, thus becoming finite verbs:

Oku·mak·ta·dır *He is engaged in reading*;
Oku·ma·lı *She must read.*

Among Turkish speakers, I have encountered resistence to the analysis of the -m@l# of okumalı as -m@ plus -l#. Göksel and Kerslake [11] present the -m@l# suffix without further analysis. The older Lewis does analyze the suffix [19, VIII.30, p. 126], while noting that, rarely, the gerund with -l# may be a simple adjective: in addition to *he must hang,* asmalı can just mean *vine-covered* [19, X.9, p. 172].

6.5 Verbal adjectives

Also obtained from a stem are five verbal adjectives, or **participles:**

present, in -(y)@n;

future, in -(y)@c@k;

past-present, in -d#k;

past, in -m#ş;

(positive) aorist in -(@)r or -#r.

The aorist is the geniş zaman *broad tense;* see below. Lewis refers to the past-present and the past participles as the di-past and miş-past, respectively, while noting that the former may denote present activity, like *done* in *things done today* as opposed to *things done yesterday* [19, IX.6, p. 164].

Aorist participles with negative or impotential stems are anomalous, so we must speak of the

negative aorist, in -m@z;

impotential aorist, in -(y)@m@z.

A future or past-present participle can take a suffix of possession, indicating the person of the *subject* of the action indicated by the participle:

oku·duğ·um kitap *book that I did read* or *am reading,*
oku·yacağ·ım kitap *book that I shall read.*

Thus a possession suffix indicates, so to speak, the possessor of the action named by the participle. This possessor may be named by a noun in the possessive case:

Gül'ün okuduğu kitap *The book read by Gül.*

The present, past, and aorist participles do not take possession suffixes, except with the usual sense:

gel·en, gid·en *that which comes, that which goes*;
dol·muş *filled, minibus (because it is usually filled)*;
dol·muş·umuz *our minibus*;
ak·ar·su *flowing water, stream*;
say·ıl·abil·ir, say·ıl·amaz *countable, uncountable* [24].

A number of the proverbs in § 7.1, p. 57, feature present participles, often with case-endings.

6.6 Verbs from verbal adjectives

The future, aorist, and past participles can take *predicative* endings, thereby becoming finite verbs. Since the third-person predicative ending is empty, the participles themselves may also be finite verbs:

Oku·yacak *She will read.*
Oku·r *He reads, is a reader.*
Oku·maz *She does not read.*
Oku·yamaz *He is illiterate.*
Oku·muş *She read* [in the past].

Another family of verbs can be understood under this scheme as follows. The verb yürü- *walk* was originally yorı- [26]. We can conceive of this as being suffixable to a verb, just as bil- is (p. 45). Then we should be able to form aorist participles like *sayılayorır, on the pattern of sayılabilir. Thus we would be using a suffix -(y)@yorır on the pattern of -(y)@bilir, that is, -(y)@bil + #r.

It seems that speakers of an ancestor of modern Turkish did this [19, p. 106 f.], but now the suffix -(y)@yorır has been abraded to

-(#)yor.

This ending is not used to make participles as such; but with the predicative endings, it still forms finite verbs, namely verbs of the **present tense:**

okuyorum	*I am reading*	okuyoruz	*we are reading*
okuyorsun	*thou art reading*	okuyorsunuz	*you are reading*
okuyor	*he is reading*	okuyorlar	*they are reading*

Compare with the aorist:

okurum	*I read*	okuruz	*we read*
okursun	*thou readst*	okursunuz	*you read*
okur	*she reads*	okurlar	*they read*

A difference between aorist and present-tense verbs is illustrated in a comment on Turkish driving habits [19, VIII, 25, p. 117]:

Başka memleketlerde kazara öl·ür·ler;
biz kazara yaşı·yor·uz.
In other countries they die by accident;
we are living by accident.

The difference between the aorist

anlamam *I am not somebody who understands*

and the present-tense

anlamıyorum *I don't understand at the moment*

is illustrated by Ali Nesin [23]. In 2005, he was selling copies of *Matematik Dünyası* magazine at the Istanbul Book Fair when a man visited the stand, identified himself as a mathematician, said he had heard of the magazine, but declined to buy a copy, saying Ben bunları anlamam *I don't understand these things.* Nesin responds:

> I never saw a mathematician who said anlamam. Many say anlamıyorum, everybody says it, but I never encountered somebody who said, anlamam.

6.7 Pure verbs

A verb without characteristic or personal endings is a *stem* (p. 43); a verb without personal endings is a **base.** Thus a base is a stem plus a characteristic. So far then, from the stem sev- for example, we have the bases

sevmekte, sevmeli,
seven, sevecek, sevdik, sevmiş,
sever, sevmez, sevemez,
seviyor.

Except perhaps the last, all of these are nouns or adjectives, at least in origin, and all take predicative endings.

There are verbs that definitely do not start out as any other part of speech. The subjunctive and imperative endings in Figure 3, p. 26, attach directly to stems, without a characteristic. The second- and third-person subjunctives are rarely seen, and the first-person subjunctive has the effect of an imperative. Since there are no official first-person imperative endings, it may be useful to combine the subjunctive and imperative endings into one series of verbs that are imperative (or perhaps optative) in meaning:

seveyim	sevelim	sev/sevin!	sevsin
let me love	*let us love*	*love, thou/you!*	*let him love*

Finally, there are a

definite past tense with characteristic -d#, and a

conditional mood with characteristic -s@.

The personal endings used with these bases are the endings called *verbal* in Figure 3, p. 26.

okudum	*I did read*	okuduk	*we did read*
okudun	*thou didst read*	okudunuz	*you did read*
okudu	*she did read*	okudular	*they did read*

I use the emphatic *I did read* simply because of the ambiguity of the written form of *read* by itself: is it pronounced *rĕd* or *rēd*?)

Oku·sa *If only he would read!*

Roughly, the difference between okumuṣ and okudu is that the latter connotes eyewitness knowledge, the former inference or hearsay. Thus the past in -m#ṣ may be called the **inferential past.**

In practice, a past-tense form need not have a past meaning:

geldim, literally *I came,* may mean *I'm coming right away.*

You can say good-bye to your friend on the telephone with either of

öptüm *I kissed,* öpüyorum *I am kissing [thee].*

The conditional characteristic -s@ appears in the logical form A ise B of Figure 5, p. 32. Here ise is understood as attached to A. It is normally used in compounds, as considered in §6.9. Let us just note here that conditional forms are used to denote *sufficient* conditions, not *necessary* conditions. In the implication $A \to B$,

- A is sufficient for B, and
- B is necessary for A.

In Turkish, it is A that will feature the conditional characteristic, while in French, B would be conditional.

All of the characteristics can now be collected as in Figure 7.

		participle	base
necessitative			-m@l#
present		-@n	-m@kt@
			-#yor
future		-(y)@cak	
aorist	positive	-(@)r, -#r	
	negative	-m@z	
	impotential	-(y)@m@z	
past		-m#ş	
		-d#k	-d#
conditional			-s@
imperative			-

Figure 7: Characteristics of verbs

6.8 Questions

The **interrogative particle** m# (which appeared in § 3.3, p. **??**) precedes the predicative endings, but follows the other personal endings:

Oku·mak·ta mı·yım	*Am I engaged in reading?*
Oku·ma·lı mı·yım	*Must I read?*
Oku·yacak mı·yım	*Am I going to read?*
Oku·r mu·yum	*Do I read?*
Oku·maz mı·yım	*Do I not read?*
Oku·yama·z mıyım	*Can I not read?*
Oku·muş mu·yum	*Did I supposedly read?*
Oku·yor mu·yum	*Am I reading?*
Oku·dum mu	*Did you see me reading?*
Oku·sa·m mı	*Should I read, I wonder?*
Oku·yayım mı	*Shall I read, do you want me to read?*

6.9 Compound tenses

Compound tenses are formed by means of the **defective verb**

i- *be.*

The stem i- takes no vocal or modal endings. It forms no verbal nouns. It *does* form the participle iken, which has a suffixed form -(y)ken and may follow a verb-base:

Gel·ir·ken, bana oyun·cak tren ge·tir·ir mi·sin?
When you come, will you bring me a toy train?

This was said in a cartoon in *Penguen* by a calf to his father, who was trying to explain why he (the bull) was going with the butcher on a long trip from which he would never return.

The stem i- forms the bases i·miş, i·di, and i·se, which can be suffixed as -(y)m#ş, -(y)d#, and -(y)s@. Hence two **compound bases** in i- are formed: i·miş·se and i·di·yse. Verbs in i- are negated with a preceding değil, and "interrogated" (made into questions) with a preceding m#; the değil precedes the m# if both are used. Verbs in i- may be attached to nouns; verbs in i- with simple (not compound) bases may be attached to verb-bases not in i-. Missing forms in i- are supplied by ol- *become.*

Kuş·muş *It was apparently a bird.*
Hayır, uçak·tı *No, it was a plane.*
Uçak ise, niçin uç·mu·yor? *If it is a plane, why is it not flying?*
Uç·acak·tı *It was going to fly.*
Uç·ar·sa, bin·ecek mi·siniz? *If it flies, will you board?*
Çabuk ol! *Be quick!*
Ol·mak ve sahip ol·mak *To be and to be an owner.*

The last example is Turkish title of the French movie *Etre et avoir.*

The sentence

Geçmiş olsun

was listed on p. 15. Formally it is a perfect imperative: *Passed may it be, let it have passed.* The form is useful for translating Euclid. When, in Proposition I.6 of the *Elements* [7], Euclid says

$$\grave{\epsilon}\pi\epsilon\zeta\epsilon\acute{\upsilon}\chi\theta\omega\ \acute{\eta}\ \Delta\Gamma,$$

this is not quite, as Heath would have it [8, p. 7], *Let* $\Delta\Gamma$ *be joined*; it is more like *Suppose* $\Delta\Gamma$ *has already been joined.* This reminds us that Euclid did not have erasable writing

boards like ours; in his lectures (not to mention his completed manuscripts), the diagrams had already been drawn [25, p. 25]. This may not be enough reason to bother with the periphrastic perfect imperative of English; but the Turkish translation is somewhat simpler:

Birleştirilmiş olsun *Let it have been joined* [9],

as opposed to

Birleştirilsin *Let it be joined.*

In any case, as noted on p. 15, Geçmiş olsun may be said of bad things, such as sickness, that are already known to have passed. Perhaps it should be understood as a wish that the bad things should pass even from memory—and not just that they should pass, but that they should *already have passed.*

6.9.1 Subordination

As noted, -(y)ken is used with a verb-base to subordinate the verb. There are various endings used with verb-*stems* that subordinate the verb to another:

- -(y)#nc@ (denotes action just before that of the main verb);
- -(y)#nc@y@ kadar *until —ing;*
- -(y)@ (the ending used in Güle güle, p. 15, Ch. 2);
- -(y)@r@k *by —ing;*
- -m@d@n *without —ing;*
- -m@d@n önce *before —ing;*

- -d#kt@n sonra *after —ing.*

Here are a couple of literary examples given in [2]:

Çiftliğe doğru iste·me·yerek yürüdü.
She walked towards the farm without wanting to.
İlkyazlarla yeniden canlanışı doğanın, kış baş·la·yınca sönmesi.
With spring comes nature's rebirth; with winter, its extinction.

7 Sentences

7.1 Sayings

Various collections of Turkish proverbs are available [16, 27, 34]. The sayings below are taken from these books. Ideally, if a translation is not given (or even if it is), the reader should be able to supply a translation on the basis of the present document. All needed root-words should be in Ch. 8.

1. Bakmakla öğrenilse, köpekler kasap olurdu.
   If learning were done by watching, dogs would be butchers.

2. Bal tutan parmağını yalar.
   The worker takes a share of the goods.

3. Balcının var bal tası; oduncunun var baltası.*
   A honey-seller has a honey-pot; a woodsman has an axe.

4. Bir deli kuyuya taş atmış, kırk akıllı çıkaramamış.

5. Çok yaşayan bilmez, çok gezen bilir.

6. Geç olsun da, güç olmasın.
   Let it be late; just don't let it be difficult.

*Normal word order would be Balcının bal tası var; oduncunun baltası var.

7. Gelen gideni aratır.
   What comes makes you look for what goes. (The new makes you miss the old.)

8. Gönül ferman dinlemez.

9. Görünen köy kılavuz istemez.
   You don't need a weatherman to know which way the wind blows.

10. Her yiğidin bir yoğurt yeyişi vardır.
    Everyone has his own way of doing things.

11. Hocanin dediğini yap, yaptığını yapma.

12. İsteyenin bir yüzü kara, vermeyenin iki yüzü.
    The person who asks for something has a black face, but the person who doesn't give it has two.

13. Kedi uzanamadığı ciğere pis der. (*sour grapes*)

14. Meyvası olan ağacı taşlarlar.

15. Nasihat istersen, tembele iş buyur.
    If you want to hear advice, ask a lazy person to work.

16. Olmaz, olmaz deme, olmaz olmaz.

17. Ölenle ölünmez. *One doesn't die with the dead.*

18. Söz gümüşse, sükût altındır.

19. Üzümü ye, bağını sorma.

20. Yolcudur Abbas, bağlasan durmaz.*
Abbas is a traveller; tie him down, he does not stop.

21. Yuvarlanan taş yosun tutmaz.

7.2 Journalese

One may in theory know all of the grammar presented so far, without being able to make sense of sentences in a newspaper. This section represents my attempt to analyze two such sentences. First, here are (1) one of these sentences, (2) a word-by-word translation, and (3) a proper English translation:

> 1701 numaralı kararda barış gücünün
> bu görevi yerine getirebilmesi için
> Lübnan ordusuna yardımcı olması
> istenirken, söz konusu görevinin
> engellenmeye çalışılması durumunda güç
> kullanabileceği belirtiliyor.
>
> 1701 numbered in-the-decision peace its-forces'
> this duty [*d.o.*] to-its-place to-be-able-to-bring for
> Lebanon to-its-army assistant its-being
> while-being-desired, word its-subject duty's
> to-be-impeded [*i.o.*] its-being-worked in-its-state
> force
> that-it-will-be-able-to-be-used it-is-made-clear.
>
> *In the decision numbered 1701, as it is desired*
> *that the peace forces will help the Lebanese army*
> *so that it can fulfill this duty, it is made clear*

*Normal word order would be Abbas yolcudur.

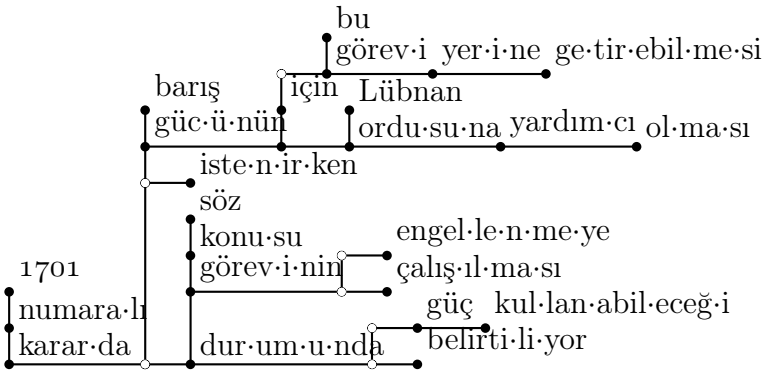

Figure 8: A newspaper sentence, diagrammed

> *that, in case the duty under discussion is being hindered, force can be used.*

In Figure 8, I diagram the Turkish sentence by the following principles:

1. No two verbs (or forms of verbs) are on the same line.
2. The complements of a verb are on the same line with the verb, or—if they involve verbs themselves—are attached to that line from above.
3. Modifiers of nouns are raised above the nouns.
4. The diagram retains the original word-order.

Another example concerns the electricity that my spouse and I experienced in Ankara before moving to Istanbul. Here I merely embolden all words that are verbs or are derived from verbs:*

> Özellikle işten eve **geliş** saatlerinde

*The sentence is from *Birgün,* November 7, 2006; I didn't record the source of the earlier sentence.

karşılaştıkları kesintilerin "bıktırdığını" söyleyen Ankaralılar, aile bireylerinin evde **olduğu,** bir arada **yemek yediği** saatlerin elektrik **kesintileri** yüzünden karanlıkta **geçirilmesinin** modern şehirlerde eşine az **rastlanılır** bir **durum olduğunu** ifade **etti.**

Especially from-work homewards coming
at-these-hours
encountered by-the-cuts "fed-up-with" saying
Ankarans, family members' at-home being, one
in-an-interval meal eating its-hours' electric cuts
from-their-face in-the-dark being-passed's modern
in-cities to-its-equal little encountered a state
being
expression made.

Saying they are fed up with cuts, experienced especially at the hours of coming home from work, Ankarans indicated that the passing of hours when family members are at home eating a meal together, in the dark because of electricity cuts, was a situation rarely meeting an equal in modern cities.

8 Dictionary

Nouns, adjectives, verbs, and adverbs used elsewhere in these notes (except perhaps Ch. 2) are listed here. For postpositions, see Ch. 4. Verbs are given as stems, with a hyphen. The big Redhouse dictionary [3] lists verbs this way, but with an equal sign (=) in place of a hyphen. Other dictionaries, as [28] or [4], list verbs in their infinitive forms, in -m@k. Forms with constructive suffixes are generally not given below, unless they are anomalous.

ağa *lord*
ağaç *tree*
ak- *flow*
akıl *wisdom*
aile *family*
al- *take, buy*
altın *gold*
an- *think of*
ana, anne *mother*
anla- *understand*
ara *interval*
ara- *look for, call*
arka *back*
as- *hang*
at *horse*
ata *father*
ayak *foot*

bağ 1 *tie, bond*
bağ 2 *vineyard*
bak- *look*
bal *honey*
balık *fish*
balta *axe*
banka *bank*
barış *peace*
baş *head*
belir- *become visible*
bıçak *knife*
bık- *get bored*
bil- *know*
bin- *go up or on*
birey *individual*
birleş- *unite*
böl- *divide*

bul- *find*
buyur- *command*
cadde *road*
cami *mosque*
can *soul, life*
ciğer *liver*
Cuma *Friday*
çabuk *quick, fast*
çağ *era*
çalış- *work*
çiftlik *farm*
çocuk *child*
çorba *soup*
de- *say*
dedikodu *gossip*
deli *mad*
deniz *sea*
devir- *overturn*
diken *thorn*
dil *tongue, language*
dinle- *listen to*
doğ- *be born*
doğa *nature*
dur- *stop*
dünya *world*
engel *obstacle*
eski *old, not new*
eş *match, equal*
et *meat*
et- *make, do*
ev *house, home*
ferman *imperial edict*
gazete *newspaper*
gece *night*
geç *late*
gel- *come*
getir- *bring*
git- *go*
gönül *heart*
gör- *see*
görev *duty*
güç *power*
gül *rose*
gül- *smile, laugh*
gümüş *silver*
gün *day*
hoca *(religious) teacher*
hürriyet *liberty*
iç- *drink, smoke*
ifade *expression*
ilkyaz *spring*
imaret *soup-kitchen (Ottom. hist.)*
iste- *desire, ask for*
iş *work, business*
kap *container*
kar *snow*
kâr *profit*
karanlık *dark*
karar *decision*
karın *belly*
karşıla- *go to meet*
kasap *butcher*
kazara *by chance*

kebap *kebab*
kedi *cat*
kes- *cut*
kılavuz *guide*
kış *winter*
kilit *lock*
kim *who?*
kişi *person*
kitap *book*
konu *topic*
konuş- *speak*
kop- *break off*
koru- *protect*
köpek *dog*
köy *village*
kul *slave*
kullan- *use*
kuş *bird*
kuyu *well*
memleket *native land*
mercimek *lentil*
meslek *profession*
meyva *fruit*
nasihat *advice*
numara *number*
odun *firewood*
oku- *read*
ol- *become, be*
ordu *army*
oyun *game, play*
öğren- *learn*
öğret- *teach*
öl- *die*
örnek *example*
özel *special, private*
özgür *free, not bound*
parmak *finger*
pis *dirty*
rakı *arak*
rastla- *meet by chance*
sahip *owner*
sarı *yellow*
sat- *sell*
say- *count*
sev- *love*
son *end*
sor- *ask (about)*
sön- *die down, go out*
söz *expression, word*
söyle- *say*
sükût *silence*
süt *milk*
şehir *city*
şeker *sugar*
tas *pot*
taş *stone*
tembel *lazy*
temiz *clean*
tren *train*
tut- *hold*
tuz *salt*
uç- *fly*
uza- *get longer*
üzüm *grape*

ver- *give*
yala- *lick*
yap- *make, do*
yardım *aid*
yaşa- *live*
yaz *summer*
yaz- *write*
ye- *eat*
yemek *food*
yeni *new*
yer *ground, place*
yiğit *(brave) young man*
yoğurt *yogurt*
yol *road*
yosun *moss, seaweed*
yumuşa- *become soft*
yuvarla- *roll*
yürü- *walk*
yüz 1 *100*
yüz 2 *face*

Bibliography

[1] A. D. Alderson and Fahir İz, editors. *The Concise Oxford Turkish Dictionary*. Oxford, 1959. Reprinted 1993.

[2] Neşe Atabay, Sevgi Özel, and İbrahim Kutluk. *Sözcök Türleri*. Papatya, İstanbul, 2003.

[3] Robert Avery et al., editors. *New Redhouse Turkish-English Dictionary*. Redhouse Press, İstanbul, 1991.

[4] Serap Bezmez, Richard Blakney, and C. H. Brown, editors. *The Larger Redhouse Portable Dictionary: English-Turkish, Turkish-English*. Redhouse, Istanbul, 1997.

[5] Hüseyin Dağtekin. *Genel Tarih Atlası [General History Atlas]*. İnkilâp, İstanbul, 2000.

[6] Tufan Demir. *Türkçe Dilbilgisi*. Kurmay, Ankara, 2004.

[7] Euclid. *Euclidis Elementa*, volume I of *Euclidis Opera Omnia*. Teubner, Leipzig, 1883. Edited with Latin interpretation by I. L. Heiberg. Books I–IV.

[8] Euclid. *Euclid's Elements*. Green Lion Press, Santa Fe, NM, 2002. All thirteen books complete in one volume. The Thomas L. Heath translation, edited by Dana Densmore.

[9] Euclid. Öğeler*'in 13 Kitabından Birinci Kitap*. Mathematics Department, Mimar Sinan Fine Arts University,

Istanbul, 3rd edition, September 2013. The first of the 13 books of Euclid's Elements. Greek text, with Turkish version by Özer Öztürk & David Pierce.

[10] H. W. Fowler. *A Dictionary of Modern English Usage*. Oxford University Press, London, 1926. Corrected reprint of 1954.

[11] Aslı Göksel and Celia Kerslake. *Turkish: A Comprehensive Grammar*. Routledge, London and New York, 2005.

[12] Reha Günay. *A Guide to the Works of Sinan the Architect in Istanbul*. YEM, Istanbul, July 2006.

[13] T. F. Hoad, editor. *The Concise Oxford Dictionary of English Etymology*. Oxford University Press, Oxford and New York, 1986. Reissued in new covers, 1996.

[14] Rodney Huddleston and Geoffrey K. Pullum. *The Cambridge Grammar of the English Language*. Cambridge University Press, Cambridge, UK, 2002. reprinted 2003.

[15] John Patrick Douglas Balfour, Baron Kinross. *The Ottoman Centuries*. Morrow, New York, 1977.

[16] Sinan Küçük, editor. *Atasözleri ve Deyimler Sözlüğü*. Karaca, Ankara, ⩽2014. TDK'nın yaptığı son değişikliklere uygun olarak hazırlanmıştır.

[17] Terttu Leney. *Finnish*. Teach Yourself, 2003.

[18] Geoffrey Lewis. *The Turkish Language Reform: A Catastrophic Success*. Oxford Linguistics. Oxford University Press, Oxford, 1999. reprinted 2002.

[19] Geoffrey Lewis. *Turkish Grammar*. Oxford University Press, second edition, 2000. First edition 1967.

[20] Librairie Larousse, editor. *Larousse de poche*. Librairie Larousse, Paris, 1979.

[21] James Morwood, editor. *The Pocket Oxford Latin Dictionary*. Oxford University Press, 1995. First edition published 1913 by Routledge & Kegan Paul.

[22] Ali Nesin. *Önermeler Mantığı*. İstanbul Bilgi Üniversitesi Yayınları, 2001.

[23] Ali Nesin. Matematik Dünyası'ndan. *Matematik Dünyası*, page 1, Yaz 2005. `http://www.matematikdunyasi.org/arsiv/PDF/05_3_01_02_GIRIS.pdf`, accessed May 3, 2018.

[24] Ali Nesin. *Sezgisel Kümeler Kuramı*, volume 6 of *Nesin Matematik Köyü Kitaplığı*. Nesin Yayıncılık, İstanbul, 2010. Genişletilmiş 3. Basım.

[25] Reviel Netz. *The Shaping of Deduction in Greek Mathematics*, volume 51 of *Ideas in Context*. Cambridge University Press, Cambridge, 1999. A study in cognitive history.

[26] Sevan Nişanyan. *Sözlerin Soyağacı: Çağdaş Türkçenin Etimolojik Sözlüğü*. Adam Yayınları, İstanbul, 3rd edition, 2007. "The Family Tree of Words: An Etymological Dictionary of Contemporary Turkish." Genişletilmiş gözden geçirilmiş ("expanded and revised").

[27] Emin Özdemir. *Açıklamalı Atasözleri Sözlüğü*. Remzi, İstanbul, 1981. Annotated dictionary of [Turkish] sayings.

[28] Ali Püsküllüoğlu. *Arkadaş Türkçe Sözlüğu.* Arkadaş, Ankara, 2004.

[29] Atilla Özkırımlı. *Türk Dili, Dil ve Anlatım [The Turkish Language, Language, and Expression].* İstanbul Bilgi Üniversitesi Yayınları, 2001. Yaşayan Türkçe Üzerine Bir Deneme [An Essay on Living Turkish].

[30] Bengisu Rona. *Turkish in Three Months.* Hugo's Language Books, 1989.

[31] Steven Runciman. *The First Crusade.* University Press, Cambridge, 1992.

[32] Herbert Weir Smyth. *Greek Grammar.* Harvard University Press, Cambridge, Massachusetts, 1980. Revised by Gordon M. Messing, 1956. Eleventh Printing. Original edition, 1920.

[33] Hilary Sumner-Boyd and John Freely. *Strolling Through Istanbul.* Tauris Parke, 2010. Revised and updated from the 1972 edition.

[34] Ayhan (Ediskun) Türkhan. *Konuşan Deyimler Sözlüğü: Atasözleri ve Söz Gurupları.* Remzi, İstanbul, 1978.

[35] Gerjan van Schaaik. *The Bosphorus papers: Studies in Turkish grammar 1996–1999.* Boğaziçi University Press, Istanbul, 2001.

[36] Erik J. Zürcher. *Turkey: A Modern History.* I.B. Tauris, London, 2005. reprint of the new edition of 2004.