The Logic of Turkish

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0 Introduction

These notes are about the majority language of Turkey. To a native English speaker, such as the writer of these notes, Turkish is remarkable in a number of ways:

1. Turkish is an *inflected* language, like Greek or Latin (or French, as far as verbs are concerned).
2. Unlike Greek and Latin, Turkish has only one way to *decline* a noun.
3. Unlike French, Turkish has only one way to *conjugate* a verb.
4. Beyond mere inflexion, Turkish has manifold regular ways of building up complex words from simple roots.
5. Much Turkish grammar and vocabulary can be explained through *morphology;* but the explanation need not be cluttered up with many paradigms illustrating the several means to the same end.
6. Turkish does, like Finnish, show regular spelling variations that correspond to *vowel harmony* in speech.
7. Turkish has many regular formulas for use in social interactions.

The present notes aim to illustrate or demonstrate these points.

1 Origins

The Persian language is Indo-European; the Arabic language is Semitic. The Turkish language is neither Indo-European nor Semitic. However, Turkish has borrowed many words from Persian and Arabic.

English too has borrowed many words from another language—French—, but for opposite or complementary reasons. In the eleventh century, the Normans invaded England and spread their language there; but Selçuk Turks overran Persia and adopted Persian, with its Arabic borrowings, as their administrative and literary language [4, p. xx]. Selçuks also invaded Anatolia, defeating the Byzantine Emperor in 1071 at the Battle of Manzikert.[1]

More barbarians invaded Anatolia from the west: the Crusaders. Finally, from the ruins of the Byzantine and Selçuk Empires, arose the Ottoman Empire. Ottoman Turkish freely borrowed words from Persian and Arabic [1]. Some Arabic and Persian words have been retained in the language of the Turkish Republic since its founding in 1923; others have been replaced, either by neologisms fashioned in the Turkish style, or by borrowings from European languages like French.

[1] The Turkish name for the town is Malazgirt; the order of battle there is shown in an historical atlas used by schoolchildren in Turkey.

2 Alphabet

Ottoman Turkish was generally[2] written in the Arabic or Arabo-Persian alphabet. Since 1928, Turkish has been written in an alphabet derived from the Latin. To obtain the Turkish from the 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—a, e, ı, i, o, ö, u, 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.*

3 Pronunciation

Turkish words are spelled as they are spoken. They are usually spoken as they are spelled, although some words taken from Persian and Arabic are pronounced in ways that are not fully reflected in spelling.[3] Except in these loanwords, there is no variation between long and short vowels.[4] There is hardly any variation between stressed and unstressed syllables.

According to their pronunciation, the 8 Turkish vowels correspond to the vertices of a cube. I propose to understand all of the vowels as deviations from the dotless letter ı; so I place this vowel at the origin of Cartesian 3-space. 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 will then be like a sideways ı. The Turkish national drink rakı is *not* pronounced like *Rocky:* in the latter syllable of *this,* the tongue is too far forward. Relax the tongue in the latter syllable, letting it fall back; *then* you can 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.** Physically, these deviations correspond to movements of the tongue, lips, and jaw; in my geometric conception, they correspond respectively

[2] However, in the museum in Milas (the Mylasa mentioned in Herodotus) for example, there is a stone with a Turkish inscription in Greek letters.

[3] This is by design: the alphabet was intended for transcribing 'pure' spoken Turkish [10, 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;* but the circumflex does not affect the alphabetical order of a word.

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

#	ı	$(0,0,0)$	back	unround	close
	i	$(1,0,0)$	front		
	u	$(0,1,0)$	back	round	
	ü	$(1,1,0)$	front		
@	a	$(0,0,1)$	back	unround	open
	e	$(1,0,1)$	front		
	o	$(0,1,1)$	back	round	
	ö	$(1,1,1)$	front		

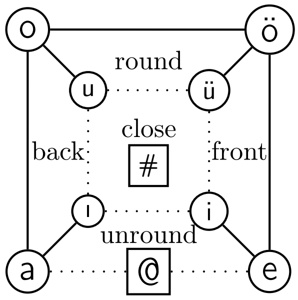

Figure 1: Turkish vowels

to movement in the x-, y-, and z-directions (right, up, and forward). For later discussion of vowel harmony, I let # stand for a generic close vowel; @, for a generic unround, open vowel.[5] See Figure 1.

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 short English *ŏŏ.* Diphthongs are obtained by addition of y: so, ay is English long *ī,* and ey is English long *ā.*

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.* Consonants doubled are held longer.

4 Everyday words and expressions

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

Lütfen/Teşekkürler/Bir şey değil *Please/Thanks/It's nothing.*[6]
Evet/hayır *Yes/no.* Var/yok *There is/there isn't.* Affedersiniz *Excuse me.*[7]
Efendim *Madam or sir*[8] (a polite way to address anybody, including when answering the telephone).
Merhaba *Hello.* Günaydın *Good morning.*[9]

[5] I do not know of anybody else who uses this notation. According to Lewis [4, 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, I shall write -#n.

[6] Literally, *One thing [it is] not.*

[7] Af, aff- is from an Arabic verbal noun, meaning *a pardoning;* and edersiniz is the second-person plural (or polite) aorist (present) 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, not a command; but it is used as a request.

[8] Efendi is from the Greek *αὐθέντης*, whence also English *authentic.*

[9] Literally *Day [is] bright.*

Hoş geldiniz/Hoş bulduk *Welcome*/its response.[10]
İyi günler/akşamlar/geceler *Good day/evening/night.*[11]
Güle güle *Fare well*[12] (said to the person leaving);
Allaha ısmarladık or Hoşça kalın *Good bye*[13] (said to the person staying behind).

Bay/Bayan *Mr/Ms,* or *gentlemen's/ladies'* toilet, clothing, &c.
Beyefendi/Hanımefendi *Sir/Madam.*
İtiniz/çekiniz *Push/pull* the door; giriş/çıkış *entrance/exit;*
sol/sağ *left/right;* soğuk/sıcak *cold/hot.*

Nasılsınız?/İyiyim, teşekkürler; siz?/Ben de iyiyim.
How are you?/I'm fine, thanks; you?/I'm also fine.[14]

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 that I know in English is not English: *bon appétit.*

Kolay gelsin *May [your work] come easy.*
Geçmiş olsun *May [your sickness, difficulty, &c.] be [something that has] passed* (this can also be said *after* the trouble has passed).

İnşallah *If God wills:* that is, 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[15] *I request,* or Estağfurullah, can be used with the sense of *I don't deserve such praise!* or *Don't say such [bad] things about yourself!*
Çok yaşayın!/Siz de görün *Live long!/You too see [long life]* (the response to a sneeze, and the sneezer's acknowledgement[16]).
Tanrı/tanrıça *god/goddess.*

Sıfır, bir, iki, üç, dört, beş, altı, yedi, sekiz, dokuz 0, 1, 2, 3, 4, 5, 6, 7, 8, 9;
on, yirmi, otuz, kırk, elli, altmış, yetmiş, seksen, doksan 10, 20, 30, ..., 90;
yüz, bin, milyon, milyar 10^2, 10^3, $(10^3)^2$, $(10^3)^3$;
yüz kırk dokuz milyon beş yüz doksan yedi bin sekiz yüz yetmiş 149,597,870.

Daha/en *more/most;* az *less,* en az *least.*

Al-/sat-/ver- *take, buy/sell/give;*
alış/satış/alışveriş buying (rate)/selling (rate)/shopping.

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[10] Literally *You came well/We found well.*
[11] The suffix -l@r makes these expressions formally plural.
[12] Literally *[Go] smiling.*
[13] Literally *To-God we-commended* and *Pleasantly stay.*
[14] The second-person forms here are plural or polite; the familier singular forms are Nasılsın?/...sen?
[15] Literally *I make a request;* the same kind of formation as affedersiniz.
[16] The familiar forms are Çok yaşa/sen de gör.

İn-/bin-/gir-/çık *go: down, off/onto/into/out, up;*
aşağı/yukarı *lower/upper;* alt/üst *bottom/top.*

Renk *color;* çay/kahve *tea/coffee;* portakal *orange;* turunç *bitter orange;*
kırmızı/portakalrengi or turuncu/sarı *red/orange/yellow;*
yeşil/mavi/mor *green/blue/purple;*
kara or siyah/ak or beyaz/kahverengi *black/white/brown.*

Kim, ne, ne zaman, nerede, nereye, nereden, niçin, nasıl, kaç, ne kadar?
who, what, when, where, whither, whence, why, how, how many, how much?

5 A bit of grammar

The Turkish **interrogatives** just given—kim, ne, ne zaman, &c.—also function as rudimentary relatives: Ne zaman gelecekler bilmiyorum *I don't know when they will come* (literally *What time come-will-they know-not-I*). But most of the work done in English by relative clauses is done in Turkish by verb-forms, namely 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.*

In Turkish, you can describe somebody for a long time without giving any clue to the sex of that person: there is no **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.* In translations in these notes, I shall use *sie* in place of *he/she,* and *hir* in place of *him/her/his.*

6 Polysyllabism and euphony

Turkish is **agglutinative** or **synthetic.** Written as two words, but pronounced as one, is the question Avrupalılaştıramadıklarımızdan mısınız? This 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 translate mostly as separate words in English, in almost the reverse order: *Are*^{10} *you*^{11} *one-of*^{9} *those*^{7} *whom*^{6} *we*^{8} *could-not*^{5} Europeanize *(make*^{4} *be*^{2}*come*^{3} *Europe*^{0}*an*^{1}*)?* [17]

The **interrogative particle** (with suffix) mısınız in Avrupalılaştıramadıklarımızdan mısınız? is **enclitic:** in particular, it shows **vowel harmony** with the preceding word. Moreover, each suffix in Avrupalılaştıramadıklarımızdan mısınız? harmonizes with the

[17] The numbered correspondence between Turkish and English is somewhat strained here. 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.

preceding syllable. If we change *Europeanize* to *Turkify* in the question, it becomes Türkleştiremediklerimizden misiniz?

In Avrupalı *European,* I understand the suffix -lı as a specialization of -l#. The last vowel of Avrupa is a back, unround vowel; 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. (In the geometrical scheme above, ı is the vowel in the plane $z = 0$ that is closest to $(0, 0, 1)$.)

Likewise, the suffix -laş is a specialization of -l@ş, with a generic unround, open vowel. Since ı is back, the @ becomes the back unround, open vowel in the formation of Avrupalılaş- *become European.*

When the modern Turkish alphabet was invented, something like my '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 (and some non-harmonizing suffixes):

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*

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 all over: An 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; in^{0}il^{1}ir^2 means *is*^{2} *got*^{1} *down-from*^{0}*, is an exit*—it's written at the rear door of city busses.

As the last two examples may suggest, not only can one word feature more than one suffix, but also, many different words can be formed from one root:

öl- *die*	öl·dür·ücü *deadly, fatal*	öl·gün·lük *lifelessness*
öl·dür- *kill*	öl·dür·ül- *be killed*	öl·mez *immortal*
öl·dür·en *killer*	öl·dür·ül·en *murder victim*	öl·mez·leş·tir- *immortalize*
öl·dür·esiye *murderously*	öl·esiye *to death*	öl·mez·lik *immortality*
öl·dür·men[18] *executioner*	öl·et (prov.) *plague*	öl·müş *dead*
öl·dür·men·lik[19] *(his post)*	öl·eyaz- *almost die*	öl·ü *corpse*
öl·dür·t- *have* (s.o.) *killed*	öl·gün *lifeless, withered*	öl·ük *deathly looking*

[18] Disused neologism for cellât.
[19] Disused neologism for cellâtlık.
[20] Disused neologism for morg.

öl·ü·lük[20] *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-[21]

7 Some common suffixes

The meanings of the root-words in the examples here are probably obvious, but they are given later in the Dictionary (§ 14):

-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), Hollandaca *Dutch.*

-l#/-s#z *including/excluding:* sütlü/sütsüz *with/without milk,* şekerli/şekersiz *sweetened/sugar-free,* etli/etsiz *containing meat/meatless;* also Hollandalı *Dutch (person),*[22] köylü *villager,* sarılı *(person) dressed in yellow.*

-l#k *container of* or *pertaining to:* tuzluk *salt cellar,* kimlik *identity,* kitaplık *bookcase,* günlük *daily* or *diary,* gecelik *nightly* or *nightgown.*

-daş *mate:* arka/arkadaş *back/friend,*[23] yol/yoldaş *road/comrade,* çağ/çağdaş *era/contemporary,* karın/kardeş *belly/sibling,*[24] meslek/meslektaş *profession/colleague.*

-l@ (makes verbs from nouns and adjectives): başla- *make a head: begin;* köpekle- *make like a dog: cringe;*[25] kilitle- *make locked: lock;* temizle- *make clean: clean.*

-#nc# *-th:* birinci, ikinci, üçüncü, dördüncü *first, second, third, fourth;* kaçıncı? *in which place? how manyeth?* sonuncu *last.*

-(ş)@r *each:* birer, ikişer *one each, two each;* kaçar? *how many each?*

-(#)z: ikiz, üçüz *twin(s), triplet(s).*

-l@r *more than one of* (not normally used if a definite number is named): başlar *heads;* beş baş: *five head;* kişiler *people;* on iki kişi *twelve person.*

[21] This would be *passive,* if öl- were transitive; öl- is instransitive, so öl·ün- must be *impersonal,* referring to the dying of some generic person. See §§ 11 and 12.

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

[23] "I am one, sir, that comes to tell you your daughter and the Moor are now making the beast with two backs"—Iago in Shakespeare's *Othello.* But 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 with your swords.

[24] That's right, there's no vowel harmony here, nor in the next example.

[25] The example is in [4, XIV, 22, p. 227], but it appears that köpekle- normally means *dog-paddle,* while *cringe* is köpekleş-.

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

Figure 2: Personal pronouns and suffixes

8 Suffixes

Turkish grammarians distinguish between **constructive** and **inflexional** suffixes. Words with inflexional suffixes do not appear in the dictionary; words with constructive suffixes (usually) do. Of the suffixes listed in § 7, only -l@r is inflexional (but for -c@ see § 10).

There are several series of **personal** inflexional suffixes; they are in Figure 2 above, with the personal pronouns for comparison.[26]

The **plural** ending -l@r combines with the third-person forms here to make onlar, -l@r#, -l@r, -l@r, -s#nl@r; but the distinct plural forms of the third-person endings are not always used.

Second-person plural forms are used politely to address individuals, as in French. In examples below, I use 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 *my book;* ağam *my lord.*

The suffix does *not* indicate that this entity *is* a possessor of something else: that job would be done by the *possessive case-ending,* discussed below in § 10.

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

kitabım *I am a book;* ağayım *I am lord.*

The ending -d#r[27] is also predicative in this way, in the third person.

Predicative suffixes are also used with some verb-forms. **Verbal suffixes** are used *only* with verb-forms; likewise for the **imperative suffixes.**

[26] The names in the table are mine.
[27] It derives from an ancient verb-form meaning *sie stands* [4, VIII, 3, p. 93].

$\neg A$	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
$A \to B$	A ise 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 3: Some conjunctions

Nouns are **declined,** roughly as in Latin: they take **case-**endings. Adjectives are *not* inflected to 'agree' in any way with the nouns that they modify. Comparison of adjectives is achieved with the particles daha, en, and az given above, in § 4; these precede adjectives.

9 Parts of speech, and word-order

Besides nouns, pronouns, adjectives, and verbs, Turkish has adverbs, conjunctions, and particles, in particular *postpositions.*

Some Turkish **conjunctions** are given in Fig. 3. (There, de is a specialization of the harmonizing enclitic d@; for ise, see § 11.)

Postpositions are somewhat like prepositions in English: they do some work that might otherwise be done with case-endings. The object of a postposition may be a case of a noun.

> gibi *like,* kadar *as far as,* doğru *towards,* dolayı *because of,*
> göre *according to,* için *for,* ile *with.*

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. But these are not absolute rules.

10 Inflexion of nouns

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

1. the plural ending, -l@r;
2. a suffix of possession;
3. a case-ending;
4. a predicative suffix.

The **cases** of Turkish nouns include

- the **bare**[28] **case,** the dictionary-form of a noun, used for subjects and *indefinite* direct objects;
- the **possessive case,**[29] in -(n)#n;
- the **dative case,** in -(y)@, for indirect objects;
- the **clarifying**[30] **case,** in (y)#, for *definite* direct objects;
- the **ablative case,** in -d@n, for that *from which;*
- the **locative case,** in -d@, for *place where;*
- the **instrumental case,** in -#n, obsolescent, mostly replaced by the locative, or by the postposition ile *with,* which can be suffixed as -l@;
- the **relative**[31] **case,** in -c@, with meanings like *according to* or *in the manner of;* one use was given in § 7.

For example:

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

The singular personal pronouns ben and sen, declined, show a vowel change in the dative:

> ben/benim/bana/beni/benden/bende/benimle/bence

[28]Some say 'nominative'; I'm translating the Turkish term yalın.

[29]The term 'genitive' is used, but some work done by genitive cases in other languages is done by the ablative in Turkish.

[30]Turkish belirtme; the Latin term 'accusative' does not quite fit here.

[31]The Turkish term is görelik *relation,* or else eşitlik *equality.* Some grammarians [8, p. 155] [2, p. 40] treat this as a case; others [3, p. 120] [4, p. 194] don't.

and likewise for sen. The third-person pronoun o is also the demonstrative adjective *that;* other demonstratives are bu/bun- *this* and şu/şun- (for the thing pointed to).

Nouns can indicate person in two senses. A suffix of possession shows the person of a possessor of the named entity; a predicative suffix shows the person of the entity itself. Therefore the plural ending -l@r can show multiplicity of the entity itself, its possessor, or the subject of which the entity is predicated. However, the plural ending will not be used more than once in a word. The plural ending can be used with -d@r in either order, with different shades of meaning.

> gül·üm/gül·ümüz/gül·ün/gül·ünüz *my/our/thy/your rose;*
> gül·ü/Deniz'in gül·ü *hir rose/Deniz's rose;*
> gül·ler·i *their rose, their roses, hir roses.*
> Gül·üm/Gül·üz/Gül·sün/Gül·sünüz *I/We/Thou/You are a rose.*
> Gül·dür·ler/Gül·ler·dir *They are roses/the roses.*
> Gül·ler·im·de·siniz *You are in my roses.*

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.*

When two nouns are joined, even though the first doesn't 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 business names:

> İş Banka·sı *Business Bank;* Tekirdağ rakısı *Tekirdağ [brand] rakı.*

Still, the plural ending, if used, precedes the suffix of possession:

> deniz ana·sı, deniz ana·lar·ı *jellyfish*[32] (one or several).

11 Conjugation of verbs

There is no verb corresponding to the English *have.* Possession is indicated by suffixes of possession. The *existence* of possession (or 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.*

The dictionary-form of a verb is usually the **infinitive,** in -m@k; remove this ending, and you have a *stem.* There are two (or more) other kinds of verbal nouns that may be in the dictionary: one in -m@, resembling the English **gerund;** and on in -(y)#ş.

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

[32] literally *sea mother(s)*

The common stem in the examples is oku-. This is the dictionary-form in one dictionary [1], 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 (§ 8). Anyway, verbs are given as stems in these notes.

A finite Turkish verb generally consists of a simple stem, followed by endings that I call *vocal, dialectical, temporal* (or *temporal-modal*) and *personal.* The vocal endings (indicating 'voice') are generally treated as constructive, and the dialectical endings are inflexional; neither of these kinds of endings need be present. A verb without temporal and personal endings is a **stem.** Although stems with dialectical endings are not found in the dictionary, they can still be made into verbal nouns.

Vocal endings may be found in a stem in the following order:

1. **reflexive:** -(#)n;
2. **reciprocal:** -(#)ş;
3. **causative:** -(d)#r, -(#)t, -@r (depending on the verb);
4. **passive** or **impersonal:** -#l, -(#)n.

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

oku·n- *be read,* oku·t- *make [somebody] read,*
öl-/öl·dür-/öl·dür·t-/öl·ün- (see § 6);
sev- *love,* sev·iş- *make love;*
bul- *find,* bul·un- *be;*
ara- *look for,* ara·ş·tır- *do research.*

Dialectical[33] endings indicate affirmation, denial, impossibility and the *possibility* of these. Strictly, *lack* of a dialectical ending indicates affirmation; denial is with -m@; impossibility, -(y)@m@; possibility, -(y)@bil:

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

Again, a simple stem, possibly with vocal and dialectical endings added, is still a stem. From this, we can make verbal nouns, such as the infinitive. As a noun, the infinitive has a locative case; especially with -d#r added, this may stand as a finite verb. Likewise the gerund, with the ending -l# from § 7 added:

[33] I chose this word, having failed to find a better. The six forms here can be analyzed as follows [4, VIII, 18(g), p. 109; VIII, 55, pp. 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- (§ 6).

> Oku·mak·ta·dır *Sie*[34] *is engaged in reading.*
> Oku·ma·lı *Sie must read.*

Also from a stem, 5 **participles**—verbal adjectives—are obtained:

1. **present,** in -(y)@n;
2. **future,** in -(y)@c@k;
3. one **past,** in -d#k;
4. another **past,** in -m#ş;
5. **aorist,**[35] in -(@)r or -#r.

Aorist participles with negative or impotential stems are anomalous, so we must speak of the **negative aorist,** in -m@z, and the **impotential aorist,** in -(y)@m@z.

A past participle in -d#k, or the future 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;*
> oku·yacağ·ım kitap *book that I shall read.*

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

> Oku·yacak *Sie will read.*
> Oku·r *Sie reads, is a reader.*
> Oku·maz *Sie does not read.*
> Oku·yamaz *Sie is illiterate.*
> Oku·muş *Sie read [in the past, according to what we are given to understand].*

There is a **present tense** formed with -(#)yor and the predicative endings:

> Okuyor *Sie is reading.*

A difference between the aorist and present tenses is also illustrated in a comment[36] on Turkish driving habits:

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

There is a **definite past tense** in -d#, and a **conditional mood** in -s@, but the personal endings used in these forms are the endings called *verbal* in § 8 (Fig. 2). The **imperative mood**[37] is formed by imperative endings, attached directly to stems:

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[34] See § 5.
[35] Geniş zaman *broad tense;* see below.
[36] Quoted at [4, VIII, 25, p. 117].
[37] Strictly, this should be two moods, an imperative and an optative, each with its own series of endings. The 'imperative' endings given in Fig. 2 on p. 9 are taken from both series; in my experience,

<table>
<tr><td colspan="2"></td><td>participle</td><td>base</td></tr>
<tr><td colspan="2">necessitative</td><td></td><td>-m@l#</td></tr>
<tr><td colspan="2" rowspan="2">present</td><td rowspan="2">-@n</td><td>-m@kt@</td></tr>
<tr><td>-#yor</td></tr>
<tr><td colspan="2">future</td><td colspan="2">-(y)@cak</td></tr>
<tr><td rowspan="3">aorist</td><td>positive</td><td colspan="2">-(@)r, -#r</td></tr>
<tr><td>negative</td><td colspan="2">-m@z</td></tr>
<tr><td>impotential</td><td colspan="2">-(y)@m@z</td></tr>
<tr><td colspan="2" rowspan="2">past</td><td colspan="2">-m#ş</td></tr>
<tr><td>-d#k</td><td>-d#</td></tr>
<tr><td colspan="2">conditional</td><td></td><td>-s@</td></tr>
<tr><td colspan="2">imperative</td><td></td><td>-</td></tr>
</table>

Figure 4: Characteristics of verbs

Oku·du *Sie read [as I witnessed].*
Oku·sa *If only sie would read!*
Oku·sun *Let hir read, may sie read.*

The **interrogative particle** m# (which appeared in § 6) 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·um mu? *Do I read?*
Oku·ma·m mı? *Do I not read?*[38]
Oku·yama·m mı? *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?*

A finite verb, without a personal ending, can be called a **base.** The suffixes that form participles and bases from stems can be called **characteristics;** they are collected in Fig. 4.

Compound tenses are formed by means of the **defective verb** i- *be.* The stem i- takes no vocal or dialectical 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?[39]

they are the only endings in daily use.

[38]The -z in the negative and impotential aorists is lost before first-person endings.

[39]Said in a cartoon (in *Penguen*) by a calf to his father, who is trying to explain why he (the bull) is going with the butcher on a long trip from which he will never return.

When you come, will you bring me a toy train?

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' 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 Turkish title of the movie *Etre et avoir*).

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, § 4);
- -(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.
Sie 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.

12 Sayings

The reader may wish to translate some of these (taken mostly from [6, 9]), or check the loose translations offered in some cases. (All needed root-words should be in § 14.)

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.*
7. Gelen gideni aratır. *What comes makes you look for what goes.*
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 hir 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.
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. Yuvarlanan taş yosun tutmaz.

13 Journalese

Here are: a sentence taken almost at random from a newspaper; a word-by-word translation; and an English translation:

> 1701 numaralı kararda barış gücünün bu görevi
> yerine getirebilmesi için Lübnan ordusuna yardımcı
> olması istenirken, söz konusu görevinin

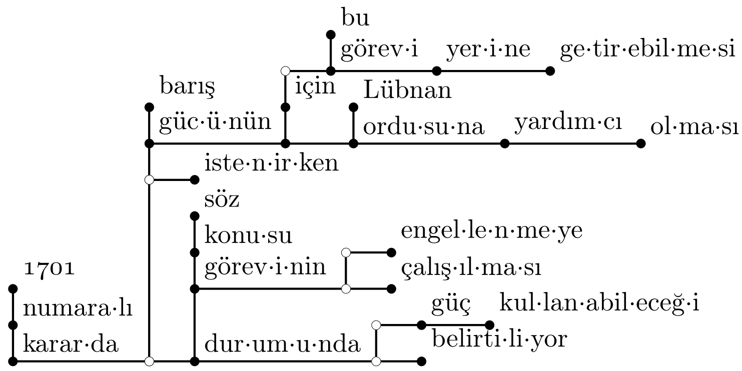

Figure 5: A newspaper sentence, diagrammed

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

I diagram the Turkish sentence in Figure 5 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: here I merely embolden all words that are verbs or are derived from verbs:[40]

> Özellikle işten eve **geliş** saatlerinde
> **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.**

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

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.

14 Dictionary

Nouns, adjectives, verbs, and adverbs used elsewhere in these notes (except perhaps § 4) are listed here. For postpositions, see § 9. Verbs are given as stems, with a hyphen. Forms with constructive suffixes are generally not given, unless they are anomalous.

ağa *lord*
ağaç *tree*
akıl *wisdom*
aile *family*
al- *take, buy*
altın *gold*
ana, anne *mother*
ara *interval*
ara- *look for, call*
arka *back*
at *horse*
bağ *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*
böl- *divide*
bul- *find*
buyur- *command*
can *soul, life*
ciğer *liver*
çabuk *quick, fast*
çağ *era*
çalış- *work*
çiftlik *farm*
çocuk *child*
de- *say*
dedikodu *gossip*
deli *mad*
deniz *sea*
diken *thorn*
dinle- *listen to*
doğa *nature*
dur- *stop*
engel *obstacle*
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*
iç- *drink, smoke*
ifade *expression*
ilkyaz *spring*
iste- *desire, ask for*
iş *work, business*
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*
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*
özel *special, private*
parmak *finger*
pis *dirty*
rakı *arak*
rastla- *meet by chance*
sahip *owner*
sarı *yellow*
sat- *sell*
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 *100*
face

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