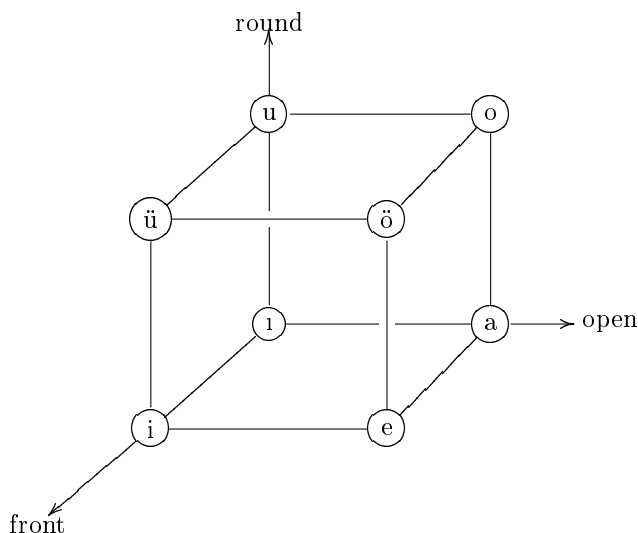


David Pierce originally prepared these notes on the Turkish language in May of 2005 for distribution to people attending a mathematical conference in Antalya.

Developed in 1928 to allow phonetic transcription of the language, the Turkish alphabet has 29 letters. To obtain it from the English alphabet: throw out (Q, q), (W, w), and (X, x); replace the letter (l, i) with the two letters (l, ı) and (İ, i); and introduce the new letters (Ç, ç), (Ğ, ğ), (Ö, ö), (Ş, ş), (Ü, ü).

According to their pronunciation, the eight vowels correspond to the vertices of a cube. At the origin of Cartesian 3-space, place the vowel ı. As fits its simple written form, you pronounce ı by relaxing the mouth completely, but keeping the teeth nearly clenched. The national drink rakı is *not* pronounced like “Rocky”: in the last syllable of *this*, the tongue is too far forward. The letter ı is the **close, unround, back** vowel. Other vowels deviate from this by being **open, round** or **front**; let these deviations correspond respectively to movement in the *x*-, *y*- or *z*-directions (right, up, or forwards). Then the vowels can be diagrammed:



In particular: a is like “uh” in English; ö and ü are as in German, or are like the French “eu” and “u”; and u is like the short English “oo”. Diphthongs are obtained by addition of y: so, ay is English long “i”, and ey is English long “a”. Syllables are fairly uniformly stressed.

The consonants that need mention are: c, like English “j”; ç, like English “ch”; ğ, or “soft g”, which never begins a word, but lengthens the vowel that precedes it; j, as in French; and ş, like English “sh”. Some expressions follow:

Lütfen/Teşekkürler/Bir şey değil (Please/Thanks/It’s nothing);
 Evet/Hayır (Yes/No); Affedersiniz (You make pardon, *i.e.* Excuse me);
 Merhaba (Hello); Günaydın (Day [is] bright, *i.e.* Good morning);
 İyi günler/akşamlar/geceler (Good day/evening/night).

Bay/Bayan: Sir/Madam, or gentlemen’s/ladies’ (room, clothing, &c.);
 İtiniz/Çekiniz (Push/Pull); giriş/çıkış (entrance/exit);
 sol/sağ (left/right); soğuk/sıcak (cold/hot).

Nasılsınız?/İyiyim; siz?/Ben de iyiyim (How are you?/I’m fine; you?/I’m also fine).

Elinize sağlık: Health to your hand. (This is a standard compliment to the chef, who will reply: *Afiyet olsun*—May it be healthy.)

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).

Kim, ne, ne zaman, nerede, nereye, nereden, niçin, nasıl, kaç, ne kadar?
(who, what, when, where, whither, whence, why, how, how many, how much?)—
these Turkish **interrogatives** also function as rudimentary relatives: *Ne zaman gelecekler bilmiyorum* (What time come-will-they know-not-I; *i.e.* I don't know when they will come); but most of the work done in English by relative clauses is done in Turkish by verb-forms (participles): “the book that I gave you” in Turkish becomes *size verdiğim kitap*—you-wards gave-that-I book, or the book *given* to you by me.

In Turkish, you can describe somebody to me for a long time without my having any idea of the sex of that person: there is no **gender**. Even accomplished Turkish speakers of English confuse “he” and “she”: there is a unique third-person singular Turkish pronoun, *o(n)*, meaning indifferently “he/she/it”.

Turkish is **agglutinative** or **synthetic**. Written as two, but pronounced as one word is the question *Avrupa⁰lı¹la²ş³tır⁴ama⁵dık⁶lar⁷ımız⁸dan⁹ mı¹⁰sınız¹¹?* Here I have numbered the eleven suffixes. These translate mostly as separate words in English, in the reverse order: Are¹⁰ you¹¹ one-of⁹ those⁷ whom⁶ we⁸ could-not⁵ *Europeanize* (*i.e.* make⁴ be²come³ Europe⁰an¹)?

The interrogative particle *mısınız* here is **enclitic**: in particular, it shows **vowel harmony** with the preceding word. Each syllable of the suffixes above features either a close vowel ({i, i, u, ü}, which I'll denote #) or an open unround vowel ({a, e}—I'll call it @). Used in a word, an indeterminate vowel # or @ settles down in the vowel-cube to the available point nearest the preceding vowel. Changing “Europeanize” to “Turkify” in the long word above means writing *Türkleştirmediklerimizden misiniz?*

Agglutination or synthesis can be seen on signs all over: *An in⁰dir¹im²* is an instance² of causing¹ to go-down⁰, that is, a reduction, a *sale*; while *in⁰il¹ir²* means “is² got¹ down-from⁰, is an exit [not an entrance]”—it's written at the rear door of city busses. Some common suffixes are:

-ç# (or -c#), indicating a person involved with something: *kebabçı* (kebab-seller); *kilitçi* (locksmith); *balıkçı* (fishmonger); *dedikoducu* (rumor-monger); *gazeteci* (journalist or newsagent);

-l#/-s#z, indicating inclusion/exclusion: *sütlü/sütsüz* (with/without milk); *şekerli/şekersiz* (sweetened/sugar-free); *etli/etsiz* (with-meat/meatless);

-l#k, indicating containment or more abstract involvement: *tuzluk* (salt cellar); *kimlik* (identity); *günlük* (daily or diary); *gececik* (nightly or nightgown);

-l@r, the **indefinite plural** marker: it's not used if a definite number is named: *başlar* (heads); *beş baş*: (five head); *kişiler* (people); *on iki kişi* (twelve person).

Turkish nouns are **declined** roughly as in Latin: there are genitive, *definite* accusative, dative, ablative and locative cases. From *gül* (rose):

Gülün dikenini; Gülü koparmayın: Rose's thorn; Don't pick *the* rose.
 Güle, gülden, gülde: to/from/on (a/the) rose.

Adjectives as such are not declined; but adjectives can be used as nouns. Nouns can indicate **person** in two senses: the person of the *possessor* of the indicated object, and the person *of* the object:

gülüm, gülün, (Deniz'in) gülü: my rose, thy rose, (Deniz's) her-or-his rose;
 gülümüz, gülünüz, gülleri: our/your/their rose.

Gülüm. Gülsün. Güldür: I-am/Thou-art/He-She-It-is a rose.

Gülüz. Gülsünüz. Güldürler: We/you/they are a rose.

Güllerdir: They are the roses. Gülümsün: Thou art my rose.

When two nouns are joined, even though the first doesn't name a possessor of the second, the second tends to be put in the third person: bölüm department; matematik bölümü mathematics department. You can see this feature in business names: banka bank; İş Bankası Work Bank.

Not prepositions, but **postpositions** are used: Gül gibi means "like a rose".

There is no verb corresponding to the English "**have**". "I have a rose" becomes Gülüm var—My rose *exists*. The negation of var is yok. But other verbless sentences are negated with değil: "I am not Rose" becomes Gül değilim.

One Turkish verb can comprise an incredible amount of information. From a simple verb-stem like oku- (read), longer stems can be formed with various suffixes. These suffixes can be:

—**vocal**, *i.e.* indicating voice: okun- (be read); okut- (make read); okuttur- (make make read—as might be said of a principal giving orders to his teachers); sev- (love); seviş- (make love);

—**logical**, indicating affirmation, denial, impossibility and their *possibility*:
 oku- read; okuyabil- can read;
 okuma- not read; okumayabil- may not read;
 okuyama- cannot read; okuyamayabil- may be unable to read;

—**modal** and **temporal**: Here are some complete third-person singular verbs (which can stand as complete sentences): okumaktadır ([s/he] is engaged in reading); okmalı (must read); okusun (let [him/her] read); okusa (if only [s/he] would read); okuyor (is reading); okuyacak (will read); okur (reads, is a reader); okumaz (does not read); okudu (did [definitely] read); okumuş (read [in the past, according to present evidence]).

There are two **verbal nouns**: okumak (to read) and okuma (reading).

Different kinds of endings can be combined into one word: okunabilecekti (was going to be readable); okuyamamız (our inability to read).

Some sayings: Balcının var bal tası; oduncunun var baltası (A honey-seller has a honey-pot; a woodsman has an axe). Bakmakla öğrenilse, köpekler kasap olurdu: If learning were done by watching, dogs would be butchers.