LOGLAN 3

UNDERSTANDING
LOGLAN

VOLUME 2

by

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Letter Variables
Lesson 3 (Volume 1) introduced the use of letter variables, with the lowercase letters replacing designations made with predicates, and the uppercase letters, those made with names. So, if you had just mentioned le ditca, you could then refer to this person as dei. What happens, though, if the sentence you had used contained le ditca je lemi detra (the teacher of my daughter)? Now we have two d-initial words; how can we refer to both, or if we only wish to refer to one, how can we make it clear which one it is? The answer is to use the Greek letter-words. These are represented by the same set of initial consonants as for Latin letters, followed by -eo. The Greek vowels are characterized by a final -zi, (e.g. azi alpha). Greek uppercase, both consonants and vowels, are formed by prefixing gao- to the lowercase letter, so gaoAzi Alpha.

The letter variables are assigned on a First In, First Out principle. That is to say, the Latin letter is assigned to the first candidate, and the Greek letter to the second. So, in the example above, le ditca would be dei, and lemi detra would be deo.

If only one of these replacements is needed, the particular letter used will make it clear which description you are replacing. If there is any doubt, you may use an “assignment operator” that will not be formally introduced until Lesson 16, but of which we can sneak a preview here. That operator is ji—a word related phonemically to bi—and means ‘which is the same as’. Thus deo ji lemi detra makes it plain beyond any doubt that you are assigning deo to lemi detra.

You will find dei and deo used in Lesson 11.
Lesson 7: Improving Your Connections

Lo Mipli Steti

1. **La Deiv farfu, e kicmu la Palys**
   The Dave is-a-father, and is-a-doctor-of the Paula.
   *Dave is a father, and he treats Paula.*

2. **La Deiv farfu, e kicmu gu la Palys.**
   Dave is-a-father-of, and is-a-doctor-of [end connection] Paula.
   *Dave is the father of, and treats, Paula.*

3. **La Deiv farfu ce kicmu la Palys.**
   Dave is-a-father-of and a-doctor-of Paula.
   *Dave is (both) the father and a doctor of Paula.*

4. **La Deiv gudbi farfu, e kicmu.**
   Dave is-a-good father, and is-a-doctor.
   *Dave is a good father and (he is also) a doctor.*

5. **La Deiv gudbi farfu ce kicmu.**
   Dave is-a-good father and doctor.
   *Dave is good as both a father and a doctor.*

6. **La Deiv mutce gudbi, e sadji kicmu.**
   Dave is-a-very good (person), and is-a-wise doctor.
   *Dave is very good, and is a wise doctor.*

7. **La Deiv mutce gudbi ce sadji kicmu.**
   Dave is-a-very good and wise doctor.
   *Dave is a very good, and a very wise, doctor.*

8. **La Deiv farfu, ice Dai kicmu.**
   Dave is-a-father, and D is-a-doctor.
   *Dave is a father, and he is a doctor.*

9. **La Deiv ke na farfu ki fa kicmu.**
   Dave both now is-a-father and will be-a-doctor.
   *Dave is both now a father and a future doctor.*

10. **La Deiv ke mutce gudbi ki nurmue sadji gu farfu.**
    Dave is-both a-very good and a-moderately wise [end connection] father.
    *Dave is both a very good, and a moderately wise, father.*
11. La Deiv gudbi ke farfu ki kicmu.
Dave is-good-as both a-father and a-doctor.
Dave is good as both a father and a doctor.

Lona Cninu Purda

Little Words

ce  a form of e used to connect the words immediately on either side of it; see Notes 3 and 5.

ice  a form of e used to connect sentences; see Note 7.

ke  both (the first part of the forethought, or “kek” version of e; see Notes 8 and 9).

ki  (in this case) and (the second part of the forethought, or “kek” version of e; see Notes 8 and 9).

Lopo Lengu Klimao

Last time we saw how to connect predicates and arguments; in this lesson we cover more advanced connections.

Notes:
1. “Eks” shut off any unfilled blank of the connectand to its left. In Example 1 the only blank farfu and kicmu share is the first one. Naturally, we have a few ways around this problem.

2. The simplest solution is to place a gu after the connected pair, as in Example 2. This makes them share any arguments that follow the gu. This is especially useful when you want to change the tense of the second predicate, as in Tomás’ Ima sorme, e, na socgoi gu mi I (Inés) is a sister of, and is now visiting, me (see Lo Nurvia Logla, below). Be careful to pause after e, or you may be heard as speaking the single word ena, a connective composed of e plus na meaning ‘and at the same time’. See also epa.

3. Adding a c- to an ek produces a “shek”: ca, ce, co, cu, noca, nucunoi, etc. Sheks leave blanks undisturbed; so farfu and kicmu in Example 3 share all of their blanks. (Note, incidentally, that you don’t have to pause before ce.) Be very careful using predicates in this way! Shared blanks can produce hilarious results, as in Dai kicmu ce farfu la Palys la Megn. This means that D is Paula’s father through mother Megan, and that he is treating Paula...for a disease named Megan! Remember: if you’re in doubt, just use an ek instead of a shek, or use two sentences.
The shekked form of ha, incidentally, is ciha: Dai kicmu ciha farfu la Palys? Is D the doctor(?) or the father(?) of Paula. This may be answered with a shek (ce, if he is both), and is not the same thing as asking Ei Dai kicmu ca farfu la Palys? Is D either the doctor or father of Paula, and possibly both?. This second question invites a yes-or-no answer.

4. As mentioned in the last lesson, eks assume that everything to their left is complete, and shuts it off. (This is why an ek turns off the unfilled blanks of its preceding predicate.) In the same way, we must interpret the group gudbi farfu, e kicmu as ((gudbi farfu), e kicmu). If you want to say that he’s a good father and a good doctor (both at once), you’ll have to use another kind of connective.

5. One way is to use a shek, as in Example 5. (Another way is to use a “kek”, as in Example 11.) Sheks act like ci to turn a pair of terms into a single, though internally connected, unit. You may figure out the implications of this fact at your leisure. One is that you can’t use a shek when the right connectand is a tensed predicate. The tense combines with the shek to form a connective relating the temporal order of the predicates, as well as how they are combined. Thus the example mentioned in Note 2 could not be changed to *sorme ce na socgoi mi, because, without a pause between them, ce would combine with na to produce sorme cena socgoi mi. This has the somewhat different meaning is a sister of mine and at the same time visits me. (Converted predicates aren’t affected by this rule. Nu socgoi is visited by is a single predicate; so the connection sorme ce nu socgoi mi is legal and means is a sister of and is visited by me.) Note that, when the connective is a shek, any following argument applies to both predicates—and without any need for gu.

You may wonder what the difference is between sheks and ci. Ci merely joins a modifier to the word it modifies, while sheks abbreviate longer expressions and always imply pairs of claims. In the sentence La Deiv gudbi farfu ce kicmu, the pair of claims implied by the ce-abbreviation are: La Deiv gudbi farfu. I la Deiv gudbi kicmu.

6. Given the previous two notes, you’re probably not astonished to learn that mutce gudbi, e sadji kicmu is a pair of predicates connected by e: ((mutce gudbi), e (sadji kicmu)). You can probably
also guess how to say that Dave is a very good and a very wise doctor.

Not hard at all, is it? Ce links gudbi and sadji so that mutce applies to both of them. Then that group modifies kicmu: ((mutce (gudbi ce sadji)) kicmu).

7. You can even connect whole claims to one another to make compound sentences. This third kind of connective is called an “eeshek”; it consists of i- plus a shek. (The c of the shek keeps the vowels apart so they won’t be heard as attitude indicators: i + a, i + o, etc.) There’s always a pause before these i-initial words (you’ve just ended a claim, after all), and in Loglan, all eeshek-connected claims are treated as clauses bound together by the eesheks into sentences. As we’ll see later, there can be more than two clauses in these compound sentences. In English translation (see Example 8), such eeshek-connected strings of clauses are also treated as compound sentences; their clauses may be separated by either commas or semicolons.

As you probably guessed, the eeshek version of ha is iha.

8. “Keks” are the most versatile of the connectives; you can use them to connect predicates, arguments, and even sentences. Like both ... and ... and if ... then ... in English (and unlike all the connectives we’ve looked at so far), keks require planning in advance.

Keks are a little odd. The best way to understand how they’re produced is to take one apart; so we’ll start with the kekked version of ... noenoi ..., which is going to come out kenoi ... kinoi ... (neither...nor...). The ke-part is just k- plus the basic vowel, e. This lets the audience know that the kek is essentially an e-connective. After this, we substitute -ki- for the -e- of noenoi. So far we have *ke ... nokinoi. Why move no- to the left, and attach it as -noi to ke-? (-noi is the suffix form of -no.) Because moving it allows the kek to imitate the positions of the no’i s in the expanded sentence. Remember, Ti, noenoi ta means the same thing as No ti, e no ta; so the first no can be spoken before the first connectand—as it is in Kenoi ti kinoi ta. This can now be fully interpreted as follows:

K- A kekked expression begins.
-e- The connection will be of the “and” type.
-noi The first connectand will be negated.
ti  “This”, the first connectand and evidently an argument.
ki-  End the first connectand and start the second (English “and” goes here).
-noi  The second connectand will be negated.
ta.  “That”, the second connectand and also an argument.

So the whole expression means Not this and not that. (In case you’re wondering, this means the same thing as Neither this nor that in English—which in turn means the same things as Both not-this and not-that.)

To sum up: the first word of the kek-pair begins with k- followed by the basic vowel. Then if the corresponding ek begins with no-, change no- to -noi and attach it to the k- word. The second word either is or begins with ki, and is followed by -noi if the ek ends in -noi.

Here’s the complete list of keks with their corresponding eks:

<table>
<thead>
<tr>
<th>Ek</th>
<th>Kek</th>
<th>Translation of the Kek</th>
</tr>
</thead>
<tbody>
<tr>
<td>... a ...</td>
<td>ka ... ki ...</td>
<td>either ... or ..., and possibly both.</td>
</tr>
<tr>
<td>... noa ...</td>
<td>kanoi ... ki ...</td>
<td>if ... then ...</td>
</tr>
<tr>
<td>... anoi ...</td>
<td>ka ... kinoi ...</td>
<td>(... if ...)</td>
</tr>
<tr>
<td>... noanoi ...</td>
<td>kanoi ... kinoi ...</td>
<td>either not ... or not ..., and possibly neither.</td>
</tr>
<tr>
<td>... e ...</td>
<td>ke ... ki ...</td>
<td>both ... and ...</td>
</tr>
<tr>
<td>... noe ...</td>
<td>kenoi ... ki ...</td>
<td>both not ... and ...</td>
</tr>
<tr>
<td>... enoi ...</td>
<td>ke ... kinoi ...</td>
<td>both ... and not ...</td>
</tr>
<tr>
<td>... noenoi ...</td>
<td>kenoi ... kinoi ...</td>
<td>neither ... nor ...</td>
</tr>
<tr>
<td>... o ...</td>
<td>ko ... ki ...</td>
<td>if and only if ... then ...</td>
</tr>
<tr>
<td>... onoi ...</td>
<td>ko ... kinoi ...</td>
<td>either ... or ..., but not both.</td>
</tr>
<tr>
<td>... u ...</td>
<td>nuku ... ki ...</td>
<td>( ... whether ...)</td>
</tr>
<tr>
<td>... nou ...</td>
<td>nukunoi ... ki ...</td>
<td>not ... whether ...</td>
</tr>
<tr>
<td>... nuu ...</td>
<td>ku ... ki ...</td>
<td>whether ..., ...</td>
</tr>
<tr>
<td>... nuunoi ...</td>
<td>ku ... kinoi ...</td>
<td>whether ..., not ...</td>
</tr>
<tr>
<td>... ha ...</td>
<td>kiha ... ki ...</td>
<td>(varies)</td>
</tr>
</tbody>
</table>

(The translations in parentheses aren’t forethought connectives in English, which has fewer connectives than Loglan.)

Note the peculiarity of the “u-family” of connectives: when there is a u in the connective, the truth of the compound statement depends on the truth of only one of the two connectands, whereas with all
the other connectives, the truth of the compound depends on the pattern of “truth-values” shown by the pair of claims. Looking back at the sentences of Lesson 6, when you say:

**La Deiv farfu, u kicmu.**
Dave is a father, whether-or-not (he’s) a doctor.

you are claiming only that Dave is a father, and making no claim at all about whether or not he is a doctor (though you’re also suggesting that his being a father would be unaffected by his being a doctor). This, incidentally, explains why I have not yet given you the unoi connective: it makes exactly the same claim as u and so is rarely used:

**La Deiv farfu, unoi kicmu.**
Dave is a father, whether-or-not he’s not a doctor(!).

If you want to assert the converse of the u relation, but keep the same order of the connectands, you’ll use nuu:

**La Deiv farfu, nuu kicmu**
Dave, whether a father or not, is a doctor.

Here, your claim is only that Dave is a doctor, and it’s his fatherness that’s irrelevant to the truth of your claim.

The important technical point to note here is that u appears before the connectand that is not being claimed to be true, and that nuu appears before the connectand that is being claimed. This rule carries over into the kekked forms—which explains the rather peculiar transformation rule for u connectands. In detail:

Dave is a father whether-or-not he’s a doctor.

**Dai farfu, u kicmu.**
(u claims farfu; disclaims a kicmu linkage)

becomes, in kekked form:

**Dai nuku farfu ki kicmu.**
(nu(k)u claims farfu, regardless of kicmu)

And the converse:

Dave, whether-or-not a father, is a doctor.

**Dai farfu, nuu kicmu.** (farfu is now unclaimed, because nuu claims kicmu)
becomes:

**Dai ku farfu ki kicmu.** ((k)u disclaims farfu; so kicmu is claimed.)

As an entertaining exercise, you might work through the application of this rule to all the u-type keks that incorporate no and/or noi. In these cases, of course, you’ll be claiming that one of the connectands is false, regardless of the truth of the other.


9. Without a punctuator, such as gu, keks run to the end of their predicate strings. Without gu, Example 10 would group as **La Deiv (ke [mutce gudbi] ki [(nurmue sadji) farfu])** Dave is both (a) very good (person) and a moderately wise father. So remember that keks apply to everything within their predicate strings unless you specifically close them. In the same way, **mutce ke gudbi ki sadji mrenu** groups as **(mutce (ke (gudbi) ki (sadji mrenu)))** is extreme both as (a) good (person) and also as a wise man. You would need a gu to separate mrenu man from sadji wise in the kekked modifier: **(mutce (ke (gudbi) ki (sadji gu))) mrenu**, which now means is extreme as both a good and a wise, man. (Mind you, this could be said much more simply and elegantly as **mutce gudbi ce sadji mrenu**.)

10. You’ve probably noticed that we haven’t been using commas after names recently. That’s because pausing after names when reading aloud is probably automatic for you by this time, and you don’t need the comma to remind you to do it.

As I explained in the Introduction, seasoned Logli writers seldom use commas after names in their texts. Their equally seasoned readers don’t need them. To use commas automatically after names—as we did in the first six lessons of this book—is good for learning, but often breaks up the the “train of understanding” for a sophisticated reader.

Using a comma after a name is, of course, always permissible. Don’t
hesitate to use one when there really is a break in thought after a name. But in future we won’t mark name-ends with commas automatically in this book, trusting that you, too, now know that, when speaking Loglan, or reading it aloud, Logli always pause after names.

11. Instead of asking La Betis he? (Betty is/does what?), we may want to know which Betty we’re talking about. There are several ways to do this. We can ask Which Betty? Ie la Betis? Or we can ask for Betty’s last name: La Betis nu famnamci hu? It is even possible to say La Betis He?, where we capitalize the he in text, and make a shorter pause than in La Betis he? This last variant is not recommended, unless both you and your hearers are experts.

Lopo Purmao
As you’ll see in the Lo Nurvia Logla for this lesson, there are two predicates for Mexican: meksi and mekso. This may remind you of logla and logli. In fact, all “ethnic predicates” come in groups of four:

- logla is a part/feature of the Loglan language
- logle is an area/territory frequented/claimed by Loglanists
- logli is a Loglanist
- loglo is a part/feature of Loglan culture.

Ethnic predicates ending in -a may refer to what is only a dialect of some language. For example, meksa probably refers to the Mexican dialect of Spanish—of course, it could also refer to one of the native languages of Mexico—just as merka refers to the American dialect of English. Similarly, ethnic predicates ending in le can refer to any territory where those “ethnics” are to be found. Thus La Logle could be a room or a table in a restaurant where Logli get together, while La Junge could refer to the Chinatown in the writer’s city.

These ethnic predicates—as well as the “animal predicates” we haven’t come to yet, but which work in much the same way, as well as certain borrowings from other languages—are the only Loglan predicates in which a difference in the final vowel reflects a difference in the predicate’s type or meaning. Normally, Loglan doesn’t allow two predicates to differ only in their final vowel. (This means
that if you’re unsure of the vowel, you can get away with mumbling it, so long as you don’t make it an *uh* sound, which is the sound of the hyphen *y*. This also means that the distinctive meaning of the final vowel is lost when you affix one predicate to another, because the final vowel of the first one then changes to *y*. Usually this doesn’t cause any problems, even with ethnic predicates; but you may want to add other affixes to specify (for example) what you mean by *Loglanize*: *loglenmao*, *logsifmao*, *logpipmao*, or *logkulmao* for *logla*, *logle*, *logli*, and *loglo*, respectively. Often, however, *logmao* will be clear enough.

Ethnic predicates are not capitalized in Loglan text as they are in English, unless they are being used as names. Thus, *le junge* (the particular Chinese area you have in mind), but *la Junge* (the local Chinatown).

Sometimes an ethnic predicate isn’t the most precise choice. For example, ‘That’s a Chinese consulate’ is *Ta junge koshaa*, but you could also say *Ta mela Junguos koshaa* (*Junguos* being the name of China itself). More importantly, is a “Mexican ruler” a ruler of Mexico (*mela Me’xikos garni*) or a ruler who happens to be Mexican (*meksi garni*)? (*Le mekse garni* could refer to someone ruling an area which is, in some sense, Mexican; such places are found almost as easily in some parts of the U.S. as in Mexico.)

**Lo Nurvia Logla**

Vi le mekso resra

Hue la Karl: Hoi! I hoi, Tob sua!
   Rea no, ba furvea tedji vi.

Hue la Denys: Ii kanoi tu gleca ca spana plizo ki ba tobsua mu. I
   io no, ba vi tobsua, e logli.

Hue Kai: Feu, mi perdja leva tobsua. I *tei* ia logli!

Hue Dai: Ua. I ii ka tei godzi mu kinois tu kraku letei namci.

Hue Kai: Ii tu dreti. Hoi, Tam!

Hue la Toma’s: Feu liu Toma’s namci mi. I loi Karl!
   Rea *tu*, Hoi No Nu Perdja, frelo, anoi logla nu
   cirhea la Karl, ica tu kunci Kai. I ua! I tu bi la
   *Denys*, io!

Hue Dai: Ia mi bi la Denys. I ei tu fremi la Brud?

Hue Kai: Tai fremi ce fatru mi.
Nao, Hoi Fremi ce Fatru Tobsua, eo mi tcidybeo ba?
Hue Tai: La Toma’s Delri,os, uiai, surva tu.
Hue Dai: La Delri,os! Ei tu kunci la Ine’s?
Hue Tai: Ima sorme, e, na socgoi gu mi.
Hue Dai: Ei tu feu meksi?
Hue Tai: Mi meksymerki. Ibuo feu levi resra na nu ponsu la Famji Cyn. Itaa la Mige’l Ernandes ponsu le jungo resra. I levi ia resra ponsu ga kultu batmi, ei?
Hue Kai: Ei ti resra feu? I ba vi tcidi vedma, ha kamkytaa?
Hue Tai: E, rea.

**Lo Kenti**
1. La Toma’s he?
2. Tai kunci hu?
3. Ima he?
4. Tai he vi levi resra?

**Lona Cninu Purda**

*Predicates*

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>batmi</td>
<td>... trades ... for ... with ...</td>
<td>(barter [BarTr]; Sp. cambiar [kAMbIar])</td>
</tr>
<tr>
<td>frelo</td>
<td>... is crazy/mad/insane</td>
<td>(frenzy [FReNzi]; Sp.loco [LOko])</td>
</tr>
<tr>
<td>garni</td>
<td>... governs ...</td>
<td>(govern [GyvRN])</td>
</tr>
<tr>
<td>kamki</td>
<td>... is funny to ... by doing/being ...</td>
<td>(comic [KAMiK])</td>
</tr>
<tr>
<td>kamkytaa</td>
<td>... jokes with ... about ...</td>
<td>[KAMKi (Y) TAnK = comic-talk]</td>
</tr>
<tr>
<td>koshaa</td>
<td>... is a consulate of country ... in country ... with consul ...</td>
<td>[KOnSu HAsfA = consul-house]</td>
</tr>
<tr>
<td>kultu</td>
<td>... is the culture of people ...</td>
<td>(Sp. cultura [KULTUra])</td>
</tr>
<tr>
<td>kunci</td>
<td>... is related to ... by relationship ...</td>
<td>(kin [KiN])</td>
</tr>
<tr>
<td>meksi</td>
<td>... is a Mexican</td>
<td>(Mexico [MEKSyko]; Sp. [MExIko])</td>
</tr>
<tr>
<td>meksymerki</td>
<td>... is a Mexican American</td>
<td>[MEKSi (Y) MERKI = Mexican-American]</td>
</tr>
<tr>
<td>merki</td>
<td>... is an American</td>
<td>(America [yMERyKy])</td>
</tr>
</tbody>
</table>
namci  ... is a name of ... to/used by ...  (name [NeiM])
ponsu  ... owns ... under law/custom ...  (possess [POZeS], own [OuN])
socgoi ... visits (person(s)) ... at time ... place ...  
[SOCl GOdzI = socially-go]
sorme  ... is a sister of ... with parents ...  
(sorority [SORoryti], a sisterhood)
spana  ... is part of the Spanish language (Sp. España[eSPANiA])
surva  ... serves ... by doing ...  (serve [SRV])
tcidi  ... is a food of/is edible to ...  (feed [fID])
tobme  ... is a table  (table [TeiBl]; Sp. mesa [MEsa])
tobsua  ... waits on diner ... with food ...  
[TOBme SUrvA = table-server]

Little Words
taa  in turn (free modifier)  [TrAnA = rotate/turn]

Summary: Lesson 7
1. To make ekked predicates share their arguments, you can place 
gu after them:  La Deiv farfu, e kicmu gu la Palys. Dave is (both) 
the father and a doctor of Paula.  versus  La Deiv farfu, e kicmu 
la Palys. Dave is a father, and (he’s also) a doctor treating Paula.. 
Be careful to distinguish between an ek followed by an inflecting 
word such as na—e.g., e, na where the na applies to the following 
predicate—and a compound connective such as ena, where the -na 
portion relates the two connected predicates in time.

2. Sheks are formed by prefixing c- to the characteristic vowel of an 
ek, as ca is formed from a, noca from noa, nucu from nuu. (The 
interrogative shek is ciha.) Sheks combine two predicates into a 
single unit, much as ci does, but with the added idea of a logical 
connection between them. Shekked predicates share their arguments 
and act as one word for the purposes of modification. You don’t have 
to pause before sheks.

3. Eesheks connect clauses to form compound sentences. Eesheks 
are made by prefixing i- to a shek (thus i+ca gives ica), or, for the 
clause interrogative, i- is prefixed directly to ha (iha).

4. Keks connect any two functionally similar units (arguments, predi-
cates, modifiers (or modifier groups), sentences, etc.). They consist
of two words. The first word begins with \textit{k}- and is followed by the basic vowel. If the corresponding \textit{ek} begins with \textit{no}-, change that \textit{no}- to \textit{noi} and attach it to the end of the \textit{k}- word. The second word is always either \textit{ki} or \textit{kinoi}; it is \textit{kinoi} if its \textit{ek} ends in \textit{-noi}. The \textit{u}-\textit{keks} have an additional peculiarity: if its \textit{ek} contains \textit{nu}-, the kek won’t; and if the \textit{ek} doesn’t contain \textit{nu}-, prefix \textit{nu}- to the first word of the kek. Thus \textit{u} converts to \textit{nuku \ldots ki \ldots}, and \textit{nuu} converts to \textit{ku \ldots ki \ldots}. The kekked form of \textit{ha} is \textit{kiha \ldots ki \ldots}.

5. Loglan writers need not use commas after names unless they wish to. However, a writer might wish either to instruct a learner or to break up the flow of text at such a point.

\textbf{Nepo Purbalci Cirduo (A Word-Building Exercise)}

Based on Rule 4, above, recreate the list of keks. (The eks are \textit{a}, \textit{noa}, \textit{anoi}, \textit{noanoi}, \textit{e}, \textit{noe}, \textit{enoi}, \textit{noenoi}, \textit{o}, \textit{onoi}, \textit{u}, \textit{nou}, \textit{nuu}, and \textit{nuunoi}.) Check your answers against the list given earlier in this lesson.

\textbf{Lopo Notlensea Cirduo (Translation Exercises)}

1. \textit{Tu cirna, epa spuro gu la Loglan.} You learn, and later will be an expert in, Loglan (that is, your learning was \textit{before} your being an expert).

2. \textit{Mi pa penso, ena repduo gu letu kenti.} I’ve thought about, and now answer, your question.

3. \textit{Ta saadja noce nu treci la Loglan.} That one doesn’t understand, but is interested in, Loglan.

4. \textit{I tu saadja ciha nu treci Lai?} And do you understand, or are you interested in, it [Loglan]?

5. \textit{Tu spuro ciha hapci logpli?} Do you expertly, or happily, use Loglan?

6. \textit{La Deiv sadji noca gudbi farfu.} Dave is, if a wise, then a good father.


8. \textit{Mi fa hapci, inoca tu logpli cirduo.} I will be happy only if you practice using Loglan.
9. Levi buku ga gleca. Iha bei logla?  
This book is [in] English. Or is it [in] Loglan?

10. Kanoi tu sadji ditca, ki ba cirna.  
If you wisely teach, [then] someone learns.

11. Kiha tu takna ta, ki ta sa-adja?  
How is your talking to that one connected to his/her understanding?

Note:
Sentence 8 is ambiguous in English—it might be read as an equivalence (if and only if), but that is not what the Loglan says. Another way to translate it is: If I am happy, it means that you are practising using Loglan.

Le Retpi  
1. What is Tomás? (Or, What does he do?)
2. T is related to whom?
3. What is I?

4. What does T do in this restaurant?

Tai fremi ce fatru Kai, e surva vi le mekso resra.  
Tai kunci la Ine’s Delri,os.

Ima sorme, e, na socgoi gu Tai. (Ima sorme Tai, e, na socgoi Tai would say the same thing.)

Tai tobsua; ice Tai tcidi vedma, e kamkyttaa lo furvea.
Lesson 8: Mass Productions

Lo Mipli Steti

1. **La Deiv vedma le bukcu.**
   Dave sells [each of] the book[s].
   *Dave sells the book (or all the books).*

2. **La Meris vedma lo₁,² bukcu.**
   Mary sells instances-of-the-mass-of-all books.
   *Mary sells books.*

3. **Mi takna tu la Loglan.**
   I talk to you about Loglan.
   *I talk to you about Loglan.*

4. **Mi takna tu lo³ logla.**
   I talk to you about-the-mass-of-all pieces-of Loglan (utterances, features, etc.).
   *I talk to you about Loglan.*

5. **Mi takna tu la⁴ Farfu.**
   I talk to you about the Father.
   *I talk to you about Father.*

6. **Lo⁵ ckano!**
   I-observe-an-instance-of-the-mass-of-all kind-ones!
   *How kind of you/him/her/etc.!!*

7. **Le blabi ze⁶ negro ga bilti.**
   The white and-jointly black one is-beautiful.
   *The black-and-white one is beautiful.*

8. **La Deiv ze⁷ la Meris pa godzi.**
   Dave and-jointly Mary went.
   *Dave and Mary went together.*

9. **Ta blabi ce negro bukcu.**
   That is-a-white and-independently a-black book.
   *That is a white book and, at the same time, a black book.*
   (Except in some metaphorical senses of black and white, this is a contradiction.)
10. Ta blabi \textsuperscript{ze} nigro bukc.  
That is-a-white and-jointly black book.  
That is a black-and-white book, one of mixed color.  
(As of one with a checkered cover.)

11. Ta brili blabi \textsuperscript{ze redro} bukc.  
That is-a-brilliantly white and-jointly red book.  
That is a brilliantly white-and-red book.

\textbf{Lona Cninu Purda}

\textbf{Predicates}

\begin{tabular}{|l|l|l|}
\hline
Word & Definition & Clue words \\
\hline
blabi & ... is whiter than ... & (Sp. blanco [BLAnko]) \\
brili & ... is brighter/more brilliant than ... by amount ... & (brilliant [BRiLIynt]) \\
nigro & ... is blacker than ... & (Sp. negro [NeGRO]) \\
\hline
\end{tabular}

\textbf{Little Words}

lo the mass of all/an instance of the mass of all ...
ze ... and-jointly/and ... together

\textbf{Lopo Lengu Klimao}

The little word \textit{lo} is used like \textit{le} to turn a predicate into a description. It means either \textit{the mass of all the} ... \textit{there is/are or a manifestation of all the} ... \textit{there is/are}, depending on the context. Logli usually refer to this as a “Mass Individual”. Of course I'm going to explain what that means!

When you go to see Mr. Smith, you aren’t really seeing all of him (it sounds rather indecent!); you are going to see a certain manifestation of a complex and dynamic individual. “Mr. Smith” today is not the same as he was a few days ago, and he’ll have changed again soon. So when you talk about “Mr. Smith”, you’re usually talking about a very small part of just one slice in a long continuum, that is, about just a tiny bit—a single manifestation—of all the slightly different individuals who are all still somehow “Mr. Smith”.

This is what \textit{lo} does: it transforms a predicate into a glancing reference to a massive, widely distributed, usually discontinuous whole, and treats that whole as a unique individual just as we treat mud and water in English. Thus \textit{lo humnu} refers to the mass of human
beings taken to be such an individual, lo ditca to the mass of teachers so-treated, and so on. Usually when you are using lo, you are talking about just some part of one of these massive individuals, for any part of any of them can be taken as a manifestation of the whole. (We often use names in this way. We are sitting at a certain sidewalk café in Paris, and we say “This is France!” Indeed it is. It is a manifestation of the massive individual we call France, only a very small part of which is present.) Sometimes we do want to talk about one of these massive individuals as a whole, as when we say “Before 1969 humanity was confined to Planet Earth.” When we make precise historical claims of this kind, logic demands that we use another descriptor, namely lea—as in lea humnu the set of all humans—but we won’t encounter this descriptor until Lesson 11.

Lo is very useful. Let’s say you want to talk vaguely about books in general. In English you might say Books are interesting. What you are talking about are scattered manifestations of this mass individual; you are not making a claim about each and every book! (We’ll learn how to make that reckless move in Lesson 12.) So in Loglan we just say Lo bukc u ga treci (the ga is necessary here, just as it is with le) in much the same way that we say La Smiq treci Smith is interesting. When we talk about individuals in this way, it doesn’t mean that we think every part and parcel of Mr. Smith and Mr. Book are interesting; just that taken as wholes they are. Similarly, Janice went to the movies would be La Djenis pa godzi lo sinma (sinma = ... is a movie [cinema] made about ... by ...) Why? Because she didn’t go to a particular movie (that would have been expressed differently both in English and in Loglan), but to a manifestation of the mass of all movies. Maybe she saw just one; maybe one and a half; maybe she changed her mind part-way through the first one. But in any case, her meeting with “Mr. Cinema” is like a meeting with “Mr. Smith”: she saw some part or manifestation of him, and that is all.

Notes:
1. Note the difference between

Mi vedma le bukc u I sell the book(s). (A particular copy
or set) and

Mi vedma lo buku  I sell books (in general). (Something a salesperson in a bookstore might say)

2. You may be tempted to use lo to translate the plural. After all, most lo constructions have plural equivalents in English: books, movies, cars, etc. But in fact, lo may refer to a single object if that object is seen as part of a larger whole. If you want to think of a book/movie/car as being part of a larger whole, use lo. That’s what it’s there for. Certain cultures view everything as manifestations of larger individuals: each cloud is a reappearance of The Cloud, each animal another instance of Mr. Animal, and so on. In a similar vein, certain schools of philosophy, such as the various forms of Platonism, see everything as ectypes of archetypes existing in an idealized realm. Such people will tend to use lo a lot. This is another way Loglan lets Logli do their own thing philosophically.

3. The explanation of lo given above stresses the similarity between lo and la. Here’s a case in point: What is the difference between la Loglan and lo logla? Answer: Virtually none. Lo emphasizes the massiveness of Loglan, while la emphasizes the individuality of that mass.

4. On the other hand, there’s a major difference between la Loglan (or lo logla) and la Logla. La Logla individualizes some local manifestation of Loglan, say a local dialect, that we might want to give a familiar name to. Another example of this use of la plus a predicate to make a familiar name is la Farfu, which means what Father without an article means in English: a name of either the speaker or writer’s own father or some other local father. Thus, if you and your auditors all know who “Father” is, you can use Farfu as a local name in Loglan too, both to refer to him, as in La Farfu ga hijra Father’s here, and to call his attention, as with Hoi Farfu! O Father!

5. Since lo and la have so much in common, it shouldn’t be any surprise that just as you can say La Ditca! to announce the arrival of Teacher, so you can say Lo ckano! to point out someone who is particularly kind, and Lo helba! to acknowledge someone’s assistance.
6. Ze is a “hyphenated and”: the kind found in black-and-white (blabi ze nigro). It means that two things act as one. If le buku

ga nigro ze blabi is true, then le buku ga nigro and le buku
ga blabi are false. A black-and-white object is not just black or just
white; it’s a mixture of the two.

7. Similarly, La Deiv ze la Meris pa godzi means that Dave and
Mary went together—“as one person”, we might say. The little word
mu, introduced in Lesson 1, can now be exactly interpreted. Mu is
actually a contraction of mi ze tu: you and I jointly. So whatever la
Deiv ze la Meris did, they did together. You can use ze for both
predicates and arguments.

8. You’re probably wondering what the difference is between ce
and ze. Simply put, ze makes one claim (That is a black-and-white
book); it concerns a single, intertwined relationship. Ce, on the other
hand, is just a shorthand way of speaking two sentences at once.
Thus, Ta blabi ce nigro buku means the same thing as the two
sentences Ta blabi buku and Ta nigro buku asserted sepa-
rately. These two sentences could hardly be true of the same book,
of course, and so the claim with ce is in this case self-contradictory.
Some predicates can be true independently of the same thing. For
example, the two claims in Ta langa ce treci buku (That’s a long
and interesting book) could both certainly be true. Ta blabi ze nigro
buku, on the other hand, cannot be taken apart. This book is one
thing. It is a black-and-white book. The unifying effect of ze also
works in descriptions: le blabi ze nigro the black-and-white one[s].
Also, le langa ce treci the long and, independently, interesting ones
is quite a sensible description. But le blabi ce nigro the black and,
independently, white ones can only be a paradoxical description in
Loglan. Taken literally, no such things exist.

9. Ze only works on the words immediately on either side. It turns
them into what amounts to a single predicate. That makes sense.
To say that something is a “mixture” of two ingredients is to say a
single thing about it, not two. Ze is used for those interesting cases
when two qualities or two individuals are treated as one—as the
two colors on a checkerboard or the two players in a doubles match
at tennis.
Lopo Purmao
We’ve looked at the mechanics of making complexes, and we’ve encountered several examples. But when do you use a complex instead of simple modification? There are two major cases:

1. If you use the term frequently, and it would be too long as a string of separate words. Of course, frequency varies from speaker to speaker. Dana, who isn’t interested in cars, seldom talks about loi breko sisto (brake systems); Betty, however, deals with loi reksio all the time.

2. You want to give a special meaning to the term, perhaps even changing the final predicate word’s structure. Siodja (... understands system ...) just doesn’t mean the same thing as sisto djano (... systematically knows ... about ...). Remember, modification doesn’t change place structure. Likewise, in the reading, Dana’s No, mi sirto djano (I don’t know for sure) isn’t quite as strong as Betty’s No, mi sirdja (I just don’t know). Complexes are often more emphatic than the metaphors made by modification.

This second reason brings us back to precision. Logli like to use the word or phrase which exactly captures their thought. Loglan has built up a larger vocabulary than it theoretically needs, simply to ensure that one word doesn’t acquire a number of vaguely similar meanings. For example, consider a few of the various words for knowing:

djano  ... knows ... about ...
duodja  ... knows how to [do] ...  (DUrzO DJAno = do-know)
feodja  ... knows fact(s) ... from source ...
   (FEktO DJAno = fact-know)
   (“Book-learning” as opposed to experience.)
kledja  ... knows that ... belongs to class ...
   (KLEsi DJAno = class-know)
leudja  ... knows (language) ... (LEngU DJAno = language-know)
   (Not the same thing as siodja. It’s possible to have a thorough understanding of a language without “knowing” the language.)
perdja  ... knows person ...  (PERnu DJAno = person-know)
   (Again, not the same as siodja, which implies deeper, if less personal, knowledge.)
saadja ... understands the meaning of utterance/word/sign/symbol ...
(SAnpA DJAno = sign-know)
siodja ... understands/comprehends system/mechanism/person ...
(SIstO DJAno = system-know)
spedja ... knows ... by experience about ...
(SPEni DJAno = experience-know)

Lo Nurvia Logla
La Betis telfyduo.

[Note how Betty uses first kia then kio when she doesn’t know how to complete her sentence. The first kia eliminates the preceding word, then she realizes that she needs another kia, which then erases the word that precedes it, until she gives up and erases the whole utterance!]

Hue la Deinys: Loi. I la Deinys takna.
Hue la Betis: I mi bi la Betis. I eo mi takna la Karl?
Hue Dai: Uu no, Kai hijra. I ui mi getsui le fu takna.
Hue Bai: Au. I nahu Kai fangoi?
Hue Dai: No, mi sirto djano.
Hue Bai: Uo!
Hue Dai: Eo mi kentaa tu?
Hue Bai: Oi.
Hue Dai: Ie la Betis? I ei tu bi le fremi je Kai?
Hue Bai: Ia mi fremi Kai. Ibuo no, mi sirdja hu, kia, kio uo!
Hue Dai: Mi bunbo, uo! Irea mi, oa, kliri cutse! I le fremi ji pa nakso leKai tcaro.
Hue Bai: Ia, mi bi fei.
Hue Dai: Lo mutce gudbi! I Kai takna mi tu. I no firpa! I le nu cutse je tu gudbi, rea. I lo tcaro ga treci tu, ei?
Hue Bai: Ia. I ei Kai takna tu lemi tcaro?
Hue Dai: Ei tei kukra, e laldo tu?
Hue Bai: Uo no! I le konce, feu, enoi le djipo ga laldo! I le motci, bea, ga junti!
Hue Dai: I hu djipo parti lo tcaro? Ibea, ei lo motci ze lo breko sisto ga djipo?
Hue Bai: Ia. Ifeu le motci ze le reksio ze le truke ze le dirtolsio ze le leksio ga djipo lo tcaro.
Hue Dai: Ua. I no, mi siodja lo tcaro.
Hue Bai: Ui mi ditca lo tcaro perti tu. I mi ze Kai dickue.
Hue Dai: Ua. I tu, ia, spuro logpli.
Hue Bai: Lo ckano! I uu no. Ifeu mi fasru ge logla takna tu lo tcaro. Ibuo lo notbi fu takna ga mutce nardu.
Hue Dai: Lo kumtu nu speni! I ia lo kusmo fu takna ga fasru.
Hue Bai: Sia! I eo mi godzi letu hasfa na la Pasnai?
Hue Dai: Uioi! I Kai fa, ia, hijra!
Hue Bai: Sia loa!
Hue Dai: Kerju!

**Lo Kenti**
1. LeKai fremi pa he?
2. Hu laldo parti leBai tcaro?
3. Hu djipo lo tcaro?
4. Dai no siodja hu?
5. Hu fasru?

**Lona Cninu Purda**

**Predicates**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>breko</td>
<td>... is a brake of vehicle/system ...</td>
<td>(brake [BREiK])</td>
</tr>
<tr>
<td>reksio</td>
<td>... is a brake system of vehicle/system ...</td>
<td>(BREKo (Y) SIstO = brake-system)</td>
</tr>
<tr>
<td>bunbo</td>
<td>... is a fool/is foolish about ...</td>
<td>(boob [BUB]; bozo [BOzo])</td>
</tr>
<tr>
<td>dickue</td>
<td>... teach each other subject(s) ...</td>
<td>(DItcA KUmcE = teachingly-reciprocate)</td>
</tr>
<tr>
<td>dirtolsio</td>
<td>... is a/the steering system of device ...</td>
<td>(DIRco TrOLi SIstO = direction-control-system)</td>
</tr>
<tr>
<td>djipo</td>
<td>... is important to ... for ...</td>
<td>(important [ImPORTant])</td>
</tr>
<tr>
<td>fangoi</td>
<td>... returns to ... from ... via ...</td>
<td>(FANve GOdzI = reverse-go)</td>
</tr>
<tr>
<td>fasru</td>
<td>... is easy for ... under conditions ...</td>
<td>(facilitate [FASiliteit])</td>
</tr>
<tr>
<td>firpa</td>
<td>... is afraid of/that ...</td>
<td>(fear [FIR]; ‘paranoid’)</td>
</tr>
<tr>
<td>getsui</td>
<td>... transmits/relays ... to ... from ...</td>
<td>(GETsi SUndI = get-send)</td>
</tr>
</tbody>
</table>
hijra ... is present at ...
(ken [hir])
kentaa ... asks/puts questions to ... about ...
[ken taka] = question-speak
kliri ... is clearer than ...
(clearly [kli])
konce ... is a/the shell/cladding/bodywork of ...
(ken [kon]; shell [ce])
kumtu ... is common to/shared by members of set ...
(common to [kunt])
kusmo ... is a custom/habit of ... under conditions ...
(custom [kyst])
leksio ... is a/the electrical system of ...
(electric system [lex])
motci ... is a/the motor of device ...
(motor [mot]; machine [myc])
nardu ... is hard/difficult for ... under conditions ...
(hard [hard]; arduous [ardu])
notbi ... is other than/not the same as ...
(“A is NOT B”)
parti ... is a part of ...
(part [part])
pasnai ... is the evening of day ...
(before-night [pas])
perti ... concerns/pertains to ...
(pertain [pert])
sinma ... is a movie/film/cinema about ... made by ...
(cinema [sin])
siodja ... understands [system/person] ...
(system-know [sio])
sirdja ... knows ... for certain about ...
(certain-know [sir])
sirto ... is certain/sure to happen under conditions ...
(certain [sir]; sp cierto [sier])
sisto ... is a system with function ... and elements ...
(system [sist])
truke ... is the structure/load bearing portion of ...
(structure [truk])

Little Words
kia [erase preceding word]
kio [forget about the current utterance as a whole]
Summary: Lesson 8
1. Lo is a descriptor like le which refers to one or more instances or manifestations of the mass of all ... . It may therefore be used to talk about some manifestation of a larger whole.

2. Ze is a “hyphenated and”; it mixes two separate ideas into an inseparable whole, as in blabi ze nigro (black-and-white). Like sheks, ze applies only to the two predicate words immediately before and after it. Unlike sheks, ze may also be used join arguments into inseparable wholes, as in la Djek ze la Djil (Jack and, jointly, Jill).

Lopo Notlensea Cirduo
1. La Deinys ze la Pal socgoi la Megn ze la Palys.
2. La Deinys, e la Pal socgoi la Megn, e la Palys.
3. Vi lo resra ba furvemcue lo tcidi.
4. La Betis fundi lo kukra tcaro.
5. Ibuo Bai no fundi lo kukra blabi ze nigro tcaro.
6. Le gudbi matma ze ditca ga takna le detra.

Dana and Paul (together) visit Megan and Paula (together).
Dana and Paul (separately) visit Megan and Paula (separately).
In restaurants one orders food.
Betty likes/prefers fast cars.
But she doesn't like fast black-and-white cars.
The good mother-and-teacher talks to the daughter.

Note: The commas used in sentence 2 are required before e (and similar connectives). Ze and ce however do not require a comma.

Le Retpi
1. What did K’s friend do?
2. What is an/are some old part(s) of B’s car?
3. What is/are important to cars?
4. What doesn’t D understand?
5. What’s easy?
Fei pa nakso leKai tcaro.
Le konce, enoi lo djipo ga laldo.
Le motci ze le reksio ze le truke ze le tolpaesio ze le lekpaesio ga djipo lo tcaro.
No, Dai siodja lo tcaro.
Lo kusmo fu takna ga fasru.
Lesson 9: Abstract Art

Lo Mipli Steti

1. Ta po¹ godzi.
   That is-an-event-of go[ing].
   That’s a case of (someone’s) going.

2. Ta po² cei godzi la Denvr, la Cikagos.
   That’s a case of c’s going to Denver from Chicago.

3. Ti po³ ridcue ditca.
   This is (an-act-of-reading-aloud) [type of] teacher.
   This is a “reading-aloud” teacher (some one who teaches others how to read aloud, or who teaches something else by reading aloud).

4. Ti po⁴ ridcue ditca lo spana.
   This is-an-event-of you being-a-reading-aloud teacher of-
   Spanish.
   This is a case of your teaching Spanish by reading [it] aloud.

5. Ti po⁵ ridcue ditca lo spana.
   This is-an-event-of reading-aloud teaching of-Spanish.
   This is teaching Spanish by reading [it] aloud.

6. Lep⁶ tu ridcue ditca lo spana pa ckecoa.
   The-event-of you reading-aloud teaching Spanish was brief.
   Your reading-aloud Spanish-teaching session was brief.

7. Lopo⁷ tu ridcue ditca lo spana ga ckecoa.
   Manifestations-of-the-mass-of-events-of you reading-aloud teaching Spanish are brief.
   Your reading-aloud Spanish-teaching sessions are brief.

8. Le⁸ po ridcue ditca ga corta.
   The reading-aloud [type of] teacher is short.
   The reading-aloud teacher is short (i.e., not tall).

9. Mi garti tu lepo⁹ tu helba mi.
   I am-grateful to-you for-the-event-of you[r] helping me.
   I’m grateful to you for helping me. (Thanks for helping me.)

10. Mi garti tu lepu¹⁰ tu helba mi.
    I am-grateful to you for-the-quality-of you[r] helping me.
    I’m grateful to you for your helpfulness toward me. (Thanks
for being helpful.)

11. Mi garti tu lezo\textsuperscript{11} tu helba mi.
   I am-grateful to-you for-the-amount-of you[r] helping me.
   I’m grateful to you for how much you help me. (Thanks for
   being so helpful.)

12. Le nirli ga spopa lepo\textsuperscript{12} le kicmu fa kamla
   The girl hopes [that] the-event [of] the doctor will come
   [will occur].
   The girl hopes that the doctor will come.

13 Le nirli pa cutse li, Le kicmu fa kamla, lu.
   The girl said [quote] The doctor will come. [close-quote].
   The girl said, ‘The doctor will come.’

14. Le nirli pa cutse liu\textsuperscript{13} ia
   The girl said [the-word] yes.
   The girl said ‘Yes.’

15. Ei tu mealiu gu,\textsuperscript{14} logli?
   Is-it-true-that you are-a-“gu-ing” [type of] Loglander?
   Are you a “gu”-ing Loglander?

Lona Cninu Purda

Predicates

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<td>... is briefer/temporally shorter than ... by interval ...</td>
<td>(\text{CKEmo COrtA} = \text{time-short})</td>
</tr>
<tr>
<td>garti</td>
<td>... is grateful to ... for ...</td>
<td>(\text{grateful [GReiTfyl]})</td>
</tr>
<tr>
<td>nirli</td>
<td>... is a girl</td>
<td>(\text{girl [gyRL]})</td>
</tr>
<tr>
<td>spopa</td>
<td>... hopes [that] ... [will occur]</td>
<td>(\text{hope [hOP]; Sp espera [eSPerA]})</td>
</tr>
<tr>
<td>ridcue</td>
<td>... reads ... aloud to ...</td>
<td>(\text{RIDle CUtsE} = \text{read-say})</td>
</tr>
</tbody>
</table>

Little Words

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>liu</td>
<td>the word ... (a combination of li and lu)</td>
</tr>
<tr>
<td>po</td>
<td>... is an event/instance/case/state of ...</td>
</tr>
<tr>
<td>pu</td>
<td>... is a quality/property of ...</td>
</tr>
<tr>
<td>zo</td>
<td>... is an amount/quantity of ...</td>
</tr>
</tbody>
</table>

Lopo Lengu Klimao

Loglan has three operators for creating abstractions: po, pu, and zo. Because it’s the most common, we’ll start with po. All three act
the same way anyhow, so in learning to use po, you’ll find out how the other two work as well.

**Notes:**

1. Placed before a predicate expression, po creates a new predicate meaning “is an act/event/instance/case/state of [whatever the predicate refers to]”. Thus,

   Ta po godzi.  *That is an act of going.*
   Ti po corta.  *This is a case of shortness.*

2. The blanks for godzi (and corta) are still fully active after po, however, and may be filled as usual:

   Ta po mi godzi la Denvr, la Cikagos.  
   *That is an event of my going to Denver from Chicago.*
   Ti po le mrenu ga corta le botci.  
   *This is a case of the man’s being shorter than the boy.*

3. You may use a po-predicate to modify another predicate in the normal way: Ti (po ridcue) ditca *(This [person] is an act-of-reading-aloud teacher (someone who teaches reading aloud)).* Note that when po is unmarked in this way, it affects only the immediately following predicate.

4. By inserting an argument between po and its predicate—as in this sentence and in the examples in Note 2 above—you have extended its scope over the entire predicate expression, including any other arguments it may have.

5. By pausing after po, you get the same effect as putting an argument after it. In a sense, the pause-comma stands in for the missing first argument, and has its effect.

6. When you turn a po-predicate into an argument, the le combines with po to produce lepo, and even without benefit of commas, the po in lepo is a “long-scope” po. If you want to “shorten the scope” of this po—if you want to speak the elements of lepo separately, in other words—you must put a pause-comma between le and po, as in sentence 8 below. Because lepo clauses are so common, their blanks may be filled like those of any sentence predicate. This is what makes them clauses.
Just as you need to make sure you’ve closed your je phrases, so you must shut off your lepo clauses. If a lepo clause is a first argument, just mark the sentence predicate with ga or one of the inflectors; that will close off the lepo clause. If the clause is a second or later argument and doesn’t end the sentence, you can either try one or more gu’s or just use guo. (Like gue, guo is a version of gu designed to terminate a specific type of structure, in this case lepo clauses.) Unclosed lepo clauses will absorb the next argument, as in Ta ditca lopo ridle lo junti (That one teaches how to read young people.), which should probably be Ta ditca lopo ridle gu[о] lo junti (That one teaches reading to young people.). (Either gu or guo will close off lopo ridle.)

7. Lopo refers to the mass individual composed of such sessions or events. Another example of the lepo/lopo distinction would be

Ei tu pa haispe lepo tu sucmi?
Did you enjoy your swim?

Ei tu pa haispe lopo sucmi?
Did you enjoy swimming?

(when you were a child, for instance)

8. Le, po (note the pause comma) is le followed by a pause-comma and then a “short-scope” po, i.e., one that binds tightly to the next predicate word: le, po ridcue ditca (the act-of- reading-aloud sort of teacher (i.e., the teacher characterized by his or her reading-aloud)).

9. Again, lepo here refers to some specific case of helping, not to helping in general, which would be lopo. A shorter way of saying this would be Lepo tu helba! How helpful you are (in this case)! You could also say Lopo tu helba! How helpful you are (in general)! Remember that lo can be used to call attention to something (Here’s [another] instance of ...); used with the abstraction operators, it points to an act, quality, or quantity, rather than to the person/thing involved.

10. Pu works just like po, but it refers to a quality:

Ta pu bilti. That is [a quality of ] beauty.

11. Zo refers to a quantity of a quality; in this case, to the amount or degree of someone’s being helpful. This is generally the best way to translate How ... !: Lozo tu ckano! How kind of you! Note the
difference between Lezo tu bilti! How beautiful you are! (tonight, or at some point) and Lozo tu bilti! How beautiful you are! (in general).

12. Lepo expressions are used in Loglan to translate indirect discourse. In other words, those clauses that often begin with that, think that, hope that, etc., become lepo expressions. This only works when you’re not quoting, though; so do not use a lepo phrase with cutse (... says ... to ...). If you’re telling what someone actually said—or wrote, for that matter—you must either quote verbatim or use a construction we’ll get to in a couple of lessons. When you quote word-for-word, use li, ..., lu for Loglan and lie for everything else. Sentence 12 gives an example of li, ..., lu usage.

13. Liu is used for quoting single words (li, ai, lu would be a bit awkward). So we say liu ai, (notice the closing comma; one is necessary if the argument is non-final). This is also the way to refer to the word liu itself: Liu liu, corta. ([The word] ‘Liu’ is short.).

14. People who are just learning a language often hesitate a lot in speech, and as you’ve seen, pauses are important to understanding Loglan. There is a way around this problem: Use gu to replace all those pauses we’ve encountered in the last few lessons; it’s a spoken version of the written comma. If the Logli you’re talking to looks at you like you’ve got two heads, just say, Mi mealiugu (I’m a “gu-er”). This will let the Logli know not to trust your pauses, but to take only a gu seriously. There is no shame in this, so long as you don’t remain at this stage forever. You are, after all, a “baby” Logli, and no one’s ashamed to hear a baby say gu; but we do expect the gu’s to grow less frequent as the years pass.

Lopo Purmao
Now is the time for action! Specifically, for doing and using things:

- pli (PLIzo, use) means to use some tool.
- duo (DURzO, do) means to use some tool on someone/-thing, or just to perform some action relevant to the root.

logpli ... uses Loglan
logduo ... uses Loglan on someone ... (Logduo letu fremi!)
bedpli ... is in bed (BEDpu PLIzo = bed-use)
bepduo ... puts to bed, in/on ... \( (\text{BE}d\text{Pu} \ \text{DU}rzO = \text{bed-do}) \)
telfypli ... uses a telephone \( (\text{TEL}Fo \ (Y) \ \text{PL}lZo = \text{telephone-use}) \)
telfyduo ... [tele]phones ... \( (\text{TEL}Fo \ (Y) \ \text{DU}rzO = \text{telephone-do}) \)

- **biu** \( (\text{BI}vdU, \ \text{behave}) \) refers to some normal, habitual behavior.
- **kao** \( (\text{KA}ktO, \ \text{act}) \) refers to something done with some goal in mind.

rembiu ... is [naturally] friendly to ... \( (\text{fRE}Mi \ \text{BI}vdU = \text{friend-behave}) \)
remkao ... acts as a friend toward ... for purpose ... \( (\text{fRE}Mi \ \text{KA}ktO = \text{friend-act}) \)
falremkao ... acts falsely as a friend/pretends to be friendly to ... \( (\text{FAL}ji \ \text{fRE}Mi \ \text{KA}ktO = \text{false-friend-act}) \)
gudbiu ... is [naturally] respectable, decent in ... \( (\text{GUD}bi \ \text{BI}vdU = \text{well-behave}) \)
gudkao ... is [intentionally] more virtuous than ... \( (\text{GUD}bi \ \text{KA}ktO = \text{well-act}) \)

(As children before Christmas.)
gubduo ... benefits ... by doing ... \( (\text{GUd}Bi \ \text{DU}rzO = \text{good-do}) \)

**Lo Nurvia Logla**

Eo perdja la Betis.

Hue la Karl: Loi!
Hue la Deinys: Ua! I mi durbiesni lepo spodru lepo tu fangoi ti!
Hue Kai: Hu vetci?
Hue Dai: La Betis telfyduo. I Bai spopa lepo takna tu.
Hue Kai: I hu fu takna?
Hue Dai: Iu.

Nao sii le, po logpli ditca ga cirna lo tcaro perti le, po tcanakso ditca. I lo treci!

[**Nao** precipitates a topic-change, a new utterance or para in the dialogue, though in this case without a speaker-change.]

Hue Kai: Irea mi haispe lopo cirna ce ditca.
Hue Dai: Uaio, le ckozu je lepo letu cirna ga fundi tu!
Hue Kai: Ifeu lemi cirna ga kamkytaa, sui. I la Betis, bea io, fundi mi.
Hue Dai: Lopu kance!
Hue Kai: Ei tu sirdja lepo Bai godzi mu?
Hue Dai: Ia. I eo stise lepo nu fatru dzoru!
Hue Kai: Ei tu stolo ti?
Hue Dai: Ia, lo kliri! I Bai danza, ia, lepo vizka jmite mi.
Hue Kai: Eo santi! I la Betis, na hijra!
Eo nengoi, hoi Betis!
Lezo tu bilti!
Hue la Betis: I lozo tu ckano cutse! I ti, ia, bi la Deinys!
Ea mu hajmi.
Hue Dai: Ea hajmi, ia!
Hue Kai: Lopo hapci! I uu la Deinys, folfunrui lepo na godzi.
Hue Dai: Ifeu no.
Hue Bai: Ceu ao mi takna tu ze la Deinys, hoi Karl. I mi ju kenti lopo logcia; ice ii tu ze Dai danza lepo dapli.

Lo Kenti
1. Dai durbiesni hu?
2. Hu cirna lo tcaro?
(Use the complete designation, not just a name or variable.)
3. Hu fundi Kai?
4. Bai danza lepo takna hu hu?

Lona Cninu Purda
Predicates

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>bilti</td>
<td>... is more beautiful to ... than ... to ... (beauty [BIuTI])</td>
<td></td>
</tr>
<tr>
<td>bivdu</td>
<td>... behaves in manner ... in situation ... (behave [BeheiV])</td>
<td></td>
</tr>
<tr>
<td>ckecoa</td>
<td>... is briefer/temporally shorter than ... by interval ... (CKEmo COrtA = time-short)</td>
<td></td>
</tr>
<tr>
<td>dapli</td>
<td>... answers ... to question/statement ... by ... (reply [rePLaI])</td>
<td></td>
</tr>
<tr>
<td>danza</td>
<td>... wants ... for purpose ...</td>
<td></td>
</tr>
</tbody>
</table>
Little Words

- **gea**: again; I repeat (free modifier)
- **liu**: the word ... (a combination of li and lu)
- **po**: ... is an event/instance/case/state of ...
- **pu**: ... is a quality/property of ...
- **zo**: ... is an amount/quantity of ...

**desire** [DiZAir], **want** [uANt]

- **durbiesni**: ... is about to [do] ...
  
  \[ \text{DURzo BIdjE SNIre} = \text{do-edge-near} \]
- **dzoru**: ... walks to ... from ... via ... 
  
  (no English clue-word)
- **folfunrui**: ... must/is obliged to do ... under ...
  
  \[ \text{FORLi FU[N]} \text{ RUlnI} = \text{strong-should} \]
- **funrui**: ... should/ought to do ... under circumstances ...
  
  \[ \text{FU[N]} \text{ RUlnI} = \text{conv. of rule} \]
- **haispe**: ... enjoys experience ...
  
  \[ \text{HApCI SPEni} = \text{happily-experience} \]
- **kakto**: ... does action ... with purpose ...
  
  \[ \text{act} [\text{aKT}] \]
- **kance**: ... is conscious/aware of/that ...
  
  \[ \text{conscious} [\text{KANCys}] \]
- **logcia**: ... learns/is a learner of Loglan from ...
  
  \[ \text{LOGla CIrnA} = \text{Loglan learn} \]
- **nuzveo**: ... is a newspaper/news magazine issued periodically ... every ... (the publication interval)
  
  \[ \text{NUSvo VEslO} = \text{news-vessel} \]
- **ridcue**: ... reads ... aloud to ...
  
  \[ \text{RIDle CUtsE} = \text{read-say} \]
- **santi**: ... is quieter than ...
  
  \[ \text{silently} [\text{SAileNT}] \]
- **spodru**: ... loses hope/despairs of/that ...
  
  \[ \text{SPOpa DiRU} = \text{hope-lose} \]
- **stise**: ... stops/ceases [doing] ...
  
  \[ \text{stop} [\text{STOP}]; \text{ cease} [\text{SIS}] \]
- **stuci**: ... is a story about ... by/told by ...
  
  \[ \text{story} [\text{STorI}] \]
- **tcanakso**: ... is a mechanic on vehicle(s) ...
  
  \[ \text{TCArO NAKSO} = \text{car-fix} \]
- **telfyduo**: ... telephones ...
  
  \[ \text{TELFo (Y) DUrzO} = \text{telephone-do} \]
- **vetci**: ... happens to ...
  
  \[ \text{event} [\text{iVENT}] \]
- **vizka**: ... sees ... against background ...
  
  \[ \text{vision} [\text{VIjyn}] \]
Summary: Lesson 9
1. If not separated from it by a pause-comma, po turns the very next predicate word into a new predicate about an action or event. To make po apply to an entire predicate expression, plus any or all its arguments, it must be separated from the following predicate word[s] by a pause-comma, a gu, or an argument: Ta po ridle cirna That’s a reading learner (one who is learning the act of reading). vs. Ta po, ridle cirna. That’s a case of reading learning (learning by reading). vs. Ta ridle po cirna. That’s a case of readers’ learning (learning by readers).

2. Although an “event predicate”—one formed by a closely preceding po—has only one blank (... is an event of [whatever the original predicate referred to]), when the predicate is separated from its po by a comma, gu, or some argument, then all its blanks are available to be filled out as usual: Ta po, ridle cirna lo spana lo nuzveo. That’s a case of reading learning (learning by reading) Spanish from newspapers.

3. If an event predicate is being used non-finally in a predicate string, you have to use je/jue to fill in its 2nd or later blanks (though this is seldom worth doing): Ta po, ridle je lo stuci gu cirna. That’s a case of a reading [of] stories [comma] learning. Inverting with go usually works better: Ta po, cirna go ridle lo stuci. That’s a case of learning by reading stories.

4. Po and kin must not directly follow descriptors like le; they must be separated from them by a pause-comma or gu. Unless they are separated, le + po will be heard as the single word lepo.

5. Any predicate expression—with or without its own internal arguments—may be turned into an argument by preceding it with lepo or lopo. Lepo (and lopo) may be followed by a predicate word, by a longer predicate expression, or by a complete sentence. When this type of clause is the first argument of a sentence, it must be closed with either ga or an inflector before speaking the main predicate of that sentence. If the lepo-clause comes later (but not last) in the sentence, use gu or guo to close it. If it is last in the sentence, the lepo-clause will be automatically closed when the sentence ends.
Lopo Notlensea Cirduo

1. Lozo tu ridle!

2. Ei tu danza lepo mi telfy-duo tu?

3. Lopo lodji penso ga pu logli.

4. Ti po, notlensea je lo steti gu cirduo.

5. Ei tu fundi lo, po purmao parti je le bukcu?

6. Mi fundi lo logla po purmao.

You read so much! (The amount you read!)

Do you want me to call/telephone you?

Logical thought is a quality of being a Logli.

This is a translating [of] sentences [comma] exercise.

Do you like the word-making part[s] of the book?

I like Loglan word-making.

Le Retpi

1. What was D about to do?

2. Who learns about cars?

3. Who likes K?

4. About what and to whom does Betty want to talk?

Dai durbiesni lepo spodru.

Le, po logpli ditca ga cirna lo tcaro.

LeKai cirna ga fundi Kai.

Bai danza lepo takna Kai ze Dai lo, po logcia kenti.
Lesson 10: Anything for the Cause

Lo Mipli Steti

1. Ta pa felda kou\(^1\) lepo da\(^2\) mutce tidjo.
   That fell physically-caused-by X's (its) being very heavy.
   That fell because it is very heavy.
2. Ti no tidjo; inukou\(^3^4\) de no pa felda.
   This is not heavy; therefore Y (it) not did fall.
   This was not heavy, so/therefore it did not fall.
3. Ta pa felda nokou\(^5\) lepo di latci.
   That fell not-physically-caused-by Z's (its) being light.
   That fell despite being light/although it was light.
4. Ti latci nonukou\(^6\) lepo do pa felda.
   This is light not-physically-causing W's (its) having fallen.
   That is light; nevertheless/even so, it fell.
5. Mi pa donsu ta la Djan, irau\(^7\) Dai jurna da.
   I gave that to John, justified-by his earning X (it).
   I gave John that because he earned it.
6. Mi pa donsu ta la Djan, imoi\(^8\) Dai pluci mi.
   I gave John that motivated-by his pleasing me.
   I gave that to John because I like him.
7. Tu saadja toi, isoa\(^9\) tu logli
   You understand this-statement entailed-by your being a Logli
   That you understand this is entailed by your being a Logli.
8. Tu nusoaki\(^10\) saadja toi, ki logli.
   You therefore understand this given (you) are-a-Logli.
   You consequently understand this, given that you are a Logli.
9. Tu gritu lia\(^11\) la Pavarotis.
   You sing like Pavarotti.
10. Moihu\(^12\) tu pa durzo ta?
    With-motive-what you did that?
    Why did you do that?
11. Tu, emou\(^13\) mi ckano
    You and-more-than I am kind.
    You are kinder than I am.
Lona Cninu Purda

*Predicates*

donsu  ... gives ... to ...  \(\text{donate [DONeit]}\)
felda  ... falls to ... from ... in gravity field ...  \(\text{fall [FaLl]}\)
jurna  ... earns wages ... for work ...  \(\text{earn [yRN]}\)
latci  ... is lighter than ... by ... in gravity field ...  \(\text{light [LaiT]}\)
pluci  ... pleases ... by ...  \(\text{please [PLiz]}\)

*Little Words*

da de di do du  X Y Z W Q or it/he/him/she/her/they/them,  
pronouns used to replace demonstratives like ta ti toi tio toa tao
emou  and-more-than ... (a comparative connective; see Note 13.)
imoi  motivated by the fact that ...; because ... (See Note 8.)
inukou  physically causing ...; therefore ... (See Notes 3 and 4.)
irau  justified by the fact that ...; because ... (See Note 7.)
isoa  entailed by the fact that ...; because ... (See Note 9.)
kou  physically caused by ...; because of ... (See Note 1.)
lia  like/in the manner of ... (a modal operator/PA word; see Note 11.)
moihu  motivated by what? why? (See Note 12.)
nokou  despite physical cause/factor ...; although (See Note 5.)
nonukou  nevertheless unexpected physical result ... (See Note 6.)
nusoaki  ... ki ...  thus ..., given ... (See Note 10.)

Lopo Lengu Klimao

This lesson introduces *causal connectives*—the words translated *because, therefore, although, and nevertheless* in English. Causal connectives fit between inflectors and regular connectives, because like inflectors, they can act on arguments (\text{va tu by you} and \text{kou tu because of you} behave in much the same way), but like connectives they link two things (a cause and an effect) and have eeshekked and kekked forms.

We’ll also meet *modal operators*—words that give details about claims. These are all members of the PA Lexeme (words which may be used like \text{pa}), so they may be used with or without an argument, and even before predicates. There are a lot of modal operators and
other PA-words, but there’s no need to learn them all at once. From now on, they will be marked (PA) in the vocabularies.

**Notes:**
1. **Kou** indicates physical cause, though it’s also used as a catch-all for the various types of causation. It is used either “adverbially” or with a designation, as here. **Kou** is not a member of the PA Lexeme, but it’s used just like an inflector. KOU words often take lepo arguments.

2. Demonstratives (like **ti this** and **ta that** ) single out some item in the local environment that we want to talk about. When we want to refer to that item again, we can do so by using a member of the DA series (**da, de, di, do** and **du**). These pronouns are used in alphabetical order—**da** is used first, then **de**, and so on—and they then become designations of these local objects that may be used repeatedly throughout the story, conversation, or speech, just as **X, Y, and Z** are used in mathematical English. As well as replacing **ta, ti,** and other demonstratives, **da**-words may also be used to replace the **ba** series of indefinite designators and the little word **hu** in questions.

3. When prefixed with **i-**, the causal connectives can be used to join utterances, just like eesheks. In this form, they are followed by sentences—such as **de no pa felda Y didn’t fall**, not by arguments such as **lepo de no pa felda the fact that Y didn’t fall**. In other words, prefixing **i-** is an economizing move; it allows you to omit a lepo.

4. **Nukou** is the reverse of **kou**. It precedes the effect rather than the cause, just as **therefore** does in English.

5. **Nokou** is the opposite of **kou**. It marks something that should have caused a different result—for example, lightness should have prevented a fall (or at least made it less likely). A common English translation of **nokou** is **although**.

6. **Nonukou** is the opposite of **nukou**; it indicates an unexpected result, such as something falling despite being light. English versions are **nevertheless** and **but...anyway**. (**It was light, but it fell anyway.**)
7. **Rau** marks a reason or justification—in other words, a moral or ethical cause. It has the same variations as **kou**: **rau**, **norau**, **nurau**, **nonurau**, and their corresponding **eesheks**. Like all **eesheks**, **irau** is followed by a sentence, not a clause.

8. **Moi** indicates a motivational cause: the purpose which led someone to do something. **Moi** has the same variations as **kou** and **rau**.

9. **Soa** shows entailment, that is, logical causation, or what is sometimes called “necessity”. It’s used to show that one thing follows from or is a necessary consequence of another thing.

10. You can kek causal connectives, and the procedure is like that for **u**-**keks**: add **nu**- if it isn’t there, remove it if it is there, and tack **ki** on the end. The second word is always **ki**. Thus,

... **kou** ... ... because ... **Nukouki** ... **ki** ... Therefore ..., because ...
... **nukou** ... ... therefore ... **Kouki** ... **ki** ... Because ..., therefore ...
... **nokou** ... ... although ... **Nunokouki** ... **ki** ... Nevertheless ..., although ...
... **nunokou** ... ... nevertheless ... **Nokouki** ... **ki** ... Although ..., nevertheless ...
and so forth.

11. The modal operator **lia** provides another way to make the Pavarotti comparisons from Lesson 5. (*Tu mela Pavarotis gritu.* *Tu gritu clika la Pavarotis.*) Modal operators are spare blanks for predicates. If you had to indicate all the possible relationships for each predicate, you’d have to add five or ten places per predicate to show tools, accomplices, methods, etc. To keep the number of blanks manageable, relationships common to many predicates are represented by words like prepositions. Modal operators are PA words. So you could also say **Tu lia gritu** *You sing similarly* and **Gritu lia! Sing like that!**

What’s the difference, then? Do you use **me**, a modal, or a modified predicate? At this stage it doesn’t matter much, though **me** is usually stronger, more intuitive and more slangy, than a modal, and creating a new predicate through modification lies somewhere between the other two. For careful Loglan, use a modal; for ordinary Loglan, use modification; and for chatting with friends (or to pep up a boring text or conversation), use **me**. **Me** is one of the most powerful devices in Loglan; when you encounter some of its weirder uses, you’ll be amazed—though you’ll probably catch the meaning
anyway.

12. Adding -hu to kou and its relatives (and to the modals, for that matter) creates several question words. Kouhu, rauhu, moihu and soahu all mean why? (They reflect different types of why, of course: physical, ethical, motivational, and logical.) Some other combinations you may find interesting: Numoihu? To what end? What good would it do? Heahu? With what help? You and whose army?

13. This is the other way to handle comparison (see Lopo Purmao in Lesson 5). Just connect the two arguments you want to compare with any of the connectives (eks, sheks, etc.) followed immediately by -mou (more than), -numou (less than), or -ciu (as much as). Stretched out, the example sentence means Lezo tu ckano ga mordu lezo mi ckano, ice tu, e mi ckano. The amount of your being kind is greater than the amount of my being kind, and we are both kind to some degree. Using e as the connective does require that the predicate be true of both arguments, though; if I mean that you are kinder than I am because I’m not kind at all, I will have to use umou or amou.

Ciu and mou can also be used as prepositions or inflectors without connectives to mean as much as (something)/equally and more than (something)/additionally.

14. Another kind of variable that you will meet in this lesson is known as a predicate variable. These (dui and dua) are used to refer to a predicate expression (the predicate and all its sutori (second and later) arguments, without having to repeat a lengthy phrase. Dui refers to a predicate used earlier, and dua (which is much less common) to one which the speaker is going to use. Notice that the -i and -a have the same relation to the timeline as do toi and toa, or tio and tao.

Lopo Purmao

We saw in the preceding lesson that Logli are interested in intentions (-biu versus -kao); now that we’re able to justify our actions, let’s pursue this idea further.

-mao (MAdzO, make) means to make or cause something intentionally.
-cko (CKOzu, cause) means to make or cause something unintentionally or naturally.

You probably wonder why we bother with such a distinction. In part, it’s to clear up an ambiguity in English between agent and instrument. Compare The worker improved the house with some paint (Le turka pa gudmao le hasfa lo pindi) with The paint improved the house (Lo pindi pa gudcko le hasfa). Judging by the similarity between the English sentences, you might think the paint is actively, intentionally improving the house. In Loglan, we have two separate words for improve:

**gudmao** ... intentionally improves ... by [doing] ...

\[GUDbi MAdzO = \text{good-make}\]

**gudcko** ... unintentionally/naturally improves ...

\[GUDbi CKOzu = \text{good-cause}\]

**sesmao** ... contributes to science ... ; ... is a scientist

\[SEnSi MAdzO = \text{science-maker}\]

**sesycko** ... unintentionally contributes to science ...

\[SEnSi (Y) CKOzu = \text{is a science-causer}\]

(Lopazu tarsandui pa sesycko lo tarsensi Ancient astrologers [accidentally] contributed to astronomy.

Lo cmavizrie ga sesycko lo livsensi Microscopes contribute to biology.)

**-cea** (CEnjA, become) is used for becoming something (intentionally or not).

**gudcea** ... improves in quality/performance ...

\[GUDbi CEnjA = \text{good-become}\]

---

**Lo Nurvia Logla**

Le kenti pe la Betis

Hue Bai: Rauhu mi cirna la Loglan?
Hue Kai: I, moihu tu kentaa?
Hue Bai: Tu pogmao, Karl; inurau tu nu treci. Isii la Deinys nu treci lo lengu ze kultu perti. I mi tcanakso, buo; inusoa, rauhu mi, gea, cirna la Loglan?
Hue Kai: I, norauhu tu logcia?
Hue Bai: Lepo la Loglan furplicle, sii, lo tcanakso.
Hue Kai: I coihu la Loglan furplicle? I tu hapci, ia, cirna Lai. I ei no, tio djipo?
Hue Bai: Da djipo mi, ia. Ibuo no, da livspe helba.
Hue Kai: Hu livspe helba? Ifeu cea la Loglan no ga cmeni, ei, vatlu?
Hue Bai: La Turcefli krido lepo la Loglan furplicle soa lepo no, Lai gudcko lopu mi tcnakso.
Hue Kai: I nusoahu? Ibuo feu ia, lopo tu logpli ga gudcko lopu tu vetfa penso. I ei no, lopu vetfa penso ga pu ge spuro tcnakso?
Hue Bai: Ia. Imoihu tu santi, Deinys? I ei tu togri la Karl?
Hue Bai: Ao mi fa logpli lia tu, Deinys!
Hue Kai: I hea mi, tu dui. I ii la Deinys fa helba ciu mi.

Lo Kenti
1. Rauhu Kai, e Dai logcia?
2. Norauhu Bai dui?
3. Coi la Turcefli la Loglan soahu furplicle?
4. Ibuo coi Kai, hu pu ge tcnakso spuro go nu gudcko Lai?
5. Coi Dai, hu nu cirna gudbi?
6. Isui hu pu meBai?

Lona Cninu Purda
Predicates

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>cefli</td>
<td>... is chief among ... for activity ...</td>
<td>(chief [tCiF])</td>
</tr>
<tr>
<td>cenja</td>
<td>... become/change naturally into ... from ...</td>
<td>(change [tCEiNJ])</td>
</tr>
<tr>
<td>cirfundi</td>
<td>... enjoys/is fond of learning ...</td>
<td>[CIRna FUNDI = learn-fond]</td>
</tr>
<tr>
<td>clivi</td>
<td>... is alive</td>
<td>(live [LIV])</td>
</tr>
<tr>
<td>cmalo</td>
<td>... is smaller than ...</td>
<td>(small [sMAL])</td>
</tr>
</tbody>
</table>
cmavizrie ... is a microscope of type ...

[CMAlO VIZka tRImE = small-see-tool]

cmeni ... is an amount of money issued by ...

(money [MyNI])

duvri ... discover ... about ...

(discover [DiskYVR])

furpicle ... is useless for purpose ... to user ...

[FUL(R) PL IzO CLEsi = 2nd passive-use (used-for) without (unusable for anything)]

gudcko ... happens to improve ... by ...

[GUDBi CKOzu = good-cause]

gudmao ... intentionally improves ... in quality ...

[GUDBi MA dzO = good-make]

krido ... believes ... to be true of ...

(creed [KRID])

lengu ... is a language of people ...

(language [LEN GUydj])

livsensi ... is an instance of biology

(cLIVi SENSi = life-science)

livspe ... experiences/spends life; “lives” in/at/doing ...

[cLIVi SPEni = life-spend]

(pernu ... is a person/are people. 

(Sp. persona [PER soNa])

pinti ... is a quantity of paint. 

(paint [PeINT])

pogmao ... is a/the programmer of/writes program for system ... 

to do ... using language ...

[PrOGa MA dzO = program-make]

proga ... is a program to do ... on system ... written by ...

(program [PROGrAm])

sensi ... is a scientific fact/law about ...

(science [SaieNS])

tarci ... is a star of galaxy ...

(star [sTAR])

tarsandui ... is an astrologer using system ...

(TARci SANpa DUvrI = star-sign-find)

tarsensi ... is the science of astronomy; is astronomical

(TARci SENSi = star-science)

tcori ... is an authority over ...

(authority [oqORytI])

turceflI ... is the boss of ... in area ...

[TURka CEFLI = work-chief]

turka ... works at/on ... with purpose ...

(work [wyRK])

vatlu ... has a value of ... to ... for use ...

(value [VeLiU])

vetfa ... invents ... for use ...

(invent [inVEnT])

zavcko ... happens to worsen ...

[ZAVlo CKOzu = evil-cause]
**Summary: Lesson 10**

1. *PA-words* include inflectors and *modal operators*. They can be used with or without an argument to modify a sentence. (We already know about inflectors.) Modal operators are like prepositions, indicating relationships common to many words. (If every predicate had places for companions, tools, methods, etc., keeping track of all the blanks would not be humanly possible.)

2. The *causal connectives* *kou*, *moi*, *rau*, and *soa* are like PA-words, because they can also be used alone or with an argument. They indicate respectively physical cause, motive, justification, and entailment (something which follows logically from a premise or argument). Each connective has four forms, modelled here by *kou*:

   - **Kou** ... physically caused by ...; because of ...  
   - **Nukou** ... physically resulting from ...; therefore/thus/so ...  
   - **Nokou** ... in spite of presumed factor ...; despite/although ...  
   - **Nunokou** ... with unexpected/paradoxical result ...; nevertheless ...

3. The difference between causal connectives and PA-words is that the connectives have forms similar to eesheks and keks. The eesheks work on sentences rather than on simple arguments, and are formed by prefixing *i*- to the connective. The keks are formed in a more complicated way: suffix *-ki* to the connective and prefix *nu-* if it isn’t already present, or remove it if it is. The second part of the kek is always *ki*.

4. Another way to create comparisons is to prefix a logical connec-
tive (e, canoi, etc.) to **mou** (more than), **numou** (less than), or **ciu** (as much as). The words connected are then compared in terms determined by the main predicate of the sentence: **Da, emou de mrenu.** *X and Y, and X more than Y, are men.* **Ciu** and **mou** also exist as separate words, and, when used as prepositions, they mean *as much as ...* and *more than ...*, respectively: **Da ciu de mrenu.** *X, as much as Y, is a man; Mou da de prano. More than X, Y is a runner.* When these words are used as inflectors, they mean *as much as this,* or *more than this,* where *this* refers to something in the speech situation, perhaps to the speech itself. When so used, they may happen to follow a connective, and then they must be separated from that connective by a pause or by **gu:** **Da kicmu, e, mou ditca.** *X is a doctor and, more than this, a teacher.*

Lopo Notlensea Cirduo

1. **Rauhu tu fundi ti?**
   Why do you prefer this one?
   I prefer X (it) because X is unbet-terable (best).
2. **Mi fundi da, irau da no nu gudbi.**
   But what entails X’s being unbetterable? (But why is X best?)
3. **Buo soahu da no nu gudbi?**
   If something x, more than another thing y, helps z (one) do something q, then x is better than y for z (’s purposes).
   And X , more than others, helps.
   So X is better than n (i.e. notbi).
   So X is the best.
   So X is the best.
   So X is the best.
   (**Nero** will be explained in Lesson 13.)
4. **Kanoi ba, amou be helba bo bu, ki ba gudbi be bo.**
   Inusoa da gudbi nei.
   Inusoa da no nu gudbi.
   Inusoa da nero gudbi.
   Ice da, amou lo notbi ga helba.
5. **Ei tu, emou mi saadja le bukcu?**
   Do you understand the book bet-ter than I do?
   In fact, I do [understand the book] better than you do, whether you [understand it or not].
6. **Ifeu, mi, umou tu dui.**
Lesson 11:
Abstract Arguments

Lo Mipli Steti

1. Hoi Sitas Fudjitsus, Rie,¹ ae rie tu perdri mi. O Sita Makino, Respectable One, I hope respectfully (that) you remember me.

Dear Sita Makino, May I say that I hope you remember me.

2. I (Lo fircko steti!) I mu pazu² socyjmi vi le mela Fam³ Djeksn hapsocvei.

And (What a frightening sentence!) And we long-ago socially-met at the Family Jackson party.

(What a frightening sentence!) We met a long time ago at the Jacksons’ party.

3. I mi bi laele⁴ blanu ze vegri cadre, soi⁵ comtu!

And I am-also-known-as the-one-represented-by the blue-and-green dress, [I’m feeling shame].

I’m known by my blue and green dress, I’m ashamed to say.

4. Ifeu lemi mermeu papa⁶ furvea cei lui mi, inumoi oa mi respli cei lui mei.

And in-fact my husband was (done) buying it for me, so I have to wear it for him.

In fact, my husband had bought it for me, so I have to wear it for him.

5. Ei tu napa ridle laeli, Loglan Nen, lu?

Is it true that you are (done) read(ing) the thing labeled (and I quote) Loglan Nen (end-quote)?

Have you read Loglan One?

6. La Loglandias he, ceu?

(The) Loglandia is-what, anyway?

What is Loglandia, anyway?

7. Lai gunti, e parti nu livspe ra⁷ logli.

L is a country, and partly lived-in [by] all logli.

It’s a country where all Loglanists partly live.

8. Loe⁸ logli ga livspe Lai na hu parcai je lepo lei clivi?

The-average Logli lives-in L during what proportion of l’s life?
What proportion of his life does the typical logli spend there?

9. Ei kisoa lea\textsuperscript{a} logli ga cmalo, ki Lai cmaci\textsuperscript{b}u?
   Is it true that, since the-class-of-all Logli is small, therefore L (i.e., Loglandia) is-equally-small?
   Since there is only a small number of Logli, does that mean that Loglandia is just as small?

10. Sii no, su\textsuperscript{7} dzabi nurkae cilble kau\textsuperscript{10} sandui ba su\textsuperscript{7} logle gunti.
    Apparently it-is-not-true-that some real world investigators are able to find-as-evidence something-x for (the existence of) some Loglandic countries.
    Apparently no real-world investigator would find any trace of a Loglandic country.

11. Lena kenti ga treci mi kou leuvi\textsuperscript{11} logli ga cmalo.
    The-current question(s) interest me because-of the fact-that also the-set-of-local Logli is small.
    I'm interested in these questions because there are only a few Logli here.

12. Inorau eo rie gesko fomtaa miu\textsuperscript{12}?
    Nevertheless, I respectfully beg you to guest lecture us (the set of me and others)?
    Nevertheless, would you please guest lecture us?

    I am feeling hope, by-the-addresser (the) Audrey Dineen.
    I hope you will, says Audrey Dineen.

---

Lona Cninu Purda

**Predicates**

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>bleka</td>
<td>... looks at ...</td>
<td>(look [LuK])</td>
</tr>
<tr>
<td>cadre</td>
<td>... is a dress</td>
<td>(dress [DREs])</td>
</tr>
<tr>
<td>cilble</td>
<td>... investigates ... for ...</td>
<td>[CItLu BLEka = detail-look]</td>
</tr>
<tr>
<td>citlu</td>
<td>... is a detail of/about ...</td>
<td>(detail [dITeiL])</td>
</tr>
<tr>
<td>cmaci\textsuperscript{u}</td>
<td>... is as small as ... in dimension ...</td>
<td>[CMAlo CIktU = small-equal]</td>
</tr>
<tr>
<td>comtu</td>
<td>... is ashamed of doing/being ...</td>
<td>(shame [CeiM])</td>
</tr>
<tr>
<td>dzabi</td>
<td>... exists/is real for ... under conditions ...</td>
<td>(be [BI])</td>
</tr>
<tr>
<td>fircko</td>
<td>... [unintentionally] frightens ... by ...</td>
<td></td>
</tr>
</tbody>
</table>
LESSON 11

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[FIRpa CKOzu = fear-cause]

fomtaa ... lectures on/about ... to audience ...

[FORMa TAknA = form-talk]

forma ... is the form/shape of ... (form [FORM])

gesko ... is a guest of ... (guest [GEST])
gunti ... is a/the country of people ... (country [kYNTrI])

hapsocli ... parties with ... about/for ...

[HAPci SOCLI = happy-socialize]

hapsocvei ... is a party given by host(s) ... for guests ... on occasion ...

[HAPci SOCLi VEtCI = happy-social-event]

mermeu ... is a/the husband of ...

[MERji MrEnU = married-man]

nurkae ... is the world of ...

(NU (R) KAnCE = (Passive) aware-of)

parcai ... is the proportion/fractional part of ... that is/does/-

contains ... [PARti CAnlI = part-quantity]

perdri ... remembers/recognizes person ...

[PERnu DRIki = person-remember]

respli ... wears clothing ...

[RESfu PLIzo = clothing-use]

sandui ... finds evidence ... of ...

[SANpa DUvrI = sign-discover]

socyjmi ... meets ... socially [SOCli JMIte = social-meet]

vegri ... is greener than ... (Fr vert [VER]; E green [GRIn])

Little Words

kau can/is able to ... ; an auxiliary verb (See Note 10.)

lae the one at/with/labeled by ... ; (See Note 4.)

lea the set/class of all things that are... ; (See Note 9.)

leu the set of things I have in mind that are ... ; (See Note 11.)

loe the statistically typical member of the set/class of things

that are ... ; (See Note 8.)

lui for (someone) ... [pLUCI = please]

miu the set of I/me and some unspecified other(s); distinct from

mu, the set composed of I/me and you; (See Note 12.)

napa is done ...-ing/has ...-ed; the present perfect tense. A com-

pound inflector; (See Note 6.)

ne a/one/one of (more fully explained in Lesson 12.)

papa was done ...-ing/had ...-ed; the past perfect tense. A com-

pound inflector; (See Note 6.)
pazu long ago. A compound inflector. (See Note 2.)
ra all/all of (more fully explained in Lesson 13.)
rie [respect(fully)]. A register marker. (See Note 1.)
soi Pseudonomatopoeia marker: turns following predicate into an attitudinal indicator. (See Note 5.)
su some/one or more of (more fully explained in Lesson 13)

Names
Fam (famji) Family. As a title, la Fam ... means the ... family.
Nen (ne) One. Used as a name or part of a name; as in Na la Nen = At (the local) One O’clock, or in Loglan Nen = Loglan One, a book-title.

Lopo Lengu Klimao
And now, a Loglan letter! Letters between Logli generally begin with Hoi followed by the person’s name, which is sometimes followed by a register marker (such as kae). They usually end with a closing phrase such as Sia loa, followed by Hue and the writer’s name but without the name-operator la. Omitting la turns the name into a signature. Other common closing phrases include Kerju [tu]! Take care [of yourself ], Djela! (Be well ) and Nu cluva! (Be loved! [Love, ]). Soi (see Note 5) may become more frequent in time, as in Soi cluva! ([I’m experiencing ] Love). This area is open to considerable innovation.

Notes:
1. Rie is a register marker. These are simple, straightforward ways of showing how you view your relationship with your auditor(s): respect (rie < rispe), politeness (kae < ckano), neutrality (nue < nutra), friendship (fie < fremi), or intimacy (die < dipri). (All register markers end in -e and are derived from some related predicate.) In natural languages, the devices for marking levels of relationship are complex, involving different words (dine, eat, chow down) and (in Japanese, for example) different grammatical forms. In a letter’s salutation, Kae roughly translates as Dear Mr./Ms. With a predicate, kae usually means would like to or might. After a while, you’ll get a feel for where to use these words.
2. Adding -zi, -za, and -zu to inflectors provides the idea of extent:
-zi  
small/immediate

pazi  
recently

vizi  
in this very spot

-za  
intermediate

paza  
sometime before

viza  
in this area

-zu  
large/distant

pazu  
long ago

vizu  
in this region

3. Some names and titles are common enough to be made from predicate words. The easiest way to do this is to drop the predicate’s final vowel(s), as in famji > Famj and kicmu > Kicm. (If the result seems awkward or too long, just drop one of two final consonants as well: Fam and Kic.) For a few predicate words (the ethnic words, such as logla, logle, etc.), the final vowel is important and should be kept. In these cases, add -n to the predicate: Loglan, Loglen, etc. For complexes ending in a cvv djifo, change it to a cvc one, if one exists (furbuu > Furbuk). Otherwise, add -n (Furbuun). (If a complex ends in a whole predicate word, drop the final vowel.)

As a rule of thumb (not a requirement!), avoid cvn djifo for names. For example, loglai (a Loglandic piece of land) should not be made into “Loglan” (using landi’s djifo -lan)—it would be confusing! For the same reason, don’t shorten a predicate word so that it ends in -s: if you turn kasna into Kas, it will look like the loglanized version of some foreign-language named ‘Ka’. Try Kasn for talking to your cow.

4. Lae refers to something indirectly, through any of its signs: a label, an address, even a title. In this case, Audrey wants to refer to herself indirectly through a particular dress: the blue-and-green one. It’s hard to give a general translation for lae; perhaps the most helpful would be the one with [the sign/symbol ] ... , as in lae le rozme (the one wearing the rose). A common use of lae is to turn designations of book titles into designations of books. For example, laeli, Lopo Dorja, ze Lopo Pismi, lu could designate a translation of War and Peace by first designating the label on its cover.

5. Soi means that the next predicate is an expression of how the speaker feels, or what he or she is doing, while making this remark. An equivalent is found in the computer community, where (:-) is a “smiley face” (hold the book left-side-up if you don’t get it), (;-) is a wink, and so on. It’s usually a good idea to use soi to let your reader
(and sometimes even your listener) know when you’re joking: soi clafo, soi crano, etc. As mentioned earlier, soi-phrases work well as letter closings. There they indicate the general attitude that the writer hopes to convey by his or her letter.

6. Papa is a compound tense operator. When it occurs alone you can translate it as already or before then; but before a predicate, use had. As a rule of thumb, compounds ending in -pa translate is, was, or will be done (doing something). The first part of the compound shows the tense: papa was done (had ...-ed); napa is done (has ...-ed), and fapa will be done (will have ...-ed). Compounds ending in -fa translate about to: pa/na/efa + fa was/is/will be about to. Compounds ending in -na make the so-called coincident tenses and can be translated with either then or now: pana was then, nana is now, fana will (be) then.

7. Ra means all (the members) of some class or group considered individually; so ra is a kind of number. (We'll deal with numbers in general in Lesson 12.) When any number is used before a predicate, it forms what is called an indefinite description. Su is another indefinite descriptor, and is used in example 10. Su means at least one (any one or more will do). So Su logle gunti may be translated Some Loglan countries.

8. Loe refers to the typical member of some class or group. It doesn’t refer to any actual individual, but to a statistical abstraction. (How many “average” people do you know?) Loe preda represents an average member of lea preda; see next note.

9. Lea refers to an entire class of things having some defining property in common, but not to any of its members. You can speak of such a group or set collectively as having any physical or numerical property you like, e.g., being numerically large or small, historically new or old, physically heavy or light, or being red-and-white in color, say, vs. black-and-tan. (One set of chess pieces may be red-and-white; another, black-and-tan; but no individual chess piece in either set has either of these mixtures of colors.) Thus you can use lea to talk about the properties of sets without saying anything about their individual members.

Lea creates sets from predicate expressions, whether qualified or
not: Leavi mrenu = The set of all the men here (i.e., in this room) or Lea mrenu = The set of all men (anywhere). If you want to talk about a set made up of a just few elements that you can identify individually, use ze to build up a designation of it. For example, La Braon ze la Djonz ze la Smiq is just as good a designation of the set of all the men in this room if, in fact, these three are all there are here. We can use either designation to talk about them collectively. For example, Bai ze Dai ze Sai logla cirgru.= B and jointly D and jointly S are a Loglan learning-group. and Leavi mrenu ga logla cirgru. = All the men here constitute a Loglan learning-group.

10. Kau is an auxiliary predicate. This one means can, and there are four more like it Loglan (fui, foi, roi, nui mean should, must, will (in the sense of intend), and may respectively). Auxiliaries allow frequently used expressions to be shortened. For example, Da kau sucmi means exactly what Da kanmo lopo da sucmi means; and both mean that X can perform acts of swimming.

11. Leu, like lea, refers to a group collectively by mentioning a property shared by all its members; but, like le, the identity of any group described with leu is determined by the intentions of the speaker. Just as Le mrenu means The man or men I have in mind, Leu mrenu means The set of (two or more) men I have in mind.

To sum up the relations among these new descriptors:

Lo logli is the mass individual composed of all the Logli there are, were, or ever will be, and is almost always used to refer to some manifestation of that—hopefully gigantic!—mass individual.

Lea logli is the class of all current Logli regarded as a whole—for example, is it growing or not? Lea logli differs from lo logli in that it refers, not to manifestations of a composite individual, but to the entire set of constituent individuals considered as a whole. We may ask Hu konte lea logli? What is the count of the set of Logli? (How many Logli are there?) The count may be small; but that does not mean that all Logli are small. Lea logli designates a physical object composed of separable individuals, and as such it has a count. It may also have a color, size, or weight—just like a chess-set.

Loe logli is the statistically average logli, an imaginary being. What you say about this abstract entity reflects statistical facts ob-
tained by your study of, or experiences with, lea logli. It is only by accident that any of these averages happens to apply to a real Logli.

Leu logli is a particular subset of lea logli about which some speaker has something to say. Both leu and le are intentional, in the sense that what they designate depends solely on the intentions of the speaker. Lea logli (The set of all Logli) and Ra logli (Every Logli) are not intentional; they may be thought of as exhaustive, in that they ask you to consider all the individuals answering to their predas. In contrast, the intentional designations Leu logli and Le logli represent only some selection of Logli picked out for us by the speaker.

Leu and lea refer to groups collectively, not to their members; we’ve said—rather arbitrarily—that such references are to sets. Le and ra refer only to the members of groups and ask you to consider them individually; we’ll say that such references are to multiples. The distinction between sets and multiples is logically fundamental; yet most languages don’t even make it! Ravi humnu ga razpli (All the humans here are rational) means that each single human here is rational, which is quite a claim! Leavi humnu pa balci levi tepli (All the humans here built this church) says something quite different, namely that the set of all the humans here got together and built it. English allows us to make this distinction, by using such qualifiers as individually and collectively; but it doesn’t insist that we make it. In Loglan, there is no way of saying either of these things without making clear which of them you mean!

Notice that the sets denoted by ordinary language are not abstract objects, such as those treated by mathematicians. They have physical properties, like age and weight, and they do things—like carry logs. Leu to humnu pa berti leva tristaga (The set of two humans I have in mind collectively carried that log) and Le to humnu pa berti leva tristaga (Each of the two humans I have in mind individually carried that log) make quite different claims.

Some Logli prefer to use expressions like Lo to preda, where others use Leu to preda, to refer to log-carrying teams and similar group activities. They like to think of these teams as local masses rather than as sets of individuals acting collectively. They are, of course, quite free to do so.
12. **Miu** is a close relation of **mu**; and **mu**, as you know, is a contraction of **mi ze tu**. This basic sense of ‘we’, which includes only the speaker and hearer, is not the only kind of ‘we’ there is, though. There is also an exclusive sense that designates the speaker and someone else and excludes the hearer. That is what **miu** means and, of course, that is just what example 12 requires. (The speaker is not asking this learned person to lecture herself as well as him and some others not present, but only him and those others.) **Miu** is therefore a contraction of **mi ze da**, in which **da** indicates those others. Finally, ‘we’ may include all three: the speaker, the hearer, and others not present. This most inclusive sense of ‘we’ is **muu** in Loglan and is thus a contraction of **mi ze tu ze da**. It is the kind of ‘we’ that politicians use when addressing some but not all of their supporters.

All the ‘we’s we have talked about so far are set-oriented. We learned earlier that strings of arguments linked with **ze** are set designations, so **mu**, **miu**, and **muu**—which are simply contractions of such strings—must designate sets.
While these collective senses of ‘we’ are the most common, there are other senses that Loglan, as a logical language, must also provide. If, speaking of yourself and your wife, for example, you say *We’re both over six feet tall*, this is probably not the collective sense of ‘we’ you’re using but one that treats the two of you as separate individuals. Collectively—for instance when she’s standing on your shoulders to get a kitten down from a tree—you and your wife might be a good bit more than twelve feet tall! So this is an individualized sense of ‘we’ you’re using here (*I’m six feet tall, and she’s six feet tall*). We need these other, individualized senses of ‘we’ in Loglan as well. They are respectively *mo, mio,* and *muo,* thus matching, except for a different final vowel, the collectives *mu, miu,* and *muu.*

<table>
<thead>
<tr>
<th>Constituants</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>mi</em></td>
<td>I alone</td>
<td><em>mi</em></td>
</tr>
<tr>
<td><em>mi, tu</em></td>
<td>we = I + hearer</td>
<td><em>mu</em></td>
</tr>
<tr>
<td><em>mi, x</em></td>
<td>we = I + others</td>
<td><em>miu</em></td>
</tr>
<tr>
<td><em>mi, tu, x</em></td>
<td>we = I + hearer + others</td>
<td><em>muu</em></td>
</tr>
<tr>
<td><strong>2nd Person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>tu</em></td>
<td>you, y'all = hearer(s)</td>
<td><em>tu</em></td>
</tr>
<tr>
<td><em>tu, x</em></td>
<td>you = hearer + others</td>
<td><em>tuu</em></td>
</tr>
</tbody>
</table>
The table on the previous page gives all six senses of ‘we’ and the four plural senses of ‘you’ in Loglan. (The same information is also to be found on the inside back cover of Vol. 1, where it may be more accessible for reference.) Note that just as mu and kin may be replaced by set designations made with ze (mi ze tu, etc.), mo and kin may be replaced by designations of multiple individuals, made with e (mi, e tu, etc.).

Lopo Purmao

-Kue (from KUmcE, reciprocal) is the djifoa used to make predicates for exchanges and mutual actions. In Lo Nurvia Logla for Lesson 8, you saw dickue (... teach each other subject ...). -Kue complexes like this generally take set designations as first arguments. This is because both people are taken to be the collective agent (the subject, in terms of English grammar) of the reciprocal action. Thus Mi cluva tu (I love you), but Mu clukue (We love each other). Mu can always be replaced with Mi ze tu, of course, which makes clear exactly what is being said: Mi ze tu clukue (I and you together love each other).

Kin- and -kii (KINci, KINcl, accompany) indicate accompaniment. There is a difference between complexes made with the prefix and those made with the suffix:

kincia ... is an apprentice/disciple of teacher ... in subject ...

[KINci CIRnA = accompany-learn]

cirkii ... is a fellow learner with ... in subject ...

[CIRnA KINcl = learn-accompany]

Simply put, a kincia is a learner who accompanies; a cirkii is a companion who learns. So -kii complexes may often be translated as fellow- or co- in English. Kin-, on the other hand, refers to someone who accompanies in order to do something.

kinsri ... follows ... to chronicle ...

[KINci SRIte = accompany-write]

(Someone who follows someone else around with a pen and notebook, like Dr. Watson.)

srikii ... co-writes ... with ...

[SRIte KINcl = write-accompany]
srikue ... (plural set) correspond/exchange letters with one another

[SRIte KUmcE = write-reciprocate]

(Another word with a similar meaning is lerbatmi [LERci BATMI = letter-trade]. However, this has a non-reciprocal structure ... corresponds with ... .

Lo Nurvia Logla

Le lerci pe la Fum Fudjitsus

Hoi Rien,

Ae rie no, lezo cimra hatro ga fatru la Rien. I io lo ponje cimra ga hatro lo meatu. I fbdaa lepo mi gudcanspe! I ao la Merm ze mi gatytaa rie tu lepo gozbeo. Irea miu durtoi, ui. Ibuo oa, soi fatcou, mi djadou Rai lepo la Merm, enoi mi fomtaa. Inorauki mi ze Mai srikii lo bukcu, ki mi feu kinsri Mai lo vidre. I mai sismao vei coi lomi nu srte. Inusoa, mi bi la Fur Buk. I la Merm bi la Fomtak, soi clafo. I eo miu norau hijra lepo grujmi?


Ceu, lopo speni lo notbi kultu ga gudcko, ia. Ibuo kanoi Rai fundi le notbi fu takna, ki ia miu durtoi. Ifeu, la Merm fa fundi fomtaa lemiu fu bukcu, leuva logli. I lea perti nu fomtaa ga groda. Lo loglo, ze lopo kulbatmi, ze lo ge po penso nu kozu je la Loglan, ze lo loglo fikco, ze lopo kambi la Loglan, lo notbi lengu guo, ze laeli Hu sitfa la Loglandias? lu parti setci fei. I eo tisra ne nu fomtaa!

Gea, soi garti. I kerju.

Hue Sitas.
Lo Kenti
1. Rauhu la Fum Fudjitsus bi la Furbuk?
2. No, loe logli ga he?
3. Hu cmalo? (Give all the possibilities mentioned.)
4. Hu parti setci? I da setci hu?

Lona Cninu Purda
Predicates

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>berti</td>
<td>... carries/transports ... to ... from ...</td>
<td>(carry [kaRi])</td>
</tr>
<tr>
<td>cimra</td>
<td>... is the summer of year ...</td>
<td>(summer [syMR])</td>
</tr>
<tr>
<td></td>
<td>(In the summer, heat waves make things shimmer [cimr])</td>
<td></td>
</tr>
<tr>
<td>cirgru</td>
<td>... is a learning-group (CIRna GRUpa = learn-group)</td>
<td></td>
</tr>
<tr>
<td>clafo</td>
<td>... laughs at [person/thing] ...</td>
<td>(laugh [LAF])</td>
</tr>
<tr>
<td>clukue</td>
<td>... (a collective) love each other</td>
<td>[CLUva KUmce = love-reciprocate]</td>
</tr>
<tr>
<td>cluva</td>
<td>... loves ...</td>
<td>(love [LAV])</td>
</tr>
<tr>
<td>cutri</td>
<td>... is some water</td>
<td>(water [uaTR])</td>
</tr>
<tr>
<td>danci</td>
<td>... is a design/plan for ... by ...</td>
<td>(design [DezAiN])</td>
</tr>
<tr>
<td>danpeo</td>
<td>... composes/outlines ...</td>
<td>[DANci PEnsO = design-think]</td>
</tr>
<tr>
<td>dickue</td>
<td>... (a collective) teach each other</td>
<td>[DItCa KUmce = teach-reciprocate]</td>
</tr>
<tr>
<td>dichea</td>
<td>... is a teacher’s aide/teaching assistant for teacher ... in subject/class ...</td>
<td>[DItCa HELbA = teach(er)-help(er)]</td>
</tr>
<tr>
<td>dipri</td>
<td>... is dear to ...</td>
<td>(dear [DIR])</td>
</tr>
<tr>
<td>disri</td>
<td>... decides to [do] ... about ...</td>
<td>(decide [DISaId])</td>
</tr>
<tr>
<td>dorja</td>
<td>... is at war with ... over ...</td>
<td>(war [waR])</td>
</tr>
<tr>
<td>durtoi</td>
<td>... agrees/promises to [do] ...</td>
<td>[DURzo TOgrI = do-agree]</td>
</tr>
<tr>
<td>fatcou</td>
<td>... is sorry to bother ... by doing ... E.g., Soi fatcou! = Excuse me! [FATru COmtU = bother-ashamed]</td>
<td></td>
</tr>
<tr>
<td>fibdaa</td>
<td>... wish for ... for purpose ...</td>
<td>(FIBru DANzA = weak-desire)</td>
</tr>
<tr>
<td>gandia</td>
<td>... is a professor of subject ...</td>
<td>[GANta DItcA = high-teacher]</td>
</tr>
<tr>
<td>gatytaa</td>
<td>... thanks ... for ...</td>
<td>[GArTi TAKnA = grateful talk]</td>
</tr>
<tr>
<td>gozbeo</td>
<td>... invites ... to be a guest at/for ...</td>
<td>[GOdZi BEEgcO = come-request]</td>
</tr>
</tbody>
</table>
grocea ... grows/becomes big[ger]

GRoda CEnjA = big-become

grujmi ... meets as group ... at ...

GRupa JMIte = group-meet

gudcae [event/circumstance] ... is luckier than ... for ... E.g., Lo
gudcae! = What luck! [GUDbi tCAnE = good-chance]
gudcanspe ... is luckier/more fortunate than ... Gudcanspe! = Be
lucky! (Good luck!) [GUDbi tCANe SPEni = luck-experience]
gunti ... is the country of people ...

KaNTri = country

hantro ... is hotter than ... by ...

HATR = hotter

hindi ... is a Hindu/native of India

HINDI = India

kaidja ... recognizes/sees/knows quality/property ... in ...

KAAtI DJAno = quality-know

kambi ... compares ... to/with ... in feature ...

KyMper = compare

kofcko ... [happens to] make(s) ... comfortable in/about/with ...

KOmFu CKOzu = comfortable-cause

komfu ... is comfortable in situation ...

KyMFort = comfort

kulbatmi ... exchanges [own] culture with [own culture of] ...

KULtu BATMI = culture-exchange

landi ... is a parcel of land

LAND = land

lenkou ... is comfortable with/fluent in language ...

LENgu KOmfU = language-comfortable

lenkofmou ... is more comfortable with language ... than ... is in ...

LENgu KOmfU MOOrdU = language-comfortable-more

nerjmis...tuo ... is a/the story of ..., a set, first meeting one another

NE (R) JMIte STUci = first-meet-story

nutra ... is neutral in dispute ... between ...

NiUTRAI = neutral

pismi ... is at peace with ...

PIS = peace

ponja ... is a part of the Japanese language

Nippon = Nippon

ponje ... is a Japanese area

raznu ... is a reason for action ... by ... in circumstances ...

RiZN = reason

razpli ... is more rational than ...

RPLIzu = reason-use

rispe ... respects ... for ...

RISPEct = respect

rozme ... is a rose from ...

ROZ = rose
setci is a set/group/collection of ..., any superset. E.g., Ta setci lea murku = That’s a set of monkeys. (set [SETci])

sismao ... arranges/systematizes ...

[sISsto MAdzO = system-make]

sitfa ... is a site/place/location of ... in reference frame ...

(site [SaIT])

srikii ... (a set) co-write/are the co-authors of ...

[SRIte KIncI = write-together]

srite ... writes ... on surface ...

(write [RaIT])

tricu ... is a tree

(tree [TRI])

tristaga ... is the trunk of tree ... (TRIcu STAGA = tree-stem)

Names
Fomtak Lecturer [fomtaa]
Furbuk Author [furbuu]
Hindis Hindi (the name of the language)
Merm Husband [mermeu]
Nihon Japan

Summary: Lesson 11
1. Register markers let your audience know how you’re relating to them: formally, informally, etc. Like all free modifiers, these little words modify the word or group of words they follow.

2. Soi [predicate] makes an attitudinal indicator out of [predicate]; a sort of aside on what you’re feeling or doing while writing or speaking. It broadens your bandwidth.

3. The suffixes -zi, -za, and -zu define the extent of an inflector, specifying small, medium, and large periods and areas.

4. Tense inflectors can be compounded. Adding -pa to the other three tense words produces the three perfect tenses, napa/papa/fapa (has/had/will have ...-ed ); adding -fa to another tense adds the idea of being about to do something: nafa/pafa/fafa (is/was/will be going to ...); adding -na creates the coincident tenses: nana/pana/fana (is now/was then/will then be ...-ing ). The first inflector always gives the primary tense: pafa was going to ..., fapa will have ...-ed, napa has ...-ed; the second inflector plays a variation on that theme.

5. Names may be formed from predicates by dropping the final vowel. For complexes, add -n or use a cvc djifo to end the word. (Avoid
abbreviations ending in -n and -s.)

6. **Lae** [argument] refers to someone or something indirectly: by specifying with [argument] something by which that someone/-thing can be found, like a distinctive mark or an address. Note that unlike normal descriptors, **lae** must be followed by an argument.

7. **Loe** forms designations of the theoretical average member of some class or set.

8. **Lea** and **leu** create descriptions of sets or classes. Claims involving them always refer to the group as a whole, not to its members. Claims with **ra** or **le**, on the other hand, concern each member of their multiples. **Lea** [predicate] describes the class of all things that are [predicate], while **leu** [predicate] refers to some subset of that class that the speaker has in mind. **Lea** is like **ra** in being universal over its predicate; **leu** is like **le** in being intentional.

**Lopo Notlensea Cirduo**

1. **Ei lea logli ga laldo loe logli?**
   Is the class of all Logli older than the average Logli?

2. **Ei tu papa takna le ditca le detra na lepo deo fadkaa?**
   Had you talked to the teacher about the daughter when she [the daughter] arrived?

3. **No. Ibuo mi pafa takna dei.**
   No, but I was about to talk to her [the teacher].

4. **Ei ra ridle je levi bukcu kou logcia?** [Hint: **kou** is being used as an inflector.]
   Would anyone who read this book therefore learn Loglan?

5. **Ei ra ridle je levi bukcu soa logcia?** [So is soa.]
   Would it be safe to infer that any reader of this book is learning Loglan?

6. **Uu no. I no, lopo ridle lo logla bukcu ga sanpa lopu logli.**
   Unfortunately, no. It is not true that reading Loglan books is a sign of being a Loglanist.

7. **Ifeu, le ne sanpa je lopu logli ga po ge logli penso.**
   In fact, the one sign of being a Loglanist is thinking like one.

8. **Inusoa kanoi ba kentaa tu lepo laele logla bukcu ga logli, ki oe io tu cutse liu iu.**
   So if someone asks you about the one with the Loglan book being a Loglanist, you should probably say, I don’t know.
Lesson 12: The Numbers Racket

Lo Mipli Steti

1. **To¹ mrenu pa kamla.**
   [Each of some] Two men came.

2. **To le² mrenu pa kamla.**
   [Each of some] Two of the [three or more] men came [separately].

3. **Le to³ mrenu pa kamla.**
   [Each of] The two men came [separately].

4. **Leu⁴ to mrenu pa kamla.**
   The group of two men [I have in mind] came [together].

5. **Hoba⁵, ⁶ pa kamla?**
   How-many [somethings] came [separately]?

6. **Tao tona⁷ vetci.**
   That-situation twice occurs (occurs twice).

7. **Ta kilgramo⁸ lio⁹ toni.**
   That measures-in-kilograms the-number twenty.
   *That weighs twenty kilograms.*

8. **Ta meltio¹⁰ lio tonikeigei¹¹.**
   That measures-in-heaviness the-number 20kg.
   *That weighs twenty kilograms.*

9. **Ta tidjo¹² ti lio toni kilgramo.**
   That is-heavier-than this [by] the-number 20 kilograms.
   *That is twenty kilograms heavier than this.*

10. **Le toni kilgramo¹³ ga cao¹⁴ cmalo.**
    [Each of] The twenty, [one-] kilogram [things] are (emphatically) small.

11. **Le lio tofokuato?¹⁵ (tofo kua to)**
    Which the-number 24/2? (24 / 2)
    *What is another way of saying twenty-four divided by two?*
    *What is twenty-four divided by two?*

12. **[Lio tofokuato bi] Lio neto.¹⁶**
    [The-number 24/2 is-another-way-of-saying] The number 12.
    *[Twenty-four divided by two is] Twelve.*
13. **Hu jolkeo**? [ti, le nedpao midnai]?  
What is the clocktime [ending at this moment, and beginning the previous midnight]?  
*What time is it?*

14. **Lio netoma** [ga jolkeo].  
The number twelve hundred [is the time].  
*[It’s] Noon.*

15. **La Neton.**  
Twelve. *(Noon.)*

---

**Lona Cninu Purda**

**Predicates**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>jolkeo</td>
<td>... is the time of event ... from clock started at ... (See Note 17.)</td>
<td>[JOkLa cKEmO = clock-time]</td>
</tr>
<tr>
<td>kilgramo</td>
<td>... measures/weighs ... kilograms. (See Note 8 &amp; Lopo Purmao)</td>
<td>[KILto GRAMO = thousandfold-gram]</td>
</tr>
<tr>
<td>meltio</td>
<td>... weighs/Measures-in-heaviness ... in gravity-field ... (See Note 10)</td>
<td>[MErLi TIDJO = measure-heavy]</td>
</tr>
<tr>
<td>midnai</td>
<td>... is the midnight of day ...</td>
<td>[MIDju NAtlI = middle-night]</td>
</tr>
<tr>
<td>nedpao</td>
<td>... is the predecessor of/the one just before ...</td>
<td>[NEDza PAskO = next-before]</td>
</tr>
<tr>
<td>tidjo</td>
<td>... is heavier than ... by ... in gravity-field ...</td>
<td><em>(weighty [ueiTI])</em></td>
</tr>
</tbody>
</table>

**Little Words**

| cao    | emphasizes the immediately following word in speech, or italicizes that word in text; see Note 14. |
| ho     | how many ... ? (A number word; see notes 5 and 6.)                                 |
| pio    | plus; a mathematical operator between numbers.                                    |
| nio    | minus/less; a mathematical operator between numbers.                               |
| tia    | times/multiplied by; a mathematical operator between numbers.                    |
| kua    | divided by ... ; see Note 15.                                                     |
| lio    | the number ... (A descriptor; see Note 9.)                                        |
| tona   | twice (two-now) (A quantified inflector; see Note 7.)                              |
Lopo Lengu Klimao

Numbers in Loglan aren't difficult to use, just different. Here are the ten digits divided into odd (-e) and even (-o) groups:

- **ni** 0 (*nil* [NII])
- **ne** 1 (Think of English *oNE*.)
- **to** 2 (Kind of like *TwO.*)
- **te** 3 (*ThrEE*, Spanish *TrEs.*)
- **fo** 4 (English *FOur* without *r.*)
- **fe** 5 (*Five + odd -e.*)
- **so** 6 (*Six + even -o.*)
- **se** 7 (*SEven.*)
- **vo** 8 (Russian *VOsem*, if it helps,
  or Latin *octaVO*)
- **ve** 9 (Spanish *nueVE.*)

Notice that the digits also come in rhyming pairs: **ni** *ni ne*, **to** *to te*, **fo** *fo fe*, **so** *so se*, **vo** *vo ve*, which makes them easy to recite, as in counting.

To form the numbers above nine, just read off the digits: 10 = *one-zero* = **neni**; 1993 = *one-nine-nine-three* = **nevevete**. As for all Loglan words with more than one syllable, you normally stress the second to last one: [neh-veh-VEH-teh]. For the plain hundreds, add **-ma**: **nema** *one hundred*, **toma** *two hundred*, etc. (Only do this when the number ends in “hundred”; otherwise, just read the digits off as usual, as in *one-nine-nine-three*, above.) For the plain thousands, add **-mo** (*nemo** *one thousand*). (Technically, **-ma** equals two zeroes, and **-mo** equals three.)

The example sentences were roughly in order of their frequency, that is, the early ones are the structures you'll probably encounter most often.

**Notes:**

1. As in English, you can say **To mrenu** (*Two men*) and mean *any* two men. This operation always designates a multiple; that is, you are here talking about each of any two men individually, not about them as a group. This is called *indefinite description* because you're not being definite about what two men you mean. But you are describing them by telling us they're men.

2. When you say **To le mrenu** (*Two of the men*), you're restricting the indefinite two to a specific multiple of men, say the men in this room. Again any two of this source multiple will do. Of course the multiple must be big enough to contain the number of men you want to talk about. So **To le mrenu** means *Each of any two members of the multiple of three or more men I'm talking about.*
3. **Le** followed by a number gives the size of the multiple. (Yes, multiples as well as sets have sizes.) But you’re still talking about each member of that multiple individually. **Le to mrenu pa berti leva tristaga.** Each of the two men individually carried that log.

4. With **leu** we can talk about log-carrying teams. **Leu to mrenu pa berti leva tristaga.** The group of two men acting together carried that log. Notice that example (4) makes just one claim while (3) makes two.

5. **Ho** means *what number?/how many ...?* It is used exactly like any ordinary number. To the question **Ho mrenu pa kamla?** (*How many men came?*) you would expect an answer like **Toni,** (*Twelve*). Or you could ask, **Lio ho?** (*The number what?*) and receive a similar answer. But if the answer you expect is a designation (using one of those **l**-words), then your question should use **hu.** Let’s suppose you are buying meat. If the clerk asks you, **Ho mitro ga nu danza tu?** (*How much meat do you want?*), you’ll reply **Tokeigei.** (*Two kilos.*) However if you point to a cut of meat and ask, **Ti kilgramo hu?** (*This is how many kilos?*) the clerk will answer, **Lio to.** (*The-number two*).

6. Numbers can’t wander around on their own in Loglan; they must be attached to something. So we use one of the **ba** series as a catch-all argument.

7. You can use a number-word with an inflector to show how many times or places a claim is true for. Thus, **tona** twice, **nivi** nowhere, **hona?** *how many times?*

8. The word **kilgramo** has the idea of weight built into it, so we don’t need to say “This weighs 20kg.” We just say “This is in kilos 20.”

9. **Lio** is the numerical equivalent of **liu;** use it to refer to numbers themselves. If you use **lio** before the end of the utterance, you may need to follow the **lio** argument with **ga** (if the next word is a predicate) or a pause (in any other case). Note that we sometimes use the phrase *the number ...* in English for something other than a number proper: **La Djonz bi laelio fe Jones** (a football player, perhaps) is number five. Likewise **Hu melaelio se?** *Who is / has [ticket] number seven?*
10. If you just have to say *That weighs 20 kg*, prefix mel- (from merli ... measures ... on scale ...) to -tio (from tidjo ... is heavier than ... by amount ... in gravity-field ...). The result, meltio, means ... measures ... in weight in gravity-field .... This is the way to form all measure words: melhatro (... measures ... degrees), melylaa (... measures ... long), etc.

11. Lio tonikeigei means the number 20kg .... Yes, this is a number in Loglan. It’s called a dimensioned number. (Pronounce this one [toh-nee-KAY-gay].) There are two ways to form dimensioned numbers:

(1) with predicates. I could have written lio toni kilgramo in the example sentence; as a beginner, you’ll probably be more comfortable with this method. (This is why you must separate a lio argument from a following predicate. Why you would want to say Lio toni ga kilgramo *The number twenty weighs a kilogram* I don’t know, but Loglan enables you to speak such nonsense unambiguously.)

(2) with measurement symbols. This is quick and—once you’re familiar with the symbols—easy. (This is why you must separate the numerical part of a lio argument from a following letteral: otherwise, the letteral could become part of a dimensioned number.) The following are some of the most common symbols:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dai/D</td>
<td>dalra</td>
</tr>
<tr>
<td>dei/d</td>
<td>denli</td>
</tr>
<tr>
<td>gei/g</td>
<td>gramo</td>
</tr>
<tr>
<td>hei/h</td>
<td>horto</td>
</tr>
<tr>
<td>isi/i</td>
<td>inca</td>
</tr>
<tr>
<td>lei/l</td>
<td>litro</td>
</tr>
<tr>
<td>mei/m</td>
<td>metro</td>
</tr>
<tr>
<td>meo/µ</td>
<td>minta</td>
</tr>
<tr>
<td>nei/n</td>
<td>nirne</td>
</tr>
<tr>
<td>sei/s</td>
<td>sekmi</td>
</tr>
</tbody>
</table>

Yes, the Greek letter *µ* is the symbol for minta. Mei (m) is used for the much more commonly used metro meter and Mai (M) is used for marli mile. So that left *µ* (µ) as the only single character left for minta. (If your printer or typewriter won’t print Greek characters, just spell it out as *meo*.)

As far as possible, Loglan measure symbols are the same as those used internationally in science. Thus m/g/s are also the characters used internationally for the meter/gram/second measurement system of science.
The problem with measurement symbols is remembering what a particular character stands for. Does tolei mean two liters, two weeks (likta), or two li (an old Chinese measurement)? The symbol assignments given above are generally accepted among Logli, but ultimately you must be prepared to explain. It’s like jumping into a paragraph about cei and dei without mentioning le cirna and le ditca first; your audience may understand by context—or they may not. In the above example, context would probably serve to distinguish measurements of volume (litro), time (likta), and distance (li). In a text or speech it’s probably best to use the full measurement predicate the first time around: lio toni litro (the number twenty liters). Then later you can write or say lio temalei (the number 300 l) with a good chance of being understood.

12. You can also use simple dimension words (heavy, high, hot, etc.) to form comparative measurements, though this is less common: Lemi brudi ga laldo mi, lio tonei. My brother is older than I am by two years.

13. In case you’re wondering, no, Toni kilgramo does not mean Twenty kilograms. It means Twenty [one-kilogram] objects. A twenty-kilogram object would be either Ne tornirkilgramo or Ne kilgramo je lio toni. However, Tonikeigei tcoko does mean Twenty kilograms of chocolate.

14. Cao is a metalinguistic operator indicating emphasis and can usually be omitted from speech—especially when speakers are confident they can make their emphasizing intentions clear by speaking emphatically. Cao is usually also absent from texts in which italics are possible; for then word emphasis can be indicated without it. Cao (think of Shout!) is used in this lesson mainly to illustrate how individual words may be chosen for emphasis without following them with free modifiers. This, as you’ve noticed, is the more usual way of indicating in text which words are to be emphasized in speech.

15. Note that tofokuato (24/2) is a number. Just as predicates may contain several predicate words, so numbers may contain several number words and whatever math operators (such as plus, minus, times, and divided by) are used to combine them.

16. Surprised? Equations in math are usually just a way of finding
a simpler, more familiar, or more understandable name for a certain number. So they are identity sentences. Like God, numbers are not analyzable by scientific instruments; we discover their nature by looking at their names: Odd or Even, Prime or Nonprime, etc. In Loglan, $24/2$, like $3 \times 4$ and $36,144/3,012$, is just one of twelve’s infinitely many aliases.

If you want to claim that $24/2$ is really 12 (banging your fist on the table as you do so), there are two ways to do it. The straightforward way is to prefix me- to the designation of the second number: Lio tofokuato ga melioneto The number $24/2$ is one of those (many) things nameable by the number 12. The other possibility is to use a regular predicate, in this case brato (... is the result of dividing / is the ratio/quotient of... by/over ...), to claim a relationship among the numbers: Lioneto, brato lioto fo lioto The number 12 is the result of dividing the number 24 by the number 2. (Note that this puts the answer first: $12 = 24/2$.) These are, however, very unusual moves, and not for amateurs in either Loglan or mathematics.

17. Look carefully at the structure of jolkeo. It gives the time (first argument) between an event (second argument) and some moment when the clock was started (third argument). If the third argument is omitted, it’s taken to be the previous midnight. If the second argument is also omitted, it is assumed to be the present moment. You can fill in the blanks in other ways: Hu jolkeo lepo la Tcarlis fa hijra? When will Charlie get here? Hu jolkeo ti lepo Tai sackaa? How long has it been since he left?

18. Logli generally use the twenty-four-hour clock. “Twelve hundred [hours]” is taken to mean twelve hours past midnight, just as it is in military or technical English. Times like “Thirteen-fourteen” (14 minutes after 1 PM) are often rendered with the same four digits convention in Loglan, thus as lio 1314.

19. You can also answer the time question with a name. When clocktimes are given as names, Logli sometimes mention only the hour: Na la Ven. At Nine; Na la Neven At Nineteen [hundred hours].
Lopo Purmao
The numbers zero through nine have easily-remembered djifoa. Just add -r to the number: nir-, ner-, tor- (remember torkrilu?), etc. We’ll see an important use for this in the next lesson.

Because it would be awkward to use these djifoa for metric terms, which are essentially international anyway, Loglan adopts multiplicative predicates and uses their djifoa—always the first three letters of the parent predicate—to make complex words like kilmeo or kilmetro for kilometer, and nansekmi for nanosecond.

dekto/dek ... is tenfold of ...    decti/dec ... is a tenth of ...
hekto/hek ... is a hundredfold of ...    centi/cen ... is a hundredth of ...
kilto/kil ... is a thousandfold of ...    milti/mil ... is a thousandth of ...
mirdo/mir ... is ten-thousandfold of ...
megdo/meg ... is a millionfold of ...    mikti/mik ... is a millionth of ...
gigdo/gig ... is a billionfold of ...    nanti/nan ... is a billionth of ...
pikti/pik ... is a trillionth of ...

Notice that the enlargers all end in -to or -do while the diminishers all end in -ti.

Lo Nurvia Logla      Nepo ditca lo konmathe
Hue La Megn: Ie lio fetiate?
Hue La Palys: Iu.
Hue Mai: Palys, penso! I lio fetiate bi lio fepiofepiofe.
Hue Pai: Inusoa fei bi lio nefe.
Hue Mai: Lo dreti! I lio fetiate bi, ia, lio nefe.
    Eq no bleka le jokla!
Hue Pai: Buo lo konmathe po ditca ga minta lio cao fofe! I
tu sacduo na la cao Nenen! I ti nu jolkeo lio cao
    netohei; inusoa lenapo ditca napa cao horto!
Hue Mai: Mi papa krido lepo tu cao pa plidja lo numcu!
    Ifeu mi pa krido lepo lenapo ditca pafa melkeo
    lio nehei.
Hue Pai: Inusoa mu nazi stise, ei?
Hue Mai: Ii. Ibuo oa tedmou cirna.
Hue Pai: No, lo numcu ga treci.
Hue Mai: Buo nei *pazi*, ia, treci tu! Irea nei no simci lo cao *mutce* perti je lopo livspe! I ei no toi?
Hue Pai: *Ii.*
Hue Mai: Inusoa mu duo *ba*, oa, pertymao nei.
Soi vefrai.
Soi cao *vidydui*! I eu kanoi mi donsu tu ne cmeni je lio nemaDai, e levi nurvembuu, ki tu furvea hu neo?
Hue Pai: *Eo mi na nu donsu?*
Hue Mai: Tedji liu eu, eo! I ea mu na sacduo nepo plekao.
Eu tu ponsu nema cmeni je lio dalra. I tu cmepli ho cei?
Hue Pai: *Nema, rea!*
Hue Mai: *Tu*, eu, fa furvea hokeigei tcoko?
Hue Pai: Le tcoko go nu furvea je mi fa kilgramo lio *neni*, ui!
Hue Mai: Ua. I eu kanoi tu furvea fe levi terdalra, ki hu prati?
Hue Pai: Lio nefeDai.
Ia ti trencyow na, na lepo mu plekao plizo lo dzabi cmeni.
Hue Mai: Soi togri.
Nao, vemsia nurperpli, eo!
Hue Pai: Soi kamki. Ibuo feu, ti *mutce*, ia, treci.
Hue Mai: Lo nu sirfio!

**Lo Kenti**
1. Ie lio fetiate? (Plizo vi, le to nu srite.)
2. Lopo ditca napa melkeo ho? (Tedji liu lopo, e liu napa.)
3. Ibuo Mai pa cutse hu Pai?
4. Duohu Mai pertymao lo numcu Pai?

**Lona Cninu Purda**

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
<th>Clue words</th>
</tr>
</thead>
<tbody>
<tr>
<td>brato</td>
<td>... is the result of dividing / is the ratio/quotient of... by/over ... (ratio [ReiciO])</td>
<td></td>
</tr>
<tr>
<td>cmeni</td>
<td>... is a piece/amount of money worth ... in the currency issued by government/authority ...</td>
<td>(money [MyNI])</td>
</tr>
</tbody>
</table>
cmepli ... spends quantity of money ... on/for ...

[dCMEni PLIzo = money-use]

dalra ... is worth ... dollars. (default 1)(dollar [DALR])
(If the second argument is omitted, “one” is assumed.)

[dDJAno CUtSE = know-say]

djacue ... says/claims/purports to know ... about ...

[horto ... lasts ... hour(s) (default 1) (hour [aOR])

[jokla ... is a clock (clock [KLAd])

[konmathe ... is an arithmetic principle for deriving ... from ...

[melkeo ... lasts a measured length of time ...

[mERLi cKEmO = measure(d)-time]

[numcu ... lasts ... minutes (default 1) (minute [MNyT])

[numcu ... is a number (numeral [NUMryl])

[nurperpli ... takes a job with ... to do ... at wage ... [NU(R) PERnu PLIzo = passive-employ]

[nurvembuu ... is a catalog offering merchandise ... for sale by vendor ... [NU(R) VEDMa BUkcU = merchandise-book]

[pertymao ... makes ... relevant to ...

[pERTi (Y) MAAdzO = pertain-make]

[plidja ... knows how to use ...

[PLIzo DJAno = use-know]

[sacduo ... begins to [do] ... by ...

[SAtCi DUrzO = begin-do]

[sirfio ... feels certain of/is convinced that ... is true/will happen

[SIRto FIlmO = certain feel]

[tcko ... is a piece/quantity of chocolate

(chocolate [TCaKylt])

[tedmou ... is more attentive to ... than ... is to ...

[TEDji MOrdU = attend-more]

[terdalra ... is a three-dollar item

[TE(R) DALRA = three-dollar]

[vefrai ... tries to think up ... for purpose ...

(Soi vefrai Let’s see.) [VEtFa tRAtI = invent-try]

[vidydui ... has/hits on idea ... about ...

(Soi vidydui! Eureka! Bingo!) [VIDre (Y) DUvrI = idea-discover]
**Little Words**

**bicio** ... is equal to or greater than; a mathematical inequality operator between numbers. (Bl)

-ci (when attached to an eeshk, it hyphenates, treats as one, the two adjoining clauses), as in **iceci** and, joined to.

cio ... is greater than; a mathematical inequality operator between numbers. (Bl)

**duo** in manner/by method ... (PA)

**eu** suppose that (free modifier; sign of a contrary-to-fact supposition) (UI)

**fui** should/ought to; the injunctive operator, the objective version of **oe**; may be combined with other PA-words as in **fuipa**; see below. (PA)

**fuipa** should have/ought to have; the injunctive past; combines **fui** with **pa**. (PA)

**iceci** and, joined to; as between clauses to be treated as one; see -ci. (ICI)

**nazi** at the very moment that ... ; immediately (PA)

**Summary: Lesson 12**

1. Number words automatically compound unless separated by a pause or comma, though they may be separated by spaces in writing to improve readability.

2. A number before a description of a multiple means [that number] of [that larger multiple of predas]: **Te le mrenu** [Each of some] Three of the [four or more] men. Numbers may also be used in place of descriptors, producing indefinite descriptions: **Te bukcu** [Any] Three books. As you might expect, putting a set descriptor before an indefinite description produces a description of a set or group: **Leu te bukcu** The [set of] three books. Adding a multiple descriptor to an indefinite description produces an enumerated multiple description: **Levi te bukcu** [Each of] These three books.

3. The Little Word **ho** is to numbers what **he** is to predicates and **hu** is to arguments. It acts just like a number and means How much? or How many?

4. Number words may be prefixed to inflectors to tell how many times or places they refer to.
5. **Lio** (the number ...) is a descriptor for referring to numbers as numbers: **lio ne the number one.** Like other descriptions, lio-arguments should be closed off before predicates; they must also be separated from any following letteral, or they will absorb it.

6. To express a measurement as an argument, use **lio [number] [measure word]**, where [measure word] is either a predicate referring to a measurement scale (for example, **kilgramo kilogram**) or a symbol of such a predicate (**keigei/kg**). Combinations of numbers and either measure words or their symbols are called *dimensioned numbers*.

7. There are three main ways to predicate a measurement. The most common is simply to use a measure predicate: **Ti kilgramo lio te. This weighs three kilograms.** The second way is by comparison, which involves using a dimension predicate like **tidjo (... is heavier than ... by amount ... in gravity-field ...): Ti tidjo ta lio 2kg This is heavier than that by two kilos. /This is two kilos heavier than that (is).** The third way is to refer directly to the quality measured: **Ti meltio lio 2kg [tokeigei]. This measures in weight, two kilos (This last form sounds a bit redundant in English; it’s definitely redundant—but legal—in Loglan. Ordinarily, you would only say such a thing to someone who didn’t realize that a kilogram was a measure of weight, or to make the technical distinction between mass and weight.) Measure predicates such as **meltio** are formed by prefixing mel-(from **merli measure**) to a dimension predicate or one of its djifoa, in this case to **-tio from tidjo heavy.**

8. Equations are generally translated as identity sentences, and mathematical expressions (2+2) are treated as single numbers—though as noted above, their elements may be written separately.

9. Questions about clocktime are asked with the predicate **jolkeo**: **Hu jolkeo? What time is it?** Thay are answered with time designations; and these may be expressed as either numbers or names. **Lio tohei piu tenimei, La Topiutenin, and La Ton Tenin** are just different ways of saying **Two-thirty A.M.** in Loglan. Times are often rendered symbolically in Loglan texts, just as in English. Thus 2:30 A.M. may be written as the number **lio 2h + 30µ**, as the name **la 2n 30n**, or even (using the four-digit convention) as **lio 0230**. The latter might be read in military English as *oh-two-thirty-hours.*
Lopo Notlensea Cirduo
(The Loglan name for Earth, incidentally, is la Ter.)

1. Se le cirna pa kamla. Four of the learners came.
2. Se le ho cirna [pa kamla]? Seven (out) of the multiple of how many learners [came]?
3. Neni. Or
Se le cao neni cirna [pa kamla]. Ten. Or
4. Inusoa no, ei, te cirna pa kamla? (And) Therefore it is not the case, is it, that exactly three learners came?
5. Toi tradu. Ibuo cao sute cirna pa kamla, isoa se cirna dui, iceci lio se bicio lio te. That’s true. But (emphatic) at least three learners came, because seven learners did (come) and (the-number) seven is-greater-than-or-equal-to the-number three.
6. Inurau mu fuipa djacue lepo te cirna no, ei, pa kamla? So I should have said (claimed) that (each of) exactly three learners did not, is that it, come?
7. Ia, toi dreti. Yes, that’s correct.
8. Le blanu ga tidjo le redro. The blue one is heavier than the red one.
9. Hu fu tidjo? By how much? (What is the weight difference between them?)
10. Lio fekeigei [fu tidjo]. (By) Five kilos [is the weight difference].
11. I rei kilgramo hu? And it [the red one] is how-many kilos?
12. Rei kilgramo lio to. It measures two kilos.
13. Inusoa bei meltio lio se, ei, kilgramo? So it [the blue one] measures seven, is that it, kilograms?
14. Vi la Ter, ia. Iceu, lio topiofe bi lio se, ravi. On Earth, yes. Anyway, two plus five is seven everywhere.
Vocabulary

For ease of reference, Little Words, Primitives, and Complexes are listed alphabetically. The number on the right indicates the Lesson in which the word is first used.

bicio greater/equal 12 inumoi therefore (motive) 11
ca and/or 7 irau because (reason) 10
canoi if 7 isoa because (inference) 10
cao emphasis 12 ka either (with ki) or 7
ce and 7 kae gentle 11
-ci eeshek hyphen 12 kanoi if (with ki) then 7
ciha ha shek 7 kau can 11
cio greater than 12 ke both (with ki) and 7
ciu equally 10 keno b both not (with ki) and 7
do only if 7 ki forethought infix 7
coi according to 10 kia delete word 8
cu whether 7 kiha ha kek 7
dua predicate variable 10 kinoi if (kek) 7
dui predicate variable 10 kio delete utterance 8
duo by (method) 12 kisoa because (inference) 11
emou and more than 10 ko if and only if (with ki) 7
eu suppose 12 kouhu why? (cause) 10
fana will be 11 ku whether (with ki) 7
fapa will have 11 kua divided by 12
fe five 12 lae indicated by 11
fo four 12 lea the set of all 11
foi must 11? leu the particular set 11
fui should 12 lia like 10
fuipa should have 12 lio the number 12
gea I repeat 9 liu single word quote 9
Guo lepo closure 9 lo the mass of 8
hea with help of 10 loe the typical 11
heahu with what help? 10 lui for 11
ho how many 12 -ma hundred 12
ice and 7 miu we 11
iceci and 12 -mo thousand 12
imoi because (motive) 10 moi in order to (motive) 10
inukou therefore (cause) 10 moihu why? (motive) 10
LESSON 13

mou   more than       10  to   two       12
nafa  is going to     11  tona  twice     12
nana  is now          11  ve    nine       12
napa  has             11  viza  in this area 11
nazi  is at this moment 12  vizi  right here   11
ne   one              12  vizu  in this region 11
ni   zero             12  vo    eight      12
nio  minus/less       12  -za   far        11
noca  only if         7  ze    and jointly  8
nokou despite (cause) 10  -zi   near       11
nunokou nevertheless 10  zo    amount of  9
nou   not...whether   7  -zu   distant    11
nucunoi whether...not 7
nukou  therefore (effect) 10
nuku  ...whether...   7
nukunoi not...whether... 7
numoihu to what end   10
nusoaki thus..., given... 10
pafa  was going to    11
pana  was then        11
papa  had             11
paza  some time ago   11
pazi  recently        11
pazu  long ago        11
pio   plus            12
po    is an event of  9
pu    is a property of 9
ra    all             11
rau  because (reason) 10
rauhu why? (reason)   10
rie   respected       11
se    seven           12
so    six             12
soa  because (premise) 10
soahu why? (premise)  10
soi   I am...         11
taa  in turn          7
te    three           12
tia  times/multiplied by 12

Primitives

batmi exchange       7
bili   beautiful      9
bivdu  behaves       9
blabi   white        8
bleka  looks         11
brato  ratio         12
breko   brake        8
brili  brilliant     8
bunbo stupid       8
cadre   dress       11
cel    chief          10
cenja  changes      10
centi hundredth    12
cimra  summer       11
citlu  detail       11
clafo  laughs       11
clivi  lives        10
cluva  loves        11
cmal   small        10
cmeni  money        10
comtu  is ashamed   11
crano  smiles       11
cutri  water        11
dalra dollar       12
danci  plans        11
danza  wants        9
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
<th>Count</th>
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<tr>
<td>decti</td>
<td>tenth</td>
<td>12</td>
</tr>
<tr>
<td>dekto</td>
<td>ten times</td>
<td>12</td>
</tr>
<tr>
<td>denli</td>
<td>day</td>
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<td>dipri</td>
<td>dear</td>
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<td>disri</td>
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<td>war</td>
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<td>duvri</td>
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<td>dzabi</td>
<td>exists, real</td>
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<td>walks</td>
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<td>gigdo</td>
<td>billion times</td>
<td>12</td>
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<td>gramo</td>
<td>gram</td>
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<td>gunti</td>
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<td>11</td>
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<tr>
<td>hatro</td>
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<tr>
<td>hekto</td>
<td>hundredfold</td>
<td>12</td>
</tr>
<tr>
<td>hijra</td>
<td>is present at</td>
<td>8</td>
</tr>
<tr>
<td>hindi</td>
<td>Indian person</td>
<td>11</td>
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<td>horto</td>
<td>hour</td>
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<td>inca</td>
<td>inch</td>
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<td>jokla</td>
<td>clock</td>
<td>12</td>
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<td>junge</td>
<td>Chinese region</td>
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<td>kilto</td>
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<td>komfu</td>
<td>comfortable</td>
<td>11</td>
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<td>konce</td>
<td>shell</td>
<td>8</td>
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<tr>
<td>krido</td>
<td>believes</td>
<td>10</td>
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</table>
ponje  Japanese region  11  cirgru  study group  11
ponsu  possesses  7  cirkii  fellow learner  11
proga  program  10  ckecoa  is brief  9
rispe  respects  11  cmaciu  is as small as  11
rozme  rose  11  cmavizrie  microscope  10
santi  silent  9  cmepli  spend money  12
sekmi  second  12  danpeo  outlines  11
sensi  science  10  dichea  teacher’s aid  11
setci  set  11  dickue  teach each other  8
sinma  cinema  8  dirtolsio  steering system  8
sirto  system  8  duodja  knows how to  12
sita  place  11  durbiesni  is on the point of  9
sorme  sister  7  durtoei  consents to  11
spana  Spanish language  7  falremkao  feign friendship  9
spopa  hopes  9  fangoi  return  8
srite  writes  11  fatcou  sorry to bother  11
stise  stops  9  feodja  knows  8
stuci  story  9  firko  frightens  11
surva  serves  7  fomtaa  lectures  11
tarci  star  10  furplicle  is useless  10
tcidi  food  7  gandia  professor  11
tcoko  chocolate  12  gatytaa  thanks  11
tcori  authority  10  getsui  transmits  8
tobme  table  7  gozbeo  invites  11
truke  structure  8  grocea  gets bigger  11
turka  works  10  grijmi  assemble  11
vatlu  value  10  gudbduo  does good  9
vegri  green  11  gudbiu  behaves well  9
vetci  happier  9  gud paced  is lucky for  11
vetfa  invents  10  gudcanspe  is lucky  11
vizka  sees  9  gudcea  improves  10
gudckoo  improves  10
budgao  is well behaved  9
gudmoe  improves  10
haispe  enjoys  9
hapsocli  has a party  11
hapsocvei  party  11
dolkeo  is clock-time  12

Complexes
bedpli  is in bed  9
bedyduo  puts to bed  9
brekysio  braking system  8
cilble  investigates  11
cirfundii  fond of learning  10
kaidja knows quality 11  respli wears 11
kamkytaa jokes 7  ridcue reads aloud 9
kentaa asks 8  sacduo begins 12
kincia apprentice 11  sanddui finds evidence of 11
kinsri chronicles 11  sesmao scientist 10
kledja classifies 8  sesycko adds to science 10
kofcko makes comfy 11  siodja understands 8
konmathe arithmetic 12  sirdja knows for certain 8
koshaa consultate 7  sirfio feels certain of 12
kulbatmi exchange culture 11  sismao systematizes 11
leksiio electrical system 8  socgoi visits 7
lenkofmou more fluent 11  socyjmi meets socially 11
lenkou fluent 11  spedja knows 8
leudja knows language 8  spodru desairs 9
livsensi biology 10  srikii co-author 11
livspe lives 10  srikue write each other 11
logcia learns Loglan 9  tarsandui astrologer 10
logduo uses Loglan on 9  tarsensi astronomy 10
logpli uses Loglan 9  tcanakso car mechanic 9
meksymerki Mex-American 7  tedmou is more attentive 12
melkeo lasts (time) 12  telfyduo telephones 9
meltio weighs 12  telfypo uses telephone 9
mermeu husband 11  terdalra three-dollar item 12
midnai midnight 12  tobsua waiter 7
nedpao next 12  tristaga tree trunk, log 12
nerjmistu first-meet story 11  turceflfi boss 10
nurkae world 11  vefrai tries to think 12
nurperpli take employment 12  vierdui hits on idea 12
nurvembuu catalog 12  zavcko worsens 10
nuzveo newspaper 9
parcai proportion 11
pasnai evening 8
perdri recognises 11
pertymao makes relevant 12
plekao pretend 12
plidja know how to use 12
reksiio braking system 8
rembiu is friendly 9
remkao acts as friend 9