

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**’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:

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

(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.

Always be careful to keep keks balanced: connect only like things. **Ke** [predicate] **ki** [predicate] and **Ke** [argument] **ki** [argument] are both fine, and so is **Ke** [sentence] **ki** [sentence]; but \***Ke** [predicate] **ki** [argument] isn't allowed.

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, Tobsua!  
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 kinoi 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**

<i>Word</i>	<i>Definition</i>	<i>Clue words</i>
<b>batmi</b>	... trades ... for ... with ... ( <i>barter</i> [BArTr]; Sp. <i>cambiar</i> [kAMBiar])	
<b>frelu</b>	... is crazy/mad/insane ( <i>frenzy</i> [FREnzi]; Sp. <i>loco</i> [LOko])	
<b>garni</b>	... governs ...	( <i>govern</i> [GyvRN])
<b>kamki</b>	... is funny to ... by doing/being ...	( <i>comic</i> [KAMiK])
<b>kamkytaa</b>	... jokes with ... about ... [KAMKi (Y) TAknA = comic-talk]	
<b>koshaa</b>	... is a consulate of country ... in country ... with consul ... [KONsu HAsfA= consul-house]	
<b>kultu</b>	... is the culture of people ... (Sp. <i>cultura</i> [KULTUra])	
<b>kunci</b>	... is related to ... by relationship ...	( <i>kin</i> [KiN])
<b>meksi</b>	... is a Mexican ( <i>Mexico</i> [MEKSyko]; Sp. [MExiKo])	
<b>meksymerki</b>	... is a Mexican American [MEKSi (Y) MERKi = Mexican-American]	
<b>merki</b>	... is an American ( <i>America</i> [yMERyKy])	

<b>namci</b>	... is a name of ... to/used by ...	( <i>name</i> [NeiM])
<b>ponsu</b>	... owns ... under law/custom ...	( <i>possess</i> [POzeS], <i>own</i> [OuN])
<b>socgoi</b>	... visits (person(s)) ... at time ... place ...	[SOcli GOdzI = socially-go]
<b>sorme</b>	... is a sister of ... with parents ...	( <i>sorority</i> [SORoryti], a sisterhood)
<b>spana</b>	... is part of the Spanish language (Sp. <i>España</i> [eSPANiA])	
<b>surva</b>	... serves ... by doing ...	( <i>serve</i> [SRV])
<b>tcidi</b>	... is a food of/is edible to ...	( <i>feed</i> [fID])
<b>tobme</b>	... is a table	( <i>table</i> [TeiBI]; Sp. <i>mesa</i> [MEsa])
<b>tobsua</b>	... waits on diner ... with food ...	[TOBme SURvA = table-server]

### Little Words

<b>taa</b>	in turn (free modifier)	[TrAnA = rotate/turn]
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### 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, predicates, modifiers (or modifier groups), sentences, etc.). They consist

of two words. The first word begins with **k-** and is followed by the basic vowel. If the corresponding ek begins with **no-**, change that **no-** to **-noi** and attach it to the end of the **k-** word. The second word is always either **ki** or **kinoi**; it is **kinoi** if its ek ends in **-noi**. The **u-**keks have an additional peculiarity: if its ek contains **nu-**, the kek won't; and if the ek doesn't contain **nu-**, prefix **nu-** to the first word of the kek. Thus **u** converts to **nuku ... ki ...**, and **nuu** converts to **ku ... ki ...**. The kekked form of **ha** is **kiha ... ki ...**.

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.

### Nepo Purbalci Cirduo (A Word-Building Exercise)

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

### Lopo Notlensea Cirduo (Translation Exercises)

- |  |  |
|--|--|
| 1. <b>Tu cirna, epa spuro gu la Loglan.</b>      | You learn, and later will be an expert in, Loglan (that is, your learning was <i>before</i> your being an expert). |
| 2. <b>Mi pa penso, ena repduo gu letu kenti.</b> | I've thought about, and now answer, your question.   |
| 3. <b>Ta saadja noce nu treci la Loglan.</b>     | That one doesn't understand, but is interested in, Loglan.   |
| 4. <b>I tu saadja ciha nu treci Lai?</b>         | And do you understand, or are you interested in, it [Loglan]?  |
| 5. <b>Tu spuro ciha hapci logpli?</b>            | Do you expertly, or happily, use Loglan?   |
| 6. <b>La Deiv sadji noca gudbi farfu.</b>        | Dave is, if a wise, then a good father.  |
| 7. <b>Oe logpli takna ce ridle.</b>              | [I think] You should use Loglan [in] speaking and reading.   |
| 8. <b>Mi fa hapci, inoca tu logpli cirduo.</b>   | I will be happy only if you practice using Loglan.   |

- |   |   |
|---|---|
| 9. <b>Levi bukcu ga gleca. Iha bei logla?</b> | This book is [in] English. Or is it [in] Loglan?                    |
| 10. <b>Kanoi tu sadji ditca, ki ba cirna.</b> | If you wisely teach, [then] someone learns.                         |
| 11. <b>Kiha tu takna ta, ki ta sadja?</b>     | 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?) | <b>Tai fremi ce fatru Kai, e surva vi le mekso resra.</b>  |
| 2. T is related to whom?                 | <b>Tai kunci la Ine's Delri,os.</b>  |
| 3. What is I?                            | <b>Ima sorme, e, na socgoi gu Tai. (Ima sorme Tai, e, na socgoi Tai would say the same thing.)</b> |
| 4. What does T do in this restaurant?    | <b>Tai tobsua; ice Tai tcidi vedma, e kamkytaa lo furvea.</b>                                      |



# 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 lo<sup>1,2</sup> 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 lo<sup>3</sup> 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 la<sup>4</sup> Farfu.**  
 I talk to-you about-the Father.  
*I talk to you about Father.*
6. **Lo<sup>5</sup> ckano!**  
 I-observe-an-instance-of-the-mass-of-all kind-ones!  
*How kind of you /him / her / etc.!*
7. **Le blabi ze<sup>6</sup> nigro ga bilti.**  
 The white and-jointly black one is-beautiful.  
*The black-and-white one is beautiful.*
8. **La Deiv ze<sup>7</sup> la Meris pa godzi.**  
 Dave and-jointly Mary went.  
*Dave and Mary went together.*
9. **Ta blabi ce nigro 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 ze<sup>8</sup> nigro bukcu.**  
 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 ze redro<sup>9</sup> bukcu.**  
 That is-a-brilliantly white and-jointly red book.  
*That is a brilliantly white-and-red book.*

### Lona Cninu Purda

#### **Predicates**

<i>Word</i>	<i>Definition</i>	<i>Clue words</i>
<b>blabi</b>	... is whiter than ...	( <i>Sp. blanco</i> [ <b>BLAnko</b> ])
<b>brili</b>	... is brighter/more brilliant than ... by amount ...	( <i>brilliant</i> [ <b>BRiLIynt</b> ])
<b>nigro</b>	... is blacker than ...	( <i>Sp. negro</i> [ <b>NeGRO</b> ])

#### **Little Words**

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

### Lopo Lengu Klimao

The little word **lo** is used like **le** to turn a predicate into a description. It means either *the mass of all the ... there is/are* or *a manifestation of all the ... 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 **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 **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 bukcu 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 bukcu** *I sell the book(s)*. (A particular copy

or set) and

**Mi vedma lo bukcu** *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 bukcu ga nigro ze blabi** is true, then **le bukcu ga nigro** and **le bukcu 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 bukcu** means the same thing as the two sentences **Ta blabi bukcu** and **Ta nigro bukcu** asserted separately. 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 bukcu** (*That’s a long and interesting book*) could both certainly be true. **Ta blabi ze nigro bukcu**, 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 **lo breko sisto** (*brake systems*); Betty, however, deals with **lo 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:

<b>djano</b>	... knows ... about ...	
<b>duodja</b>	... knows how to [do] ...	( <b>DURzO DJAno</b> = do-know)
<b>feodja</b>	... knows fact(s) ... from source ...	( <b>FEktO DJAno</b> = fact-know)
		("Book-learning" as opposed to experience.)
<b>kledja</b>	... knows that ... belongs to class ...	( <b>KLEsi DJAno</b> = class-know)
<b>leudja</b>	... knows (language) ...	( <b>LEngU DJAno</b> = language-know)
		(Not the same thing as <b>siodja</b> . It's possible to have a thorough understanding of a language without "knowing" the language.)
<b>perdja</b>	... knows person ...	( <b>PERnu DJAno</b> = person-know)
		(Again, not the same as <b>siodja</b> , which implies deeper, if less personal, knowledge.)

- saadja** ... understands the meaning of utterance/word/sign/symbol ...  
(**SA**nP**A DJA**no = sign-know)
- siodja** ... understands/comprehends system/mechanism/person ...  
(**SI**st**O DJA**no = system-know)
- spedja** ... knows ... by experience about ...  
(**SP**E**ni DJA**no = 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. I buo no, mi sirdja hu, kia, 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 junt!

Hue Dai: I hu djipo parti lo tcaro? I bea, ei lo motci ze lo breko sisto ga djipo?

Hue Bai: Ia. I feu 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 ckanano! I uu no. Ifeu mi fasru ge logla takna tu  
 lo tcaro. I buo 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**

<i>Word</i>	<i>Definition</i>	<i>Clue words</i>
<b>breko</b>	... is a brake of vehicle/system ...	( <i>brake</i> [BREiK])
<b>reksio</b>	... is a brake system of vehicle/system ...	(BREKo (Y) SIsTO = brake-system)
<b>bunbo</b>	... is a fool/is foolish about ...	( <i>boob</i> [BUB]; <i>bozo</i> [BOzo])
<b>dickue</b>	... teach each other subject(s) ...	(DItcA KUmCe = teachingly-reciprocate)
<b>dirtolsio</b>	... is a/the steering system of device ...	(DIRco TrOLi SIsTO = direction-control-system)
<b>djipo</b>	... is important to ... for ...	( <i>important</i> [ImPORTant])
<b>fangoi</b>	... returns to ... from ... via ...	(FANve GOdZI = reverse-go)
<b>fasru</b>	... is easy for ... under conditions ...	( <i>facilitate</i> [FASiliteit])
<b>firpa</b>	... is afraid of/that ...	( <i>fear</i> [FIR]; 'paranoid')
<b>getsui</b>	... transmits/relays ... to ... from ...	(GETsi SUnDI = get-send)



<b>hijra</b>	... is present at ...	( <i>here</i> [ <b>HIR</b> ])
<b>kentaa</b>	... asks/puts questions to ... about ...	( <b>KENti TAKnA</b> = question-speak)
<b>kliri</b>	... is clearer than ...	( <i>clearly</i> [ <b>KLIRII</b> ])
<b>konce</b>	... is a/the shell/cladding/bodywork of ...	( <i>conche</i> [ <b>KONtC</b> ]; <i>shell</i> [ <b>CEI</b> ])
<b>kumtu</b>	... is common to/shared by members of set ...	( <i>common to</i> [ <b>KaMn TU</b> ])
<b>kusmo</b>	... is a custom/habit of ... under conditions ...	( <i>custom</i> [ <b>KyStM</b> ])
<b>leksio</b>	... is a/the electrical system of ...	( <b>LEnKi SIsTO</b> = electric-system)
<b>motci</b>	... is a/the motor of device ...	( <i>motor</i> [ <b>MOTr</b> ]; <i>machine</i> [ <b>MyCIn</b> ])
<b>nardu</b>	... is hard/difficult for ... under conditions ...	( <i>hard</i> [ <b>hARD</b> ]; <i>arduous</i> [ <b>ARDiUys</b> ])
<b>notbi</b>	... is other than/not the same as ...	(“A is <b>NOT B</b> ”)
<b>parti</b>	... is a part of ...	( <i>part</i> [ <b>PART</b> ])
<b>pasnai</b>	... is the evening of day ...	( <b>PASko NAtII</b> = before-night)
<b>perti</b>	... concerns/pertains to ...	( <i>pertain</i> [ <b>PRTeIn</b> ])
<b>sinma</b>	... is a movie/film/cinema about ... made by ...	( <i>cinema</i> [ <b>SiNyMA</b> ])
<b>siodja</b>	... understands [system/person] ...	( <b>SIsTO DJAno</b> = system-know)
<b>sirdja</b>	... knows ... for certain about ...	( <b>SIRto DJAno</b> = certain-know)
<b>sirto</b>	... is certain/sure to happen under conditions ...	( <i>certain</i> [ <b>SRTn</b> ]; <i>Sp cierto</i> [ <b>SIeRTO</b> ])
<b>sisto</b>	... is a system with function ... and elements ...	( <i>system</i> [ <b>SISTm</b> ])
<b>truke</b>	... is the structure/load bearing portion of ...	( <i>structure</i> [ <b>sTRyKtcr</b> ])

**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.** Dana and Paul (together) visit Megan and Paula (together).
2. **La Deinys, e la Pal socgoi la Megn, e la Palys.** Dana and Paul (separately) visit Megan and Paula (separately).
3. **Vi lo resra ba furvemcue lo tci.** In restaurants one orders food.
4. **La Betis fundi lo kukra tcaro.** Betty likes/prefers fast cars.
5. **Ibuo Bai no fundi lo kukra blabi ze nigro tcaro.** But she doesn't like fast black-and-white cars.
6. **Le gudbi matma ze ditca ga takna le detra.** 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? **Fei pa nakso leKai tcaro.**
2. What is an/are some old part(s) of B's car? **Le konce, enoi lo djipo ga laldo.**
3. What is/are important to cars? **Le motci ze le reksio ze le truke ze le tolpaesio ze le lekpaesio ga djipo lo tcaro.**
4. What doesn't D understand? **No, Dai siodja lo tcaro.**
5. What's easy? **Lo kusmo fu takna ga fasru.**

# Lesson 9: Abstract Art

## Lo Mipli Steti

1. **Ta po<sup>1</sup> godzi.**  
That is-an-event-of go[ing].  
*That's a case of (someone's) going.*
2. **Ta po<sup>2</sup> cei godzi la Denvr, la Cikagos.**  
That is-an-event-of c going [to] Denver [from] Chicago.  
*That's a case of c's going to Denver from Chicago.*
3. **Ti po<sup>3</sup> ridcue ditca.**  
This is (an-act-of-reading-aloud) [type of] teacher.  
*This is a "reading-aloud" teacher (someone who teaches others how to read aloud, or who teaches something else by reading aloud).*
4. **Ti po tu<sup>4</sup> 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 po,<sup>5</sup> ridcue ditca lo spana.**  
This is-an-event-of reading-aloud teaching of-Spanish.  
*This is teaching Spanish by reading [it] aloud.*
6. **Lepo<sup>6</sup> 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. **Lopo<sup>7</sup> 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. **Le,<sup>8</sup> 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 lepo<sup>9</sup> 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 lepu<sup>10</sup> 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<sup>11</sup> 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<sup>12</sup> 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<sup>13</sup> ia**  
The girl said [the-word] yes.  
*The girl said 'Yes.'*
15. **Ei tu mealiu gu,<sup>14</sup> logli?**  
Is-it-true-that you are-a-"gu-ing" [type of] Loglander?  
*Are you a "gu"-ing Loglander?*

### Lona Cninu Purda

#### Predicates

Word	Definition	Clue words
<b>ckecoa</b>	... is briefer/temporally shorter than ... by interval ...	(CKEmo COrtA = time-short)
<b>garti</b>	... is grateful to ... for ...	(grateful [GRiTYfI])
<b>nirli</b>	... is a girl	(girl [gyRL])
<b>spopa</b>	... hopes [that] ... [will occur]	(hope [hOP]; Sp <i>espera</i> [eSPerA])
<b>ridcue</b>	... reads ... aloud to ...	(RIDle CUtsE = read-say)

#### Little Words

<b>liu</b>	the word ... (a combination of <b>li</b> and <b>lu</b> )
<b>po</b>	... is an event/instance/case/state of ...
<b>pu</b>	... is a quality/property of ...
<b>zo</b>	... is an amount/quantity of ...

### 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 lepo ridle lo junti** (*That one teaches how to read young people.*), which should probably be **Ta ditca lepo ridle gu[o] lo junti** (*That one teaches reading to young people.*). (Either **gu** or **guo** will close off **lepo 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 ... (**BEdu Pu DUrzO** = bed-do)  
**telfypli** ... uses a telephone  
 (TELFO (Y) PLIzo = telephone-use)  
**telfyduo** ... [tele]phones ... (TELFO (Y) DUrzO = telephone-do)  
 -**biu** (**BIvdu**, *behave*) refers to some normal, habitual behavior.  
 -**kao** (**KAKto**, *act*) refers to something done with some goal in mind.
- rembiu** ... is [naturally] friendly to ...  
 (**fREMi BIvdu** = friend-behave)  
**remkao** ... acts as a friend toward ... for purpose ...  
 (**fREMi KAKto** = friend-act)  
**falremkao** ... acts falsely as a friend/pretends to be friendly to ...  
 (**FALji fREMi KAKto** = false-friend-act)  
**gudbiu** ... is [naturally] respectable, decent in ...  
 (**GUDbi BIvdu** = well-behave)  
**gudkao** ... is [intentionally] more virtuous than ...  
 (**GUDbi KAKto** = well-act)  
 (As children before Christmas.)  
**gubduo** ... benefits ... by doing ...  
 (**GUDbi DUrzO** = 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: Ua. I, ei Bai funrui lepo logpli na la Natli? Ifeu,  
 Bai godzi ti.

Hue Kai: Ueei? Igea rea.



- 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 haijmi.
- Hue Dai: Ea *haijmi*, 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

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

- (desire [DiZAir], want [uANt])*
- durbiesni** ... is about to [do] ...  
(**DURzo BIDJE SNIre** = do-edge-near)
- dzoru** ... walks to ... from ... via ... (no English clue-word)
- folfunrui** ... must/is obliged to do ... under ...  
(**FORLi FU[N] RUIInI** = strong-should)
- funrui** ... should/ought to do ... under circumstances ...  
(**FU[N] RUIInI** = conv. of rule)
- haispe** ... enjoys experience ...  
(**HAPcI SPEni** = happily-experience)
- kakto** ... does action ... with purpose ... (*act* [**aKT**])
- kance** ... is conscious/aware of/that ... (*conscious* [**KANCys**])
- logcia** ... learns/is a learner of Loglan from ...  
(**LOGla CIRnA** = Loglan learn)
- nuzveo** ... is a newspaper/news magazine issued periodically  
by ... to/for ... every ... (the publication interval)  
(**NUZvo VESlO** = news-vessel)
- ridcue** ... reads ... aloud to ... (**RIDle CUtsE** = read-say)
- santi** ... is quieter than ... (*silently* [**SAilentII**])
- spodru** ... loses hope/despairs of/that ...  
(**SPOpa DiRIU** = hope-lose)
- stise** ... stops/ceases [doing] ... (*stop* [**STOp**]; *cease* [**SIS**])
- stuci** ... is a story about ... by/told by ... (*story* [**STorI**])
- tcanakso** ... is a mechanic on vehicle(s) ...  
(**TCARo NAKSO** = car-fix)
- telfyduo** ... telephones ... (**TELFo (Y) DUrzO** = telephone-do)
- vetci** ... happens to ... (*event* [**iVEnT**])
- vizka** ... sees ... against background ... (*vision* [**VIjyn**])

### **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 ...

**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 [off] 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. <b>Lozo tu ridle!</b>                                   | You read so much! (The amount you read!)               |
| 2. <b>Ei tu danza lepo mi telfy-<br/>duo tu?</b>           | Do you want me to call/telephone you?                  |
| 3. <b>Lopo lodji penso ga pu<br/>logli.</b>                | Logical thought is a quality of being a Logli.         |
| 4. <b>Ti po, notlensea je lo steti<br/>gu cirduo.</b>      | This is a translating [of] sentences [comma] exercise. |
| 5. <b>Ei tu fundi lo, po purmao<br/>parti je le bukcu?</b> | Do you like the word-making part[s] of the book?       |
| 6. <b>Mi fundi lo logla po pur-<br/>mao.</b>               | I like Loglan word-making.                             |

**Le Retpi**

- |   |   |
|---|---|
| 1. What was D about to do?                            | <b>Dai durbiesni lepo spodru.</b>                               |
| 2. Who learns about cars?                             | <b>Le, po logpli ditca ga cirna lo<br/>tcaro.</b>               |
| 3. Who likes K?                                       | <b>LeKai cirna ga fundi Kai.</b>                                |
| 4. About what and to whom does<br>Betty want to talk? | <b>Bai danza lepo takna Kai ze<br/>Dai lo, po logcia kenti.</b> |

# Lesson 10:

## Anything for the Cause

### Lo Mipli Steti

1. **Ta pa felda kou<sup>1</sup> lepo da<sup>2</sup> 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<sup>3,4</sup> 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<sup>5</sup> 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<sup>6</sup> 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 donsusu ta la Djan, irau<sup>7</sup> 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 donsusu ta la Djan, imoi<sup>8</sup> 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<sup>9</sup> 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<sup>10</sup> 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<sup>11</sup> la Pavarotis.**  
*You sing like Pavarotti.*
10. **Moihu<sup>12</sup> tu pa durzo ta?**  
With-motive-what you did that?  
*Why did you do that?*
11. **Tu, emou<sup>13</sup> mi ckano**  
You and-more-than I are kind.  
*You are kinder than I am.*

**Lona Cninu Purda****Predicates**

<b>donsu</b>	... gives ... to ...	( <i>donate</i> [DONeit])
<b>felda</b>	... falls to ... from ... in gravity field ...	( <i>fall</i> [FaLI])
<b>jurna</b>	... earns wages ... for work ...	( <i>earn</i> [yRN])
<b>latci</b>	... is lighter than ... by ... in gravity field ...	( <i>light</i> [LaiT])
<b>pluci</b>	... pleases ... by ...	( <i>please</i> [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**

<b>emou</b>	and-more-than ... (a comparative connective; see Note 13.)
<b>imoi</b>	motivated by the fact that ...; because ... (See Note 8.)
<b>inukou</b>	physically causing ...; therefore ... (See Notes 3 and 4.)
<b>irau</b>	justified by the fact that ...; because ... (See Note 7.)
<b>isoa</b>	entailed by the fact that ...; because ... (See Note 9.)
<b>kou</b>	physically caused by ...; because of ... (See Note 1.)
<b>lia</b>	like/in the manner of ... (a modal operator/PA word; see Note 11.)
<b>moihu</b>	motivated by what? why? (See Note 12.)
<b>nokou</b>	despite physical cause/factor ...; although (See Note 5.)
<b>nonukou</b>	nevertheless unexpected physical result ... (See Note 6.)
<b>nusoaki ... ki ...</b>	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 (**va tu** *by you* and **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 kekkek 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 **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,

... <b>kou</b> ...	... because ...	<b>Nukouki ... ki</b> ...	Therefore ..., because ...
... <b>nukou</b> ...	... therefore ...	<b>Kouki ... ki</b> ...	Because ..., therefore ...
... <b>nokou</b> ...	... although ...	<b>Nunokouki...ki</b> ...	Nevertheless ..., although ...
... <b>nunokou</b> ...	... nevertheless ...	<b>Nokouki...ki</b> ...	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 pinti**) with *The paint improved the house* (**Lo pinti 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 = good-make]

**gudcko** ... unintentionally/naturally improves ...  
[GUDbi CKOzu = good-cause]

**sesmao** ... contributes to science ... ; ... is a scientist  
[SEnSi MADzO = science-maker]

**sesycko** ... unintentionally contributes to science ...  
[SEnSi (Y) CKOzu = 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 = 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 *furpliche*, sii, lo *tcanakso*.

- Hue Kai: I coihu la Loglan furpliche? I tu *hapci*, ia, cirna Lai. I ei no, tio djipo?
- Hue Bai: Da djipo *mi*, ia. I buo no, da livspe helba.
- Hue Kai: Hu livspe helba? I feu cea la Loglan no ga *cmeni*, ei, vatlu?
- Hue Bai: La Turceffi krido lepo la Loglan furpliche soa lepo no, Lai gudcko lopu mi tcanakso.
- Hue Kai: I nusoahu? I buo feu ia, lopo tu logpli ga gudcko lopu tu vetfa penso. I ei no, lopu vetfa penso ga pu ge spuro tcanakso?
- Hue Bai: Ia. Imoihu tu *santi*, Deinys? I ei tu togri la Karl?
- Hue Dai: Ia. Irau Kai mutce sadji takna. I ia lo nu haispe ga kanoi gudcko cenoi zavcko lopu tu *pernu*, Betis, ki nu cirna gudbi. Iceu io tu na gudcko lopu spuro. Isoa ke lopo gudmao lopu spuro, ki lopo cirfundi ga pu metu. Irea rau tio, *cirna*, oe, la Loglan.
- 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 Turceffi la Loglan soahu furpliche?
4. I buo coi Kai, hu pu ge tcanakso spuro go nu gudcko Lai?
5. Coi Dai, hu nu cirna gudbi?
6. Isui hu pu meBai?

### Lona Cninu Purda

#### Predicates

Word	Definition	Clue words
<b>ceffi</b>	... is chief among ... for activity ...	(chief [t <b>CiF</b> ])
<b>cenja</b>	... become/change naturally into ... from ...	(change [t <b>CEiNJ</b> ])
<b>cirfundi</b>	... enjoys/is fond of learning ...	[ <b>CIRna FUNDI</b> = learn-fond]
<b>clivi</b>	... is alive	(live [ <b>LIV</b> ])
<b>cmalo</b>	... is smaller than ...	(small [ <b>sMAL</b> ])

- 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 ...  
[**FU(R) PLIzo 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 MADzo** = good-make]
- krido** ... believes ... to be true of ... (*creed* [**KRID**])
- lengu** ... is a language of people ... (language [**LENGUydj**])
- livsensi** ... is an instance of biology  
(**cLIVi SENSI** = life-science)
- livspe** ... experiences/spends life; "lives" in/at/doing ...  
[**cLIVi SPENi** = life-spend]  
(as in **Ta po livspe!** *That's living!* or **Da pa livspe vi la Espanias.** *X lived in Spain.*)
- pernu** ... is a person/are people. (*Sp. persona* [**PERsoNa**])
- pinti** ... is a quantity of paint. (*paint* [**PeINT**])
- pogmao** ... is a/the programmer of/writes program for system ...  
to do ... using language ...  
[**PrOGa MADzo** = 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* [**sSTAR**])
- 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**])
- turceffi** ... 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]

**Little Words**

<b>ciu</b>	as much as ... is/does	[ <b>CIktU</b> = equals]
	(as in <b>Da farfu ciu de</b> = <i>X is a father as much as Y is</i> = <i>X is as much of a father as Y is.</i> ) (PA)	
<b>coi</b>	according to ... (PA)	[ <b>tCOrI</b> = authority]
<b>dua</b>	... is/does [something about to be mentioned]	
<b>dui</b>	... is/does [something previously mentioned]	
<b>hea</b>	with the help of ... (PA)	[ <b>HEIbA</b> = help]
<b>mou</b>	more than ... is/does	[ <b>MOrdU</b> = more]
	(as in <b>Da farfu mou de</b> = <i>X is a father more than Y is</i> = <i>X is more of a father than Y is.</i> ) (PA)	

**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**:

<b>kou</b> ...	physically caused by ...; because of ...
<b>nukou</b> ...	physically resulting from ...; therefore/thus/so ...
<b>nokou</b> ...	in spite of presumed factor ...; despite/although ...
<b>nunokou</b> ...	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 mreanu.** *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 mreanu.** *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?
2. **Mi fundi da, irau da no nu gudbi.** I prefer X (it) because X is unbet-  
terable (best).
3. **Buo soahu da no nu gudbi?** But what entails X's being un-  
betterable? (But why is X  
best?)
4. **Kanoi ba, amou be helba  
bo bu, ki ba gudbi be bo.** If something x, more than an-  
other thing y, helps z (one) do  
something q, then x is better  
than y for z ('s purposes).  
**Ice da, amou lo notbi ga  
helba.** And X, more than others, helps.  
**Inusoa da gudbi nei.** So X is better than n (i.e. notbi).  
**Inusoa da no nu gudbi.** So X is the best.  
**Inusoa da nero gudbi.** So X is the best.  
(*Nero will be explained in Les-  
son 13.*)
5. **Ei tu, emou mi saadja le  
bukcu?** Do you understand the book bet-  
ter than I do?
6. **Ifeu, mi, umou tu dui.** In fact, I do [understand the  
book] better than you do,  
whether you [understand it or  
not].

# Lesson 11:

## Abstract Arguments

### Lo Mipli Steti

1. **Hoi Sitas Fudjitsus, Rie,<sup>1</sup> 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 pazu<sup>2</sup> socyjmi vi le mela Fam<sup>3</sup> 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 laele<sup>4</sup> blanu ze vegri cadre, soi<sup>5</sup> 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 papa<sup>6</sup> 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 ra<sup>7</sup> logli.**  
 L is a country, and partly lived-in [by] all logli.  
*It's a country where all Loglanists partly live.*
8. **Loe<sup>8</sup> 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<sup>9</sup> logli ga cmalo, ki Lai cmaciu?**  
 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<sup>7</sup> dzabi nurkae cilble kau<sup>10</sup> sandui ba su<sup>7</sup> 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 lepo sui leuvi<sup>11</sup> 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<sup>12</sup>?**  
 Nevertheless, I respectfully beg you to guest lecture us (the set of me and others)?  
*Nevertheless, would you please guest lecture us?*
13. **Soi spopa, hue la Adris Dini'n.**  
 I am feeling hope, by-the-addresser (the) Audrey Dineen.  
*I hope you will, says Audrey Dineen.*

### Lona Cninu Purda

#### Predicates

Word	Definition	Clue words
<b>bleka</b>	... looks at ...	(look [LuK])
<b>cadre</b>	... is a dress	(dress [DREs])
<b>cilble</b>	... investigates ... for ...	[CItLu BLEka = detail-look]
<b>citlu</b>	... is a detail of/about ...	(detail [dITeiL])
<b>cmaciu</b>	... is as small as ... in dimension ...	[CMAlo CIktU = small-equal]
<b>comtu</b>	... is ashamed of doing/being ...	(shame [CeIM])
<b>dzabi</b>	... exists/is real for ... under conditions ...	(be [BI])
<b>fircko</b>	... [unintentionally] frightens ... by ...	



		[FIRpa CKOzu = fear-cause]
<b>fomtaa</b>	... lectures on/about ... to audience ...	
		[FOrMa TAKnA = form-talk]
<b>forma</b>	... is the form/shape of ...	(form [FORM])
<b>gesko</b>	... is a guest of ...	(guest [GEST])
<b>gunti</b>	... is a/the country of people ...	(country [kyNTrI])
<b>hapsocli</b>	... parties with ... about/for ...	
		[HAPci SOCLI = happy-socialize]
<b>hapsocvei</b>	... is a party given by host(s) ... for guests ... on occasion ...	
		[HAPci SOcli VEtCI = happy-social-event]
<b>mermeu</b>	... is a/the husband of ...	
		[MERji MrEnU = married-man]
<b>nurkae</b>	... is the world of ...	
		(NU (R) KAnCE = (Passive) aware-of)
<b>parcai</b>	... is the proportion/fractional part of ... that is/does/- contains ...	[PARTi CANII = part-quantity]
<b>perdiri</b>	... remembers/recognizes person ...	
		[PERnu DRiki = person-remember]
<b>respli</b>	... wears clothing ...	[RESfu PLIzo = clothing-use]
<b>sandui</b>	... finds evidence ... of ...	
		[SANpa DUvrI = sign-discover]
<b>socyjmi</b>	... meets ... socially	[SOcli JMite = social-meet]
<b>vegri</b>	... is greener than ...	(Fr <i>vert</i> [VER]; E <i>green</i> [GRIn])

### Little Words

<b>kau</b>	can/is able to ... ; an auxiliary verb (See Note 10.)
<b>lae</b>	the one at/with/labeled by ... ; (See Note 4.)
<b>lea</b>	the set/class of all things that are... ; (See Note 9.)
<b>leu</b>	the set of things I have in mind that are ... ; (See Note 11.)
<b>loe</b>	the statistically typical member of the set/class of things that are ... ; (See Note 8.)
<b>lui</b>	for (someone) ... [pLUcI = please]
<b>miu</b>	the set of I/me and some unspecified other(s); distinct from <b>mu</b> , the set composed of I/me and you; (See Note 12.)
<b>napa</b>	is done ...-ing/has ...-ed; the present perfect tense. A com- pound inflector; (See Note 6.)
<b>ne</b>	a/one/one of (more fully explained in Lesson 12.)
<b>papa</b>	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:

<b>-zi</b>	small/immediate		
	<b>pazi</b> <i>recently</i>	<b>vizi</b>	<i>in this very spot</i>
<b>-za</b>	intermediate		
	<b>paza</b> <i>sometime before</i>	<b>viza</b>	<i>in this area</i>
<b>-zu</b>	large/distant		
	<b>pazu</b> <i>long ago</i>	<b>vizu</b>	<i>in this region</i>

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 djifoa, 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 djifoa for names. For example, **loglai** (*a Loglandic piece of land*) should not be made into "**Loglan**" (using **landi**'s djifoa **-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/fa + 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.

Four Kinds of Loglan Plural

<i>Multiples</i>	<i>Sets</i>
<p><i>Intentional:</i> LE  <b>Le neni preda ga prede</b> = Each of the ten predas I have in mind, considered <u>individually</u>, is a prede.  <b>Le neni mrenu ga normermeu</b> = Each of the ten soldiers is a bachelor/The ten soldiers are <u>all</u> bachelors.</p>	<p><i>Intentional:</i> LEU  <b>Leu neni preda ga prede</b> = The set of ten predas I have in mind, considered <u>collectively</u>, is a prede.  <b>Leu neni solda ga nergru.</b> = The (group of) 10 soldiers (I have in mind) is a squad.</p>
<p><i>Exhaustive:</i> RA  <b>Ra preda ga prede</b> = Every preda, considered <u>individually</u>, is a prede.  <b>Ra humnu ga mamla</b> = Every human is a mammal/Humans are mammals.</p>	<p><i>Exhaustive:</i> LEA  <b>Lea preda ga prede</b> = The set of all predas, considered <u>collectively</u>, is a prede.  <b>Lea humnu ga speci</b> = The set of all humans is a species.  <b>(Lea mrenu no ga speci</b> = The set of all men is not a species.)</p>

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**.

### Personal Variables

<u>Constituants</u>		<u>Singular</u>	<u>Plural</u>	
<u>1st Person</u>			<u>As a Collective</u>	<u>As Individuals</u>
mi	I alone	<b>mi</b>		
mi, tu	we = I + hearer		<b>mu</b>	<b>mo</b>
mi, x	we = I + others		<b>miu</b>	<b>mio</b>
mi, tu, x	we = I + hearer + others		<b>muu</b>	<b>muo</b>
<u>2nd Person</u>				
tu	you, y'all = hearer(s)	<b>tu</b>	<b>tou</b>	<b>too</b>
tu, x	you = hearer + others		<b>tuu</b>	<b>tuo</b>



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**, **KInCI**, *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 KInCI** = 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 KInCI** = 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 fibdaa 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 srite. Inusoa, mi bi la Furbuk. I la Merm bi la *Fomtak*, soi clafo. I eo miu norau hijra lepo grujmi?

Nao miu na danpeo laeli, Hu sitfa la Loglandias? lu. I kanoi Rai ke siodja lo loglo ki kaidja lo logle, ki Rai komfu lepo logli. I sui lopo djano lo fu plizo je la Loglan, ga kofcko. I uu no, loe logli ga kaidja lolei kultu ze lengu! I eo komfu! I leuva logli ga *cmalo*, ia, inosoa *lea*, sui, logli dui! Ibuo lo junti ga cmalo, epa grocea.

Lomiu po kulbatmi nu speni tie la Loglan, ga ii notbi fu takna. I *Rai* io djano lemiu nerjmistu. I mi pa hindi stude vi la Nihon. I Mai dichea lemi gandia. I miu disri lepo kinci cirna la Loglan. I fazi, miu lenkofmou la Loglan, miu, lomiu notbi nu cirna lengu. Irea, mi na gudbi ge ponja takna cenoi srite. I Mai lenkou la Hindis.

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 ckozu 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**

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

<b>grocea</b>	... grows/becomes big[ger]	
		[ <b>GROda CENjA</b> = big-become]
<b>grujmi</b>	... meets as group ... at ...	
		[ <b>GRUpa JMite</b> = group-meet]
<b>gudcae</b>	[event/circumstance] ... is luckier than ... for ... E.g., <b>Lo gudcae!</b> = <i>What luck!</i> [ <b>GUDBi tCAnE</b> = good-chance]	
<b>gudcanspe</b>	... is luckier/more fortunate than ... <b>Gudcanspe!</b> = <i>Be lucky! (Good luck!)</i> [ <b>GUDBi tCANE SPEni</b> = luck-experience]	
<b>gunti</b>	... is the country of people ...	( <i>country</i> [ <b>kaNTri</b> ])
<b>hatro</b>	... is hotter than ... by ...	( <i>hotter</i> [ <b>HATR</b> ])
<b>hindi</b>	... is a Hindu/native of India	( <i>Hindi</i> [ <b>HINDI</b> ])
<b>kaidja</b>	... recognizes/sees/knows quality/property ... in ...	
		[ <b>KAtII DJAno</b> = quality-know]
<b>kambi</b>	... compares ... to/with ... in feature ...	
		( <i>compare</i> [ <b>KyMper</b> ])
<b>kofcko</b>	... [happens to] make(s) ... comfortable in/about/with ...	
		[ <b>KOmFu CKOzu</b> = comfortable-cause]
<b>komfu</b>	... is comfortable in situation ...	( <i>comfort</i> [ <b>KyMFort</b> ])
<b>kulbatmi</b>	... exchanges [own] culture with [own culture of] ...	
		[ <b>KULTu BATMI</b> = culture-exchange]
<b>landi</b>	... is a parcel of land	( <i>land</i> [ <b>LAND</b> ])
<b>lenkou</b>	... is comfortable with/fluently in language ...	
		[ <b>LENGu KOfU</b> = language-comfortable]
<b>lenkofmou</b>	... is more comfortable with language ... than ... is in ...	
		[ <b>LENGu KOfU MOrDU</b> = language-comfortable-more]
<b>nerjmistu</b>	... is a/the story of ..., a set, first meeting one another	
		[ <b>NE (R) JMite STUCi</b> = first-meet-story]
<b>nutra</b>	... is neutral in dispute ... between ...	
		( <i>neutral</i> [ <b>NiUTRAI</b> ])
<b>pismi</b>	... is at peace with ...	( <i>peace</i> [ <b>PIS</b> ])
<b>ponja</b>	... is a part of the Japanese language	
		( <i>Nippon</i> [ <b>niPON</b> ])
<b>ponje</b>	... is a Japanese area	
<b>raznu</b>	... is a reason for action ... by ... in circumstances ...	
		( <i>reason</i> [ <b>RiZN</b> ])
<b>razpli</b>	... is more rational than ...	
		[ <b>RAZnu PLIzu</b> = reason-use]
<b>rispe</b>	... respects ... for ...	( <i>respect</i> [ <b>RISPEct</b> ])
<b>rozme</b>	... is a rose from ...	( <i>rose</i> [ <b>ROZ</b> ])

<b>setci</b>	... is a set/group/collection of ..., any superset. E.g., <b>Ta setci lea murku</b> = <i>That's a set of monkeys.</i> (set [SETci])
<b>sismao</b>	... arranges/systematizes ... [SISto MAdzO = system-make]
<b>sitfa</b>	... is a site/place/location of ... in reference frame ... (site [SaIT])
<b>srikii</b>	... (a set) co-write/are the co-authors of ... [SRite KIInCI = write-together]
<b>srite</b>	... writes ... on surface ... (write [RaIT])
<b>tricu</b>	... is a tree (tree [TRI])
<b>tristaga</b>	... is the trunk of tree ... (TRICu STAGA = tree-stem)

### Names

<b>Fomtak</b>	Lecturer [fomtaa]
<b>Furbuk</b>	Author [furbuu]
<b>Hindis</b>	Hindi (the name of the language)
<b>Merm</b>	Husband [mermeu]
<b>Nihon</b>	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 djifoa 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. <b>Ei lea logli ga laldo loe logli?</b>  | Is the class of all Logli older than the average Logli?   |
| 2. <b>Ei tu papa takna le ditca le detra na lepo deo fadkaa?</b>                                  | Had you talked to the teacher about the daughter when she [the daughter] arrived?                                   |
| 3. <b>No. Ibuo mi pafa takna dei.</b>   | No, but I was about to talk to her [the teacher].   |
| 4. <b>Ei ra ridle je levi bukcu kou logcia?</b> [Hint: <b>kou</b> is being used as an inflector.] | Would anyone who read this book therefore learn Loglan?   |
| 5. <b>Ei ra ridle je levi bukcu soa logcia?</b> [So is <b>soa</b> .]                              | Would it be safe to infer that any reader of this book is learning Loglan?  |
| 6. <b>Uu no. I no, lopo ridle lo logla bukcu ga sanpa lopo logli.</b>                             | Unfortunately, no. It is not true that reading Loglan books is a sign of being a Loglanist.                         |
| 7. <b>Ifeu, le ne sanpa je lopo logli ga po ge logli penso.</b>                                   | In fact, the one sign of being a Loglanist is thinking like one.  |
| 8. <b>Inusoa kanoi ba kentaa tu lepo laele logla bukcu ga logli, ki oe io tu cutse liu iu.</b>    | 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. **To<sup>1</sup> mrenu pa kamla.**  
[Each of some] Two men came.
2. **To le<sup>2</sup> mrenu pa kamla.**  
[Each of some] Two of the [three or more] men came [separately].
3. **Le to<sup>3</sup> mrenu pa kamla.**  
[Each of] The two men came [separately].
4. **Leu<sup>4</sup> to mrenu pa kamla.**  
The group of two men [I have in mind] came [together].
5. **Hoba<sup>5,6</sup> pa kamla?**  
How-many [somethings] came [separately]?
6. **Tao tona<sup>7</sup> vetci.**  
That-situation twice occurs (occurs twice).
7. **Ta kilgramo<sup>8</sup> lio<sup>9</sup> toni.**  
That measures-in-kilograms the-number twenty.  
*That weighs twenty kilograms.*
8. **Ta meltio<sup>10</sup> lio tonikeigei<sup>11</sup>.**  
That measures-in-heaviness the-number 20kg.  
*That weighs twenty kilograms.*
9. **Ta tidjo<sup>12</sup> ti lio toni kilgramo.**  
That is-heavier-than this [by] the-number 20 kilograms.  
*That is twenty kilograms heavier than this.*
10. **Le toni kilgramo<sup>13</sup> ga cao<sup>14</sup> cmalo.**  
[Each of] The twenty, [one-] kilogram [things] are (emphatically) small.
11. **Ie lio tofokuato?<sup>15</sup> (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.<sup>16</sup>**  
[The-number 24/2 is-another-way-of-saying] The number 12.  
*[Twenty-four divided by two is] Twelve.*

13. **Hu jolkeo**<sup>17</sup> [**ti, le nedpao midnai**]?

What is the clocktime [ending at this moment, and beginning the previous midnight]?

*What time is it?*

14. **Lio netoma**<sup>18</sup> [**ga jolkeo**].

The number twelve hundred [is the time].

*[It's] Noon.*

15. **La Neton.**<sup>19</sup>

*Twelve. (Noon.)*

**Lona Cninu Purda****Predicates**

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

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

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

Notice that the digits also come in rhyming pairs: **ni ne, to te, fo fe, so se, 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 tonikegei** 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:

<b>Dai/D</b>	<b>dalra</b>	dollar	<b>lei/l</b>	<b>litro</b>	liter
<b>dei/d</b>	<b>denli</b>	day	<b>mei/m</b>	<b>metro</b>	meter
<b>gei/g</b>	<b>gramo</b>	gram	<b>meo/μ</b>	<b>minta</b>	minute
<b>hei/h</b>	<b>horto</b>	hour	<b>nei/n</b>	<b>nirne</b>	year
<b>isi/i</b>	<b>inca</b>	inch	<b>sei/s</b>	<b>sekmi</b>	second

Yes, the Greek letter *mu* 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 **meo (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 **3×4** 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 liotofo 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 *multi-plicative 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*.

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

Eo 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 trecymou na, na lepo mu plekao plizo lo dzabi  
cmeni.
- Hue Mai: Soi togri.  
Nao, vemsia *nurperpli*, eo!
- Hue Pai: Soi kamki. I buo 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. I buo Mai pa cutse hu Pai?
4. Duohu Mai pertymao lo numcu Pai?

### Lona Cninu Purda

<i>Word</i>	<i>Definition</i>	<i>Clue words</i>
<b>brato</b>	... is the result of dividing / is the ratio/quotient of... by/over ...	( <i>ratio</i> [Rei <b>ci</b> O])
<b>cmeni</b>	... is a piece/amount of money worth ... in the currency issued by government/authority ...	( <i>money</i> [My <b>NI</b> ])

- cmepli** ... spends quantity of money ... on/for ...  
[CMENi PLIzo = money-use]
- dalra** ... is worth ... dollars. (default 1)(*dollar* [DALR])  
(If the second argument is omitted, "one" is assumed.)
- djacue** ... says/claims/purports to know ... about ...  
[DJAno CUtSE = know-say]
- horto** ... lasts ... hour(s) (default 1) (*hour* [aOR])
- jokla** ... is a clock (*clock* [KLAK])
- konmathe** ... is an arithmetic principle for deriving ... from ...  
[KONte MATHE = count-math]
- melkeo** ... lasts a measured length of time ...  
[MErLi cKEMO = measure(d)-time]
- minta** ... lasts ... minutes (default 1) (*minute* [MINyT])
- numcu** ... is a number (*numeral* [NUMryI])
- 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) MADzO = pertain-make]
- plekao** ... pretends/plays that ... is true  
[PLEci KAKtO = play-act]
- 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]
- tcoko** ... is a piece/quantity of chocolate  
(*chocolate* [TCaKYlyt])
- 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. (BI)
- ci** (when attached to an eeshek, 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. (BI)
- 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**. (IC)
- 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?* They are answered with time designations; and these may be expressed as either numbers or names. **Lio tohei piu tenimeï**, **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.** Seven of the learners came.
2. **Se le ho cirna [pa kamla]?** Seven (out) of the multiple of how many learners [came]?
3. **Neni. Or** Ten. *Or*  
**Se le cao neni cirna [pa kamla].** Seven of the (emphatic) *ten* learners [came].
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	kenoi	both not (with ki) and	7
co	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
fuiipa	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

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		<b>Primitives</b>	
nuku	...whether...	7	batmi	exchange	7
nukunoi	not...whether...	7	bilti	beautiful	9
numoihu	to what end	10	bivdu	behaves	9
nusoaki	thus..., given...	10	blabi	white	8
pafa	was going to	11	bleka	looks	11
pana	was then	11	brato	ratio	12
papa	had	11	breko	brake	8
paza	some time ago	11	brili	brilliant	8
pazi	recently	11	bunbo	stupid	8
pazu	long ago	11	cadre	dress	11
pio	plus	12	ceffi	chief	10
po	is an event of	9	cenja	changes	10
pu	is a property of	9	centi	hundredth	12
ra	all	11	cimra	summer	11
rau	because (reason)	10	citlu	detail	11
rauhu	why? (reason)	10	clafo	laughs	11
rie	respected	11	clivi	lives	10
se	seven	12	cluva	loves	11
so	six	12	cmalo	small	10
soa	because (premise)	10	cmeni	money	10
soahu	why? (premise)	10	comtu	is ashamed	11
soi	I am...	11	crano	smiles	11
taa	in turn	7	cutri	water	11
te	three	12	dalra	dollar	12
tia	times/multiplied by	12	danci	plans	11
			danza	wants	9

decti	tenth	12	kultu	culture	7
dekto	ten times	12	kumtu	common	8
denli	day	12	kunci	is related to	7
dipri	dear	11	kusmo	custom	8
disri	decides	11	landi	land	11
donsu	gives	10	latei	light	10
dorja	war	11	lengu	language	10
duvri	discovers	10	likta	week	12
dzabi	exists, real	11	litro	liter	12
dzoru	walks	9	logle	Loglan region	7
fasru	easy	8	loglo	Loglan culture	7
felda	falls	10	marli	mile	12
firpa	fears	8	megdo	millionfold	12
forma	form	11	meksi	Mexican person	7
frelu	crazy	7	merki	American person	7
garni	governs	7	metro	meter	12
garti	grateful	9	mikti	millionth	12
gesko	guest	11	milti	thousandth	12
gigdo	billion times	12	mintu	minute	12
gramo	gram	12	mirdo	ten-thousandfold	12
gunti	country	11	motci	motor	8
hatro	hot	11	namci	name	7
hekto	hundredfold	12	nanti	billionth	12
hijra	is present at	8	nardu	difficult	8
hindi	Indian person	11	nigro	black	8
horto	hour	12	nirli	girl	9
inca	inch	12	nirne	year	12
jokla	clock	12	notbi	other	8
junge	Chinese region	7	numcu	number	12
jurna	earns	10	nutra	neutral	11
kakto	acts	9	parti	part	8
kamki	funny	7	patce	device	10
kance	is aware	11	pernu	person	10
kilgramo	kilogram	12	perti	pertains to	8
kilto	thousandfold	12	pikti	trillionth of	12
kliri	clear	8	pinti	paint	10
komfu	comfortable	11	pismi	peace	11
konce	shell	8	pluci	pleases	10
krido	believes	10	ponja	Japanese language	11

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	is certain	8	djacue	says that	12
sisto	system	8	duodja	knows how to	8
sitfa	place	11	durbiesni	is on the point of	9
sorme	sister	7	durtoi	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	fircko	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	grujmi	assemble	11
vatlu	value	10	gubduo	does good	9
vegri	green	11	gudbiu	behaves well	9
vetci	happens	9	gudcae	is lucky for	11
vetfa	invents	10	gudcanspe	is lucky	11
vizka	sees	9	gudcea	improves	10
			gudcko	improves	10
	<b>Complexes</b>		gudkao	is well behaved	9
bedpli	is in bed	9	gudmao	improves	10
bedyduo	puts to bed	9	haispe	enjoys	9
brekysio	braking system	8	haposcli	has a party	11
cilble	investigates	11	haposcvei	party	11
cirfundi	fond of learning	10	jolkeo	is clock-time	12

kaidja	knows quality	11	respli	wears	11
kamkytaa	jokes	7	ridcue	reads aloud	9
kentaa	asks	8	sacduo	begins	12
kinacia	apprentice	11	sandui	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	consulate	7	sirfio	feels certain of	12
kulbatmi	exchange culture	11	sismao	systematizes	11
leksio	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	despairs	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	telfypli	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	turceffi	boss	10
nurkae	world	11	vefraci	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			
reksio	braking system	8			
rembiu	is friendly	9			
remkao	acts as friend	9			









