La Bangu series

The La Gleki's
Crash Course in Lojban

The guide to
the naturalistic
logical language

eng v. 1.0.0.17

Book cover

Send your suggestions and feedback to
gleki.is.my.name@gmail.com.
For checking the grammar of your sentences use **this parser.**

The La Gleki's

Crash Course in Lojban

The guide to the naturalistic logical language
Published 2015

This crash course covers the most important aspects of Lojban, a logical language.

Why was this book born?

When I first saw the description of Lojban I was confused. A language where verbs and nouns don't differ. How is that possible? And then I saw those pronounceable smileys... but wait! It is a logical language. Where do emotions come from in the world of logic? These oddities were making me crazy.

If this language can combine those things it must be the most powerful human language in the world. And although I didn't have much free time for such hobbies I decided to look into it deeper.

Why?

- I wanted to try new ways of thinking.
- I wanted a beautiful language.
- And I wanted something easy to grasp.

I heard others saying that Lojban is extremely hard to learn but what I discovered later was an amazing simplicity of its structure.

Go on reading and you'll get evidence for that.

I also learnt that Lojban allows to say things shorter without unnecessary distracting details. For example, one doesn't have to always think of what tense (past, present or future) to use in a verb when it's already clear from context: when you need details you add them. But unlike other languages Lojban doesn't force you to do so.

But why did I decide to write my own course?

When I first opened textbooks on Lojban ... darn, they were written not for humans for sure. An awkward and boring style making it impossible to learn the language fast. A lot of distracting not necessary details, no solutions for real situations and bulky, bulky, bulky.

And I said "Enough! If you can't explain it yourself then I'll do that, in simple words, with better examples and as concise as possible."

Using this course.

Lojban is likely to be very different to the kinds of languages you are familiar with — which certainly include English. Learning it is much more than just learning its words and grammar: it is more about understanding it. It will make you think about the ways you express ideas in words. Something that you learned and used every day but never tried to understand how it works.

Learning may be easy or hard, depending on how well you understand the ideas behind it. There are not many words and rules that you need to learn to get into a basic level. You will get there rather quickly if you put a systemic effort. On the other hand, if you fail to understand some basic point, memorizing things will not help you much. In such cases don't hesitate to move on, and come back to it later. Likewise, some of the exercises are trickier than others (particularly the translation exercises at the end of sections). If you can't work out the answer to a particular question, feel free to skip it — but do look at the answer to the question.

Conventions used in this book.

Lojbanic text is in **bold**.

Translations are in *italic*.

Explanations of the structure of text in Lojban is in such "square" letters.

Brackets are used to clarify the grammatical structure of Lojban in examples. [These brackets are not part of official Lojban orthography, and are included only for clarifying stuff].

> Words with their translations are indented.

| Examples are marked by a line on the left. This is an example of a case study sentence.

‖ Examples of common colloquial phrases are marked by a

‖ double line on the left.

Side notes and tips are in boxes. This is an example of a note.

For more information on Lojban, please contact the Logical Language Group:

- e-mail: thelogicallanguagegroup@gmail.com
- web-site: mw.lojban.org

This course is created by the author La Gleki with the help of the Lojban community throughout year 2015. This book teaches a simplified and optimized style in Lojban and explains modern trends in Lojban language.

Lesson 1. The language at a glance

Alphabet

The basic thing you need to know about Lojban is obviously the alphabet.

Lojban uses the Latin alphabet (vowels are colored):

a b c d **e** f g **i** j k l m n **o** p r s t **u** v x **y** z ' .

Letters are pronounced exactly as they are written.

There are six vowels in Lojban:

a as in *palm* (not as in *face*)
e as in *get*
i as in *machine* or (Italian) *vino* (not as in *hit*)
o as in *choice* or *more* — not as in *so* (this should be a 'pure' sound).
u as in *cool* (not as in *but*)
y as in *comma* (not as in *misty* or *cycle*)

a, **e**, **i**, **o**, **u** are pretty much the same as vowels in Italian or Spanish.

u before vowels can be pronounced shorter, like *w*, for example: **ui** is pronounced as *wee*.

i before vowels can be pronounced shorter, like *y*, for example: **ie** is pronounced as *ye* in *yes*.

The sixth vowel, **y** sounds like *a* in the word *comma*. So it's kind of *er* or, in American English, *uh*. **y** is the sound that comes out when the mouth is completely relaxed (this sound is also called *schwa* in the language trade).

As for consonants they are pronounced like in English or Latin, but there are a few differences:

c   is pronounced as *sh* (like in *shop*).

g   always *g* as in *gum*, never *g* as in *gem*

j   like *j* in French *bonjour* or like *s* in *pleasure* or *treasure*.

x   like *ch* in Scottish *loch* or as in German *Bach*, Spanish *Jose* or Arabic *Khaled*. Try pronouncing *ksss* while keeping your tongue down and you get this sound.

'   like English *h*. So the apostrophe is regarded as a proper letter of Lojban and pronounced like a *h*. It can be found only between vowels. For example, **u'i** is pronounced as *oo-hee* (whereas **ui** is pronounced as *wee*).

.   a full stop (period) is also regarded as a letter in Lojban. It's a short pause in speech to stop words running into each other. Actually any word starting with a vowel has a full stop placed in front of it. This helps prevent undesirable merging of two sequential words into one.

Stress is always put on the last but one vowel or shown explicitly using symbol ` before the stressed vowel in order to break this rule. For example, **dansu** (which means *to dance*) can be also written as **d`ansu** to explicitly show the stress. If a word has only one vowel you just don't stress it.

You don't have to be very precise about Lojban pronunciation, because the sounds are distributed so that it is hard to mistake one sound for another. This means that rather than one 'correct' pronunciation, there is a range of acceptable pronunciation — the general principle is that anything is OK so long as it doesn't sound too much like something else. For example, Lojban **r** can be pronounced like the *r* in English, Scottish or French.

Two things to be careful of, though, are pronouncing Lojban **i** and **u** like Standard British English *hit* and *but* (Northern English *but* is fine). This is because non-Lojban vowels, particularly these two, are used to separate consonants by people who find them hard to say. For example, if you have problems spitting out the **ml** in **mlatu** (which means *cat*), you can say *mɪlatu* — where the *ɪ* is very short, but other vowels: **a**, **u** have to be long.

The simplest sentence

lo mlatu
a cat

pinxe
drinks, to drink

lo ladru
milk

lo plise
an apple

prami
loves

karce
… is a car

carvi
… is a rain

Now let's turn to constructing our first sentences in Lojban.

Of course one of your first thoughts might be "Where are nouns and verbs in Lojban?"

Here are three verbs:

> **pinxe** means *drinks, to drink*.
> **mlatu** means *is a cat, to be a cat*.
> **ladru** means *is some milk*.

And here is our first sentence:

> **lo mlatu cu pinxe lo ladru**
>
> *A cat drinks milk.*

To turn a verb into a noun we put a short word **lo** in front of it: **lo mlatu**, **lo ladru**.

It might sound strange how *cat* and *milk* can be verbs but in fact this makes Lojban very simple:

pinxe - *to drink*	**lo pinxe** - *drinker*
mlatu - *is a cat*	**lo mlatu** - *cat*
ladru - *is some milk*	**lo ladru** - *milk*

We can also say that **lo** creates a noun from a verb with roughly the meaning of *one who does...* (*drink - drinker*), *one who is...* (*is a cat - cat*) or *one which is...* (*is some milk - milk).*

The most basic sentence in Lojban consists of one phrase (otherwise called *clause*). Phrase has the following parts from the left to the right:

- the head of the clause: one or more nouns. The noun **lo mlatu** in this case.
- the head separator **cu** (remember that **c** is pronounced as *sh*)
- the tail of the clause: the main verb (**pinxe**) with possibly one or more nouns after it: the noun **lo ladru** in this case.

Any verb can be turned into a noun. For example, **lo pinxe** will mean *a drinker* (the one who drinks).

One more example:

> **lo plise cu kukte**
>
> *An apple is tasty.*

Here, **lo plise** means *an apple*, **kukte** means *to be tasty*.

A simpler clause in Lojban would contain only one main verb:

> **karce**
>
> *Car!*

You could say this when you see a car coming. The context would be clear enough that there is a car somewhere around and probably it's dangerous.

karce is a verb meaning *is a car, to be a car*.

Or you can say

> **carvi**
>
> *It is raining.*

where

carvi = *is a rain, to be raining*

Notice that in Lojban there is no need in the word *it* in such sense. You just use the verb you need.

> **prami**
>
> *[Someone] loves.*

prami = *to love (someone)*

> **bajra**
>
> *Someone runs.*

bajra = *to run*

Again context would probably tell who loves whom and who runs.

Lojban does not require any punctuation, separate words are used instead. Punctuation marks like *. , ! ? " "* and capital letters (*A B C* etc.) can be used for stylistic purposes or to make the text look more smart. They don't add or change the meaning.

Pronouns: *I* - mi, *you* - do

mi = *I*
do = *you*
mi'ai = *we*

ti = *this one*
ta = *that one*
tu = *that one over there*

Like their English name hints, pronouns work like nouns by default. And they don't require **lo** in front of them.

> **mi pinxe**
>
> *I drink.*
>
> **do pinxe**
>
> *You drink.*
>
> **ti ladru**
>
> *This is some milk.*
>
> **tu mlatu**
>
> *That is a cat.*
>
> **do citka lo plise**
>
> *You eat an apple.*

citka = *to eat (something)*

> **mi prami do**
>
> *I love you.*

As you can see we can even omit **cu** after pronouns as we can clearly see the head of the clause (**mi** in the last example) and the tail with the verb being separated.

Nouns and pronouns work exactly the same, and later we will be calling them both *nouns* for brevity.

Unlike in English we don't have to add the verb "is/are/to be" to the sentence. It is already there: **mlatu** means <u>to be</u> a cat.

Task

Close the right part of the table. Translate from Lojban the sentences on the left.

mi'ai citka	*We eat.*
mi pinxe lo ladru	*I drink milk.*
mi citka lo plise	*I eat an apple.*

Close the right part of the table. Translate to Lojban the sentences on the left.

That is an apple over there.	**tu plise**
The milk is tasty.	**lo ladru cu kukte**
You love me.	**do prami mi**
We eat an apple.	**mi'ai citka lo plise**

.i separates sentences

The most precise way of uttering or writing sentences in Lojban would be placing a short word **.i** in the beginning of each of them:

> **.i mi viska lo mlatu .i lo mlatu cu pinxe lo ladru**
>
> *I see a cat. The cat drinks milk.*

> **viska** = *to see (something)*

.i separates sentences like the full stop (period) at the end of sentences in English texts.

When saying one sentence after another in English we make a pause (it may be short) between them. But pause has many different meanings in English. In Lojban we have a better way of understanding where one sentence ends and another begins.

Also note that sometimes when pronouncing words quickly you can't figure out where one sentence ends and the word of the next sentence begins. Therefore it's advised to use the word **.i** before starting a new sentence.

Task

Close the right part of the table. Translate from Lojban the sentences on the left.

> **lo prenu** = *person, people*
> **stati** = *to be smart, to have a talent*
> **klama** = *to go (to somewhere)*
> **lo zarci** = *market*
> **lo najnimre** = *an orange (fruit), oranges*
> **lo badna** = *a banana, bananas*

lo mu prenu cu klama lo zarci	*Five people go to the market.*
pano lo panono prenu cu stati .i do stati	*10 out of 100 people are smart. You are smart.*
lo prenu cu nelci lo plise i za'u lo prenu cu nelci lo najnimre .i me'i lo prenu cu nelci lo badna	*People like apples. More people like oranges. Fewer people like bananas.*
za'u lo mu prenu cu nelci lo plise	*More than one person out of five like apples.*
za'u re lo mu prenu cu stati	*More than two ut of five people are smart.*

Close the right part of the table. Translate to Lojban the sentences on the left.

256 cats are smart.	**lo re mu xa mlatu cu stati**
Fewer than 12 apples are tasty.	**me'i lo pa re plise cu kukte**
All people eat. Fewer people eat oranges.	**lo ro prenu cu citka i me'i lo prenu cu citka lo najnimre**

Numbers: *1234567890* = pa re ci vo mu xa ze bi so no

lo simply turns a verb into a noun but such noun has no number associated with it. The sentence

> **lo mlatu cu pinxe lo ladru**
>
> *A cat drinks milk.*

can also mean

> **lo mlatu cu pinxe lo ladru**
>
> *Cats drink milk.*

A cat in English means "one cat", and *cats* means "two or more cats". In Lojban, **lo mlatu** can mean either of them. Usually context tells us how many cats are here.

But what if we want to specify the number?

Let's add a number after **lo**.

pa re ci vo mu xa ze bi so no
1 2 3 4 5   6 7 8 9 0

> **ro** = *all*.

So

> **lo pa mlatu cu pinxe lo ladru**
>
> *A cat/one cat drinks milk.*

For numbers consisting of several digits we just string those digits together.

> **lo re mu mlatu cu pinxe lo ladru**
>
> *25 cats drink milk.*

Yes, it's that simple.

If we want to count we can separate numbers with **.i**:

> **5 ... 4 ... 3 ... 2 ... 1 ... start**
>
> *mu .i vo .i ci .i re .i pa .i .insipe*

> **insipe** = *to begin itself, break out*

If we want **ro** is also used to express the meaning of *all*.

> **lo ro mlatu cu pinxe lo ladru**
>
> *All cats drink milk.*

 By placing numbers to the left of **lo** we specify how many objects are in question:

> **ci lo re mu mlatu cu pinxe lo ladru**
>
> *Three out of 25 cats are drinking milk.*

So we use **lo** as a separator in phrases with *out of* or similar.

ro to the left of **lo** gives us the meaning *each*:

> **ro lo mlatu cu pinxe lo ladru**
>
> *Each, every cat drinks milk.*

Notice that **lo ro ...** means *all* and **ro lo ...** means *each, every*.

To say just *cats* (plural number) as opposed to *a cat* (*one cat*) we use the number **za'u**.

> **lo za'u mlatu cu pinxe**
>
> *Cats are drinking.*

Compare it with:

> **lo pa mlatu cu pinxe**
>
> *A cat is drinking.*

Putting **za'u** before **lo** means *more*, putting **me'i** means *less*:

> **za'u lo mlatu cu pinxe**
>
> *More cats are drinking.*
>
> **me'i lo mlatu cu pinxe**
>
> *Fewer cats are drinking.*

Putting a number after **za'u** or **me'i** specifies *more than [that number]*:

> **lo za'u ci mlatu cu pinxe**
>
> *More than three cats are drinking.*
>
> **me'i ci lo mu mlatu cu pinxe**
>
> *Less than three out of five cats are drinking.*

Compound verbs

Compound verbs (**tanru** in Lojban) are several verb words one after another.

> **tu melbi zdani**
>
> *That is a pretty home.*

> **melbi** = *to be beautiful*
> **zdani** = *to be a home or nest (to someone)*

> **do melbi dansu**
>
> *You prettily dance.*

> **dansu** = *to dance*

Here the verb **melbi** adds an additional meaning as it is to the left of another verb: **zdani**. The left part is usually translated using adjectives and adverbs.

Compound verbs are a powerful tool that can give us richer verbs. You just string two verbs together. And the left part of such compound verb adds a flavor to the right one.

We can put **lo** to the left of such compound verb getting a compound noun:

> **lo melbi zdani** = *a nice home.*

Now you know why there was **cu** after nouns in our example

> **lo mlatu cu pinxe lo ladru**
>
> *A cat drinks milk.*

Without **cu** it'd turn into **lo mlatu pinxe** … with the meaning *a cat-like drinker* whatever that could mean.

> Remember about placing **cu** before the main verb in a clause
>
> to prevent unintentional creating of compound verbs.

Compound verbs can contain more than two verbs. In this case the first verb modifies the second one, the second one modifies the third and so on:

> **verba** = *to be a child*
> **lo melbi verba zdani** = *a pretty-child home, a home of a pretty child*
> **lo verba melbi zdani** = *a childishly pretty home, a home pretty in a childish way*

Task

> **lo fetsi** = *a female, female beings (for example, women)*
> **lo nakni** = *a male, male beings (for example, men, male humans)*
> **sutra** = *to be quick*
> **barda** = *to be big*
> **cmalu** = *to be small*

Close the right part of the table. Translate from Lojban the sentences on the left.

lo melbi fetsi	*beautiful female.*
do sutra klama	*You quickly go. You go fast.*
ta barda zdani	*That is a big home.*
lo sutra bajra mlatu	*a quickly running cat*
lo sutra mlatu	*a quick cat*
lo bajra mlatu	*a running cat*

Close the right part of the table. Translate to Lojban the sentences on the left.

This is a small child.	**ti cmalu verba**
tasty apple	**lo kukte plise**
quick eater	**lo sutra citka**
You are a quickly going male.	**do sutra klama nakni**

"*Yes/No*" questions

In English, we make a *yes/no* question by changing the order of the words (e.g. "*You are …*" — "*Are you …?*") or putting some form of *do* at the beginning (e.g. *Do you know?*). In Lojban we can retain the order of words.

We turn any assertion into a *yes/no* question by simply putting the word **xu** somewhere in the sentence, for example in the beginning:

> **xu do nelci lo gerku?**
>
> *Do you like dogs?*

> **nelci** = *to like (something)*
> **lo gerku** = *dog, dogs*

Remember that in Lojban punctuation like "?" (question mark) is totally optional and used mostly for stylistic purposes. After all, we use the question word **xu** that shows the question anyway.

Other examples:

> **xu mi klama**
>
> *Am I coming?*

> **klama** = *to come (to somewhere)*

> **xu pelxu**
>
> *Is it yellow?*

> **pelxu** = *to be yellow*

We can shift the meaning by placing **xu** after different parts of a clause. Some possible explanations of such shift in meaning are given in brackets:

> **— xu do nelci lo gerku**
>
> *— Do you like dogs?*
>
> **— do xu nelci lo gerku**
>
> *— Do YOU like dogs?*
>
> *(I thought it was someone else who likes them).*
>
> **— do nelci xu lo gerku**
>
> *— Do you LIKE dogs?*
>
> *(I thought you were just neutral towards them).*

> **— do nelci lo gerku xu**
>
> *— Do you like DOGS?*
>
> *(I thought you liked cats).*

As you can see what is expressed using intonation in English is expressed by moving **xu** after the part we want to emphasize. Note, that the first sentence with **xu** in the beginning asks the most generic question without stressing any particular aspect.

xu is an interjection word. Here are the features of Lojban interjections:

- interjection modifies the construct to the left of it. So when put after certain part of the clause like pronoun or a verb it modifies that verb: **do <u>xu</u> nelci lo gerku** - *Do <u>YOU</u> like dogs?*
- being put in the beginning of a clause interjection modifies the whole clause: **xu do nelci lo gerku** - *Do you like dogs?*
- we can put an interjection after different parts of the same clause shifting the meaning.

Now how to reply to such 'yes/no' questions?

> **— xu do nelci lo gerku**
>
> *— Do you like dogs?*
>
> **— je'u**
>
> *— Yes.*
>
> — True [literally]

or

> **je'u nai**
>
> *No.*
>
> Not true [literally]

Another way to answer *yes* is to repeat the main verb, for example

> **— xu lo mlatu cu melbi**
>
> **— melbi**
>
> *— Are cats pretty?*
>
> *— Pretty.*

je'u and **je'u nai** are also interjections. We can use them not only in questions:

> **je'u do lazni**
>
> *Actually you are lazy.*

lazni = *to be lazy*

> **je'u mi nelci lo gerku**
>
> *It is true that I like dogs.*

The particle **nai** is a modifier of interjections, it creates the opposite meaning when put after them.

> All Lojban words are divided into two groups: particles (called **cmavo** in Lojban) and verbs (**selbrivla)**.
>
> It is quite common to write several particles one after another without spaces between them. This is allowed by Lojban grammar. So don't be surprised to see **lonu** instead of **lo nu**, **je'unai** instead of **je'u nai** etc. This doesn't change the meaning. However, this is not applied to verbs: they are to be separated with spaces.

Task

Close the right part of the table. Translate from Lojban the sentences on the left.

xu lo barda zdani cu melbi	*Is the big home is beautiful*
— lo re nakni cu stati xu	*— Are the two men smart?*
— je'unai	*— No.*
do klama lo zarci xu	*Do you go to the market?*
xu lo pa verba cu prami lo ci mlatu	*Does the child love the three cats?*

Close the right part of the table. Translate to Lojban the sentences on the left.

Is the car fast?	**xu lo karce cu sutra**
— Is the orange tasty?	**— xu lo najnimre cu kukte**
— Yes it is.	**— je'u**
Does the female love you?	**xu lo fetsi cu prami do**

Commands

How do we do commands and requests in English?

For example, if I want you to run, I'd probably say:

> *Run!*

Now the verb for *to run* is **bajra**.

In Lojban **bajra** simply means *Someone runs/is running.* It <u>can</u> be assumed to mean a command *Do*

run! but sometimes context isn't enough to make you decide whether it's an urge to run or simply a statement of the fact that someone runs or is running.

Instead we say

> **do ko'oi bajra**

do bajra means *You run*. And **ko'oi** is an interjection that turns *You run* into a command, appeal, request or suggestion.

do ko'oi is so useful and frequent in speech that in spoken Lojban it is also common to use a contraction of it, the word **ko**. It's just a shorter synonym of **do ko'oi**.

As noted earlier any interjection modifies only the part of the sentence that it follows. Moving **ko'oi** to another part moves command/request to that part.

You can even have several **ko'oi** in one sentence.

> **do ko'oi kurji do ko'oi**
> *Take care of yourself.*

> **kurji** = *to take care (of someone)*

which in short form would be

> **ko kurji ko**
> *Take care of yourself.*
> ```
> [Act so that] you take care of you. [literally]
> ```

As for **ko'oi** itself it is mostly used when applying to other pronouns (not **do**). E.g.

> **mi'ai ko'oi klama**
> *Let's go.*

Here **ko'oi** is applied to the pronoun **mi'ai** (*we*) although in ordinary speech it would probably be contracted to just

> **ko'oi klama**
> *Let's go.*

We can put **ko** or **do ko'oi** in any place where we put **do** transforming it into commands, e.g.

> **nelci ko**

nelci = *to like (something or someone)*

Note that **prami** corresponds to English *to love* while **nelci** corresponds to English *to like*.

This means *Make it so you are liked by someone!*, and as you can see we have to restructure this clause in English which still sounds weird, but you could use it in Lojban in the sense of *Try to make a good impression.*

Polite requests

ko'oi is rather vague. Sometimes we need to be more precise and to ask polite questions. The interjection **.e'o** before a sentence turns it into a request:

> **.e'o do lebna lo cukta**
>
> *Could you take the book, please?*
>
> ```
> Please take the book. [literally]
> ```

e'o = *interjection: please*
lebna = *to take (something)*

.e'o is enough to make polite requests in Lojban (in English as you can see one has to use "*could you + please* + a question").

Task

lo tcati = *tea*
lo ckafi = *coffee*
catlu = *to watch*
lo skina = *a film, movie*

Close the right part of the table. Translate from Lojban the sentences on the left.

ko sutra bajra	*Run quickly!*
.e'o do pinxe lo tcati	*Drink tea!*
ko catlu lo skina	*Watch a film!*

Close the right part of the table. Translate to Lojban the sentences on the left.

Be smart!	**ko stati**
Go home!	**ko klama lo zdani**
Please, drink coffee!	**.e'o do pinxe lo ckafi**
Please, take care of the girl.	**.e'o do kurji lo nixli**

"*And*" and "*or*"

> **lo verba je melbi zdani** = *a childish and pretty home*

> **lo sutra je blabi karce cu klama**
>
> *A quick and white car is moving.*

je means *and* in Lojban in compound verbs.

Without **je**

> **lo sutra blabi karce cu klama**
>
> *A quickly white car is moving.*

would be funny and make no sense since **sutra** modifies **blabi** and **blabi** modifies **karce** according to how compound verbs work. The same for

> **lo blabi sutra karce cu klama**
>
> *A whitely quick car is moving.*

So

> **lo sutra je blabi karce cu klama**
>
> *A quick (and) white car is moving.*

has the intended meaning. Both **sutra** and **blabi** modify **karce** directly.

For connecting nouns we use a similar particle **.e**:

> **mi .e do nelci lo plise**
>
> *I like apples, and you like apples.*

In modern styles of Lojban **je** is used for connecting nouns too:

> **mi je do nelci lo plise**
>
> *I like apples, and you like apples.*

This is considered a non-standard, although a popular approach.

When we need to show that nouns are considered together we use the particle **jo'u**:

> **lo nanla jo'u lo nixli cu casnu lo karce**
>
> *A boy and a girl discuss a car.*

> **nanla** = *...is a boy, boys*
> **nixli** = *...is a girl, girls*

Also notice that omitting **lo** can cause weird results:

> **lo nanla jo'u nixli cu casnu lo karce**
>
> *Someone who is a boy and a girl (at the same time considered together!) discusses a car.*

Don't remove **lo** when connecting two nouns:

> **lo nanla jo'u lo nixli cu casnu lo karce**
>
> *A boy and a girl discuss a car.*

is the correct sentence here.

Let's mention other conjunction words.

> **lo nanla cu fengu ja bilma**
>
> *The boy is angry or ill (or may be both angry and ill)*

> **ja** = *and/or* or
> **.a** = *and/or* when connecting nouns.

> **fengu** = *to be angry*
> **bilma** = *to be ill*

> **lo karce cu blabi jo nai grusi**
>
> *The car is either white or gray.*

> **jo nai** = *either ... or ... but not both* (it consists of two words but it has one single meaning)
> **.o nai** = *either ... or ... but not both* when connecting nouns

Note that it's better to remember **jo nai** as a single word. The same for **.o nai**.

> **mi prami do .i ju do fenki**
>
> *I love you. Whether or not you are crazy.*

    ju = *whether or not...*
    fenki = *to be crazy*

Again many people always use **ja** instead of **.a**, **jo nai** instead of **.o nai**, **ju** instead of **.u**.

Task

    lo jisra = *a juice*

Close the right part of the table. Translate from Lojban the sentences on the left.

mi nelci lo badna .e lo plise	*I like bananas, and I like apples.*
do sutra ja stati	*You are quick or smart or both.*
lo za'u prenu cu casnu lo nixli .u lo nanla	*The people discuss girls whether or not (they discuss) boys.*
mi citka lo najnimre .o nai lo badna	*I eat either oranges or bananas.*

Close the right part of the table. Translate to Lojban the sentences on the left.

Females like rain, and males like rain.	**lo fetsi .e lo nakni cu nelci lo carvi**
Either I or you go to the market.	**mi .onai do klama lo zarci**
I see a big and beautiful car.	**mi viska lo barda je melbi karce**
The child drinks milk and/or juice.	**lo verba cu pinxe lo ladru .a lo jisra**

Events: *dancing* - lo nu dansu, *to be together* - lo nu kansa

Any clause can be turned into a verb by putting **nu** in front of it:

> **lo nicte cu nu mi viska lo lunra**
>
> *The night is when I see the Moon.*
>
> ```
> The night is the event when I see the Moon. [literally]
> ```

    nicte = *(some event) is a nighttime.*
    lo nicte = *night, nighttime*
    viska = *to see (something)*
    lo lunra = *the Moon*

Here **lo nicte** is a noun of the clause and **nu mi viska lo lunra** is the main verb of the clause as it starts with **nu**. But inside this main verb we can see another clause (**mi viska lo lunra**) embedded!

The word **nu** actually transforms a clause into a verb that denotes an event or a process.

Adding **lo** in front of **nu** creates nouns that denote processes:

pinxe = *to drink*
lo nu pinxe = *drinking*

􏿿

dansu = *to dance*
lo nu dansu = *dancing*

􏿿

kansa = *to be together with*
lo nu kansa = *being together*

jimpe = *to understand, to comprehend*
lo nu jimpe = *understanding, comprehending*

􏿿

klama = *to come*
lo nu klama = *coming*
lo nu do klama = *coming of you, you coming*

So **lo nu** corresponds to English *-ing*, *-tion* or *-sion*.

Some verbs require using events instead of ordinary nouns. For example

> **mi gleki lo nu do klama**
>
> *I'm happy because you are coming.*

gleki = *to be happy (of some event)*
lo gleki = *a happy one, a happy person*

> **mi djica lo nu do klama ti**
>
> *I want you to come here (to this place)*

djica = *to want (some event)*
mi jimpe lo nu do stati = *I understand that you are smart.*
jimpe = *to understand (some event)*

ti can refer not only to things but places. Some nouns are events by themselves. WWe can combine them with events so no **lo nu** will be used. 􏿿

> **lo cabna cu nicte**
>
> *Now it's night. At present it's night.*

lo cabna = *present time, (an event) is at present.*

> **lo nu pinxe lo ladru cu nabmi mi**
>
> *Drinking milk is a problem, problematic to me.*

nabmi = *(event) is a problem (to someone)*

Task

pilno = *to use (something)*
skami = *...is a computer*

Close the right part of the table. Translate from Lojban the sentences on the left.

mi nelci lo nu dansu	*I like dancing.*
xu do gleki lo nu pilno lo skami	*Are you happy of using a computer?*
do djica lo nu mi citka lo plise xu	*Do you want me to eat an APPLE?*

Close the right part of the table. Translate to Lojban the sentences on the left.

Coming here is a problem.	**lo nu klama ti cu nabmi**
Do you understand that I like bananas.	**xu do jimpe lo nu mi nelci lo badna**

Prepositions and tenses: *was, is, will* = pu, ca, ba

Prepositions in Lojban are grouped into series by their meaning to make them easier to remember and use.

Prepositions from the series called *PU*:

pu denotes past tense or *before some event*
ca denotes present tense or *at the same time as some event*
ba denotes future tense or *after some event*

⬚

> **mi pinxe ca lo nu do klama**
>
> *I drink while you are coming.*

Yes, we need **lo nu** to insert a whole sentence after **ca**.

> **mi citka ba lo nu mi dansu**
>
> *I eat after I dance.*

Now let's talk about tenses.

English forces us to use certain tenses. You have to choose between

> *A cat drinks milk.*
> *A cat has been drinking milk.*
> *A cat drank milk.*
> *A cat will have drunk milk.*

and other similar choices.

However, in Lojban tense are optional - you can be as vague or as precise as you want!

Our sentence

> **lo mlatu cu pinxe lo ladru**
>
> *A cat drinks milk.*

in reality says nothing about when this happens. Context is clear enough in most cases and can help us. But if we need more precision we just add more words.

It may be a surprise to you but those prepositions can be used as tenses as well!

The only difference is that we should just drop the noun after **pu**, **ca**, **ba**, place them before the main verb and they will turn into tenses:

> **lo mlatu ca pinxe lo ladru**
>
> *The cat drinks milk (at present).*
>
> **lo mlatu pu pinxe lo ladru**
>
> *The cat drank milk.*
>
> **lo mlatu ba pinxe lo ladru**
>
> *The cat will drink milk.*

As you can see we replaced **cu** with the tense word (**pu**, **ca**, **ba**) as they also clearly separate the head from the main verb.

> **ca** doesn't describe *exactly this moment*. **ca** extends slightly
>
> into the past and the future, meaning *just about now*. This is
>
> because human beings don't perceive time in a perfectly
>
> logical way, and the Lojban tenses reflect that.

Another example:

> **lo nicte cu pluka**
>
> *The night is pleasant.*

□

> **pluka** = *to be pleasant*

Tense words before nouns turn into prepositions:

> **ba lo nicte cu pluka**
>
> *After the night it is pleasant.*

So to say *will be pleasant* we should place the tense word before the main verb:

> **lo nicte ba pluka**
>
> *The night will be pleasant.*

□

We can combine tenses with and without clauses after them.

> **mi pu citka ba lo nu mi dansu**
>
> *I ate after I danced.*

□Note, that **pu** (past tense) is put only in the main clause (**mi pu citka**).

We shouldn't put it with **dansu** (unlike English) as **mi dansu** is viewed relative to **mi pu citka** so we already know that everything was in past.

Prepositions from the series called *ZAhO*:

> **co'a** = *the event is at its beginning*
> **ca'o** = *the event is in progress*
> **mo'u** = *the event is at its finish*

For precisely expressing English Progressive tense we use **ca'o**:

> **lo mlatu ca ca'o pinxe lo ladru**
>
> *A cat (at present) is drinking milk.*

mo'u usually corresponds to English Perfect tense:

> **lo mlatu ca mo'u pinxe lo ladru**
>
> *A cat has drunk milk.*

We could omit **ca** in these sentence since the context would be clear enough in most such cases.

Two prepositions from other series:

ta'e = *simple tense: the event happens habitually*
ze'a = *through some time, for a while, during ...*

Present Simple tense in English describes events that happen sometimes:

> **lo mlatu ca ta'e pinxe lo ladru**
>
> *A cat (habitually, sometimes) drinks milk.*

We can use the same rules for describing the past using **pu** instead of **ca** or the future using **ba**:

> **lo mlatu pu mo'u pinxe lo ladru**
>
> *A cat had drunk milk.*
>
> **lo mlatu ba mo'u pinxe lo ladru**
>
> *A cat will have drunk milk.*

> The relative order of tenses is important. In **ca mo'u** we first
> say something happens in present (**ca**), then we state that in
> this present time the described event is finished (**mo'u**). Only
> when using this order we get Present Perfect tense.

ze'a emphasizes that events happened during an interval:

> **mi pu ze'a sipna**
> *I slept for a while.*

> **mi pu sipna ze'a lo nicte**
> *I slept through the night. I slept all night.*

Let's compare it with **ca**.

> **mi pu sipna ca lo nicte**
> *I slept at night.*

sipna = *to sleep*
lo nicte = *a nighttime*

When using **ze'a** we are talking about the whole interval of what we describe. ⬜ Don't forget that **nicte** is itself an event so we don't need **nu** here.

Task

> **lo tsani** = *the sky*
> **zvati** = *to be present at (some place or event), to stay ... (at some place)*

Close the right part of the table. Translate from Lojban the sentences on the left.

mi ca gleki lo nu do viska lo tsani	*I am happy that you see the sky.*
xu lo mlatu pu ru'i zvati lo zdani	*Were the cat staying at home?*
do pu citka lo plise ba lo nu mi pinxe lo ladru	*You ate an apple after I drank the milk.*

Close the right part of the table. Translate to Lojban the sentences on the left.

You will see the sun.	**do ba viska lo solri**
You understand that it will rain.	**do ca jimpe lo nu ba carvi**

Other prepositions

Other prepositions work the same way. ⬜

> **fa'a** = *towards ..., in the direction of ...*
> **to'o** = *from ..., from the direction of ...*
> **bu'u** = *at ... (some place)*

> **mi klama fa'a do to'o lo mlatu**
>
> *I go to you from a cat.*

⬜

> **mi cadzu bu'u lo tcadu**
>
> *I walk in the city.*

⬜One thing is important. **nu** shows that a new clause in a sentence starts. Put **vau** after such clause to show its right border. Here is an example:

> **lo mlatu cu plipe fa'a mi ca lo nu do ru'i klama**
>
> *A cat jumps towards me when you are coming.*

> **plipe** = *to jump*

but

> **lo mlatu cu plipe ca lo (nu do ru'i klama <u>vau</u>) fa'a mi**
>
> *A cat jumps [when you are coming] towards me.*

(brackets are used here only to show the structure)

We use **vau** after the clause **nu do ru'i klama** to show that it ended and other parts of the sentence begin. Compare this sentence with the following:

> **lo mlatu cu plipe ca lo (nu do ru'i klama fa'a mi)**
>
> *A cat jumps (when you are coming towards me).*

As you can see **do klama fa'a mi** is a clause inside the big one. So **fa'a mi** is now inside it.

Now you, not the cat, come towards me.

At the end of the sentence **vau** is never needed as it's already the right border.

Some preposition require a noun with an event inside:

> **mi pinxe se ja'e lo nu mi taske**
>
> *I drink because I am thirsty.*
>
> **mi citka se ja'e lo nu mi xagji**
>
> *I eat because I am hungry.*

> **se ja'e** = *because ... (of some event)*
> **taske** = *to be thirsty*
> **xagji** = *to be hungry*

Task

> **lo canko** = *window*
> **lo fagri** = *a fire*

Close the right part of the table. Translate from Lojban the sentences on the left.

ko catlu fa'a lo canko	*Look towards the window.*
xu do gleki ca lo nu do ru'i cadzu bu'u lo purdi	*Are you happy when you are walking in the garden?*
ca lo nu mi klama lo zdani vau do pinxe lo tcati se ja'e lo nu do taske	*When I go home you drink tea because you are thirsty.*

Close the right part of the table. Translate to Lojban the sentences on the left.

Quickly run away from the fire!	**ko sutra bajra to'o lo fagri**

We were staying at home when it was raining.   **mi'ai pu ru'i zvati lo zdani ca lo nu carvi**

Negation

> **mi na'e nelci do**
>
> *I don't like you.*
>
> **na'e bo mi nelci do**
>
> *Not I like you (may be someone else likes you).*

- **na'e** means *no* or *not*.
- **na'e** modifies the construct to the right of it.
- Before nouns and pronouns **na'e bo** is usually used instead, although in popular styles of Lojban it can be omitted.

So when put before a pronoun it negates that pronoun, when put before a verb word, it negates that verb word.

We can put **na'e** before different parts of the same clause shifting the meaning.

Here are other words that work exactly as **na'e**:

> **mi no'e nelci do**
>
> *As for whether I love or hate you, I'm indifferent to you. I neither like nor hate you.*

The word **no'e** makes a part of sentence middle in its meaning.

> **mi to'e nelci do**
>
> *I hate you.*
>
> ```
> I anti-like you. [literally]
> ```

The word **to'e** makes a part of sentence opposite in its meaning. It's similar to English *anti-*.

> **mi je'a nelci do**
>
> *I indeed like you.*
>
> ```
> I indeed-like you. [literally]
> ```

The word **je'a** confirms the meaning of a part of sentence. It means *indeed'. Usually it's just omitted.*

All these words form a scale:

Word	Meaning
je'a	*indeed* - the affirmative position on the scale
no'e	*not really* - midpoint on the scale
to'e	*anti-*, *dis-*, *mis-* etc. - opposite on the scale

na'e   *non-* - other than the affirmative position on the scale

na'e is more vague than **no'e** and **to'e**, it can mean any of them when you don't care about the exact meaning.

Lastly, the preposition **na** put before the main verb also makes it negative in meaning:

> **mi na nelci do**
>
> *I don't like you.*

Names. Choosing a name

cmevla, or a *name word* is a special kind of verb. It is mostly used to build personal names. You can easily recognize cmevla in a flow of text as only **cmevla** end in a consonant.

Besides, it is common to wrap them by one dot from each side. Examples are: **.paris.**, **.robin.**

> Lojbanists often omit dots in front of and at the end of cmevla to write texts faster for example, when text chatting. After all, cmevla are still separated from neighboring words by spaces around them. However, in spoken language it is still necessary to put a short pause before and after cmevla.

If one's name is Bob then we can create a cmevla ourselves that would sound as close as possible to this name, for example **.bob.**

And then we prefix it with the word **la** so that it would work just like a noun — **la .bob.**. The word **la** is similar to **lo** but it converts a verb not to a simple noun but to a name (**cmene** in Lojban).

So the most simple example of using a name would be

> **la .bob. cu tcidu**
>
> *Bob reads/is reading.*

> **tcidu** = *to read*

> Don't forget to put **la** if you want to produce a name!

Well, Bob is lucky because his name goes directly into Lojban without any changes. The same for the name *Lojban*. It's a cmevla and is written as **.lojban.**

> **la .lojban. cu bangu mi**
>
> *I speak Lojban.*
>
> ```
> Lojban is the language used by me. Lojban is the language I use.
> [literally]
> ```

bangu = *is a language (used by someone)*

However, as you might guess Lojban spelling is quite transparent and therefore there are some rules for adapting names to how they are written in Lojban. This may sound strange — after all, a name is a name — but in fact all languages do this to some extent. For example, English speakers tend to pronounce *Jose* something like *Hozay*, and *Margaret* in Chinese is *Magelita*. Some sounds just don't exist in some languages, so the first thing you need to do is rewrite the name so that it only contains Lojban sounds, and is spelt in a Lojban way.

> Pay attention to how the name is pronounced natively. Thus, the English and French names *Robert* come out differently in Lojban: the English name is rather **.robyt.** in UK English, or **.rabyrt.** in some American dialects, but the French is **.rober.**

> **la .suzyn.**
>
> *Susan*

In the English name *Susan* the two letters *s* are pronounced differently. The second one is actually a *z*, and the *a* is not really an *a* sound, it's the "schwa" explained in the beginning of this chapter. So *Susan* is written **.suzyn.** in Lojban.

Here are some names that we'll use throughout this book:

la .alis.	*Alice*	**la .meilis.**	*Mei Li*
la .bob.	*Bob*	**la .abdul.**	*Abdul*
la .ian.	*Yan* or *Ian*	**la .al.**	*Ali*
la .jasmin.	*Jasmine*	**la .an.**	*Anne*
la .kevin.	*Kevin*	**la .eduard.**	*Edward*
la .adam.	*Adam*	**la .lukas.**	*Lucas*

- Two extra full stops (periods) are necessary because if you didn't put those pauses in speech, you might not know where the name started and ended, or in other words where the previous word ended and the next word began.
- The last letter of a cmevla must be a consonant. And if a name doesn't end in a consonant we usually add use *s* to the end; so in Lojban, *Mary* becomes **.meris.**, *Joe* becomes **.djos.** and so on. An alternative is to leave out the last vowel, so *Mary* would become **.mer.** or **.meir.**.
- You can also put a full stop in between a person's first and last names (though it's not compulsory), so *Jim Jones* becomes **.djim.djonz.**

Other verbs as names

You can use not only cmevla, but also other types of verbs to choose your nickname in Lojban. If you prefer, you can translate your name into Lojban (if you know what it means, of course) or adopt a completely new Lojban identity.

Here are a few examples of Lojbanic names:

Original name	Meaning	Word in Lojban	Your name
Robin	a name of a bird	**lo turdida** — *American robin*	**la turdida**
Alva	*elf* in Scandinavian	**lo .elfe** — *elf*	**la .elfe**
Mei Li	*beautiful* in Mandarin Chinese	**lo melbi** — *beautiful*	**la melbi**

Three types of nouns: lo-nouns, la-names and pronouns

There are three types of nouns in Lojban:

1. *lo*-*noun* is **lo** + a verb.
2. *name* is **la** + a verb.
3. *pronouns* are **mi** — *I*, **tu** — *that* and others

So as they mostly work the same way we are calling them *nouns* and use more specific terms when needed. In Lojban nouns are called **sumti**.

the, *he* and *she*

> **la alis cu klama lo zarci i le fetsi cu xagji**
>
> *Alice is going to a shop. She is hungry.*

When instead of **lo** we put **le** we refer to nouns (pronouns or names) that have just been mentioned. They are translated to English as *he*, *she* or by using the article *the*.

> **le fetsi** = *she, the female*
> **le nakni** = *he, the male*
> **le prenu** = *he or she, the person (gender is not known)*

> **la alis cu viska la jasmin i le fetsi cu melbi**
>
> *Alice can see Jasmine. She (Jasmine) is beautiful.*

If several nouns can match then the last one is used. In this case **le fetsi** is applied to Jasmine, the last noun deribing a female person.

In this example we assume that both Alice and Jasmine are females.

> In spoken language **le** can be applied to nouns not found in
>
> text but obvious from context. Consider the outer reality a

part of the text.

Introducing yourself. Vocatives

cerni
morning

vanci
evening

donri
daylight time
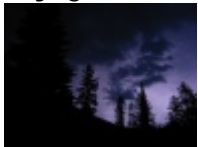
nicte
night

Vocatives in Lojban are words that function just like interjections (**xu** which we discussed) but they attach the following noun after them:

> **coi do**
>
> *Hello you.*

> **coi** = *vocative: hello, greetings*

You use **coi** + a noun to greet someone. **coi** corresponds to *Hi*, *Hello*, *Good morning*, and whatever else happens to be in vogue.

> **coi ro do** = *Hello all of you* (Southern U.S. *Hello y'all*) is how
>
> people usually start a conversation with several people. **coi re**
>
> **do** means *Hello two of you* or *Hello you two* and can be useful
>
> when, for example, one starts a letter to their parents).

Since vocatives work like interjections we have nice types of greetings:

> **cerni coi**
>
> *Good morning!*
>
> `morning` — `Hello!` (literally)

> **vanci coi**
>
> *Good evening!*

> **donri coi**
>
> *Good day!*

> **pluka nicte di'ai**
>
> *Good night!*

> **di'ai do**
>
> *Good luck to you!*

> **di'ai** = *vocative: well-wish*
> **pluka** = *to be pleasant to ... (someone)*

We use **di'ai** here because *Good night!* is not a greeting but a well-wish actually. Thus we use a different vocative here. Although, you can be vague by saying **pluka nicte** (just meaning *pleasant night* without any wishes explicitly said).

The vocative **mi'e** + a noun is used to introduce yourself. Watch any film where people don't know each other's language. They start off saying things like "Me Tarzan".

> **mi'e la .jasmin.**
>
> *I'm Jasmine. This is Jasmine speaking.*

> **mi'e** = *vocative: identifies speaker*

co'o is the farewell word, corresponding to *Goodbye*, *Farewell*. Lojbanists signing off on e-mail often end with something like **co'o mi'e .bob.** — this is equivalent to putting your name at the end of your email in English as a signature, and translates as *Goodbye; I'm Bob.*

And when you address people by name, you usually do so to make it clear who out of a group you are talking to. The word **doi** is used to show who you're talking to.

> **mi cliva doi la .robert.**
>
> *I'm leaving, Robert.*

> **cliva** = *to leave (something or someone)*

Without **doi** the name might become the first noun of the clause:

> **mi cliva la .robert.**
>
> *I'm leaving Robert.*

doi is a bit like English *O* (as in *O ye of little faith*) or the Latin vocative (as in *Et tu, Brute*). Some languages don't distinguish between these contexts although as you can see Old English and Latin did.

Two more vocatives are are **ki'e** for saying thanks and **je'e** for accepting them:

> **— do pu sidju mi .i ki'e do**
>
> **— je'e do**
>
> — *You helped me, thank you.*
>
> — *Not at all.*

> **sidju** = *to help (someone)*

We can omit the noun after the vocative only if this is the ends of the sentence. For example we can just say

> **— coi .i xu do kanro**
>
> — *Hello. How do you do?*
>
> — Hello. Are you healthy? [literally]

> **kanro** = *to be healthy*

Here, a new sentence starts immediately after the vocative **coi** so we omitted the name. Or we can say:

> **coi do mi djica lo nu do sidju mi**
>
> *Hello. I want you to help me.*
>
> Hello you. I want that you help me. [literally]

Thus, in case you don't know the name of the listener you just place **do** after it if you want to continue the same sentence after the vocative.

Task

Close the right part of the table. Translate from Lojban the sentences on the left.

nelci = *to like (someone or something)*
lo mamta = *a mother, mothers*

cerni coi la .alis.	*Good morning, Alice.*
— mi ba sipna	*— I will sleep.*
— pluka nicte di'ai	*— Good night.*
mi'e la .adam. i mi nelci lo nu mi ru'i tavla do	*I am Adam. I like that I am talking to you.*

Close the right part of the table. Translate to Lojban the sentences on the left.

Mommy, I will eat an apple.	**doi lo mamta mi ba citka lo plise**
You leave? Goodbye.	**xu do cliva .i co'o do** or just **xu do cliva .i co'o**

Lesson 2. More basic stuff

Order of arguments

Lojban dictionaries present all verbs with x1, x2 etc. symbols as e.g.

prami = x_1 *loves* x_2

There is nothing strange in these x1, x2. They are called places of arguments and simply represent the order in which you have to add nouns. E.g.

> **mi prami do**
>
> *I love you.*

This also means that

- x1 denotes *the one who loves* and
- x2 denotes *the one who is loved by*.

The advantage of such style of definitions is that compared to English there is no need in many additional words as all participants of this love are in one definition.

We can also omit nouns making the sentence more vague:

carvi (literally *is a rain, is raining*) means *It is raining*.
prami do (literally *loves you*) means *Someone loves you*.

All omitted places in a clause just mean **zo'e** = *something/someone* so it means the same as

> **zo'e prami do**
>
> *Someone loves you.*

And

> **prami**

is the same as

> **zo'e prami zo'e**
> *Someone loves someone.*

The order of arguments of compound verbs is the same as the of the last verb word in it:

> **tu sutra bajra pendo mi**
> *That is my quickly running friend.*
> That is a quickly running friend of me. [literally]

> **pendo** = *to be a friend, is a friend (of someone)*

So the order of arguments is the same as of **pendo** alone.

More than two places

There might be more than two places. E.g.

> **pinxe**
> *x1 drinks x2 from x3*
>
> **mi pinxe lo ladru lo kabri**
> *I drink milk from a cup.*
>
> **lo kabri**
> *a cup*

In this case there are three places and if you want to exclude the second place in the middle you have to use **zo'e:**

> **mi pinxe zo'e lo kabri**
> *I drink [something] from a cup.*

If we omitted **zo'e** we'd get

> **mi pinxe lo kabri**
> *I drink a cup.*

which would make no sense.

> Note that like in English you don't need to remember all
>
> places of all verbs. You may study places when you find them
>
> useful or when people use them in a dialogue with you.

General rules in the order of arguments

The order of places in verbs might be sometimes hard to remember. But let's not worry — we don't have to memorize all of them. In fact nobody does (do you remember the meaning of hundreds of thousands of words in English?)

Most of them have one or two places. Usually you can guess the order using context and a few rules of thumb:

1. The first place is often the person or thing who <u>does</u> something or <u>is</u> something: **klama** = *x1 goes ...*
2. The object of some action is usually just after the first place: **punji** = *x1 puts <u>x2</u> on x3*, **dunda** = *x1 gives <u>x2 (gift)</u> to x3 (recipient)*
3. And the next place will usually be filled with the recipient: **punji** = *x1 puts x2 on <u>x3</u>*, **dunda** = *x1 gives x2 (gift) to <u>x3 (recipient)</u>*
4. Destination (*to*) places nearly always come before origins (*from*) places: **klama** = *x1 goes to x2 from <u>x3</u>*
5. Less-used places come towards the end. These tend to be things like 'by standard', 'by means' or 'made of'.

The general idea is that first come the places which are most likely to be used.

> No need to fill all places all the time. Unfilled places just have
>
> values irrelevant or obvious to the speaker (they take the
>
> value of **zo'e** = *something*).

Places for nouns

lo pendo
friend/friends

lo pa cukta

a book/the book

mi dunda lo pa cukta
I give a book.

How do we say *You are my friend* ?

> **do pendo mi**
>
> *You are my friend.*
>
> ```
> You are a friend of me. [literally]
> ```

And now how do we say *My friend is crazy.*?

> **lo pendo be mi cu fenki**
>
> *My friend is crazy.*

So when we convert a verb into a noun (**pendo** — *to be a friend* into **lo pendo** — *a friend*) we can still retain other places of that verb by placing **be** after it.

By default it attaches the second place (x2). We can attach more places by separating them with **bei**.

For example:

> **mi dunda lo pa cukta mi**
>
> *I give a book to me.*

> **lo pa cukta** = *a book*

And now

> **lo dunda be lo cukta bei mi**
>
> *The grantor of the book to me*
>
> **lo dunda be lo cukta bei mi cu pendo mi**
>
> *The giver of the book to me is my friend.*
>
> ```
> The one who gives the book to me is a friend of mine. [literally]
> ```

Another example:

> **la .lojban. cu bangu mi**
>
> *Lojban is my language.*
>
> ```
> Lojban is a language of me. [literally]
> ```

bangu = x_1 is a language used by x_2 to express ideas x_3

However,

> **mi nelci lo bangu be mi**
>
> *I like my language.*

We can't omit **be** because **lo bangu mi** are two independent nouns (well, the second one is a pronoun but it's all the same in Lojban). Neither can we use **nu** because **lo nu bangu mi** is some event about my language. So **lo bangu be mi** is a correct solution to the problem.

Using **be** for not-converted verb words has no effect: **mi nelci be do** is the same as **mi nelci do**.

Relative clauses

Let's look at these two sentences.

1. The cat that is white is drinking milk.
2. The cat, which is white, is drinking milk.

In the first sentence the word "*that*" is essential to identifying the cat in question, it clarifies which cat we are talking about. Out of probably many cats we choose only those who are white. May be there is only one cat around that is white like in this example.

As for "*which is white*" from the second sentence it just provides additional information about the cat. It doesn't help us to identify cats. For example, this might happen when all the cats are white.

In Lojban we use **poi** for the first sentence and **noi** for the second sentence.

> **lo mlatu poi blabi cu pinxe lo ladru**
>
> *The cat that is white is drinking milk.*
>
> **lo mlatu noi blabi cu pinxe lo ladru**
>
> *The cat, which is white, is drinking milk.*

blabi = *to be white*

This **poi blabi** is a relative clause, a mini-clause attached to the noun **lo mlatu**. It ends just before the next word **cu**.

So we actually additionally state in the sentence that **lo mlatu cu blabi** — *the cat is white*.

Removing **poi** can change the meaning:

> **le nakni pu co'a speni lo ninmu poi pu se penmi bu'u lo zarci**
>
> *He married a girl (which one?) met in the store.*

Removing the relative clause with **poi** changes the meaning: *He married a girl.*

> **lo prenu poi gleki cu clani zmadu renvi**
>
> *People (which ones?) who are happy live longer.*

> **gleki** = *to be happy*
> **clani** = *to be long*
> **zmadu** = *to exceed*
> **renvi** = *to survive*

Removing the relative clause with **poi** changes the meaning: *People live longer.*

On the other hand, relative clauses with **noi** contain just additional information about the noun to which they are attached. That noun is sufficiently defined by itself so that removing relative clause doesn't change its meaning:

> **mi nelci la .jasmin. noi mi ta'e zgana bu'u lo panka**
>
> *I like Jasmine, whom I habitually see in the park.*
>
> *I like Jasmine (what else can I say about her?)...*

Removing the relative clause with **noi** retains the meaning: *I like Jasmine.*

In spoken English the distinction is often achieved using intonation or by guessing. Also relative clauses with **noi** are traditionally separated with commas in English, they use *which* or *who* and the word *that* is not used in them.

Let's have a more interesting example.

> **lo tricu** = *a tree*
> **barda** = *to be big/large*
> **klama** = *to go to something*

> **mi klama lo tricu**
>
> *I go to a tree*
>
> **lo tricu cu barda**
>
> *The tree is big*

And now let's join those two sentences:

> **lo tricu noi mi klama ke'a cu barda**
>
> *A tree, to which I go, is big.*

Note the word **ke'a**. We move the second sentence about the same tree into a relative clause and replace the noun **lo tricu** with **ke'a** in the relative clause. So the pronoun **ke'a** is like *who* and *which* in English. It points back to the noun to which the relative clause is attached.

So literally our Lojbanic sentence sounds like

> *A tree, such that I go to which, is big.*

ke'a can be dropped if we are to place it just after **noi** or **poi**. That's why the two following sentences mean the same:

> **lo mlatu poi blabi cu pinxe lo ladru**
>
> **lo mlatu poi <u>ke'a</u> blabi cu pinxe lo ladru**
>
> *The cat that is white is drinking milk.*

> **la nakni pu co'a speni lo ninmu poi pu penmi bu'u lo zarci** or
>
> le nakni pu co'a speni lo ninmu poi pu penmi ke'a bu'u lo zarci
>
> He married a girl whom he met in the store.

A more tricky example:

> **lo tricu noi mi pu klama ke'a ca lo cabdei cu barda**
>
> *A tree, to which I went today, is big.*

> **lo cabdei** = *the day of today*

Note that **ca lo cabdei** belongs to the relative clause. Another example

> **lo tricu noi mi pu klama ke'a cu barda ca lo cabdei**
>
> *A tree, to which I went, is big today.*

The meaning has changed a lot.

Short relative clauses. "*About*".

Sometimes you might need to attach additional noun to another noun.

> **mi djuno zo'e pe do**
>
> *I know something about you.*

pe and **ne** are similar to **poi** and **noi** but connect nouns to nouns:

> **lo penbi pe mi cu xunre**
>
> *A pen that is mine is red.* (*mine* is essential to identifying the pen in question)
>
> **lo penbi ne mi cu xunre**
>
> *A pen, which is mine, is red.* (additional information)

> **ne** = *non-restrictive relative clause. "which is associated with, about ... (noun follows)*
> **pe** = *restrictive relative clause. "that is associated with, about ... (noun follows)"*

be and pe

Notice that relative clauses are attached to nouns whereas **be** connects to the verb that is transformed into a noun afterwards.

Actually, **lo bangu pe mi** is a better translation of *my language*, since this clause, like the English, is vague as to how the two are associated with each other.

However, you can say **lo birka be mi** as *my arm*. Even if you saw off your arm, it'll still be yours. That's why **birka** has a place of the owner:

> **birka** = x_1 *is an arm of* x_2

Notice that **be** attaches to the verb word. But **pe**, **ne**, **poi** and **noi** are attached to nouns. For example,

> **lo melbi be mi cukta pe lo pendo cu barda**
>
> *The beautiful to me book of my friend is big.*

Here, **be mi** is applied only to the verb **melbi** = *to be beautiful to ... (someone)*. But **pe lo pendo** is applied to the whole noun **lo melbi be mi cukta** = *the beautiful to me book*.

"*She is a teacher*" and "*She is the teacher*"

In English the verb *is, are, to be* makes a noun work like a verb in English. In Lojban even such concepts as *cat* (**mlatu**), *person* (**prenu**), *house* (**dinju**), *home* (**zdani**) work like verbs by default. Only pronouns work as nouns.

However, here is an example:

> **le nakni cu ctuca**
>
> *He teaches.*

> **le nakni cu me lo ctuca**
>
> *He is a teacher.*
>
> ```
> He is among those who are teachers. [literally]
> ```
>
> **le nakni cu du lo ctuca**
>
> *He is the teacher.*

> **me** = *to be among ..., to be one of ..., to be a member of ... (noun follows)*
> **du** = *to be identical to ...*

The particle **me** takes a noun after it and shows that there are probably other teachers, and he is one of them.

However, when using the verb **du** we mean that he is, for example, the teacher we have been searching for or talking about.

me is also used to transform pronouns and personal names into verbs:

> **me mi verba** = *my child*
> **tu me mi verba** = *this is my child*

mi is a pronoun by itself. We turned it into a verb word: **me mi**. Then used it in the compound verb: **me mi verba** - *my child*. **lo** and **me** have opposite functions.

Similarly, **me mi'ai** means *to be one of us, to be among us*

> **xu do djica lo nu do me mi'ai**
>
> *Do you want to be one of us?*

Thus **me** and **du** can sometimes reflect what in English we use the verb *to be/is/was* for.

> In Lojban we first rely on the meaning of what we need to say,
>
> not necessarily on how it is literally said in English or other
>
> languages.

Other examples:

> **mi me la bond**
>
> *I am Bond.*
>
> **mi du la .kevin.**
>
> *I am Kevin.* (the one you needed)

> **ti du la .alis. noi mi ta'e zgana bu'u lo panka**
>
> *This is Alice, whom I often see in the park.*

> **la jasmin poi du lo pendo be la .kevin. cu vi zvati**
>
> *Jasmine, who is Kevin's friend, is here.*

noi du and **poi du** are typically used in Lojban to introduce alternate names for something. So they correspond to English *namely, i.e.*:

> **la .alis. cu penmi la xumske fanza <u>noi du</u> la .djang.**
>
> *Alice met 'Chemistry Annoyance', <u>namely</u> Zhang.*

Prepositions inside nouns

We can place a tense not only before the main verb of a clause but at the end of it giving the same result:

> **mi ca tcidu**
>
> **mi tcidu ca**
>
> *I (now read).*

> **tcidu** = *to read (some text)*

When using **nu** we create a clause. Notice, the difference between these two examples:

> **lo nu tcidu ca cu nandu**
>
> *The current reading is complicated, difficult.*
>
> **lo nu tcidu cu ca nandu**
>
> *The reading is now complicated.*

Other examples:

> **mi klama lo cmana pu**
>
> *I went to a mountain.*
>
> I go to a mountain (in past). [literally]
>
> **lo nu mi klama lo cmana pu cu pluka**
>
> *That I went to a mountain is pleasant.*

When not using **nu** we don't have clauses. Nouns start with **lo** and end in its verb (like a single or a compound verb). Thus we can insert prepositions to nouns only before that verb:

> **lo pu kunti tumla ca purdi**
>
> *What was a desert is now a garden.* (approximate translation)

So **pu** belongs to **lo kunti tumla** and **ca** belongs to **purdi** (as **lo pu kunti tumla** can't add **ca** in the end).

This doesn't contradict with using **be** after the verb since with **be** you change the verb: **bangu be mi** is considered one verb.

Placing prepositions <u>after</u> the main verbs binds them to outer verbs:

> **lo kunti tumla pu purdi** means
>
> *The desert was a garden.*

New nouns from places of the same verb

> **do dunda ti mi**
>
> *You give this to me.*

> **dunda** = *to give (some gift)*.

> Note: *gift* here is anything given without payment or
>
> exchange — it doesn't need to have the 'special present'
>
> associations of the English word).

Conversion is a way to swap the places round in the verb and thus change the place structure. We can reclause the clause above and say

> **ti se dunda do mi**
>
> *This is given by you to me.*

do dunda ti mi means exactly the same as **ti se dunda do mi**! The difference is solely in style.

You may want to change things around for different emphasis (people tend to mention the more important things in a sentence first). So the following pairs mean the same thing:

> **mi viska do**
>
> *I see you.*

> **do se viska mi**
>
> *You are seen by me.*

> **lo nu mi tadni la .lojban. cu xamgu mi**
>
> *My study of Lojban is good for me.*

xamgu = *to be good for (someone)*

> **mi se xamgu lo nu mi tadni la .lojban.**
>
> *For me it's good to study Lojban.*

As we remember, when we add **lo** in front of a verb it becomes a noun. So **lo dunda** means *something(s) which could fit in the first place of **dunda***.

lo dunda = *a giver, a donor, a donator*

As **dunda** actually means not just *to give* but *to donate (something)* it defines that the noun after it (the second argument) is actually something that is given.

Well, therefore it's a gift.

In Lojban we don't need a separate word for a gift. It's much easier.

If a verb word has the second argument you can prefix it with **se** and it will refer to the second place of that verb:

It's just

lo se dunda = *something that is given, a gift*

For the ease of understanding and memorizing predicate words prefixed with **se** are put into the dictionary as well together with their definitions although you can easily figure out their meaning yourself.

So you don't have to memorize numerous interconnected words. Lojban is much easier. We save a lot of words because of such clever design.

Indeed, we can't imagine a gift without implying that someone gave it or will give it. When phenomena are connected Lojban reflects this.

Changing other places in main verbs

se is part of a series of particles which go, in alphabetical order, **se, te, ve, xe**. Like a lot of these series, the first one (**se**) is used a lot more than the others, but sometimes the others are useful.

- **se** changes round the first and second places
- **te** changes round the first and third places
- **ve**, the first and fourth, and
- **xe**, the first and fifth.

> **le nakni cu zbasu lo stizu lo mudri**
>
> *He made a chair out of wood.*

> **zbasu** = x_1 *builds, makes* x_2 *out of* x_3
> **lo stizu** = *a chair, chairs*
> **lo mudri** = *wood*

> **lo mudri cu te zbasu lo stizu le nakni**
>
> *Wood is the material the chair is made of by him.*

The **le nakni** has now moved to the third place in the sentence, and can now be dropped out without being missed if we are too lazy to specify who made the chair or we just don't know who made it:

> **lo mudri cu te zbasu lo stizu**
>
> *Wood is the material of the chair.*

The more extreme conversions like **ve** and **xe** are rarely used, partly because most verb words only have two or three places, and partly because even with four- or five-place verbs, the less-used places are less needed in ordinary speech.

Similarly to our example with **lo se dunda** (*a gift*) we can use **te, ve, xe** to get more words from other places of verbs.

> **lo prenu cu dunda lo cukta mi**
>
> *A person gives a book to me.*

lo prenu can also be **lo dunda** — *the giver*. But what about the noun describing **mi** and **lo cukta**? Well, you probably guessed.

> **mi te dunda lo cukta**

This means that **mi** can be **lo te dunda** — *the recipient*. In the same way, **lo cukta** can be **lo se dunda** — *the gift* or *the thing given*. So if we want to make a really obvious sentence, we can say

> **lo dunda cu dunda lo se dunda lo te dunda**
>
> *The donor gives the gift to the recipient.*
>
> ```
> The giver gives the given-thing to the person-to-whom-it-is-given.
> ```
>
> ```
> [literally]
> ```

Free word order. Prepositions for places

Usually we don't need all the places of a verb, so we can omit the unnecessary ones by replacing them with **zo'e**. However, we can use *place tags* - special prepositions to explicitly refer to a needed place.

> **mi prami do** is the same as **fa mi prami fe do**
>
> *I love you.*

- **fa** refers to the first place of a verb (x1)
- **fe** - to the second place (x2)
- **fi** - to the second place (x3)
- **fo** - to the second place (x4)
- **fu** - to the second place (x5)

More examples:

> **mi klama fi lo tcadu**
>
> *I go from the city.*

> **klama** = x_1 *goes to* x_2 *from* x_3

fi marks **lo tcadu** as the third place of **klama** (the origin of movement). Without **fi**, the sentence would turn into **mi klama lo tcadu** meaning *I go <u>to</u> the city.*

> **mi pinxe fi lo kabri** is the same as **mi pinxe zo'e lo kabri**
>
> I drink [something] from a cup.

> **pinxe** = x_1 *drinks* x_2 *from* x_3

> **mi tugni zo'e lo nu vitke lo rirni**
>
> **mi tugni fi lo nu vitke lo rirni**
>
> I agree [with someone] about visiting parents.

> **tugni** = x_1 *agrees with someone* x_2 *about* x_3 *(event)*

With place tags we can move places around:

> **fe lo cukta cu dunda fi lo nanla**
>
> *The book was given to a boy.*

> **dunda** = x_1 *gives the gift* x_2 *to* x_3

Here

- **lo cukta** = *the book*, the second place of **dunda**, what is given
- **lo nanla** = *a boy*, the third place of **dunda**, the recipient.

Extensive use of place tags can make our speech harder to perceive but they allow for more freedom.

be allows using place tags too by placing them after **be**:

> **lo dunda fi lo nanla cu pendo mi**
>
> *The one who give something to a boy is my friend.*

Unlike **se** series using place tags like **fa** doesn't change the place structure.

Another option in placing nouns is that we can put all the nouns of one main verb in front of the verb (preserving their relative order). Because of this freedom we can say:

> **mi do prami** which is the same as
>
> **mi prami do**
>
> *I love you.*

> **ko kurji ko** is the same as **ko ko kurji**
>
> *Take care of yourself.*

The following clauses are also equal in meaning:

> **mi dunda lo plise do**
>
> *I give the apple to you.*

> **mi lo plise cu dunda do**
>
> *I the apple give to you.*

> **mi lo plise do dunda**
>
> *I the apple to you give.*

Infinitives

Infinitives are verbs that are often prefixed with "to" in English. Examples include "I like to run" with "to run" being the infinitive.

> **lo mlatu cu djica lo ka pinxe**
>
> *The cat wants to drink.*

The particle **ka** works much like **nu** but it indicates that the noun on the left does or would do the action following **ka**. It makes the first noun of the outer verb (**djica** in this case) also the first noun of the embedded verb started by **ka** (**pinxe** in this case) so you don't have to repeat this noun the second time.

Thus we can rewrite the sentence as

> **lo mlatu cu djica lo nu lo mlatu cu pinxe**
>
> The cat wants that the cat drinks [literally]

The first translation sounds more natural and compact so using **ka** is preferred in such case.

Another example with a pronoun in the place of the first noun

> **mi djica lo ka pinxe**
>
> *I want to drink.*

or

> **mi djica lo nu mi pinxe**
>
> I want that I drink [literally]

Again the first sentence looks smarter.

As for *I want you to drink* it's simple **mi djica lo nu do pinxe**. First pronouns of **djica** differs from the one from **pinxe** so we can't use **ka** here.

It is also possible to use **ka** when we usually don't use infinitive in English

> **mi gleki lo ka jinga**
>
> *I'm glad of winning.*

which is the same as

> **mi gleki lo nu mi jinga**
>
> *I'm glad that I won.*

zo'e and da

zo'e can denote different things every time:

> **zo'e tavla zo'e zo'e**
>
> *Someone talk to someone about something or someone.*

which in the correct context might actually mean:

My friend talks to his father about his girlfriend.

da means *something/someone that exists*. Usually it is translated as *There is something/someone that ...*

> **mi tavla da**
>
> *There is someone I talk to.*

tavla = x_1 *talks to* x_2 *about* x_3

But there is an important rule: if you use **da** the second time in the same sentence it always means the same thing as the first **da**.

> **da tavla da**
>
> *Someone talk to themselves.*
>
> **da tavla da da**
>
> *Someone talk to themselves about themselves.*

This is its difference from **zo'e**.

"To have"

The English verb *to have* has several meanings.

> **birka mi**
>
> *Something is an arm of me*
>
> *I have an arm.*

birka = x_1 *is an arm of* x_2

> **mi cortu lo birka be mi**
>
> *I feel pain in my arm.*
>
> *My arm hurts.*

cortu = x_1 *feels pain in part of body* x_2

If you keep a dog at home:

> **mi ralte lo gerku**
>
> *I keep a dog., I have a dog.*
>
> **mi ralte lo karce**
>
> *I have a car.*

ralte = x_1 *keeps* x_2 *in their possesion*

If you possess something according to some law or documents you should use **ponse**:

> **mi ponse lo vi bakni lo vi se ciska**
>
> *I own this cow according to what is written here.*

ponse = x_1 *owns* x_2 *according to the law/document/custom* x_3
vi = *preposition: near ...*

By default without a noun after it or with **zo'e** means *here* (i.e. *near this place*).

> We can use **lo me mi birka** — *my arm*, **lo me mi gerku** —
> *my dog* using compound verbs, of course. This section just
> describes more precise ways of expressing such things in
> Lojban by using where appropriate the place structure of
> verbs (like in the example with **lo birka be mi**) or using
> specific verbs like **ralte**.

For expressing family relationship we use a very simple strategy in Lojban:

> **da bruna mi**
>
> **mi se bruna da**
>
> *Someone is my brother.*
>
> *I have a brother.*
>
> `There is someone who is a brother of me. [literally]`

So we don't need the verb "to have" to denote such relationship. The same for other family members:

da mamta mi or **mi se mamta da** = *I have a mother.*
da patfu mi or **mi se patfu da** = *I have a father.*
da mensi mi or **mi se mensi da** = *I have a sister.*
da panzi mi or **mi se panzi da** = *I have a child (or children).*

Lesson 3. Questions. Quoting. Interjections

Content questions
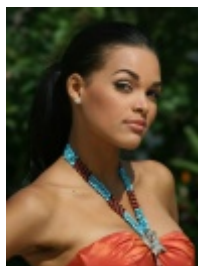
lo ninmu
a woman (female human)
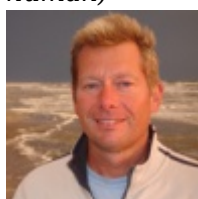
lo nanmu
a man (male human)

English also has a number of *wh-* questions — *who, what* etc. In Lojban we use one word for all of these: **ma**. This is like an instruction to fill in the missing place. For example:

> **— do klama ma**
>
> **— la .london.**
>
> — *Where are you going?*
>
> — *London.*
>
> **— ma klama la .london.**
>
> **— la .kevin.**
>
> — *Who's going to London?*
>
> — *Kevin.*
>
> **— mi dunda ma do**
>
> **— lo cukta**
>
> — *I give what to you?* (probably meaning *What was it I was supposed to be giving you?*)
>
> — *The book.*

It is quite common to restrict **ma** with relative clauses:

> **— do xabju ma poi gugde — lo gugde'usu**
>
> — *In what country do you live? — USA*
>
> — You inhabit what that is a country? — USA [literally]

xabju = *to inhabit (some place)*

Combining prepositions or relative clauses with **ma** can give us other useful questions:

word	meaning	[literally]
ca ma	When?	during what
bu'u ma	Where?	at what
ma poi prenu	Who?	what that is a person
ma poi dacti	What? (about objects)	what that is an object
se ja'e ma	Why?	because of what
pe ma	Whose? Which? About what?	pertaining to what or whom
lo mlatu poi mo	Which cat? Which kind of cat?	

pe ma is attached only to nouns:

> **lo penbi pe ma cu zvati lo jubme**
>
> *Whose pen is on the table?*

mo is like **ma**, but questions the main verb, not a noun — it's like English *What does* x *do?* or *What is* x*?* (remember, Lojban doesn't force you to distinguish between being and doing!) We can see **mo** as asking someone to describe the relationship between the nouns in the question.

> — **do mo**
>
> — *How do you do? What's up?*
>
> — You are what, you do what? (literally)
>
> This is the most common way of asking *How do you do?*,
>
> *Howdy?* in Lojban. The answer might be:
>
> — **mi gleki** — *I'm happy.*
>
> — **mi kanro** — *I'm healthy.*
>
> or other.

Another way of asking *How do you do?*:

> — **do cinmo lo ka mo** — *How are you? How do you feel*

> **cinmo** = *to feel (some event)*

Another example:

> **do mo la .kevin.**
>
> *What are you to Kevin?*
>
> `You ??? Kevin. [literally]`

The answer depends on the context. Possible answers to this question are:

- **nelci**: *I like him.*
- **pendo**: *I am his friend*
- **prami**: *I adore/am in love with him.*
- **xebni**: *I hate him.*
- **fengu**: *I'm angry with him.*
- **cinba**: *I kissed him*

> Note once again that the time is not important here: just as
>
> **cinba** can mean *kiss*, *kissed*, *will kiss* and so on, **mo** does not
>
> ask a question about any particular time.

We've said that **mo** can also be a *What is …* type of question. The simplest example is **tu mo** — *What is this?* You could also ask **la .meilis. cu mo**, which could mean *Who is Mei Li?*, *What is Mei Li?*, *What is Mei Li doing?* and so on. Again, the answer depends on the context. For example:

- **ninmu**: *She's a woman.*
- **jungo**: *She's Chinese.*
- **pulji**: *She's a policewoman.*
- **sanga**: *She's a singer or She's singing.*
- **melbi**: *She's beautiful.* (possibly a pun, since this is what *meili* means in Chinese!)

There are ways to be more specific, but these normally involve a **ma**-question; for example **la .meilis. cu gasnu ma** (*Mei Li does what?*).

Number questions

The word **xo** means *How many?* and thus asks for a number.

> **lo xo mlatu cu pinxe lo ladru**
>
> *How many cats drink milk?*

The answer might be:

> **mu**
>
> *Five.*

The full answer will be:

> **lo mu mlatu cu pinxe lo ladru**
>
> *5 cats drink milk.*

So the person being asked is supposed to put an appropriate value in place of **xo**.

A few more examples:

> **lo xo botpi cu kunti**
>
> *How many of the bottles are empty?*
>
> **lo xo prenu cu klama ti**
>
> *How many people come here?*
>
> **do viska lo xo sonci**
>
> *How many soldiers do you see?*

Indirect questions

> **mi djuno lo du'u ma <u>kau</u> tadni la .lojban.**
>
> *I know who is studying Lojban.*

This is called an indirect question. The word *who* in that statement is not a request for information, there's no question mark, and the question word is not stressed. In fact you yourself know the answer to the question *Who is learning Lojban?*

kau is an interjection that you put after a question word telling that its an indirect question.

If I ask you the question **ma tadni la .lojban.**, you know what value to fill in the **ma** slot with: **la .kevin.** So you could just say

> **mi djuno lo du'u la .kevin. cu tadni la .lojban.**

This all means that **mi djuno lo du'u <u>ma</u> tadni la .lojban.** can never be an indirect question: it is asking for an answer (even if you're doing it rhetorically).

You can put it after other question words:

> **mi djuno lo du'u lo <u>xo kau</u> prenu cu tadni la .lojban.**
>
> *I know how many people study Lojban.*

Other examples:

> **<u>ma</u> tadni la .lojban.**
>
> *<u>Who</u> is studying Lojban?*

By the same token,

> **mi djica lo nu <u>ma</u> tadni la .lojban.**
>
> *<u>Who</u> do I want to study Lojban?*
>
> I want <u>who</u> to study Lojban? [literally]

And

> **mi pu cusku lo se du'u <u>ma</u> tadni la .lojban.**
>
> *<u>Who</u> did I say is studying Lojban?*
>
> I said <u>who</u> is studying Lojban? [literally]
>
> **mi djuno lo du'u <u>makau</u> tadni la .lojban.**
>
> *I know who is studying Lojban. I know the identity of the person studying Lojban.*

sei: comments to the text

The particle **sei** allows to insert into a clause a comment about our attitude about what is said in that clause:

> **do jinga sei mi gleki**
>
> *You won! (I'm happy about that!)*

However:

> **do jinga sei la .ian. cu gleki**
>
> *You won! (And Yan is happy about that!)*

Like with nouns formed with **lo** the clause formed with **sei** must end in a verb. So we put all its nouns before the verb or glue them into the main verb with **be** and **bei**:

> **la .alis. cu prami sei la .bob. cu gleki la .kevin.**

Let's add brackets to make it more easily readable.

> **la .alis. cu prami (sei la .bob. cu gleki) la .kevin.**
>
> *Alice loves (Bob is happy) Kevin.*
>
> *Alice loves Kevin (Bob is happy).*

With **be**:

> **do jinga sei manci be mi**
>
> *You won! (this amazed me)*

sei is also useful for quoting text:

> **mi prami la .mark. sei le fetsi pu cusku**
>
> *I love Mark! — she said.*

Quotation marks

The opposite method of dealing with quotations is putting them into nouns by placing the word **lu** before the quote and placing **li'u** after it.

For example,

> **mi cusku lu mi prami do li'u**
>
> *I say "I love you."*

> **cusku** = x_1 *expresses/says* x_2 *(quote) to audience* x_3

> A nice feature of Lojban is that 'quote' and 'unquote' marks
> are pronounceable. They are represented by separate words:
> **lu** and **li'u**. It is quite handy since in spoken Lojban you don't
> have to change intonation to show where a quoted text starts
> and ends.

This sentence literally claims that John said (uttered / wrote) the quoted text. If the central claim is that John made the utterance, as is likely in conversation, this style is the most sensible.

However, in written text which quotes a conversation, you don't want the *he said* or *she said* to be considered part of the conversation. If unmarked, it could confuse speakers and listeners what **le nakni**, **le fetsi** or **le prenu** refer to. In such cases it's better to use **sei**.

You can also nest quotations, e.g.

> **la .ian. pu cusku lu la .djein. pu cusku lu coi li'u mi li'u**
>
> *Yan said "Jane said 'Hello' to me."*

which is similar to

> **la .ian. pu cusku lu la .djein. pu rinsa mi li'u**
>
> *Yan said "Jane greeted me."*

Lojban is very careful to distinguish between words for things, and the things themselves. So you can't speak about the clause "*the universe*") in the same way you speak about the universe itself. To give a silly example, the clause **lo munje** is small, but the universe itself is not. To distinguish between the two in Lojban, you need to use quotation:

> **lu lo munje li'u cu cmalu**
>
> *'The universe' is small (a small text).*
>
> **lo munje na cmalu**
>
> *The universe is not small.*

> **lo munje** = *the universe, world*

Tip: **lu ... li'u** is intended to quote grammatical pieces of Lojban — ideally, entire sentences, rather than individual words. For smaller chunks of Lojban, which do not necessary make sense in isolation, the proper quotation words are instead **lo'u... le'u**, the 'error quotes'. For example, **ro lo mi pendo cu klama** makes sense in Lojban as a sentence, and can be enclosed in **lu ... li'u**. But if you want to say what goes before pendo in the sentence, ro lo mi does not make that much sense on its own. So you would quote that sentence fragment, not as **lu ro lo mi li'u**, but as **lo'u ro lo mi le'u**.

Interjections and vocatives work like **sei** constructs:

> **.ui mi jinga sei le nakni cu cusku**
>
> *Yippee, "I won", he said.*

As you can see **.ui** is not his words. It's your attitude to the clause. If you want to quote "**.ui mi jinga**" use quotation marks getting:

> **lu .ui mi jinga li'u se cusku le nakni**
>
> *"Yippee, I won", he said.*

See the difference between the two examples?

Now several verbs related to talking:

> **cusku** = x_1 *expresses/says x_2 (quote) to audience x_3*
> **retsku** = x_1 *asks x_2 (quote) to audience x_3*
> **spusku** = x_1 *replies/says answer x_2 (quote) to audience x_3*

As you can see all of those verbs have the same place structure so it's easy to remember them. And here are some more verbs:

> **spuda** = x_1 *replies to x_2 by doing x_3*
> **tavla** = x_1 *talks/speaks to x_2 about subject x_3 in language x_4*
> **ciska** = x_1 *write x_2 on x_3 (surface/paper...)*

Note the different place structures of **cusku**, **tavla** and **ciska**.

- With **cusku** the emphasis is on communication; what is communicated is more important than who it is communicated to. Quotes in e-mails frequently start with **do cusku di'e** (**di'e** is a particle that means 'the following') as the Lojban equivalent of *You wrote*.
- With **tavla** the emphasis is rather more on the social act of talking: you can **tavla** about nothing in particular.
- **ciska** places more emphasis on the physical act of writing.

> **le fetsi pu retsku lu do klama ma li'u**
>
> *She asked "Where do you go?"*
>
> **mi pu spusku lu mi klama lo zdani li'u**
>
> *I replied "I am going home."*
>
> **mi pu spuda lo se retsku be le fetsi lo ka spusku lu mi klama lo zdani li'u**
>
> *I replied to her question by saying in reply "I am going home."*

Indirect quotations (reported speech)

A clause like *Alice said "Robin said "Hello" to me".* can also be expressed in a rather more subtle way:

> **la .alis. pu cusku zo'e pe lo nu la .robin. pu rinsa le fetsi**
>
> *Alice said something about Robin greeting her before.*
>
> ```
> Alice said something about the event of Robin greeted her.
> ```
>
> ```
> [literally]
> ```

or a bit shorter:

> **la .alis. pu cusku lo se du'u la .robin. pu rinsa le fetsi**
>
> *Alice said that Robin had greeted her.*

What is this **se du'u**? This combination allows us to express indirect speech.

Here are the examples of verbs related to talking when using reported speech:

> **le fetsi pu retsku lo sedu'u mi klama makau**
>
> *She asked where I was going.*
>
> **mi pu spusku lo sedu'u mi klama lo zdani**
>
> *I replied that I was going home.*
>
> **mi pu spuda lo se retsku be le fetsi lo ka spusku lo sedu'u mi klama lo zdani**
>
> *I replied to her question by saying in reply that I was going home.*

Simple **du'u** is used in Lojban in some places of verbs instead of **nu**, e.g.:

> **djuno** = x_1 knows x_2 (du'u, fact) about x_3 by reasoning x_4

> **mi djuno lo du'u do stati**
>
> *I know that you are smart.*

It's not a mistake to use **nu** instead of **du'u** but it is recommended to use **du'u** if the dictionary says **du'u** should go in that place. But what is the difference between them?

Lojban has different words for *that…*, depending on what sort of thing is meant.

- If *that* introduces something that happened, use **nu**. (Events can be subdivided more finely yet, but for now let's not complicate matters even more than necessary).
- If *that* introduces something that you think, use **du'u**. This is how you can guess where to put **nu** and where to put **du'u**.
- If *that* introduces something that you say, use **se du'u**. But if it's a literal quote use **lu … li'u**.

zo — quoting one word

zo is a quotation marker, just like **lu**. However, **zo** quotes only one word immediately after it. This means it does not have an unquote word like **li'u**: we already know where the quotation ends. Thus we save two syllables making our speech more concise.

> **zo robin cmene mi**
>
> *Robin is my name.*
>
> *My name is Robin.*

Oh yes, this is how you present yourself in Lojban using your Lojbanized name. Of course, if you have a name consisting of more than one verb word then use **lu … li'u**.

> **lu robin djonson li'u cmene mi**
>
> *Robin Johnson is my name.*

Another way is to use **me**.

> **mi me la robin djonson**
>
> *I'm Robin Johnson.*

Emotional interjections

Sometimes **sei** with its clause is too lengthy for expressing a simple attitude. That's why in Lojban there are short particles called *interjections*, or attitudinal indicators. They work as **sei** with their clauses. The most basic ones consist of two vowels, sometimes with an apostrophe in the middle.

There are more than 50 interjections. Each of them corresponds to a different emotional state. So in Lojban we can be very specific about our emotions still remaining concise in our speech.

For example **.ui** (pronounced as English "we") expresses happiness and means the same as **sei mi gleki** so we instead of

> **do jinga sei mi gleki**
>
> *You won! (I'm happy about that!)*

we can just say an equivalent phrase:

> **do jinga .ui**
>
> *You won! (I'm happy about that!)*

Like with **xu** or **sei**-clauses we can add interjections after any noun, pronoun or verb thus expressing our attitude towards that part of the sentence.

Here are some of the most useful interjections with examples:

Urging interjections.

> **.a'u tu mo**
>
> *I wonder what is that. Hm, what is that?*

.a'u = *interest ("Hm …")*

> **.au do kanro**
>
> *I wish you were healthy.*

.au (pronounced as in h*ow*) = *desire*

.aunai mi klama lo ckule

I don't want to go to school.

.aunai = *reluctance*

.a'o do clira volve

I hope you return early.

.a'o = *I hope.*

.e'a do nerkla

You may come in.

.e'a = *permission (like in "I allow you...")*

.e'i mi ca cliva

I have to leave now.

.e'i do gunka

You have to work.

.e'i = *constraint*

.e'o mi ciksi da poi mi cusku djica

Please, let me explain what I want to say.

.e'o = *request (Please ...)*

.e'u do pinxe lo jisra

I suggest that you drink the juice. You'd better drink the juice.

.e'u = *suggestion*

.ei mi ciska lo xatra

I should write a letter.

.ei as in h<u>ey</u> = obligation ("I should ...")

Attitude interjections.

.ai as in h<u>igh</u> = intent ("I'm going to...")
.ia like German <u>Ja</u> = belief
.i'e = approval
.i'enai = disapproval
.ie like <u>yeah</u> = agreement
.ienai = disagreement
.ii = fear (Think of *Eeek!*)
.io = respect

> **.o'u tu mlatu**
>
> *Oh, that's only a cat.*
>
> (relaxation!) that is a cat. [literally]

In this case you probably thought that was something dangerous but it's only a cat so you are saying **.o'u**.

.o'u = *relaxation*
.oi as in b<u>oy</u> = complaint/pain
.oinai = pleasure
.u'e = wonder (like in *Wow!*)
.u'i = amusement
.u'u = repentance (*Sorry, I'm sorry!*)
.ua as in <u>waah!</u>, or French <u>quoi</u> = discovery. *Eureka! Ah, I get it!*
.uanai = confusion. *I don't get it, Duh...*

> **lo mlatu .ue cu pinxe lo ladru**
>
> *A cat (wow, how unexpected!) is drinking milk.*
>
> A cat (surprise!) is drinking milk. [literally]

.ue as in *question* = surprise
.uenai = not a surprise, as expected

> **.ui do jinga**
>
> *Yay, you won!*

.ui like <u>we</u>, or French <u>oui</u> = *Yay!* (interjection of happiness)
.uinai = Unfortunately
.uo as in *qu<u>o</u>te* = *Voila!* (interjection of completion)
.uu as in w<u>oo</u> = pity

In English the word *pity* is often connected with the feeling of superiority which would be **.uu ga'i** — *pity combined with a sense of superiority,* or **.uu vu'e** — *pity combined with a sense of virtue.*

> **je'u** = *Yes, it's true*
> **je'unai** = *No, it's false, not true*
> **ba'a** = expectation
> **ba'acu'i** = I experience
> **ba'anai** = I remember

Less frequent interjections can be searched in the dictionary that also shows the meaning when **cu'i** or **nai** is attached to them.

Note that any word that starts with a vowel is prefixed with a dot in Lojban. So the correct spelling is **.ui** and so on. In writing many Lojbanists often omit dots. We will do this later in this course for brevity. However, while speaking you should always show this dot by making a short pause before saying such word to prevent merging two neighboring words together into one.

In Lojban word two vowels together are pronounced as one sound:

- if the first of two vowels is **.u** it is pronounced as *w*
- if the first of two vowels is **.i** it is pronounced as *y* in *yes*
- if the last of two vowels is **.i** it is pronounced as *y* in *hey*
- but **.ui** is pronounced as like *we* in English

This is also shown in the table above. Vowel combinations are pronounced in such a way even if this combination of vowels is a part of another word, e.g. **.uiski** means "whisky" and can be pronounced as "weeh-skeeh" just like in English.

While being photographed instead of "cheese" say **.ui** (sounds like English "we"). It means *I'm happy* in Lojban and produces the best smile due to its special sounding.

Interjections are short but not always as powerful as "**sei** plus its clause". E.g.

> **sei mi'ai gleki do jinga**
>
> *How we are happy, you won!*

can't be expressed using interjections, although in simpler cases it's possible:

> **sei mi gleki do jinga = .ui do jinga**

(**.ui** always describes the attitude of the one who says it).

> **sei do gleki le prenu cu jinga = .uidai le prenu cu jinga**

Intensity of interjections

- When we put **nai** after an interjection we turn it into its opposite.
- When we put **cu'i** after an interjection we turn it into the middle attitude.

The emotion is turned into its opposite by adding **nai**, so **.ui** is an interjection of happiness while **.uinai** means *I'm unhappy*, and so on. This is unlike verbs and nouns where **nai** just means *not*. By adding **cu'i** we create an emotion in the middle. Not all interjections are meaningful with **cu'i**. One of the most used ones is **.a'ucu'i** — *no interest* (while **.aunai** denotes repulsion).

You can divide up the continuum even more finely. If you want to say that you have an only weak attitude, you can add the particle **ru'e** to the corresponding interjection. **sai** is used for expressing strong degree of an attitude. Extremely strong attitude is **cai**. This gives you a seven-part scale:

> **cai > sai >** (nothing) **> ru'e > cu'i > nai ru'e > nai > nai sai > nai cai**

So for instance, if you want to say *Eh. That's cool*, you'd say **.a'ucu'i**. If you want to say *That is really gross!*, you'd say **.a'unaisai**. And if you want to say *Oh my God, that is the most interesting thing in the world since the very invention of Lojban*! then you would say **.a'ucai**. **cai** is used very seldom as strong emotions happen rarely.

> Interjections are extremely useful, and it is well worth making an effort to learn the most common ones. One of the biggest problems people have when trying to speak in a foreign language is that, while they've learnt how to say simple clauses like **mi klama lo cmana** (*I go to a mountain*), they can't express feelings, because many languages do this in a round-about way. In Lojban you can be very direct, very briefly (there are ways of 'softening' these emotions, which we'll get to in a later lesson). In fact, these interjections are so useful that some Lojbanists use them even when they're writing in English instead of those internet smileys — symbols like ;-) or :-(and others.

Empathy in interjections

- When we put **dai** after an interjection we show listener's attitude.

> **.o'adai do jinga**
>
> *You must be proud since you won.*

A common pitfall to avoid is trying to specify whose attitude the interjections express. The reason interjections are so simple is that they express direct emotional or attitudinal responses — gut reactions, without making any fine distinctions like whose attitude is involved. The reaction is always taken to be the speaker's. So **.ui do cliva** means that you're happy that someone else is leaving, just like *You're leaving — Yay!* does. If you wanted to say that the <u>someone else</u> is happy, not you, then you wouldn't say *Yay!* at all. Instead, you'd say something like *You must be happy you're leaving.* The same goes in Lojban: if you're relaying someone else's responses, not your own, then that's what the clause are there for.

You wouldn't likely make this mistake for **.ui**. But **.ei** (expresses obligation) is the worst offender. **.ei mi cliva** means *I should leave.* But **.ei do cliva** doesn't necessarily mean *You ought to leave.* It's more like *I feel the obligation for you to leave.* I can say this if I want you gone while you're making yourself comfortable — but not if you've remembered you've got to be somewhere else, while I'd want nothing more than for you to stick around.

The temptation to use interjections for others' reactions is strong enough, in fact, that there are a couple of ways of getting around it. If you add the modifier **dai**, you're saying that the emotion is someone else's, and that you are empathizing with them. If **.a'u** is *That's interesting!*, **.a'u dai** is more like *That must have been interesting for you!* If you add the modifier **se'i**, you say that you feel the emotion for yourself. If you add **se'i nai**, then, you say that you feel it for someone else: **.uise'inai** is pretty much *I'm happy for you!*

Questions in interjections

> **.iepei lo ninmu cu melbi**
>
> *Do you agree the the woman is pretty?*

> **pei** = *interjection: what is your attitude?*

- When we put **pei** after an interjection we turn it into a question.

> **— pei lo lunra cu crino**
>
> **— .ienai**
>
> — *The moon is green (what is your attitude?)*
>
> — *I disagree.*

As **pei** can act as an interjection modifier you can use **.iepei**, **pe'ipei** to ask question but in this case the listener will be forced to use **.ie, .iecu'i, .ienai, pe'i** etc. when replying.

- **pei** can be used on its own like **xu** (not after an interjection). **pei** is a question interjection more general than **xu**. When using **pei** you don't force the speaker to reply with only **je'u** or **je'unai**.

Most suitable interjections in reply are **.ie** (*I agree*) and **.ienai** (*I disagree*), **pe'i** (*In my opinion it's true*), although *je'u **and** ''je'unai* are fine too.

If you want to use an interjection and **pei** as a full interjection together put **pei** before the interjection so that it doesn't modify it:

> **pei .u'i lo mlatu cu sutra plipe**
>
> *(What do you feel?) Heh, the cat is quickly jumping.*

Combining interjections

We can combine interjections:

> **.iu .uinai**
>
> *I am unhappily in love.*
>
> **.ue .ui do jinga**
>
> *Oh, you won! I'm so happy!*

> **jinga** = *to win.*

In this case the victory was unprobable, I'm surprised and happy at the same time.

Forgot to put an interjection at the beginning?

> **do pu sidju mi**
>
> *You helped me.*

What if we forgot to add **.ui** at the beginning of this clause. In

> **do pu sidju mi .ui**

.ui modifies only the pronoun **mi** putting the attitude only to *me*.

Now let's close the clause with **vau** and then put the interjection:

> **do pu sidju mi vau .ui**
>
> *You helped me, yay!*

> **vau** = *particle. Shows that the clause just ended*

More vocatives

Vocatives exist to manage our conversations: to make someone pay attention to our turn, to butt in before it is our turn, to signal that a conversation is beginning or ending, and so on.

Here are some more rare vocatives:

- **co'oi** is the greeting/parting word much like Italian *ciao*: it corresponds to *Hello / Bye*.
- **ju'i** — *Hey!*, with which you draw someone's attention, and
- **fi'i** — *Welcome! At your service!*, with which you offer hospitality or a service. (It's what you say to a visitor; you wouldn't say it over the phone, for instance, unless your addressee is calling from the airport and is on their way over).
- **ki'e** — *Thank you* and the appropriate response is *not* **fi'i** (*You're welcome* doesn't mean you're being visited by some guests), but the simple acknowledgement **je'e**.
- **je'e** corresponds to *Roger!* in radio-speak, and *right* or *uh-uh* in normal English: it confirms that you've received a message. If you haven't, you say **je'enai** instead (of course); in normal English, that would be *Beg your pardon?* or *Huh?*
- In case you haven't received the message clearly, you can explicitly ask for the speaker to repeat whatever they said with **ke'o**.
- Similarly, **be'e** signals a request to send a message (*Hello? Are you there?*), and **re'i** indicates that you are ready to receive a message. It's what you say when you pick up the phone — which in English also happens to be *Hello?*, but in Italian is *Pronto* or *Ready!*
- **mu'o** is what you say when you explicitly make it another speaker's turn to speak: it's the *Over!* of radio.
- **vi'o** acknowledges a request, and promises to carry it out: in radio talk this is *Wilco!*, and in normal English *OK* or *All right, I will* (or for that matter, *Consider it done!*)

Vocatives take nouns after them. However, the rule is that you can drop **lo** making it more vague:

> **coi gleki**
>
> *Hello, friends!*
>
> can mean both
>
> **coi lo gleki** — *Hello, a happy one* or
>
> **coi la gleki** — *Hello, Happy* (a personal name) depending on context.

If you use the vocative on its own (without a noun after it) and the sentence is not finished yet then you need to separate it from the rest, because the things likeliest to follow the vocative in a sentence could easily be misconstrued as describing your addressee. Use the word **do** for that. For example,

> **coi do la .alis. la .meilis. pu cliva**
>
> *Hello! Alice left Mei Li.*
>
> Hello you! Alice left Mei Li [literally]
>
> **coi la .alis. la .meilis. pu cliva**
>
> *Hello, Alice! Ranjeet's just left.*

And if you want to put both vocatives and interjections modifying the whole sentence please put

interjections first:

> **.ui coi do la .alis. la .meilis. pu cliva**
>
> *Yay, Hello! Alice left Mei Li.*

Note that in the beginning of sentences usually interjections are put before vocatives because

> **coi .ui do la .alis. la .meilis. pu cliva**

means

> *Hello (I'm happy about this greeting) you! Alice left Mei Li.*

So an interjection immediately after a vocative modifies that vocative. Similarly, interjection modifies the vocative noun when being put after it:

> **coi do .ui la .alis. la .meilis. pu cliva**
>
> *Hello you (I'm happy about you)! Alice left Mei Li.*

Lesson 4. Practice

Dialogue: First meeting

Now we know about so many things that we can start talking.

> **coi la .Alis.**
>
> *Hi, Alice!*
>
> > **coi** — *Hello*, **la** — shows that a name follows. Capital letter in **.Alis.** is used for
> > stylistic purposes.
>
> > **coi la .Mark.**
> >
> > *Hi, Mark!*
> >
> > **do mo?**
> >
> > *How are you?*
> >
> > > **do** = *you*, **do mo** — *you are what? what can you say about yourself?*,

mi kanro .i mi bredi lo ka tavla

I'm healthy. And I'm ready to talk.

mi = *I*, **kanro** = *to be healthy*, **.i** — separates sentences, **bredi** = *to be ready*, **tavla** = *to talk*

xamgu .i ma tcima ca lo bavlamdei?

Good. What will be the weather tomorrow?

xamgu = *to be good*, **ma** = *what?*, **tcima** = *weather*, **ca** — *at (some time)*, **lo bavlamdei** = *tomorrow*

mi na djuno .i lo solri sei mi pacna

I don't know. It'll be sunny, I hope.

na = *not true that*, **djuno** = *to know*, **lo solri** = *the sun*, **sei** — discursive comment, **pacna** = *to hope*

mi jimpe

I understand.

jimpe = *to understand*

> **co'o**
> *Goodbye.*

The whole dialogue once again:

> **coi la .Alis.**
>
> **coi la .Mark.**
>
> **do mo?**
>
> **mi kanro .i mi bredi lo ka tavla**
>
> **xamgu .i ma tcima ca lo bavlamdei?**
>
> **mi na djuno .i lo solri sei mi pacna**
>
> **mi jimpe**
>
> **co'o**

Spelling styles. Capital letters

Capital letters are optionally used in Lojban for stylistic purposes:

> **la .Alis.** is the same as **la .alis.**

And a capital letter alone has a special meaning. It denotes the name of that letter:

> **A** is the same as **.abu**, **B** is the same as **by.** and so on. They means the same and even are

read the same as normal **.abu**, **by.** etc.

Punctuation can also be used to help visually structure the text. However, punctuation is used only as a decoration. It doesn't add any meaning to the text.

The symbol **.** (dot) can be used as we use dot in English (i.e. as a punctuation mark) but its main purpose in Lojban is that it is a proper letter that denotes a pause.

Senses

You should be careful with the words for senses since in Lojban they are very powerful compared to natural languages.

> **viska** = x_1 sees x_2 (form, object, color)

>> **viska lo tarmi be ...** = $x1$ sees the form of ... (something with that form)
>> **viska lo se skari be ...** = $x1$ sees the color of ... (something with that color)

> **mi viska lo plise**
> I see an apple.

mi viska lo tarmi be lo plise i le plise cu se tarmi lo cukla

I see the form of an apple. The apple is round.

plise = x_1 *is an apple*

mi viska lo se skari be lo plise i le plise cu skari lo xunre

I see the color of the apple. The apple is colored red.

tirna = x_1 *hears* x_2 *(sound)*

tirna lo sance be ... = *x1 hears the sound of ... (something that produces that sound)*

mi tirna lo palta

I hear a plate

mi tirna lo sance be lo palta poi ru'i porpi i le palta cu se sance lo cladu

I hear the sound of a plate that is falling. It sounds loud.

Or we can use **cladu** and similar words

directly:

mi tirna lo cladu
I hear something loud.

mi tirna lo tolycladu
I hear something quite in sound.

mi tirna lo tonga be lo paplta poi farlu = *I hear the tone of the plate falling down.*

sumne = x_1 *smells* x_2 *(odor)*

> **sumne lo panci be ... =**
> *x1 smells the odor of ... (something with that odor)*

mi smaka lo plise
I taste the apple.

mi smaka lo tasta be lo plise i le plise cu se tasta lo kukte
I taste the taste of the apple. The apple tastes sweet.

smaka = x_1 *smacks, tastes* x_2 *(taste)*

> **smaka lo tasta be ... =** *x1 smells the taste of ...*

(something with that taste)

sumne lo plise
I smell the apple.

mi sumne lo panci be lo plise i le plise cu se panci lo xrula
I smell the odor of the apple. The apple smells of flowers.

palpi = x_1 *palpates, touch-feels* x_2 *(surface)*

palpi lo sefta be ... = *x1 touch-feels the surface of ... (something with that surface)*

mi palpi lo plise
I palpate, touch feel the apple.

mi palpi lo sefta be lo plise i le plise cu se sefta lo xutla
I touch feel the surface of the apple. The apple has a smooth surface.

Also instead of "to see", "to smell" you can just use the vague **ganse** — *to sense*.

> **ganse** = x_1 *senses* x_2 *(object, event) by means* x_3

>> **ganse lo tarmi be ...** = *x1 senses the form of ... (something with that form, means of sensing is unspecified)*

> **mi ganse lo plise**
> *I sense an apple.*

> **mi ganse lo tarmi be lo plise i le plise cu se tarmi lo cukla**
> *I sense the form of an apple. The apple is round.*

Note that English confuses smelling some odor and smelling something that produces that odor. We say *to smell an apple, the apple smells of flowers (has the scent of flowers)*. This two-fold distinction is important because an apple produces aromatic particles that are distinct from the apple itself. The same for a falling plate and its sound — those are different things.

In Lojban you can easily separate between those cases like shown in the examples above.

You can ask precise questions like

> — **do tirna ma poi sance** =
> *What sound do you hear?*
> — **lo zgike** = *a music*
> — **do tirna lo sance be ma**
> = *You hear a sound of what?*
> — **lo plise poi farlu** = *An apple that has fallen down.*

Some words can be used with different sensory verbs. For example, you can

> **viska lo sefta** = *see the surface*
> **palpi lo sefta** = *palpate the surface*

Other special feelings:

> **cortu** = x_1 *feels pain in* x_2 *(organ, part of* x_1*'s body)*

> **mi cortu lo cidni**
> *I feel pain in my knee my knee hurts.*

> **cidni** = x_1 *is a knee of* x_2

> **ganse lo glare** = *to feel the heat*
> **ganse lo lenku** = *to feel the cold*

Colors

gusni = x_1 *(energy) is a light illuminating* x_2 *from the light source* x_3

carmi = x_1 *is*

intense/bright/saturated/brilliant in property (ka) x_2

mi catlu lo xunre tsani ca lo cerni
I look at the red sky in the morning.

xunre = x_1 *is red*

mi viska lo narju fagri noi cokcu lo mudri
I see the orange fire, which absorbs the wood.

narju = x_1 *is orange*

lo tricu cu plexu ca lo critu
The trees are yellow in autumn.

pelxu = x_1 *is yellow*

lo lebna lo crino plise = *Take the green apple.*
crino = x_1 *is green*

xu lo ca tsani cu blanu
Is the sky now blue?

blanu = x_1 is blue

le fetsi cu dasni lo zirpu taxfu

She wears a violet dress.

zirpu = x_1 is violet

Health

cortu = x_1 feels pain in x_2 (organ, part of x_1's body)

mi cortu lo cidni

I feel pain in my knee

my knee hurts.

cidni = $x1$ is a knee of $x2$

kanro = x_1 is healthy

bilma = x_1 is ill or sick with symptoms x_2 from disease x_3

mikce = x_1 cures or treats x_2 for disease x_3 with medicine x_4

la zukam = common cold (disease)

lo influenza = influenza, flu

glare = x_1 *is hot*

lenku = x_1 *is*

cold

Human body

xadni = x_1 *is a*

body of x_2

rango = x_1 *is an*

organ of body x_2
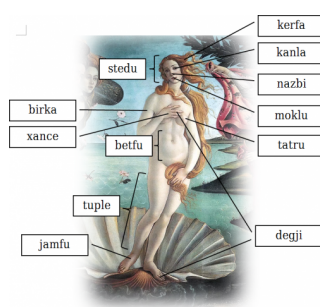
Most of these words

have the same place

structure as **xadni**:

stedu = x_1 *is a*

head of x_2

However, some

describe smaller parts:

degji = x_1 *is a*

finger/toe on
part x_2 *(hand,*

foot)

degji lo
xance =

x1 is a

finger

degji lo jamfu =

x1 is a toe

tamji = x_1 *is a thumb or big toe on x_2 (hand, foot)*

janco = x_1 *is a joint attaching limbs x_2*

ctebi = x_1 *is a lip of mouth, orifice x_2*

cidni = x_1 *is a knee or elbow of limb x_2*

xasne = x_1 *is a sweat of body x_2*

Internal organs have places for their functions:

cigla = x_1 *is a gland secreting secret x_2*

Kinship

Again notice the consistency in place strucre of the following verbs:

prenu = x_1 *is a*

person (in fairy

tales and

fantastic stories

animals and

alien being from

other planets can

be persons)

remna = x_1 *is a*

human

The following two

words are for humans

only:

ninmu = x_1 *is a*

woman
nanmu = x_1 *is a*

man

The following words

can be used for

describing both

animals and humans:

fetsi = x_1 *is*

female
nakni = x_1 *is a*

man

lanzu = x_1 *is a*

family including

x_2
speni = x_1 *is a*

husband/wife of
x_2

mi co'a
speni la
.suzan.
I married
Susan.

rirni = x_1 *is a*
parent of x_2
mamta = x_1 *is a*
mother of x_2
patfu = x_1 *is a*
father of x_2

panzi = x_1 *is a*
child of x_2
tixnu = x_1 *is a*
daughter of x_2
bersa = x_1 *is a*
son of x_2

tunba = x_1 *is a*
sibling
(brother/sister)
of x_2
mensi = x_1 *is a*
sister
(older/younger)
of x_2
bruna = x_1 *is a*
brother of x_2

Age:

citno = x_1 is young

laldo = x_1 is old, aged

Emotions

badri = x_1 is sad about x_2

gleki = x_1 is happy about x_2

terpa = x_1 fears x_2

cinmo = x_1 feels emotion x_2

nelci = x_1 likes x_2

prami = x_1 loves x_2

manci = x_1 feels awe or wonder about x_2

steba = x_1 feels frustration about x_2

se cfipu = $x1$ is confused about $x2$

cisma = x_1 smiles

cmila = x_1 laughs

fengu = x_1 *is angry about* x_2

kucli = x_1 *is curious of* x_2

xajmi = x_1 *thinks* x_2 *is funny*

se zdile = x_1 *is amused by* x_2

(**zdile** = $x1$ *is amusing*)

surla = x_1 *relaxes (by doing* x_2)

djica = x_1 *desires* x_2

pacna = x_1 *hopes that* x_2 *is true*

nitcu = x_1 *needs* x_2

kakne = x_1 *is capable of* x_2 (**mi kakne lo ka bajra** = *I can run.*)

Basic notions

Movements:

zvati = x_1 *is present at* x_2

klama = x_1 *goes to x_2 from x_3*

ko klagau lo cukta
Bring the book.

klagau = x_1 *brings x_2 to x_3 from x_4*

ko muvgau lo cukta lo cnita
Move the book down.

muvgau = x_1 *moves x_2 to x_3 from x_4*

vofli = x_1 *flies to x_2 from x_3*

cnita = x_1 *is below x_2*

gapru = x_1 *is above x_2*

zunle = x_1 *is to the left of x_2*

pritu = x_1 *is to the right of x_2*

Basic actions:

zbasu = *x1 creates, makes x2 from x3 (components, raw materials)*

jgari = x_1 *holds* x_2

cpacu = x_1 *gets* x_2 *from* x_3

te cpacu = x_1 *gives* x_2 *to* x_3

dunda = x_1 *gives the gift* x_2 *to* x_3

lebna = x_1 *takes* x_2 *from* x_3

benji = x_1 *sends* x_2 *to* x_3

te benji = x_1 *receives* x_2 *to* x_3

punji = x_1 *puts* x_2 *onto* x_3

Vehicles:

marce = x_1 *is a vehicle carrying* x_2

karce = x_1 *is a car carrying* x_2

bloti = x_1 *is a boat carrying* x_2

vinji = x_1 *is an aircraft carrying* x_2

trene = x_1 is a train of cars x_2

Body postures:

sanli = x_1 stands on x_2

zutse = x_1 sits on x_2

vreta = x_1 lies on x_2

Basic things:

djacu = x_1 is some water

dertu = x_1 is some soil

xamsi = x_1 is a sea

terdi = x_1 is the Earth

tsani = x_1 is the sky

vacri = x_1 is some air

Animals and plants:

danlu = x_1 is an animal

cinki = x_1 is an insect

spati = x_1 is a

plant
grute = x_1 *is a*

fruit
mudri = x_1 *is*

some wood

In the shop:

vecnu = x_1 *sells*

x_2 *to* x_3
te vecnu = x_1

buys x_2 *from* x_3
pleji = x_1 *pays* x_2

to x_3 *for* x_4
jdima = x_1 *is the*

price of x_2
jdini = x_1 *is*

money
rupnusudu = x_1

costs x_2 *US*

dollars
rupne'uru = x_1

costs x_2 *euro*

Shop, buildings

stuzi = x_1 *is a*

place
dinju = x_1 *is a*

building, house
zdani = x_1 *is a*

home of x_2

se zdani = x_2

lives in x_2, x_1

inhabits x_2

tcadu = x_1 *is a*

city or town
jarbu = x_1 *is a*

suburban are of city/town x_2

nurma = x_1 *is a*

rural area, x_1 is

in the country

kumfa = x_1 *is a*

room

vikmi kumfa =
x_1 *is a toilet*

zarci = x_1 *is a*

shop

Lesson 5. "*They*" and math

Names of letters in Lojban

Each letter has a name in Lojban.

The following table represents the basic Lojban alphabet and how to pronounce letters (below each letter):

'	a	b	c	d	e
.y'y.	.abu	by.	cy.	dy.	.ebu
f	g	i	j	k	l
fy.	gy.	.ibu	jy.	ky.	ly.
m	n	o	p	r	s
my.	ny.	.obu	py.	ry.	sy.
t	u	v	x	y	z
ty.	.ubu	vy.	xy.	.ybu	zy.

As you can see

- to get the name for a vowel, we add "bu"
- to get the name for a consonant, we add "y"
- the word for **'** (apostrophe) is **.y'y**.

We can spell word using these names. For example, CNN will be **cy. ny. ny.**

Letters instead of "*he*" and "*she*"

Names of letters are pronouns. And we can use them for another method of referring to nouns and names earlier used in speech.

> **la robin cu**
> **viska lo**
> **mlatu i lo**
> **mlatu cu**
> **na'e viska**
> **la robin**
> **la robin cu**
> **viska lo**
> **mlatu i**
> **my. na'e**
> **viska ry.**
> *Robin sees*
> *a cat. The*
> *cat doesn't*
> *see Robin.*

As the first letter in **robin** is **r** and the first letter in **mlatu** is **m** we can use names of letters to refer to nouns that we get from them. Both Lojban sentences mean the same.

So if you see a Lojban letter being used as a noun, you take it as referring to the last noun or name whose verb word (**robin** and **mlatu** in this case) starts with that letter.

Clearly, this method is more powerful than *he* or *she*.

But notice that it can happen that we'd like to refer back to, say, **lo mlatu**, but then before we can do so, another noun or name that starts with **m** appeared in the meantime, so that **my.** can no longer refer to the cat. The quickest way out is to repeat the entire noun or name, i.e. **lo mlatu**.

If a name consists of several cmevla you can use the first letters of them to refer to that name. The same is for compound verbs:

> **la .djon.smit. cu citka lo finpe stasu i dy.sy. nelci fy.sy.**
> *John Smith is eating fish soup. He likes it.*

If you need to put several pronouns one after another separate them with the particle **boi**:

> **mi klama la paris la moskov**
> *I go to Paris from Moscow.*
>
> **mi klama py. boi my.**
> *I go to P from M.*

The phrase **mi klama py. my.** would mean *I go to PM* which wouldn't mean what is needed here.

Other methods for *"he"*, *"she"*, *"they"*

lo melbi
beautiful, handsome,

pretty

lo se pluka

nice, pleasant

In English we often use such pronouns as "they", "he", "she", "it" in order not to repeat the same name or noun over and over again.

Lojban gives us more possibilities.

- The particle **ri** refers to the last noun used in the discourse.
- The particle **ra** refers to one of the last nouns used in the discourse but before **ri**.

Look how we can make a story more concise by using them:

la .alis. cu klama lo barja .i la .alis. ze'a pinxe lo vanju .i la .alis. cu zgana lo nanmu .i lo nanmu cu melbi .i lo nanmu cu zgana la .alis.

Alice goes to the bar. Alice drinks some wine for a while. Alice notices a man. The man is beautiful. The man notices Alice.

> **la .alis. cu klama lo barja .i ra ze'a pinxe lo vanju .i ra zgana lo nanmu .i ri melbi .i ri zgana ra**
>
> *Alice goes to the bar. She drinks some wine for a while. She notices a man. He is beautiful. He notices her.*

> **melbi** means both *handsome* and *beautiful* no matter the person of what gender you describe.

Another example

la .alis. cu sipna bu'u lo kumfa pe la .alis.

Alice sleeps in Alice's room.

Alice sleeps-in the of-Alice room. [literally]

is turned into:

la .alis. cu sipna bu'u lo kumfa pe ri

Alice sleeps in her room.

Alice sleeps in the room of [last noun]. [literally]

The **ri** is equivalent to repeating the last noun or name, which is **la .alis.** here.

Note that **ri** does not repeat **lo kumfa pe ri** (which is also a noun), because **ri** is inside that noun and

therefore that noun is not yet complete when **ri** appears. This prevents **ri** from getting entangled in paradoxes of self-reference. (There are plenty of other ways to do that!)

Note also that nouns within other nouns, as in quotations, abstractions, are counted in the order of their beginnings. Thus a lower level noun like **la .alis.** in that last example is considered to be more recent than a higher level noun that contains it.

Most pronouns are ignored by **ri**. It is better just to repeat them directly:

> **mi prami mi**
> *I love me.*
> *I love myself.*

However,

1. the particles **ti**, **ta**, **tu** are picked up by **ri**, because you might have changed what you are pointing at, so repeating **tu** may not be effective.

2. likewise, **ri** itself (or rather it's antecedent) can be repeated by a later **ri**; in fact, a string of **ri** particles with no other intervening nouns always repeat the same noun:

> **.i la .alis.**
> **cu zgana**
> **lo nanmu**
> **.i ri melbi**
> **.i ri zgana**
> **ra**
> *Alice notices a man. He is beautiful. He notices her.*

Here the second **ri** has as antecedent the first **ri**, which has as

antecedent **lo nanmu**. All three refer to the same thing: the man.

A vague **ra** repeats a recently used noun but before the one to which **ri** can refer. The use of **ra** forces the listener to guess at the referent, but makes life easier for the speaker.

Tip: nouns are counted from their beginnings. So in a sentence like

> **lo du'u lo nanmu cu dotco cu se djuno ri**

ri refers to **lo nanmu** and not **lo du'u lo nanmu cu dotco**: the

start of **lo nanmu** is closer to **ri** than the start of **lo nu lo nanmu cu dotco**.

Tip: **ri** cannot refer to a noun if it is already smack in the middle of that noun. For example, in

> **la .alis. cu pinxe lo ri vanju**

ri obviously refers to **la .alis.**, and not to **lo vanju**.

Clause inside **sei** forms a parallel text. **ri** and **ra** ignore nouns inside **sei**-

clauses:

> **mi viska la .mark. sei la .jasmin. pu cusku i ri jibni la .djein.**
> *I see Mark, — Jasmine said. He is near Jane.*

In this example **ri** cannot refer to **la .jasmin.** We simply ignore the whole **sei la .jasmin. pu cusku** clause when deciding what **ri** should refer to.

Finally, only you decide what's to use in speech: the method with **ri** and **ra** or the method

> with letter names.

"Myself, themselves"

> **mi nelci mi**
> *I like myself.*
> I like me.
> [literally]

or

> **mi lumci mi**
> *I wash myself.*

> **lumci** = x_1 washes x_2 of contaminant x_3 with x_4

In some languages like Russian people say literally *I wash self*. In order to be closer to Russian style we can use **lo nei** which always refers to the first noun of a clause:

> **mi nelci lo nei**

which is the same as

> **mi nelci mi**

or we can say

> **la ian cu
> lumci lo
> nei**
> *Yan washes
> himself.*

which is the same as

> **la ian cu lumci
> ri**

Remember that **ri** can't refer back to pronouns like **mi** so **lo nei** might be preferred here.

And of course, when changing the first noun **lo nei** doesn't change which is quite handy:

> **mi lumci lo nei**,
> **do lumci lo nei**,
> **la ian cu lumci
> lo nei** ...

nei itself is a verb so we can attach particles of **se** series to it:

- **lo nei** links to the first noun of the

current clause

- **lo se nei** links to the second
- **lo te nei** to the third and so on.

Here are some more straightforward examples of its use:

> **la .meilis. cu pensi lo nei**
> *Mei Li thinks about herself.*
>
> **lo gerku cu batci lo nei**
> *The dog bites itself.*

nei works well when a sentence only contains one clause. But when it has several embedded clauses we might need something different. In

> **la .jasmin. cu djuno lo du'u la .alis. cu prami lo nei**
> *Jasmine knows that Alice loves herself.*

lo nei refers to **la .alis.**

What if we want to refer to Jasmine? Here is the solution:

> **la .jasmin. cu djuno lo du'u la .alis. cu prami vo'a**
> *Jasmine knows that Alice loves her.*

So while **lo nei** refers to the first noun of the current clause, **vo'a** refers to the first noun of the current sentence.

When there are no embedded clauses those two words mean the same:

> **la .alis. cu prami vo'a is the same as la .alis. cu prami lo nei**
> *Alice loves herself.*

- **vo'a** refers to the first noun of the current sentence.
- **vo'e** refers to the second noun of the current sentence.
- **vo'i** refers to the third noun of the current sentence.
- **vo'o** refers to the 4th noun of the current sentence.
- **vo'u** refers to the 5th noun of the current sentence.

Some Lojbanists use **ra** in order to refer to such "self"-places, which is deliberately

as vague as pronouns in many natural languages.

go'i for the previous clause

- **nei** alone links to the current clause.
- **go'i** links to the previous clause.

go'i presents yet another way of referring back to a noun that we need.

Whereas **lo nei** refers to the first noun of the current clause, **lo go'i** refers to the first noun of the previous clause.

> **la .alis. cu klama lo barja .i la .alis. cu viska lo nanmu**

can be changed to:

> **la .alis. cu klama lo barja .i lo go'i cu viska lo nanmu**

lo se go'i refers to the second nouns of the previous clause, **lo te go'i** to the third etc. For example,

> **.i la .alis.**
> **cu zgana**
> **lo nanmu**
> **.i ri melbi**

can also be expressed as

> **.i la .alis.**
> **cu zgana**
> **lo nanmu**
> **.i <u>lo se go'i</u>**
> **cu melbi**

That's because **lo se go'i** refers to the second place (x2) of the preceding clause, which is **lo nanmu**.

Consider another example:

> *Bill saw Bob. He hit him.*

English doesn't bother with precision here —

he just means "*some male person mentioned earlier.*" Did Bill hit Bob, or did Bob hit Bill? We don't know. Lojban does have other tricks up its sleeve, and as you might just have already guessed, **lo se go'i** will do the trick.

> **la bil cu viska la bob i lo se go'i cu darxi lo go'i**

Although, in most cases **ri**, **ra** or using first letter of names are to choose from:

> **la bil cu viska la bob i ri darxi la bil**

or

> **la bil cu viska la bob i la bob cu darxi ra**

What does go'i copy?

Note that emotional interjections like **.ui**, **.u'i**, **je'u**, those formed with **sei** and the question interjection **xu** are not parts of clauses. Thus they are not copied by **go'i**.

Other interjections like **nai**, **cu'i**, **pei** are parts of the clause when they are used on their own (not as modifiers of emotional interjections). **na**, **na'e**, **no'e**, **to'e** are also parts of clauses.

go'i copies words that are parts of clauses like **na** and **na'e**:

> — **la bob na prami la alis**
>
> — **go'i**
>
> — *It is not true that Bob loves Alice.*

— He doesn't (love).

— la bob na'e prami la alis — go'i

— Bob doesn't love Alice.

— He doesn't (love).

In order to say "No, he does love her" we need to use the word reverse to **na** — **ja'a**.

la bob na prami la alis ja'a go'i

Bob doesn't love Alice.

He does.

To override **na'e** we use its opposite: **je'a**.

— la bob cu na'e prami la alis

> — **je'a go'i**
>
> — *Bob doesn't love Alice.*
>
> — *He does.*

go'i is quite common for answering '*yes/no*' in a kind of logical style. Unlike **je'u** it is not an interjection and thus doesn't directly express your attitude. Instead, by saying **go'i** you repeat the previous clause (e.g. just said by the one you are talking to) as some absolute truth.

> If you ask me **xu do nelci la .alis.** (*Do you like Alice?*), and I then say *You like Alice.*, I am repeating your words, but not your meaning. I would need to say *I like*

Alice. instead. **go'i** repeats the meaning of the clause, not necessarily the words literally. So **go'i** after **xu do nelci la .alis.** means <u>mi</u> **nelci la .alis.** (and not <u>do</u> **nelci la .alis.**. In other words, in an answer to a *Do you?* type of '*yes/no*' question, **go'i** means *Yes (I do)*, as you'd expect.

Rewrite rule when using go'i

- xu do pu zvati la madrid
- ba go'i
- Have you been to Madrid?
- I will.

> **mi pu klama .i ba go'i**
> *I went. And I will go.*

We can use prepositions together with **go'i**. In this case they replace preposition of the same series if they occurred in the clause we refer to with this **go'i**. In this example **pu** replaces **ba** said by the first speaker since both prepositions are in *PU* series.

go'i can be omitted if the context is clear enough:

> **- xu do pu zvati la madrid - ba**
> *- Have you been to Madrid?*
> *- I will.*

The same is true for some series of non-

prepositions like **na'e**:

> **- mi to'e nelci lo gerku - i mi je'a go'i**
> *- I hate (anti-love) dogs.*
> *- I do love them.*

Here **je'a** replaces '**to'e** said earlier.

Here are several most notable groups of particles that can override each other within each group when using **go'i**:

- Tense: **pu - ca - ba**
- Event contours: **ta'e - ru'i - ze'a** and any other event contours you might encounter.

Negation:

- **ja'ai - nai**
- **ja'a - na**
- **je'a - no'e - to'e - na'e**

A little math.

> **li mu du li**
>
> **re su'i ci**
>
> *Five equals*
>
> *two plus*
>
> *three.*

Here **li** is similar to **lo** but it starts a mathematical expression (or just a number). So **li mu** means *Number 5* for use in formulae unlike simple **mu** which is used to denote 5 objects or events.

Note that **re su'i ci** (*2+3*) is one single expression considered as one noun.

du is a verb and means *to be equal to.*

- **su'i** means *plus.*
- **vu'u** means *minus.*
- **pi'i** means *times* and is used for multiplication
- **fe'i** means *divided by* and is used for division.

The word **pi** is a decimal separator so **no pi mu** means *0.5*, **ci ze pi pa so** means *37.19*.

In some notations 0.35 can be written as .35 and in Lojban we can also drop zero saying **pi mu**.

Here are some other examples.

> **li pare fe'i ci du li vo** = *12 : 3 = 4*
> **li re pi'i re du li vo** = *two times two is four*
> **li pano vu'u mu pi'i re du li no** = *10 − 5 · 2 = 0*

Notice again that you put **li** only once before the equation and once after it. Thus *12 : 3* is considered one number. Indeed, *4* is the same as *12 : 3*. They are both numbers.

More examples:

xu li mu

du li re

su'i ci

Is 5 = 2 +

3?

go'i

Yes.

na go'i

No.

For asking for a number we use **ma**:

li ci su'i vo

du ma

3 + 4 = ?

li ze

7

"Most", "many" and "too much"

Words like *most* and *many* are also numbers in Lojban, which is pretty logical if you think about it. The following 'numbers' are particularly useful:

ro   *each*
so'a *almost all*
so'e *most*
so'i *many / a lot of*
so'o *several*

so'u *few*
no *zero, none*
su'e *at most*
su'o *at least*
za'u *more than...*
du'e *too many*

Some examples:

> **so'i lo merko cu nelci la .nirvanas.** *Many Americans like "Nirvana".*

The group, not the mystical state. Although on second thought... An yes, names are ambiguous, because they're used Humpty-Dumpty style: they mean what the <u>speaker</u> means.

> **so'u lo jungo cu nelci la .nirvanas.** *Few Chinese people like Nirvana.*

su'e mu lo muno prenu cu cmila
No more than five out of the fifty people laugh(ed). (For example, if a comedian told a bad joke).

su'o pa lo prenu cu prami do
At least one person loves you.

This last sentence is logically the same as **lo prenu cu prami do**, which means *at least one person loves you*. In fact, all articles in Lojban have such default numbers associated with them; **lo** by default means **su'o pa lo ro** — *at least one out of all….*

"First, second, last"

Ordinal numbers such as "first, second, third" are used to put things in order. In Lojban they are formed with a number plus **moi** immediately after it:

> **pamoi** = x_1 is *first among ...*
>
> **remoi** = x_1 is *second among ...*
>
> **cimoi** = x_1 is *third among ...*
>
> ...
>
> **romoi** = x_1 is *last among ...*

It is possible to use verbs instead of numbers:

> **memimoi** = x_1 is *mine*
>
> **medomoi** = x_1 is *yours*

In this case we had to convert pronouns to verbs using **me**.

> **ti pamoi lo**

ratcu pe mi

This is my first rat.

ta romoi lo ratcu pe mi

That is my last rat.

lo cerni tarci cu romoi lo tarci poi cumki falo nu viska pu lo nu co'a donri

The morning star is the last star that's visible before the dawning of the day.

ta me mi moi

That's mine.

ta me mi moi lo stixu

That's my place.

> **.i lo vi stizu cu me mi moi lo paci stizu poi sruri lo jubme** *This place is mine among 13 places around the table.*

Cardinal numbers are placed before ordinal numbers in a string and separated by **lo**.

> **ci lo pa moi be lo ckafi kabri** *the first three cups of coffee*

Without **lo** we could have read this as **ci pa moi** – *thirty-first*.

never - noroi, *always* - roroi

An intermittent event can be specified with

the prepositions like **ta'e** or by counting the number of times during the interval that it takes place. In this case we use a number and append a preposition **roi** to make a quantified tense. Quantified tenses are common in English, but not so commonly named: they are exemplified by the following constructs:

- **noroi** = *never*
- **paroi** = *once*
- **reroi** = *twice*
- **ciroi** = *thrice*

  ...

- **so'iroi** = *many times*
- **so'uroi** = *a few times*
- **du'eroi** = *too many times*
- **roroi** = *always*

  > **mi paroi klama lo zarci**
  > *I go to the market once.*

zarci = x_1 *is a market*

> **mi du'eroi klama lo zarci**
> *I go to the market too often.*

With the quantified tense alone, we don't know whether the past, the present, or the future is intended, but of course the quantified tense can be enriched with tenses:

> **mi pu reroi klama lo zarci**
> *I went to the market twice.*

Without **pu** the construct **reroi** may mean that once i went to the market but the second time I will be there only in the future.

- **pare'u** = *for the first time*
- **rere'u** = *for the second time*

  …

- **za'ure'u** = *again*
- **rore'u** = *for the last time*

The particle **re'u** works like **roi** but tells for which time this event happens.

Compare:

mi paroi vitke lo muzga
I visited the museum once.

mi pare'u vitke lo muzga
I visited the museum for the first time.

mi za'uroi vitke lo muzga
I visited the museum more times.

mi za'ure'u vitke lo muzga
I visited the museum again.

mi za'uparoi vitke lo muzga
I visited the museum more than once.

mi za'upare'u vitke lo muzga
I visited the museum not for the first time (may be for the second/third etc.))

vitke = *to visit (somebody or something)*

Making

prepositions from verbs. fi'o

> **mi klama fi'o kansa do**
> *I go with you.*
> I go with you accompanying me.
> [literally]

kansa = x_1 accompanies x_2

The verb **klama** — *to go* has no place for denoting with whom you are going.

The combination of the particle **fi'o** followed by a main verb, in this case the verb word **kansa**, forms a new case which is prefixed to the noun filling this new place, namely **do**. The meaning of **fi'o kansa do** is that **do** fills the x1 place of **kansa** (*x1 accompanies x2*).

It is important to

remember that even though **do** is placed following **fi'o kansa**, it belongs in the x1 place of **kansa**.

Thus the verb **klama** has now acquired an additional place specifying who accompanies you while you are going.

> Prepositions add extra places to verbs.

What's really interesting is that prepositions in Lojban have their corresponding verbs.

For example,

> **fa'a = fi'o farna**
> **farna** = x_1 *is a direction of* x_2 *from viewpoint* x_3

So if you forgot a preposition you can use **fi'o** plus an appropriate verb

instead of that.

As you can see in English we use a preposition. **fi'o kansa** is also a preposition but with a verb inside!

In fact there is a preposition for **fi'o kansa** as well. It's **ka'ai**. But if you don't remember a preposition you can safely use the construct with **fi'o**.

We can add verbs with **se** and its friends for **fi'o**:

> **mi klama fi'o se pilno lo jamfu**
> *I walk on foot.*
> ```
> I walk
> using feet.
> [literally]
> ```

There is a common preposition **se pi'o** which is the same as **fi'o se pilno**. So if there is **se** inside **fi'o** clause the corresponding

preposition also has this **se** (Of course, the same for **te, ve, xe**).

The only exlusion is for **pu** and **ba**:

> **pu = fi'o se purci**
>
> **ba = fi'o se balvi**

So those two prepositions have **se** in their coresponding verbs whereas they themselves don't have.

The term for such an added place is a *preposition place*, as distinguished from the regular numbered places. The **fi'o** construction marking a prepositional place is called a *prepositional clause*, and the noun which follows it a *prepositional noun*. Prepositional clauses may be placed anywhere within the main clause, in any order; they have no

effect whatever on the rules for assigning unmarked clause to numbered places, and they may not be marked with places tags (**fa**, **fe**, **fi**, **fo**, **fu**).

There can be prepositions that refer to objects. An example is **fa'a**. It is compared to the first noun of the clause where it resides.

Lesson 6. Time, space, situation

Time of day, dates and calendar

Time of day

> — **ma tcika ti** = *What's the time?*
> — **li pa pa** = *Eleven [hours]*

Another option:

— **ma ca tcika**
— *What is the time now?*

ma = *the content question word (*what*)*
tcika = x_1

(hours, minutes, seconds) is the time of event x_2 on day x_3, at timezone x_4

So in Lojban, times do not exist in the abstract: times are always the times <u>of</u> something. So we ask what the time is of **ti**, meaning *this event/thing*, or, in other words *now*.

ca tcika lo nu ei sipna
It's time to sleep.

24-hour time is used almost always in Lojban as 12-hour

system can lead to misunderstading.

In order to specify not only hours but minutes and seconds we separate them with **pi'e**:

> **li pa pa pi'e pano**
> *11:10 (Ten minutes past eleven)*
> The number eleven: ten [literally]

or

> **li pa pa pi'e pano pi'e pa ci**
> *Ten minutes and thirteen seconds past eleven.*
> The number eleven: ten : thirteen [literally]

In order to say *ten <u>to</u> eleven* you can just say

> **li pano pi'e mu no**
> *10:50*

If we want to give the time of an event, rather than just tell the time, we need to fill in some more places. The second place of **tcika** is *state/event*: people don't have times — events have times. So we use **nu**:

> **li pa no cu tcika lo nu mi klama**
> *Ten o'clock is the time that I go* (or come!)

Preposition for time of day

By using **se** we can get a more naturally sounding sentence:

> **lo nu mi klama cu se tcika li pa no**
> *I go at 10 o'clock.*

But you might still find too long and clumsy.

Or we can use a preposition:

> **mi klama ti'u li pa no**
> *I am going at 10:00.*

> **ti'u = fi'o se tcika =** *occurring at the time of day...*

Dates

> **nanca =** x_1 *is of duration of* x_2 *years*

nanca specifies the duration and in order two say *two years long* you fill the second place with a number prefixed with **li**:

> **mi nanca li re re**
> *I am 22 years old.*

In order to say *in year 2014* we use **moi**:

> **ca lo re no pa vo moi nanca mi pu zvati la .kebek.**
> *In 2014 I was in Quebec.*
> During 2014th year I was in Quebec. [literally]

The basic verb for dates is

> **datru** = x_1
>
> *(event) is dated/pertaining to day/occurring on day x_2 of month x_3 of year x_4 in calendar x_5*

The default calendar is the standard Western one as it is international. If you want to use, for example, the Arabic or Chinese calendars, you can put **lo xrabo** or **lo jungo** in the fourth place. (As always, context is important —

in a discussion of Islamic history we would probably assume that the Arabic calendar was being used).

We can therefore say

> **lo nu lo remna cu klama lo lunra cu datru li repa li ze li pa so xa so**
> That a
> human goes
> to the moon
> is dated
> day 21,
> month 7,
> year 1969.
> [literally]

Remember that when we speak of dates in Lojban, we also need to specify the place on the globe where the date was calculated. The instant Neil Armstrong made that small step for (a) man, for instance, it wasn't

the 21st of July everywhere on Earth. In Tokyo, it was closer to the 22nd. So if we want to point out that it was the 21st, *Houston time*, we need to specify the x4 place of **tcika**. That means we can simply say:

> **lo nu lo remna cu klama lo lunra cu datru li re pa li ze li pa so xa so fi'o se tcika fo la .xustyn.**

Days, months and seasons

> **masti** = x_1 *is* x_2 *months long*
> **djedi** = x_1 *is* x_2 *full days long*

Here are the names of the days of the week:

English name	Lojban name
Monday	lo lurdei

Tuesday	lo fagdei
Wednesday	lo jaurdei
Thursday	lo mudydei
Friday	lo jimdei
Saturday	lo tedydei
Sunday	lo soldei

mi gunka ca lo lurdei

I work on Monday

mi gunka ca ro lurdei

I work every Monday

And here are the names of months of Gregorian calendar:

English name	Lojban name	meaning
January	lo pagmese	1st month
February	lo regmese	2nd month
March	lo cigmese	3rd month
April	lo vogmese	4th month
May	lo mugmese	5th month
June	lo xagmese	6th month
July	lo zegmese	7th month
August	lo bigmese	8th month
September	lo sogmese	9th month
October	lo daugmese	10th month
November	lo feigmese	11th month
December	lo gaigmese	12th month

It is easier to remember them if you

notice that they the first letters remind of numbers. Thus, May is the first month and start with **pa** (1) and so on.

Calendars in other cultures

The names of days of the week and months match international standards. However, there can be a need to describe conventions for cultures which for example do not use a seven-day week. In ordinary speech you are free to create compound verbs for that. For example, you can call the first month of classical Chinese calendar as **lo jungo pavma'i** (literally *Chinese January* although the first month in the original Chinese calendar rather starts in February). And **lo jungo pavdei** could be the first day of the

Chinese ten-day week. (**jungo** means *x1 is Chinese*).

The same logic can be applied if the seasons where you live don't match this pattern. For example, the rainy season or monsoon could be **lo carvi citsi** (from **carvi** = *rain*, and **citsi** = *season*). Here are some I made up for fun to give a better idea of the weather in Britain:

lo lenku carvi citsi	*the cold rain* — spring
lo mligla carvi citsi	*the warm rain* — summer
lo brife carvi citsi	*the windy rain* — autumn
lo dunja carvi citsi	*the freezing rain* — winter

Later in this course we'll see how to create new words in the form of lujvo and zi'evla and those words will have precise meanings and thus become terms.

You'll actually need a pretty good knowledge of Lojban to make up lujvo on the spot, but we'll learn how to make some simple lujvo later on in this course.

Scope in prepositions

- Prepositions with a particle **ku** or a noun after them modify the sentence to the right of them.
- Prepositions without a noun before the main verb are applied to that main verb.
- Prepositions at the end of the clause are applied to the main verb of that clause as well.

Compare **vi ku ro da fenki** versus **ro da vi fenki**.

> **ro da vi fenki**
> *Everyone is crazy here.*
> Every one here crazy [literally]

> **vi ku ro da fenki**
> *Here everyone is crazy.*
> Here: every one crazy [literally]

Did you catch that?

1. *Everyone is crazy here* means that if someone is not crazy somewhere then they will become crazy in this place.
2. *Here everyone is crazy* simply describes those who are here (and they are crazy). We don't know anything about others in other places.

Other examples:

> **vi ku mi gunka**
> *Here, I work.*
> (describes what happens here).
> **mi vi gunka**
> *I here work.*
> (describes me, where am I and what I do).

> **pa lo prenu cu roroi jundi**
> *One of the people is always attentive.*

- it is the same person who is always attentive.

> **roroiku su'o pa lo prenu cu jundi**
> *Always one of the people is always attentive.*

- it is always that one person is attentive. People may change but there is one always attentive.

Time and place

> **mi citka lo cirla**
> *I eat cheese.*
> *I ate cheese.*
> *I always eat cheese.*
> *In a moment, I will have just finished eating cheese.*

Tenses in Lojban are optional, you don't have to think all the time what tense to use.

Often context resolves what is correct. We add tenses when we feel we need them.

Lojban tenses treat

time and space the same. Saying that *I worked a long time ago* is not grammatically different than saying *I work far away to the north*. English treats words like *earlier*, past tense ending *-ed* and space prepositions like *in* or *near* in three different schemes, while in Lojban they use the same principle.

Time and place

Preposition without a noun after it describes the event as relative to *here* and *now*:

> **mi pinxe ba**
> *I will drink.*
>
> **mi pinxe bu'u**
> *I drink at this place.*

Preposition with a noun after it describes the event as relative to the event in that noun:

> **mi pinxe ba lo nu mi cadzu**
> *I drink after I walk.*

Time & space journeys

> **mi pu ba klama lo cmana**
> *It happened before I went to the mountain.*
> I in past: in future: go to the mountain. [literally]

> **mi ba pu klama lo cmana**
> *It will happen after I went to the mountain.*
> I in future: in past: go to the mountain. [literally]

If there are several prepositions in one clause, the rule is that

we read them from left to right, thinking it as a so called *imaginary journey*. We begin at an implied point in time and space (the speaker's "now and here" if no noun follows), and then follow the prepositions one after another from left to right.

The rule can be overriden by connecting prepositions with **ce'e**:

> **mi ba ce'e pu klama lo cmana**
> *I went and will go to the mountain.*
> ```
> I in future
> and in
> past: go to
> the
> mountain.
> [literally]
> ```
> **mi cadzu ba lo nu mi citka ce'e pu lo nu mi sipna**
> *I walk after I eat <u>and</u> before I sleep.*

Distance in time and space

Prepositions

fau = preposition. at the same time, place or situation as ...

ca = *at ... (some time), at the same time as ...*; present tense.	**bu'u** = *at ... ... (some place)*; at this place.
zi = *just or soon, in a short time*	**vi** = *near ...*
za = *a while ago* or *in a while, in an unspecified time*	**va** = *not far from ...*
zu = *long time ago* or *in a long time*	**vu** = *far away from ...; far away*

Following the *imaginary journey* principle after a tense we can put particle specifying how far we ago into the past or future:

- **pu zu** means *a long time ago*
- **pu za** means *a while ago*

- **pu zi** means *just*
- **ba zi** means *soon*
- **ba za** means *in a while*
- **ba zu** means *in a long time*

Notice the vowel order **i**, **a** and **u**. This order appears again and again in Lojban, and might be worth to memorize. *Short* and *long* in are always context dependent, relative and subjective. Two hundred years is a short time for a species to evolve, but a long time to wait for the bus.

> **zi**, **za** and **zu** are special prepositions, they modify the previous preposition like **pu** and **ba**: **pu zu** is *a long time ago* while **zu pu** is *in the past of some point in*

time which is a long time toward the future or the past of now. In the first example, **pu** shows that we begin in the past, **zu** then that it is a long time backwards. In the second example, **zu** shows that we begin at some point far away in time from now, **pu** then, that we move backwards from that point. Thus **pu zu** is always in the past. **zu pu** could be in the future.

As you can see spatial distance is marked in a similar way by **vi**, **va**

and **vu** for short, unspecified (medium) and long distance in space.

We can use them as prepositions as well:

> **ba za lo djedi be li ci mi volve**
> *In three days I will return.*

The space equivalent of **ca** is **bu'u**. And **fau** is more vague than two of them, it can mean time, space or situation.

> **ba za vu ku mi gunka**
> *Some time in the future, I will work a place long away.*

> **gunka** = *to work*

mi vipuzu gunka
I used to work here a long time ago.
```
I here-past-long-time-
distance work [literally]
```

> **pu zu vu**
>
> **ku zasti fa**
>
> **lo ninmu**
>
> **.e lo**
>
> **nanmu**
>
> *Long ago*
>
> *and far*
>
> *away lived*
>
> *a woman*
>
> *and a man.*

The last sentence is how fairy tales often begin.

If **vau** in the last sentence wasn't there, **mi** would become the second place of **catra** rather than the first place of **gunka**, so the listener would understand the sentence as *Not very far from where Kennedy was killed by me someone works.*

Duration in time and space

Prepositions

ze'i — for a short time of … (event)   **ve'i** — over a short space of … (event)

ze'a — for an unspecified time of … (event)   **ve'a** — over an unspecified space of … (event)

ze'u — for a long time of … (event)   **ve'u** — over the long space of … (event)

Again it's easy to remember given the similarity between vowels in two columns.

mi ze'u bajra
I run for a long time.

la .bob. ze'u pinxe lo birje
Bob drinks beer for a long time.

mi bazize'a xabju la .djakartas.
Pretty soon I'm going to live in Jakarta for a while.

> **lo jenmi pe la .romas. baze'u gunta la .kart.xadact.**
> *The army of Romans will be attacking Carthage for a long time.*

This does not mean that Romans are not attacking Carthage these days. In Lojban, if we say that something is true at a particular time, it doesn't mean that it is not true at any other time. You can say **pu ba ze'u** so that we know that this activity was in future when viewed from some point in past but in past when viewed from today.

> **do ve'u klama lo dotco gugde ze'u**
> *You spend a long time traveling a long space to Germany.*

> **ti ve'u gerku**
>
> *That's a big dog. This is a dog covering a large space.*

We can also contrast **do ca ze'i pu klama** with **do pu ze'i ca klama**. The first event of traveling has one endpoint in the present and extends a little towards the past, while the second event has one endpoint in the past and extends only to the present (that is, slighty into the past or future) of that endpoint.

Event contours

> **pu'o** = *preposition: to be about to do something (the event has not yet happened)*
>
> **ca'o** = *preposition: to*

be doing something (the event is in progress)

ba'o = *preposition: to have done something, to be no longer doing something (the event has ended)*

With the *event contours* and unlike **pu**, **ca** and **ba** we view each event as having shape with certain stages:

> **mi ba tavla lo mikce** *I will speak to the doctor (and I might be speaking now too).*

mi pu pu'o tavla lo mikce
I was about to speak to the doctor (I am not speaking now, the event hasn't started yet).

Note that **mi ba tavla** is similar to **mi pu'o tavla**, and likewise with **ba'o** and **pu**. Why do they seem reversed in sounding? Because event contours view the present as seen from the viewpoint of the process, whereas the other tenses view events

> seen from the present.

Other examples:

> **lo sanmi ca pu'o bredi**
> *The meal is not ready yet.*
>
> **mi pu ca'o tavla lo mikce**
> *I was speaking to the doctor.*
>
> **mi pu ba'o tavla lo mikce**
> *I had spoken to the doctor.*
>
> **mi ba ba'o tavla lo mikce**
> *I will have spoken to the doctor.*

More clarity is achieved by combining several tenses:

> **.a'o mi ba**
> **zi ba'o**
> **gunka**
> *I hope I've*
> *soon*
> *finished*
> *working.*

In Lojban, we also operate with an event's *natural beginning* and its *natural end*. The term *natural* is highly subjective in this sense, and the natural end refers to the point in the process where it should end. You can say about a late train, for instance, that its process of reaching you is now extending beyond its natural end. An undercooked, but served meal, similarly, is being eaten before the natural beginning of the process. The event contour prepositions used in these examples are as follows:

> **za'o** = *still. The*

event is in process beyond its natural end

xa'o = *already as in "too early". The event already started is immaturely in process*

> **seja'e ma do za'o zvati vi**
> *Why are you still here?*
>
> **la .kevin. xa'o zvati vi**
> *Kevin is already here.*

All of these tenses have been describing stages of a process which takes some time (as shown on the graph above; those tenses above the event like). But many of the event contours describes point like stages in the process, like its

beginning. As is true of **ca** and **bu'u**, they actually extend slightly into the past and future of that point, and need not to be precise.

The two most important point-like event contours are:

> **co'a** = *the event starts during (a noun follows)*
> **co'u** = *the event stops during (a noun follows)*

For this kind of aspect, English normally just uses verbs: *start*, *finish*, *stop*. Lojban likewise allows you to use distinct verbs to express these notions: **cfari**, **mulno**, and **sisti**. Using aspects just lets you express things more succinctly; and with Lojban the way it is, anything that makes things more succinct comes in

handy.

mo'u describes events as finished:

> **la .maks. mo'u zbasu lo vi dinju**
> *Max has built this house.*
>
> **lo kabri mo'u porpi**
> *The vase broke.*

> **mo'u** = *the event is at its natural end*
> **porpi** = x_1 *breaks into pieces x_2*

Most of the time, though, processes actually end at their natural ending; this is what makes it natural. Trains are not usually late, and people usually retrain themselves to eat only edible food.

Since a process can be interrupted and resumed, these points have earned their own event contour also:

> **de'a** = *the event is pausing during (a noun follows)*
> **di'a** = *the event is resuming during (a noun follows)*

> **de'a ze'i jundi** = *BRB (I'll be right back)*
> **di'a jundi** = *back*
>
> **jundi** = x_1 *pays attention to* x_2

These two expressions are common in text chat

for saying that you stop paying attention or away, and then back online.

One could of course also say just **de'a** or **di'a** and hope the point gets across.

Two prepositions from TAhE series:

> **ru'i** = *continuous tense: the event is continuous*
> **ta'e** = *simple tense: the event happens habitually*

Place contours

Even contours can be used to refer to space if we prefix them with **fe'e**:

lo rokci cu kuspe fe'e co'u lo canko

The rock reached and stopped by the window.

kuspe = x_1

extends, reaches across scope, range x_2

All event contours in one diagram
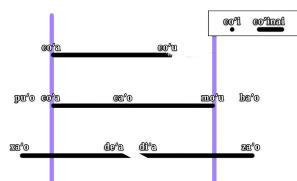
Vertical line signifies the time for the natural beginning and natural end of an event.

Horizontal lines show the event contours.

Space: "*to the

left", "to the right"

> **lo prenu**
> **cu sanli**
> **fi'o se**
> **pritu mi**
> *The person stands to the right of me.*
>
> **lo gerku**
> **cu vreta**
> **fi'o se**
> **zunle lo**
> **verba**
> *A dog is lying to the left of a child.*
>
> **lo mlatu**
> **cu plipe**
> **fi'o se**
> **crane do**
> *The cat jumps in front of you.*

zunle = x_1 is to the left of x_2 from the viewpoint of x_3

pritu = x_1 is to

the right of x_2

from the viewpoint of x_3

crane = x_1 is in front of x_2 facing x_3

trixe = x_1 is behind x_2 from the viewpoint of x_3

sanli = *to stand*

vreta = *to lie (horizontally)*

If no noun follows then the position is understood as relative to the speaker: this is important when speaking about left and right:

lo prenu cu sanli fi'o se pritu
The person stands to the right (of me).

ko jgari lo panbi poi zunle
Take the pen on the left.

ko catlu lo dinju poi crane
Look at the house in the front.

la .bob. cu sanli fi'o se pritu vi
Bob stands just to the right.

la .bob. cu sanli fi'o se pritu vi la .meiris.
Bill stands just to the right of me near Mary.

The third place can be useful from whose viewpoint the object is to the left, to the right etc.:

lo dinju cu zunle lo rokci ti
The house is to the left of the rock if viewed from here.

Connecting sentences with prepositions

mi klama lo cmana ca lo nu lo mlatu cu pinxe lo ladru
I am coming to a mountain while a cat is drinking milk.

mi klama lo cmana .i ca bo lo mlatu cu pinxe lo ladru
I am coming to a mountain, and the same time a cat is drinking milk.

If two sentences are too long we can use **.i**

to separate them. But we still can show that they express the same idea using prepositions. The second example differs from the first one in that it puts the focus on both sentences.

So here we use **.i**, then the preposition that we need and then **bo**.

The particle **bo**

- attaches the sentence to the previous one.
  - Usually we split sentences into two and then bind them with **bo** when a sentence looks or sounds too bulky.

- separates the preposition before it from the rest of the sentence where it belongs.
  - Left on its own, a preposition always applies to the noun after it. So **.i**

> **ca lo mlatu**
>
> would have meant something like *during a cat, at the time of cat*. Looks like a nonsense. At least this doesn't mean what we want. To make the prepositions apply to the <u>entire</u> sentence and bind the previous sentence, we follow it with the word **bo**.

Other examples:

> **mi cadzu .i ba bo mi citka**
> *I walk, and then I eat.*

.i ba bo means *afterwards, then*. The sentence after **.i ba bo** refers to something that took place later than what took place in the sentence before.

Remember that **ba** and **pu** differ from other prepositions. The very astute reader will have noted that 'afterwards' <u>should</u> have been **.i pu bo**. Such special rule for Lojban was made by analogy of natural languages. So you just have to remember this special behavior of these two words.

> A modern trend is to do the same with **fa**, **fe** and its friends.
>
> > **mi gleki .i fe bo do jinga**
>
> is the same as
>
> > **mi gleki lo nu do jinga** *I am glad that you win.*

Here **fe** refers to the second place of **gleki**. It is possible to use **se** to reverse the order:

> **do jinga .i se fe bo mi gleki**
> *You win, and I am glad of that.*

Causes and implications

gasnu — to make something do something

> **lo canko cu kalri**
> *The window is open.*

ko gasnu lo nu lo canko cu kalri
Open the window!

gasnu = *agent x_1 causes event x_2 to happen*

Such verbs as *to open (something), to move* can be rephrased as *to make something open, to make something move* and therefore we don't need to learn extra verbs for every such meaning. Instead we use an additional verb **gasnu** all the time.

Its corresponding preposition is **gau**:

gau ko lo canko cu kalri
Open the window!

> **e'o gau do lo canko cu kalri**
> *Please open the window.*

> **gau = fi'o gasnu =** *agentive preposition (to make someone do something)*

The third option is to use separate words:

> **mi kargau lo canko**
> *I open a window.*

> **kargau =** *to open (something)*

jalge - result ("*because of ...*", "*why?*")

> **ma se jalge lo nu carvi**
> *What gives the rise to the raining?*

> **jalge** = *event x_1 is the result or outcome of event x_2*
>
> **se jalge** = *event x_1 give rise to the event x_2*

The corresponding preposition of **se jalge** is **se ja'e**:

> **- se ja'e ma carvi - lo nu lo dilnu cu klaku**
> *- Why is it raining? - Because the clouds are crying.*

> **se ja'e = fi'o se jalge** = *because of ...*
> **se ja'e ma** = *why?*

Therefore is the reverse word compared to *because*:

- **se ja'e** = *because*
- **ja'e** = *therefore*

lo dilnu cu klaku ja'e lo nu lo dargu cu cilmo
Skies are crying resulting in the road being wet.

lo dilnu cu klaku i ja'e bo lo dargu cu cilmo
Skies are crying. Therefore the road is wet.

nibli — logical implication

- ma nibli lo nu nicte
- lo nu lo solri na te gusni
- What logically entails that it is night? - The sun not shining.

nibli = x_1

logically necessitates/entails/implies x_2 under rules x_3

gusni = x_1 *is light falling down on x_2 from source x_3*

te gusni = x_1 *is the source of light x_3 falling onto x_2*

Its corresponding preposition is **ni'i**:

- ni'i ma nicte - lo nu lo solri na te gusni
- Why is it night? - Because the sun is not shining.

lo solri na te gusni i se ni'i bo nicte
The sun is not shining. Therefore, it's night.

> **ni'i = fi'o nibli**
> = *logically because of ...*

seni'i = *with the logical consequence that ..., logically therefore*

This is another type of *why*. Here we can't use **jalge** as we are talking not about a result but about logical implication. The fact that it is night just logically follows from the sun not shining.

Verbs more precise than jalge

Here are other frequent verbs for causes with their corresponding prepositions:

Let's try to replace **jalge** with other verbs in our examples.

rinka — physical causation

lo nu lo dilnu cu klaku cu rinka lo nu lo dargu cu cilmo

The clouds' crying is making it rain.

```
The-event the
cloud weep
physically-cause
the event rain.
[literally]
```

rinka = x_1 *causes effect* x_2 *under conditions* x_3

Its corresponding preposition is **ri'a**:

lo dargu cu cilmo ri'a lo nu lo dilnu cu klaku

ri'a = *because (of physical or mechanical cause…)*

Compare:

mi darxi la .kevin. ri'a lo nu ky. lacpu lo kerfa be mi

I hit Kevin because he pulled my hair.

This is nonsense. It means that Kevin pulling my hair physically caused me to hit him, which would only be true if Kevin had pulled my hair so hard that I had fallen on top of him, perhaps.

What we need is either a more vague **se ja'e** or another preposition that we'll study just now.

mukti — motivation

> **lo nu la kevin cu lacpu lo kerfa be mi cu mukti lo nu mi darxi ky. vau mi**
> *Kevin pulling my hair motivated me to hit him.*

> **mukti** = x_1 *is a motive, incentive for the event x_2 caused by agent x_3*

In this example, what we have is not two events which are physically connected, like clouds and rain, but three events:

1. Kevin pulls my hair.
2. I decide, as a result of this, to hit Kevin.
3. I hit Kevin.

English misses out the second event and says *Sally hit Joey because he pulled her hair.* However, this is not only vague but, some would say, psychologically dangerous. People do not generally react to stimuli automatically, but as a result of motivation, and confusing complex responses with simple physical causation may lead us to believe that

we have no control over our emotions or even our actions. Thus, it is often useful to distinguish between physical reactions (**rinka**) and responses which have a cognitive/emotional element (**mukti**).

The corresponding preposition of **mukti** is **mu'i**:

> **mi darxi la .kevin. mu'i lo nu ky. lacpu lo kerfa be mi**
> *I hit Kevin because he pulled my hair.*
>
> **mu'i** = *because (of motive ...)*

As we can see, the third place is nearly always unnecessary, since we can assume that the agent of the second event is also

the person who decides to do it. Even so, this structure is a bit clumsy, so again we would normally use a preposition — in this case, **mu'i**. This gives us

Using **te** we get **te mukti** which has another concise translation in English:

> **te mukti** = x_1
>
> *intends/going to do x_2 with motive x_3*

Yes, in fact *to be going to* is tightly connected with motivation so we use the same verb for these concepts in Lojban.

> **mi te mukti lo ka klama la paris**
> *I am going to visit Paris.*

krinu — justification

> **lo nu la .salis. cu carmi gunka cu krinu lo nu lo ctuca cu dunda lo tartcita sy.**

> **la .salis. cu te dunda lo tartcita lo ctuca ki'u lo nu sy. carmi gunka**

krinu = *event x₁ is a justification or reason for event x₂*

ki'u = *because (due to explanation …)*

The difference between motivation and justification is not always clear, but we

can say that the latter involves some rule or standard while the former does not require this. Going back to the example of Sally and the teacher, it is possible to say

> **la .salis. cu te dunda lo tartcita lo ctuca mu'i lo nu sy. carmi gunka**
> ```
> Sally is-given
> a star-label
> [by] the
> teacher with-
> motivation she
> much-try work.
> [literally]
> ```

However, this says only that Sally's hard work motivated the teacher to give her a star. It does not imply that it is the custom for teachers to give stars (or 'star-labels', as I have rather pedantically translated it) as a reward for good work. What we need here is **ki'u**, the preposition from **krinu**.

> Note: Don't get **ki'u** mixed up with **ku'i** which means *but, however*!

Let's not confuse jalge and nibli

Notice that **se ja'e** is the only verb that has **se**. It means that the order of it's places is reversed compared to the other verbs.

ki'u appeals to more general considerations than **mu'i**, but it still deals with human standards, not logical laws. Only a very naive student would believe that if a student is given a star, it must logically imply that that student has worked hard. In the tragic case of Fluffy, however, the fact that Fluffy is a rabbit

logically implies that he will not live long, given what we know about rabbits. Here we can confidently use **nibli**.

Of course, the questions do not <u>have to</u> take these forms; if young Joey is a religious type, he might say **la .flufis. co'a morsi ki'u ma**, asking with what justification God took his rabbit from him, whereas if he is scientifically minded, he might ask **la .flufis. co'a morsi ri'a ma**, inquiring as to the physical cause of Fluffy's death.

"So ... that"

The expression *so ... that* is very common in English. It is expressed in Lojban by splitting such sentence into two:

mi <u>tai</u>

galtu plipe

<u>.i ja'e bo</u>

mi farlu

I jumped so

high that I

fell down.

tai —

preposition. *in*

the manner of ...

mi tai

zukte

I cat this

way

mi tai

fengu

I am so

angry.

fengu = x_1 *is*

angry of x_2

(event)

"If ... then"

fau lo nu

do fenki

vau mi ba

prami do

If you are

crazy then

I'll love you.

The preposition **fau** means *with the event of..., under circumstances ...* It requires an event after it. In fact it is much like **ca** (*when*) or **bu'u** (*at (some place)*).

Indeed, in most cases we can replace **fau** with **ca** getting almost the same meaning (may be sometimes more precise):

> **mi ba prami do ca lo nu do fenki**
> *I'll love you when you are crazy.*

We can replace **lo** with **ro** after such prepositions getting a new meaning:

> **mi ba prami do ca ro nu do fenki**
> *I'll love you whenever you are crazy.*

fau and da'i.
What if …

> **da'i mi turni** = *I could be a king.*
> **da'inai mi turni** = *I am a king.*

- The interjection **da'i** marks the clause in which it is put as describing an imaginary event.
- The opposite interjection **da'inai** marks the clause as describing an actual, real event.

Constructs with **da'i** are usually translated to English with so called auxiliary verbs such as *can/could, will/would, may/might, should* and *must*. Clauses with **da'i** in English are said to be in *subjunctive mood*.

Omitting **da'i** or **da'inai** makes the sentence clear only from context which is usually quite

transparent. That's why **da'i** or **da'inai** is not obligatory. We use it for clarity when needed.

Clauses with **da'i** often include **fau**:

> **da'i mi gleki fau lo nu mi ponse lo megdo be lo rupnu**
> *I would/could be happy if I had one million dollars.*

> **fau** = *in the event/situation/world of ...*
> **megdo** = x_1 *is a million of* x_2

Here the event inside **fau** is equally imagined together with **mi gleki**. And here is the reverse example:

> **da'inai mi gleki fau lo nu mi ponse lo megdo be lo rupnu**
> *Having one million dollars I am happy.*

A good example of **mo** and **da'i**:

> **mo da'i fau lo nu mi cusku zo nai**
> *What if I say "no"?*

Probabilities

Suppose you come home and hear someone scratching. You can say one of the following sentences:

> **fau da ti mlatu.**
> *This might be/possibly is a cat. It is possible that*

this is a cat.
(You keep several animals at home. So it might be your cat scratching but you are not sure.)
fau ro da ti mlatu.
this must be/certainly is the cat.
(You have a cat and such noise can be produced by only one object, that cat.)
fau so'e da ti mlatu.
This should be/probably is the cat.
(If you have a dog then it can also produce such sounds but your dog usually

doesn't do that so the cat is more likely.)

fau so'u da ti mlatu.
It is not probable that this is the cat.

fau no da ti mlatu
This can't be the cat. This mustn't be the cat. It is impossible that this is the cat.

Notice that we omitted **da'i** for brevity. But if we want to be explicitly clear about the events being imaginary **da'i** in these examples is to be put inside the **fau** clause:

1. **fau da'i da** denotes that the event in this clause *is possible, may/can*

possibly happen.

2. **fau da'i ro da** —
   the event *would
   necessarily happen.*

3. **fau da'i so'e da** —
   the event *is
   probable, will
   probably happen, is
   likely to happen.*

4. **fau da'i so'o da** —
   the event *is
   remotely probable,
   could/might happen.*

5. **fau da'i so'u da** —
   the event *is not
   likely, probably
   don't happen.*

6. **fau da'i no da** —
   the event *is not
   possible.*

The difference
between these is in the
number of imaginary
situations we take into
account. We don't
describe those
situations, we just
mark them as **da**
(*something*) letting the
context (or our
listeners) decide what
those situations are.

Words with possibility implied in their places

Some verbs have **da'i** implied in some of their places when you don't use **da'i** explicitly:

> **mi pacna lo nu do ba pluka sipna**
> *I hope you will have a pleasant sleep.*

> **pacna** = x_1 hopes for x_2 (possible event) with likelihood x_3 (number, by default **li so'a** i.e. close to 1)

> **mi kanpe lo nu do tsuku**
> *I expect you to arrive.*

mi kanpe lo nu do ba jinga vau li so'e

You'll probably win.

```
I expect
with a high
probability
that you
will win.
[literally]
```

mi kanpe lo nu mi cortu fau ro nu lo rokci cu farlu lo tuple be mi

I know for a fact that if a rock lands on my foot, it will hurt.

kanpe = x_1 *expects* x_2 *(possible event) with expected likelihood* x_3 *(a number from 0 till 1, the default*

*value is **li so'a**, i.e. near 1)*

Unlike **pacna** the verb **kanpe** doesn't necessarily implies hope or wish. It can describe impartial expectation, subjective evaluation of the probability of a situation.

> **cumki fa lo nu do jinga**
> *It is possible that you win.*
>
> **- xu ba carvi**
> **- cumki**
> *- Will it rain?*
> *- May be.*

cumki = x_1

(possible event) is possible, x_1 may, might occur, x_1 is a

maybe.

- xu ba carvi

- lakne

- Will it rain?

- Probably.

lakne = x_1

(possible event) is probable, likely

mi djica lo nu do jinga

I want you to win.

mi djica lo ka vitke fi la .paris.

I would rather visit Paris. I want to visit Paris.

djica = x_1 wants x_2 (possible

event)

mi te mukti lo ka vitke fi la .paris.
I will visit Paris. I intend to/I'm gonna visit Paris.

mi te mukti vitke fi la .paris.
I'm visiting Paris intentionally.

te mukti = x_1 *is motivated to bring about goal x_2 (possible event) by motive x_3 (event)*

mi kakne lo ka limna
I am able to swim.

mi pu kakne lo ka gunka

I could work. I was able to work.

kakne = x_1 can, is able to do x_2 (property of x_1)

x2 describes a possible event.

mi te javni lo ka gunka

I should work.

te javni = x_1 should/ought to do x_2 (property of x_1) under rule x_3 (proposition)

x2 describes a possible event.

do na te javni lo ka tcidu

You don't have to read.

na te javni = x_1

doesn't have to, needn't to do x_2

(property of x_1)

under rule x_3

(proposition)

x2 describes a possible event.

mi nitcu lo

ka sipna

I need to

sleep.

nitcu = x_1 *needs*

x_2 *(possible*

event)

mi bilga lo

ka gunka

I must

work. I am

obliged to

work.

bilga = x_1 *must,*

is obliged to do x_2 (property of x_1)

mi curmi

lo nu do

citka ti

I allow you

to eat this.

curmi = x_1

allows/permits x_2

(possible event)

mi tolcru

lo nu do

nerkla

I forbid you

to enter.

{gl|tolcru|x1

forbids/prohibits x2

(possible event)}}

xu do stidi

lo nu mi

sipna

Do you

suggest

that I

sleep?

{gl|stidi|x1 makes a

suggestion x2 (possible

event}}

mi na birti lo nu

ra volve

I'm not sure if he

returns.

birti = x_1 is certain/sure/positive/convinced that x_2 (possible event) is true

mi senpi lo nu ra kakne lo ka limna

I doubt that he can swim.

senpi = x_1 doubts that x_2 (possible event) is true

senpi is the same as **na'e birti**

mi se xanri lo nu mi pavyseljirna

I imagine myself being a unicorn. I could be a unicorn.

se xanri

x1 imagines x2 (possible event)

> **xanri**
>
> *x1 (possible event) is imagined by x2*

Lesson 7. Conjunctions in detail

But …

> **lo xance be do cu melbi .i je ku'i lo voksa be do cu mabla**
>
> *Your hands are nice. But your voice is ugly.*

> **xance** = x_1 *is a hand (of x_2)*
> **voksa** = x_1 *is a voice (of x_2)*

Actually *but* is the same as *and* although it adds a flavor of contrast.

In Lojban we just use **je** and then add the interjection **ku'i** that will give us the necessary contrast.

Logical connectives

There are four basic words for logical connectives:

- **ja** = *and/or*
- **je** = *and*
- **jo** = *only if*
- **ju** = *whether or not*.

These are used for connecting parts of compound verbs. For connecting nouns we use similar connectives: **.a**, **.e**, **.o**, **.u**. So instead of the letter **j** we have a dot (pause) here.

> The modern trend is to use **ja**, **je**, **jo**, **ju** for connecting nouns too.

Placing **na** before a connective negates what is to the left of it.

Placing **nai** after a connective negates what is to the right of it.

So if we take two parts: A and B then placing **ja** between them gives **A ja B** which means *A or B or both of them* while e.g. **A jo nai B** means *either A or B but not both*.

This system gives results that are purely logical but might not look intuitively usable. Some of them are used seldom. It is no need to try to understand why they produce such results so you can just learn them by rot.

Here are the basic operators combining two words: *this* and *that*.

- **ti .a ta** = *this and/or*

that, this or that or both of them

- **ti .e ta** = *this and that, both this and that*
- **ti .o ta** = *both or none*
- **ti .u ta** = *this, and perhaps that*

Some other more rare conjunctions:

- **ti .a nai ta** = *this if that, this is the exclusive condition for that*
- **ti .e nai ta** = *this and not that, this but not that*
- **ti .o nai ta** = *either this or that*

- **ti na .a ta** = *this only if that*
- **ti na .e ta** = *not this but that*
- **ti na .e nai ta** = *neither this nor that (none)*
- **ti na .u ta** = doesn't influence *(not this, but perhaps that)*
- **ti na .u nai ta** = doesn't influence *(not*

this, but perhaps that)

- **ti se .u ta** = *perhaps this, and that*
- **ti se .u nai ta** = *perhaps this but not that*

ju and **.u** meaning *whether or not* just emphasize that the second value does not affect the truth of the sentence.

As you can see some produce synonymous results and **se** is used only for **ju / .u** because in other cases it leads to no effect in meaning.

Logical connectives for sentences

.i je joins two sentences with a logical *and*, showing that two sentences are part of one thought and that both sentences are true.

> **la rome'os cu prami la djuliet .i je la djuliet cu prami la rome'os**
> *Romeo loves Juliet and Juliet loves Romeo*

means that both statements are true, i.e. Romeo and Juliet love each other.

The same is applicable to other conjunctions:

> **la rome'os cu prami la djuliet .i ja la djuliet cu prami la rome'os**
> *Romeo loves Juliet and/or Juliet loves Romeo*

means that one of them loves the other, and perhaps both of them do.

la rome'os cu prami la djuliet .i <u>jo nai</u> la djuliet cu prami la rome'os
<u>Either</u> Romeo loves Juliet <u>or</u> Juliet loves Romeo.

Here either Romeo loves Juliet (but Juliet doesn't love him), or Juliet loves

Romeo (but he doesn't love her).

la rome'os cu prami la djuliet .i <u>ja nai</u> la djuliet cu prami la rome'os
Romeo loves Juliet if Juliet loves Romeo.

means that if Juliet loves Romeo, he definitely loves her, but he may love her anyway (the only outcome which is impossible is that

Juliet loves Romeo but he doesn't love her).

la rome'os cu prami la djuliet .i j<u>o</u> la djuliet cu prami la rome'os *Romeo loves Juliet only if Juliet loves Romeo.*

means that if Juliet loves Romeo, he loves her, and if she doesn't love him, he doesn't love her.

la rome'os cu prami la djuliet .i ju la djuliet cu prami la rome'os

Romeo loves Juliet whether or not Juliet loves Romeo.

.i mi djuno lo du'u do vi zvati .i na ja mi dasni no da

You read the first sentence: *I know that you're here.* Then you get the conjunction:*If that were the case, I would wear nothing.* You didn't know in advance that the first sentence was going to be an *if*. This is unlike the case in English (and natural languages

in general), where the *if* comes right at the start of the first sentence, and gives you plenty of warning about what's coming up.

Notice how we Lojbanize the name "Romeo": combination "eo" is impossible in Lojban so we used "e'o" and added a consonant in the end for his name.

Logical connectives for nouns

> **mi ralte lo pa gerku .e lo re mlatu**
> *I've got a dog and two cats.*
> I keep one dog <u>and</u> two cat. [literally]

This is actually a contracted way of saying:

> **mi ralte lo pa gerku .i je mi ralte lo re mlatu**
>
> *It is true that I have a dog. It is true that I have two cats.*
>
> **mi ba vitke lo mamta .a lo tamne**
>
> *I'll visit the mother or the cousin.*

This leaves open the possibility that I will get round to visiting both of them at some point. If I want to say that that I will visit either the mother or the cousin but not both, I need **.o nai** (*either/or*). This is actually a negative *only if*, which sounds confusing, but is quite simple. *If and only if I do not visit the cousin,*

I will visit the mother implies that, if I visit the cousin, I will not visit the mother, and vice versa; so I will visit either the mother or the cousin but not both. So we have

> **mi ba vitke lo mamta .o nai lo tamne**
> *I'll visit either the mother or the cousin.*

As **.o** means *only if*, I *will visit the mother if (and only if) I visit the cousin* would be **mi ba vitke lo mamta .o lo tamne**. If, for some strange reason, I want to use simple *if* and say that I will definitely visit the mother if I visit the cousin, but I may visit her anyway, I need another negative: **.a nai**:

> **mi ba vitke lo mamta .a nai lo tamne**
>
> **ja nai** = *if*
>
> **.a nai** = *if (for nouns)*

And **.u** means *whether or not*. In this way I can say

> **mi ba vitke lo mamta .u lo tamne**
> *I'll visit the mother whether or not I'll visit the cousin.*

> **mi nelci la bob .e nai la alis**
> *I like Bob but not Alice.*
> I like Bob
> and not
> Alice
> [literally]

This is how we can say *but not*. Thus we negate the noun after **.e**. We can even say **.e nai ku'i** adding a

flavor of contrast for the second noun.

It is possible to do the reverse: to negate the noun <u>before</u> **.e**. In this case we use the particle **na** before **.e**:

> **mi nelci la alis na .e la Bob**
> *I don't like Alice but I do like Bob.*
> ```
> I like
> Alice not
> and Bob
> [literally]
> ```

The second sentence means the same as the first although it may sound a bit weird for English speakers ("I like Alice not…") so you might prefer the first version — **mi nelci la bob .e nai la alis** or even **mi nelci la bob .i mi na nelci la alis**. And the last case:

**mi nelci la
alis na .e
nai la Bob**
*I don't like
neither
Alice nor
Bob*

Logical connectives for compound verbs

As we've seen before, we can put two or more verbs into a main verb, getting a compound verb (tanru), and optionally convert it into a noun using **lo** or similar particles:

lo xunre cukta
a red book

The first element of the compound verb modifies or restricts the second element, in some unspecified way. What happens if there are three or more elements, though? Like many other features of

Lojban grammar, tanru follow a left-grouping rule, which means that the element on the far left modifies the next one, then those two together modify the next, and so on. For example,

> **lo melbi xunre cukta** means *a beautifully red book*

But usually we need something like *beautiful red book*. Thus, we have two adjectives. We need to connect them together like: *beautiful <u>and</u> red book*.

The simplest method for that is just to use a logical conjunction and say

> **lo barda je xunre cukta**
> *A big red book.*
> A (big <u>and</u> red) book. [literally]

la .alis. cu nelci ro lo xajmi ja melbi nanmu
Alice likes men who are funny or handsome (or both).
Alice likes all (funny and/or beautiful) man [literally]

Let's say that Alice finds the qualities of humor and good looks attractive but incompatible — she likes Woody Allen and Steven Seagal, but thinks a mixture of the two would be just too much. We would then say

> **la .alis. cu**
> **nelci ro lo**
> **xajmi jo nai**
> **melbi**
> **nanmu**
> *Alice likes all*
> *(either funny*
> *or beautiful)*
> *man*
> Alice likes
> men who are
> either
> funny or
> handsome
> (but not
> both).
> [literally]

On the other hand, Jasmine is turned on by funny men, and doesn't care about their looks at all. Woody Allen would do fine, but Steven Seagal wouldn't stand a chance unless he could tell a few jokes (funnier than Schwarzenegger's, preferably.) What we need here is

la .jasmin. cu nelci ro lo xajmi ju melbi nanmu

Jasmine likes all (funny whether or not beautiful) man.Jasmine likes funny men, whether they are handsome or not.

Warning: Be careful not to confuse connecting nouns and parts of compound verbs:

mi ba vitke lo mi mamta je lo mi speni is not the

same as **mi ba vitke lo mi mamta je speni**.

The first phrase uses the modern trend of using **je** for connecting nouns.

The first phrase means that I will visit my mother and my spouse (probably on separate occasions). The second means that I will visit a person who is both my mother and my spouse.

Logical connectives for clause tails

pu ku mi kelci lo fudbolo gi'e cu klama lo zdani gi'e pinxe lo ladru
I played football, went home, drank milk.

gi'e connects several clauses into one with some nouns shared. Look at this:

.i la .bob. pu klama la .kalifornias. .i je la .bob. pu stali la .kalifornias. ze'a lo nanca be li ci
Bob goes to California, and Bob stays in California during three years.

We can make this example more concise by merging the two sentences into one:

> **.i la .bob. pu klama la .kalifornias. <u>gi'e</u> pu stali la .kalifornias. ze'a lo nanca be li ci**
> *Bob went to California, and stayed in California for three years.*

We're keeping the subject who does or is something constant, and changing the rest of the sentence.

The first nouns coinciding all those sentences are called "the head of the clause", and the remaining part, the main verb with its trailing nouns, is called

"the tail of clause". To separate them we use **gi'e** which has the same final vowel as in **je** and thus means *and*. Other connectives for clause tail are **gi'a** for *and/or*, **gi'onai** for *either ... or*, **gi'u** for *whether or not* etc. so they have the same vowel as connectives of **ja** series.

Choice questions

There is another type of *or* that we find in questions.

> **— xu do pinxe lo tcati .o nai lo ckafi?**
> **— je'u**
> — *Will you drink tea or coffee?*
> — *Yes.*

That's a weird but a perfectly reasonable answer: *Yes, I will drink tea or coffee.*

Why this happens is because *or* has several meanings in English:

1. *A or B* can mean *either A, or B but not both*. We use **jonai** here.
2. *A or B* can mean *A or B or both*. We use **ja** here.
3. *A or B?* can be a question meaning *select from A and B, which of them do you choose?* We use **ji** here.

Thus in the last case we use a separate question conjunction **ji**:

> **— do pinxe lo tcati ji lo ckafi?**
> *— Will you drink tea or coffee?*

Possible answers:

> **lo tcati .e lo ckafi**
> *Tea and coffee.*

> **lo tcati**
> *Tea.*

> **lo ckafi**
> *Coffee.*

However, it is also possible to use conjunctions when replying:

> **.e** — *Both* (the first and the second item is chosen)

> **.e nai** — *The first one (tea)* (the first but not the second one is chosen)
> **na .e** — *The second one (coffee)* (not the first but the second one is chosen)

> **na .e nai** — *Neither* (not

> the first and
> not the
> second one
> is chosen)

If you say **.e**, you are saying the sentence **.i do pinxe lo tcati .e lo ckafi** — in other words, you will drink both. If you say **.e nai**, you are using the *and not* conjunction, which negates what follows it: so you are saying *I will drink tea, <u>and not</u> coffee.* If you want to negate what went before the conjunction instead, you use **na .e** and you are saying *I will drink <u>not</u> tea,* and *coffee* (or, as is more usual in English, *not tea, but coffee*) — which means that you are picking only coffee. If you want neither, you can negate both sides: **na .e nai**. You can still be unhelpful with your response: **.a** would leave us right where we started, for

instance. But at least this way you have a logically consistent way of picking alternatives presented to you.

You can ask questions in the same way about the other kinds of conjunctions we have looked at. The interrogative conjunction for clause tails is **gi'i**, for compound verbs - **je'i**, for sentences — **.i je'i**.

> The modern trend is to use **ji** for compound verbs too and **.i ji** for sentences.

Indirect questions are achieved by using **ji kau**:

The waiter asks Jasmine and Alice **lo lanme ji lo bakni** = *lamb or beef?* Once

they answer, he knows whether they want to eat lamb or beef:

> **ba'o lo nu la .jasmin. .e la .alis. cu spusku vau lo bevri cu djuno lo du'u re ra djica lo ka citka lo lanme <u>ji kau</u> bakni**
>
> *Having Jasmine and Alice replied, the waiter knows whether they two want to eat lamb or beef.*

Forethought conjunctions

> **mi nelci la Alis na je la Bob**
>
> *I don't like Alice but I do like Bob.*
>
> `I like Alice not and Bob. [literally]`

The second sentence means the same as the first although it may sound a bit weird for English speakers ("`I like Alice not...`")

So if you don't like such linking of sentences hard to grasp or use you can either use the first sentence or use forethought conjunctions.

Forethought conjunctions are used to identify the logical relation between two terms by being placed in front of the first term, rather than in between the two.

> **.i mi djuno lo**
> **du'u do vi zvati**
> **.i na ja mi**
> **dasni no da**

The problem here is, the logical version of *if* <u>denies</u> what comes before it. So in effect, you're getting the first statement, quite normally, and then the surprise: *Either* that'*s not true, or* this *is true.* Things are just as bad for other conjunctions denying what comes before them:

> **mi nelci lo**
> **bakni na**
> **.e lo jipci**
> *I like not*
> *the beef,*
> *but the*
> *chicken.*

But look at what the Lojban is actually saying:

> *I like the beef —*
> *NOT! and the*
> *chicken.*

There was a vogue in the '90s of putting NOT! at the end of sentences in American English (see *Wayne's World*.) This was a joke, and the reason it was a joke is that saying a sentence isn't true *after you've already said it* isn't exactly being helpful.

So if we're going to use logical conjunctions in Lojban, and are obligated to pull NOT!-tricks like this, the Lojban listener can understandably get frustrated. Once again, though, Lojban has an answer. With forethought conjunctions, you can indicate the logical relationship between two terms <u>in front of</u> the first term. You still need a word separating the two terms, to show what is being logically

connected. But now you know in advance what that logical connection is.

If nouns are involved, the forethought conjunction is formed by placing the particle **ga** before the logical conjunction. The two nouns are then connected with the particle **gi**. So the forethought version of **mi .e do** is

ge mi gi do

Here, **ge** means that the two nouns coming up are connected with *and*, while **gi** indicates that what follows is the second noun in the relation.

The series is parallel to other connectives. It is **ga**, **ge**, **go**, **gu**.

The real usefulness of these forms comes out in the NOT!-conjunctions we've just

seen. If you want to give some warning when choosing the chicken instead of the beef, you can now say

mi djica <u>ge nai</u> lo bakni <u>gi</u> lo jipci

Forethought conjunctions can be followed by **nai**, just like their afterthought counterparts.

If you wanted to say *beef, not chicken*, you would put **nai** after the **gi**:

mi djica ge lo bakni gi nai lo jipci

If you're connecting clauses, as it turns out, you still use **ge** or their friends. If you don't follow **ge** + noun immediately by **gi** and another noun, then Lojban grammar assumes that you're connecting not nouns

any more, but clauses. So here is our forethought version of the problematic sentence:

> **.i ga nai**
> **mi djuno**
> **lo du'u do**
> **vi zvati gi**
> **mi dasni**
> **no da**
> *If I know*
> *that you are*
> *here, I will*
> *wear*
> *nothing.*

You'll notice that there is no second **.i** here. Two clauses connected by **ga nai** belong to the same sentence. What's coming up after the **gi** is a separate clause, so we don't need to separate it out with **.i**.

This can actually turn out handy in beating Lojban precedence:

> **.i la .flufis.
> cu ractu .i
> je ro lo
> ractu ze'i
> jmive .i la
> .flufis. se
> ni'i ze'i
> jmive**
> *Fluffy is a
> rabbit, and
> rabbits live
> not long.
> Fluffy
> therefore
> lives not
> long.*

We should be able
from that to say

> **.i la .flufis.
> cu ractu .i
> je ro lo
> ractu ze'i
> jmive .i se
> ni'i bo la
> .flufis. ze'i
> jmive**

Right? Actually, no we
can't: **bo** has the
function of connecting
sentences through
prepositions, because
it connects sentences

on its own. And when it does, it connects them tighter than **.i je** does. This means that **.i se ni'i bo** connects only to the immediately preceding sentence — not to the preceding sentence pair! So Fluffy's death is presented as a consequence of rabbits not living long — not a consequence of <u>both</u> rabbits not living long <u>and</u> Fluffy being a rabbit.

However, if we put the two clauses in a single sentence, then none of this is an issue: the conclusion will attach to both clauses, but will still attach to a single sentence:

> **.i g<u>e</u> la .flufis. cu ractu <u>gi</u> ro lo ractu ze'i jmive <u>.i se ni'i bo</u> la .flufis. ze'i jmive**

There is also a forethought conjunction for compound verbs: these are **gu'a**, **gu'e**, **gu'o**, gu'u**. And the second compound part is connected with** gi**. So if we want to say that Alice fancies men that are, if funny, then also handsome, the afterthought version is**

> **la .alis. cu nelci ro lo melbi na ja xajmi nanmu**

To make this slightly (but only slightly!) more comprehensible, we can put this in forethought mode:

> **la .alis. cu nelci ro lo <u>gu'a nai</u> melbi <u>gi</u> xajmi nanmu**

There are no forethought versions of clause tail

conjunctions. In practice, however, two clauses connected by **ge** can be clause tails just as easily as a full clause: there is no real distinction in meaning between the two.

New conjunction system

There is an experimental new conjunctions system that is gaining popularity. It doesn't contradict the standard system once you know the correspondences.

In the new system **ja**, **je**, **jo**, **ju** are used for connecting both nouns and verbs.

ja cu, **je cu**, **jo cu**, **ju cu** are used to connect clause tails.

In each pair of columns you can see the new conjunctions to the left and the

standard conjunctions to the right:

tanru			*nouns*	in clause tails
ja	ja	.a	ja	gi'a	ja cu
je	je	.e	je	gi'e	je cu
je'i	ji	ji	ji	gi'i	ji cu
jo	jo	.o	jo	gi'o	jo cu
ju	ju	.u	ju	gi'u	ju cu

The new system has fewer words to remember that's why it is gaining popularity.

Also you can use such conjunctions as **jo'u** and **joi** with it.

Lesson 8. Structuring text

Emphasis
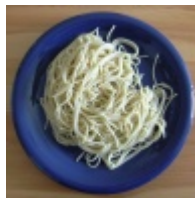
spageti

… is spaghetti

To emphasize a word we would use stress in

spoken English, and italics or capitals in written English.

In Lojban we use a separate word **ba'e**.

Like interjections, this word can go pretty much anywhere in a Lojban sentence, but it emphasizes the word that <u>follows</u> it, rather than what precedes it.

> **mi ba'e nelci lo spageti**
> *I do like spaghetti.*

Paragraphs and separating sentences

ni'o works exactly like **.i** but starts a new paragraph. Paragraphs are usually associated with new topics.

It is normal to use in speech only **.i** to separate sentence but you might want to use

ni'o especially in a written text to structure it.

to ... toi for parenthetical remarks

Comments that we place inside parentheses in English text are formed using the particle **to** instead of the left parenthesis and **toi** instead of the right parenthesis:

> **ti poi <u>to</u> <u>vi'onai do</u> <u>mi na</u> <u>djica lo</u> <u>drata toi</u> plise cu fusra**
> *This (no, I don't want another one!) apple is rotten.*

> **ti** = *this*
> **djica** = *to desire*
> **drata** = *to be different from ...*
> **plise** = x_1 *is an*

> *apple*
> **fusra** = x_1 *rots*
>
> *or decays with agent* x_2

Such parenthetical remarks can go anywhere interjections can — meaning pretty much anywhere in a Lojban sentence. With parentheses, just like with quotes, you need to know where the parenthesis starts, and where it ends.

Advanced interjections

Discursives

A special group of interjections carry information about how a particular word or clause fits in with everything else you're saying.

We've seen one such interjection already: **ku'i**, which means *but, however*. This means that whatever it is attached to contrasts

with what you've been saying. It usually applies to a whole sentence (so normally you'll see it next to **.i**), but it can apply to a single word: **.abu na .e <u>ku'i</u> by.** is the proper Lojban for *Not A, <u>but</u> B*. Let's study other interjections.

> **.i mi venfu do doi melbi .e <u>ji'a</u> lo cmalu gerku pe do**
> *I'll get you, my pretty — and your little dog, <u>too</u>!*

ji'a means *additionally, also*. This means that whatever it is attached to <u>adds</u> on to what you've been saying.

> — **mi si'a nelci do**
> — *I too like you.*
> (although, this is not perfect English here)
> — **mi nelci lo mlatu**
> — **mi si'a go'i**
> — *I like cats.*
> — *Me too.*

si'a means *similarly, too.*

In some cases, there is nothing to either contrast or add to what you've said, because what you've said is the unique relevant case. In that context, you would use *only* in English. Because *only* is somewhat clumsy to express in terms of pure logic, Lojban allows another discursive as its

equivalent: **po'o**. So

> **lo mlatu po'o cu nelci lo mlatnipa**
> *Only cats like catnip.*

> **lo mlatnipa** = *a cat-intoxicating catnip*

If you wanted to say that something <u>is not</u> the only applicable case, then of course you'd say **po'o nai**.

> **la .alis. cu nelci ro lo xajmi ja melbi nanmu**
> *Alice likes men who are funny or handsome (or both).*
> Alice likes all (funny <u>and/or</u> beautiful) man [literally]

This sentence is still true even if Alice also likes men who are *not* funny or handsome. In natural language, social conventions means you wouldn't normally say such a sentence in that case, because it would be misleading. In Lojban in order to be more precise 9when we want that) we can add **po'o**:

> **la .alis. cu nelci fe po'o lo xajmi ja melbi nanmu**
> *Alice likes only men who are funny or handsome (or both).*

Or we can rephrase this using **da**:

ro da poi nanmu gi'e se nelci la .alis. cu xajmi ja melbi
For everyone who is a man and is liked by alice it is true that he is funny and/or handsome.

"*Kidding...*" and sarcasm

Interjections. Kidding and sarcasm

zo'o	*Kidding,* saying not-seriously, humorously	**zo'ocu'i**	saying dully	**zo'onai**	Seriously, *Joke apart*
xo'o	Sarcastically saying	**xo'ocu'i**	saying without sarcasm	**xo'onai**	Sincerely saying

- The interjection **zo'o** is used just like the smiley-face in e-mail, to indicate that you're being humorous when saying something, and it's used for

much the same reason.

- The interjection **xo'o** is used the same way but for expression sarcasm.
- Correspondingly, **zo'onai** is used to show that the information is not a joke and **xo'onai** is for expressing sincerity.

In these two communication systems, it's difficult to work out whether someone is joking or not — in e-mail, because you can't hear the tone of voice that gives things away; in Lojban, because Lojban doesn't want to leave things to natural-language–based intuition when you want to explicitly express something (and also because it's used a lot on e-mail anyway). So hints like this are always

welcome, and
frequently taken
advantage of.

Fixing errors
in speech

When screwing a
sentence up, knowing
how to correct yourself
is a good idea. You can
use two words to
delete your previous
words:

- **si** — deletion:
  Deletes last word
  only.
- **sa** — deletion:
  Deletes back until
  next cmavo spoken.

The function of them is
obvious: they delete
words as if they have
never been spoken.
They do not work
inside certain quotes
(all quotes except
lu...li'u), though, as
that would leave it
impossible to quote
these words. Several **si**
in a row deletes
several words.

When you make a mistake while speaking (factual or grammatical) in English you don't normally bother to correct it even if you realize you made a mistake in the first place. That's because English is fairly redundant (for this very reason!). In English if we catch ourselves making an error, we stumble out a correction that will do the trick, without going into details like how many words should be cancelled: context usually helps us. So if I say

> *I took and read an English dictionary. Er, Lojban dictionary.*

context and common sense dictate that *Lojban dictionary* is meant to replace

English dictionary. But what if it was meant to replace *took and read an English dictionary*? We wouldn't normally care, in natural languages.

But Lojban allows you to be more precise about what words you are correcting.

si erases the immediately preceding word. If you want to erase two words in a row, you say **si si** after them. So the correction above would be in Lojban

> **.i mi te benji je tadni lo glico valsi si si lojbo valsi**
> **valsi** = x_1 *is a word with the meaning x_2 in language x_3*

The problem with **si** is, you have to count words. This can get tedious, and you

shouldn't have to keep a transcript of your words when you want to correct yourself.

The other correction word Lojban offers is somewhat more helpful: **sa** takes the word following it, which starts the clause to serve as the correction. It then goes back in the sentence, looking for the last time you used a clause starting with the same word or another word of the same class (selma'o). Once it finds the last such clause, it replaces all text from that clause up to **sa** with the clause following **sa**. For example:

> **.i mi te benji gi'e tadni lo sa .i mi tadni lo lojbo valsi**

The correction following **sa** is a

sentence; you know that, because the first word after **sa** is the sentence marker, **.i**. So the sentence following **sa** replaces the current sentence up to and including **sa**. Or consider:

> **.i mi mrilu fi do
> ca lo prulamdei
> sa ca lo reldei**

The correction is **ca lo reldei** — *on Tuesday*. So what it replaces is everything from the last clause beginning with **ca**: **ca lo prulamdei** — *yesterday*. The English version would be *Yesterday I mailed you... actually, it was Monday.*

Dealing with misunderstanding

> — .i mi pu
> zi te vecnu
> lo flokati
> — .i lo

flokati ki'a

— *I just bought a flokati.*
— *Flokati, huh?*

ki'a = *interjection inquiry: confusion about something said. "Huh? Whaat?? (confusion), pardon?"*

When you don't understand what someone has just said — whether because you don't get what they were referring to, or you don't know the word, or the grammar confused you — you can repeat the word or clause you didn't get, and add **ki'a** as a plaintive request for clarification (so it's even better than *Huh?*, because you can point out exactly what made you say *Huh?*)

Here is a dialogue.

> — **mi nelci lo kalci**
> — **ki'a ?**
> — *I like shit.*
> — *Whaat???*

> **Note:** Since **zo** quotes any word following it — <u>any</u> word — it turns out that **zo ki'a** doesn't mean *zo? Huh?* at all, but *The word **ki'a***. To ask *zo? Huh?*, you'll have to resort to **zo zo ki'a**.

Lesson 9

Terminology in clauses

Let's describe the structure of Lojban clause (**bridi**). The main verb, or *predicate* (**selbri** in Lojban) describes relationships of nouns. It can be represented as a single *verb word*

(**selbrivla**) or as a *compound verb* (**tanru**).

Here are some examples of nouns and main verbs.

> **ti ladru**
> *This is milk.*

Here **ti** is a noun and **ladru** is the main verb consisting of one verb word.

> **lo mlatu cu sutra pinxe**
> *A cat quickly drinks.*

Here **lo mlatu** is a noun (sumti) and the compound verb **sutra pinxe** works as the main verb (selbri).

Also you can add prepositions (**sumtcita**) like **ca**:

> **ra ca citka**
> *He/she now eats.*

So in other words.

> **bridi** = optionally one or more **sumti** + one **selbri** + one or more **sumtcita**

or in English

> *clause* = optionally one or more *noun*s + *one main verb of the clause* + one or more *preposition*s.

tanru, or compound verbs consist of two or more verb words. Each left verb word is called **seltau** compared to the right one called **tertau**.

Morphology of verbs

Verbs (**selbrivla**) are divided into 4 groups by their form:

1. **gismu**, or *root-words* are main

building blocks of Lojban vocabulary. gismu are easy to recognise, because they always have five letters, in the form CVCCV — e.g. **ladru, gismu, sumti**, orCCVCV — e.g. **mlatu, cmene, bridi, klama**where C=consonant and V=vowel.Verbs in the following forms are created when there is no appropriate verb in gismu list:

2. **lujvo**, or *compound words*. They are created from short building blocks (called **rafsi**) used for mnemonic purposes. Examples are: **retsku**, **kargau**

3. **zi'evla**, or *free words*. They are usually created for specific concepts and things like *igloo* (**iglu** in Lojban), *spaghetti* (**spageti**

in Lojban).

4. **cmevla**, or *name words*.

Task. Close the right part of the table. Which of the following Lojban words are **selbrivla**, **cmevla** (remember, they always end in a consonant), neither?

Note: I've the full stops are removed in the **cmevla** below to make the task a bit more tricky ;).

lojban	cmevla
karce	selbrivla
robin	cmevla
mi	cmavo
mlatu	selbrivla
cukta	selbrivla
fa'a	cmavo
to'o	cmavo
ian	cmevla
ba	cmavo
spageti	selbrivla

Masses and loi

loi prenu cu sruri lo

jubme
People surrounded the table.

> **jubme** = x_1 *is a table*

We can't say **lo prenu cu sruri lo jubme** because it's impossible that each person can surround the table.

In fact the mass (crowd) of people surrounded it. Thus, we say **lo gunma be lo prenu cu sruri lo jubme**.

There is a shortcut for **lo gunma be lo** wich is **loi**.

> **lo gunma be lo prenu cu sruri lo jubme loi prenu cu sruri lo jubme**
> *The mass of people surrounded*

the building.

Carrots alone and carrots together

🥕

lo najgenja
a carrot

Consider a sentence:

> *Three carrots weigh 60 grams.*

Does it mean that each carrots weighs 60 grams or they weigh 60 grams if taken together?

In Lojban we can easily distinguish between these two cases:

> **ro lo ci najgenja cu grake li 60**
> *Each of three carrots weigh 60 grams.*

loi ci najgenja cu grake li 60

Three carrots weigh 60 grams in total.

(so that every carrots weighs 20 grams on average)

najgenja = x_1 *is a carrot*

grake = x_1 *weighs x_2 grams*

kiltygrake = x_1 *weighs x_2 kilograms*

As you can see there is an important difference between describing one object of a mass or describing the mass as a whole.

As we already know **lo ci najgenja** just means *three carrots*:

> **ko dunda**
>
> **lo ci**
>
> **najgenja**
>
> *Give me*
>
> *three*
>
> *carrots.*

And

> **ko dunda**
>
> **pa lo ci**
>
> **najgenja**
>
> *Give me*
>
> *one carrot*
>
> *out of those*
>
> *three.*

Existing things: "*any*", "*the*", "*a*"

Here is the difference between **lo** and **da poi**:

> **mi nitcu lo mikce** = *I need a doctor (any doctor)* (implying "any doctor will do").
>
> **mi nitcu da poi mikce** = *There is a doctor whom I need*.

We looked at **lo**, **zo'e** and **da** before. Here is a more complete expalanation.

- **da poi** refers to objects that exist. **da** always refers to the same object or event when used more than once in the same sentence or in several sentences connected to each other using connectives like **ja**, **ba bo** and their friends. So if I say **da klama lo barja .i je da fenki** you can assume I'm referring to the same man in both sentences.
- **lo** simply converts verbs to nouns. **lo** is similar to **zo'e noi** because it actually means *someone who* or *something, which*. As it is based on **zo'e** it can refer to different objects every time is used.

There are actually

three words in **da** series: **da**, **de**, **di**. Use them if you need to refer to different objects in one discourse:

> **ci da poi gerku cu batci re de poi nanmu** *Three dogs bite two men.*

If you need more such words in one discourse add a suffix **xi** to them and then any number (which we can call an index).

Thus,

- **da xi pa** is the same as simple **da**,
- **da xi re** is the same as **de**,
- **da xi ci** is the same as **di**
- **da xi vo** is the fourth "something" and so on...

Dropping da

pa mlatu is the same as **pa da poi mlatu** and thus means *there is one cat*. The same is true for other numbers and verbs: not using **lo** is equivalent of using **da poi**. Compare:

> **lo re mlatu cu pinxe lo ladru**
> = *Two cats drink milk.*
> **re lo mlatu cu pinxe lo ladru**
> = *Two of cats drink milk.*
> **re mlatu cu pinxe lo ladru**
> = *There are two cats who drink milk.*

Every time you use a number+verb a new **da** with new index is implied so

> **re mlatu cu viska re prenu**
> is the same as **re da poi mlatu cu pinxe re de poi**

prenu (notice **da** and **de**).

Another example:

re bruna be mi cu clani means *I have two brothers and they are tall.*

clani = x_1 *is long/tall*

Topic and comment. zo'u

Sometimes it is useful to show the topic of a clause and then say a comment about it:

lo finpe zo'u mi nelci lo salmone
As for fish I like salmon.

zo'u ends the topic and starts the comment of the clause.

zo'u is more useful

when a pronoun like **da** is defined in the topic and then used in the comment:

> **da zo'u mi viska da**
> *There is a thing such that I see it.*
>
> **da poi gerku zo'u mi nelci da**
> *For each ting that is a dog: I like it.*
> *I like all dogs.*
>
> **da de zo'u da viska de**
> *There is **da** and **de** such that **da** sees **de**.*

The two pronouns **da** and **de** tell us that there are two things which stand in the relationship that one sees the other. It might

be the case that the supposed two things are really just a single thing that loves itself: nothing in the sentence rules out that interpretation, which is why the colloquial translation does not say *Somebody sees somebody else.* The things referred to by different pronouns of **da** series may be different or the same.

It is perfectly okay for these pronouns to appear more than once in the main clause:

> **da zo'u da prami da**
> *There is **da** such that **da** loves **da**.*
> *There is someone who loves himself/herself.*

It is not necessary for a pronoun to be the direct noun of the the main verb:

da zo'u lo gerku pe da cu viska mi

There is da such that the dog of them sees me. Somebody's dog sees me.

Scope

ci da poi gerku cu batci re de poi nanmu

Three dogs bite two men.

The question raised here is, does each of the dogs bite the same two men, or is it possible that there are two different men per dog, for six men altogether? If the former interpretation is taken, the number of men involved is fixed at two; but if the latter,

then the speaker has to be taken as saying that there might be any number of men between two and six inclusive. By using **zo'u** we can make our sentence more clear:

> **ci da poi gerku re de poi nanmu zo'u da batci de**
> *For three **da** which are dogs, for two **de** which are men: **da** bites **de**.*

Here we see that each of the dogs is said to bite two men, and it might be different men each time; a total of six biting events altogether.

How then are we to express the other interpretation, in which just two men are involved? We cannot just reverse the order

of variables in the prenex to

> **re de poi nanmu ci da poi gerku zo'u da batci de**
> *For two **de** which are men, for three **da** which are dogs, **da** bites **de***

for although we have now limited the number of men to exactly two, we end up with an indeterminate number of dogs, from three to six. The distinction is called a "scope distinction": in the first example **ci da poi gerku** is said to have wider scope than **re de poi nanmu**, and therefore precedes it in the prenex. In the second example the reverse is true.

To make to scope

equal we use a special connective **ce'e** connecting two nouns.

> **ci da poi gerku ce'e re de poi nanmu cu batci**
> *ci gerku re nanmu cu batci*
> *Three dogs [plus] two men, bite.*

which picks out two groups, one of three dogs and the other of two men, and says that every one of the dogs bites each of the men. The second Lojban version uses forethought.

"*any*" and "*some*" in examples

The words "any" and "some" are translated to Lojban using **da poi** or **lo**. Here are the most important meanings of these

words. There is no need in memorizing the English names of those cases (like "irrealis"). Lojban is simple as you can see in the translations:

- Specific known:

  da pu fonjor ne .i ko smadi lo du'u da me ma kau *Somebody called. Guess who?*

- Specific unknown:

  mi pu tirna da .i ku'i

mi pu na kakne lo ka facki lo du'u da mo kau

I heard something, but I couldn't tell what it was.

- Irrealis:

  .ei do troci bu'u lo drata

  You must try somewhere else.

- Question:

xu da do pu junga u de
Did anybody tell you anything about it?

- Conditional antecedent:

fau da'i lo nu do viska su'o prenu vau, ko mi ba zi sai junga u
If you see anybody, tell me

immediately.

- Comparative:

  la .djon. cu zmadu ro da lo ka clani
  John is taller than anybody.

- Direct negation:

  la .djon. pu na viska su'o prenu
  John didn't see anybody.

- Anti-morphic:

  mi jinvi lo du'u naku da djuno lo du'u ma kau danfu *I don't think that anybody knows the answer.*

- Anti-additive:

  lo banxa catni cu rivbi lo ka

jdice da
The bank avoided taking any decision.

- Free choice:

  ro da zo'u: .e'a do cinba da
  You may kiss anybody.

- Universal free choice:

  la .djon. pu cinba ro

ma'ur ni'u poi lo xunre ke'a kerfa
John kissed any woman with red hair.

- Generic:

  lo gerku cu se tuple vo da
  Any dog has four legs.

- Indiscriminative:

  mi na za'o djica lo ka

gletu lo na slabu be mi *I don't want to sleep with just anybody anymore.*

Four meanings of "*you*" in English

We've already seen two personal pronouns, **mi** and **do**, meaning *I* (or *me*) and *you*. However, *you* in English can mean four

different things:

1. The one person I'm talking to.
2. A number of people I'm talking to.
3. The person or people I'm talking to and some other person or people.
4. Anyone (as in *Money can't buy <u>you</u> love.*)

Lojban gets round the confusion between (1) and (2) by using numbers. The most common way

to express (2) is **ro do** = *all of you* (or Southern U.S. *y'all*). You can also use specific numbers: **lo re do** would mean *you two* (for example, once can start e-mails to their parents with **coi lo re do**). Notice that **re do** means *two of you* and **re lo ci do** means *two of you three*.

You can also use numbers with **ko**, e.g. **ro ko klama ti** — *All of you, get over here.*

Case (3) is expressed by

the pronoun **do'o** — *you and someone else*. Case (4) is completely different: it's normally expressed by **ro da** = *all da* or **ro lo prenu** — *all persons*, but often you can just miss it out altogether (or place **zo'e** in that place).

"*we*" — different ways of saying that

> **mi'ai** = *I and at least one other*

person (corresponds to English "we")

The word *we* (**mi'ai**) is vague. Sometimes we might want to use more precise words:

mi'o = *you and I*
mi'a = *we without you*
ma'a = *you and I and another/others*

Unlike English

some languages have separate words for that too. Not surprisingly, Lojban has such words too, although you are always free to revert back to **mi'ai**, which might be more comfortable sometimes.

> **mi** = *I or the speakers*

Oddly enough, **mi** can also mean *we*. Lojban makes no distinction between singular and

plural by default. So if several people are speaking all together, **mi** (which refers to the one or more speakers) is perfectly correct for *we*. In practice, you'll usually get **mi** used like that when one person is presuming to speak (or more often, to write) on behalf of others.

Some examples:

> **mi prami do**
> *I love you.*

mi'a penmi do ti'u li ci
We'll meet you at three o'clock.

ma'a remna
We are all human.

mi djica lo nu do cliva
We want you to go away.

mi'ai prami la .bob.
We love Bob.
(The sentence just states there are several people loving Bill including the speaker. It's not known if "we"

includes the listener)

Quoting text in different languages

The particle **zoi** is a quotation mark for quoting non-Lojban text. Its syntax is **zoi X. text .X**, where X is a Lojban word (called the delimiting word) which is separated from the quoted text by pauses, and which is not found in the written text or spoken phoneme

stream inside that quotation. It is common, but not required, to use the name of some letter, which corresponds to the Lojban name of the language being quoted:

> **zoi gy. John is a man .gy. cu glico jufra**
> *"John is a man" is an English sentence.*

where **gy.** stands for **glico**. Other popular choices of delimiting words are **.kuot.**, a

Lojban name which sounds like the English word *quote*, and the word *zoi* itself. Another possibility is a Lojban word suggesting the topic of the quotation.

Lojban strictly avoids any confusion between things and the names of things:

> **zo .bob. cmene la bob.**
> The-word "Bob" is-the-name-of the-one-named Bob.
> [literally]

zo .bab. is the word, whereas **la bab.** is the

thing named by the word. The particle **la'e** and **lu'e** convert back and forth between references and their referents:

> **zo .bab. cmene la'e zo .bab.**
> *The-word "Bob" is-the-name-of the-referent-of the-word "Bob".*
>
> **lu'e la bab. cmene la bab.**
> *A-symbol-for Bob is-the-name-of Bob.*

Last two examples mean the same. But this is different:

> **la bab. cu cmene la bab.**
> *Bob is the name of Bob.*

and says that Bob is both the name and the thing named, an unlikely situation. People are not names.

The particle **la'o** serves to mark non-Lojban names, for example the Linnaean binomial names (such as "Homo sapiens"), which are the internationally standardized names for species of animals and plants.

Internationally known names which

can more easily be recognized by spelling rather than pronunciation, such as *Goethe*, can also appear in Lojban text with **la'o**:

> **la'o dy. Goethe .dy. cu me la'o ly. Homo sapiens .ly.**
> *Goethe is a Homo sapiens.*

Using **la'o** for all names rather than Lojbanizing, however, makes for very cumbersome text. A rough equivalent of **la'o** might be **la me**

zoi.

Everything expressed in text should also be expressed in speech and vice versa. Therefore, there cannot be any punctuation which is not pronounced. This means that Lojban has a wide range of words to quote other words. All Lojban convert a text into a noun.

lu … **li'u** quote only text that is grammatically correct. To quote any Lojban text

we use **lo'u** ... **le'u** quote instead.

> **xu lo'u je le'u lojbo sumtcita . i je'unai**
> *Is "je" a preposition? No.*
>
> **ma xe fanva zoi gy.What's up?.gy. la .lojban.**
> *How to translate "What's up?" to Lojban?*

zo'oi quotes next word only. Next word is identified by pauses in speech or whitespace/dot in writing:

> **ri pu cusku zo'oi Doh! .u'i**
> *Ha ha, he said "Doh!"*

There is also the word **la'oi**, which

forms a one-word name but unlike **la** even out of non-Lojban words:

> **la'oi Safi glico nanmu. It's his name.** *Safi is an English guy. .i lu'e ri cmene ri*

The word **me'oi** converts next word into a verb even if it's not a Lojban word. It is used to create necessary verb words on the fly or when you forget a Lojban verb:

lo xirma ca me'oi gallop

The horse gallops

General use of **zo'oi**, **la'oi** and **me'oi** is problematic. You should be aware that the word following **zo'oi** should not include a period, a glottal stop or a pause. For example, the following sentence is not correct:

mi penmi la'oi Mei Li is not correct since

la'oi attaches only one word, *Mei*.

"**la'oi uli.uli zgike tutci**" for *Uli uli is a musical instrument* is not correct since **la'oi** takes only the first word before the dot: "uli" ("`uli`uli" is a Hawaii

an musical instrument). Thus use **la'o gy.uli. uli.gy. zgike tutci** for *Uli uli is a musical instrument.*

Infinitives and ce'u

The particle **ce'u** is used for referring to the noun from the outside verb:

mi gleki lo ka ce'u prami means the same as

mi gleki lo nu mi prami *I am happy that I love, I am happy of loving (someone).*

mi gleki lo ka prami ce'u means the same as **mi gleki lo nu prami mi** *I am happy that someone loves me, I am happy of being loved (by someone)*

There is also a rule that the first omitted noun in the embedded clause is automatically assigend the value of

ce'u if **ka** is used in the beginning of the embedded clause. So we can make the first sentence shorter:

mi gleki lo ka prami means the same as **mi gleki lo nu mi prami** *I am happy that I love, I am happy of loving (someone).* **mi gleki lo ka prami ce'u** means the same as **mi gleki lo nu prami mi** *I am happy that someone loves me, I*

am happy of being loved (by someone)

Notice we can't do that for the second sentence. In order to omit **ce'u** there you need to somehow fill the first noun so that **ce'u** goes to the next unfilled noun:

mi gleki lo ka zo'e prami means the same as **mi gleki lo nu prami mi** *I am happy that someone loves me, I am happy of*

being loved (by someone)

For most verbs **ce'u** in their event places refers to the first place of the verb:

> In **mi gleki lo ka ce'u prami** the particle **ce'u** refers to **mi**.

For **zmadu** and **mleca** the particle **ce'u** refers equally to the first two places:

> In **mi zmadu do lo ka**

> **ce'u**
> **clani**
> (*I am lengthier/taller than you*)
> **ce'u** refers both to **mi** and **do**.

A very special case is **simxu** that has in its second place two **ce'u**.

> > **mi**
> > **jo'u**
> > **do**
> > **simxu**
> > **lo ka**
> > **ce'u**
> > **ce'u**
> > **prami**
> > *You and I love each other.*

The first place of **simxu** is one

or several nouns connected with **jo'u**.

The second place of **simxu** is an abstraction. The first two unfilled places take have **ce'u** implied. So you can remove both **ce'u** in this example:

> **mi jo'u do simxu lo ka prami**
> *You and I love each other.*

ka and **ce'u** are also used to express infinitives:

mi djica lo ka pinxe or **mi djica lo nu mi pinxe**
I want to drink.

ra na nitcu lo ka co'e
He does not have to do this.

co'e — elliptical/unspecified verb. Often translated with *this*, *that*, *it*.

ma

pu

co'e

Who

did

it?

**mi curmi
lo nu do
co'e**
*I will give
you
permission
to do it.*

So **co'e** is a verb that is known from context. **mi co'e** might mean *I am doing you know what*, or *You know who I am.*

While **zo'e** is the 'don't care' noun, **co'e** is the 'don't care' verb. For example, when I say **mi klama lo barja**, I'm not bothering to specify my

point of origin, route, or vehicle. And when I say **mi co'e lo barja** I don't specify what I'm doing to the bar, probably I'm visiting it. So **mi co'e lo barja** means something like *I thingummy the bar*: the bar and I are in some relationship, but I'm not bothering to say what it is. I might be going to it, coming from it, sleeping in it, refurbishing it, or hearing about my neighbor getting

drunk in it once. It just doesn't matter enough for me to say what.

The verb **djica** requires us to specify an event that one desires.

> **mi djica lo nu mi citka lo plise**
> *I want to eat an apple.*

Okay, but usually we just say in English *I want an apple*. We can't desire

the apple itself, we want to <u>do</u> something with it.

Here we can omit the second **mi** and replace the verb *to eat* with **co'e**.

> **mi djica lo nu co'e lo plise** *I want something to do with an apple.*

So I let it be up to context what abstraction about the apple I desire.

There is a compact abbreviation for **lo nu co'e** which is **tu'a**:

> **mi djica tu'a lo plise**
> *I want an apple.*

tu'a takes a noun and converts it to an elliptical abstraction which has something to do with that noun. One always has to guess what abstraction the speaker means by **tu'a** + the noun, so it should only

be used when context makes it easy to guess.

Another example:

> **gasnu = x_1** *does/brings about x_2 (volition not implied)*
> **za'a do gasnu tu'a lo skami** *I see that you make the computer do something.*

There are situations where you cannot use **tu'a**, even though it would seem suitable. These situations are when I don't want the resulting noun to be an abstraction, but a concrete noun. In this case, one can use **zo'e pe** or its abbreviation **zo'ei**.

> **mi djuno zo'ei do or mi djuno zo'e pe do**
> *I know about you, I know something about you*

Comparisons: "*more than...*"

mi nelci lo rutpesxu pe semau lo ladru
I like jam more than milk.

lo rutpesxu cu zmadu lo ladru lo ka mi nelci
I like jam more than milk.
Jam exceeds milk in how much I like it. [literally]

We can of course say **... mi nelci ce'u** in the end to show the listener that we fill the second place of it (but the first is filled anyway so **ce'u** is not needed here). Another

method is to use the preposition **semau** which means *more than* and always refers to the first place of its clause:

> **lo rutpesxu cu se nelci mi semau lo ladru**
> *Jam is liked by me more than milk.*

And now an interesting sentence:

> *Bob likes Betty more than Mary.*

It can mean two different things in English!

1. Bob likes Betty and

he likes
Mary less.

2. Bob likes
Betty but
Mary
likes
Betty too,
though
not as
much as
Bob does!

Do we
compare
Betty with
Mary in how
Bob likes
them?

Or instead
we compare
Bob with
Mary in how
they like
Betty?

English is
ambiguous
in this
regard.

However,
since **semau**
always
compares

the noun after it with the first place of the clause we know what we get:

> **la bob cu nelci la betis semau la maris**
> *Bob (compared to Mary) likes Betty more. Mary likes Betty less.*
>
> > **la betis cu se nelci la bob semau la maris**
> > *Betty is loved by Bob more than Mary. Bob likes Mary less.*

Comparisons: "*equal*

", "*the same*"

mi dunli lo mensi be mi lo ka clani i ku'i mi na mintu my.

I am as long as my sister. But I'm not her.

I equal the sister of me in length. But i am not identical to her. [literally]

dunli

= x_1 (any type) is equal to x_2 (any type) in x_3 (property of x_1 and x_2 with {kau})

mintu

= x_1 (any type) is identic

al to x_2 (any type) in x_3 (property of x_1 and x_2 with {kau})

dunli compares two places for a single property, while **mintu** compares for identity. My sister and I are the same height, but we are not the same person. Clark Kent and Superman have different admirers, but they are the same person.

The same goes for another two verbs:

mi frica do lo ka nelci makau

We differ from each other in what we like.

```
I differ
from you in
liking
what.
[literally]
```

lo drata be mi cu kakne lo ka sidju

Someone other than me is able to help.

frica = x_1 (any type) differs from x_2 (any type) in x_3 (property of x_1 and x_2 with {kau})

drata

$= x_1$

(any type) is not the same as x_2 (any type)

Internal prepositions

Using **be** you can attach not only the default places of verbs but even prepositions:

lo vi xatra be de'i li vo cu se mrilu de'i li ze *This letter, dated the 4th, was mailed on the 7th*

A date tagged with **de'i** applies only to the **xatra**. In **lo vi xatra de'i li vo cu se mrilu de'i li ze** it would apply to the whole clause, not to the letter. What we want to say is that the former date applies just to the letter, and the

latter date applies to the mailing of the letter. This means that the 4th, as a date, applies only to the verb **lo xatra**, and not to the entire clause.

Another example is

> **fi'e =** preposition: *authored by* .... The same as **fi'o finti**

fi'e, like *by* in English, tends to apply only to specific things, and not to

events: you say *a book by Dickens* or *a sonata by Mozart*, not *Jim went to the zoo, by Norman Mailer.* (OK, you can say "*Jim Went To The Zoo*", *by Norman Mailer* if "Jim Went To The Zoo" is the name of a book. But then *by Norman Mailer* is still attached to a thing, and not to an event). So **fi'e** is almost always used as an internal noun. This means you can say

> **lo cukta be fi'e la .dikens.**
> *a book by Dickens*

However, in

> **la .oliver.tuist. pe fi'e la .dikens. cu mutce xamgu**
> *"Oliver Twist" by Dickens is very good.*

we use **pe** to attach the preposition to the whole noun (the name **la .oliver.tuist.** in this case).

Another frequently used alternative is to use **finti** which **fi'e** is derived from:

la .oliver.tuist

. poi la .dikens. cu finti ke'a cu mutce xamgu or **la .oliver.tuist. poi la .dikens. cu finti cu mutce xamgu** *"Oliver Twist" by Dickens is very good.*

Compound verbs in detail

The grouping of terms in Lojban grammar is particularly important when it comes to tanru (compound verbs). The way verbs

group together in a tanru determines what that tanru means. For example,

> *bad music magazine*

has in English two interpretations: a bad magazine about music, or a magazine about bad music. In Lojban, its equivalent

> **lo xlali zgike karni**

has only the interpretation *a bad-*

music magazine, because the first two verbs (*xlali zgike — bad music*) group together first. So it is important to be able to modify the grouping of verbs, so that we can make sure the tanru means what we actually intend it to mean. For that reason, Lojban has a couple of mechanisms in place for making tanru group together properly.

In English we use

brackets to structure the text. Likewise for tanru we use **ke'** *for the left bracket and* *ke'e* for the right bracket.

> **lo xlali ke zgike karni** means *a bad {music-magazine}*.

As you can see we separated **xlali** from the rest of the tanru and made it apply to the whole tanru. There is no need in **ke'e**

in the end of the tanru since we already know that it ends here.

> **.i mi pu zi te vecnu lo xlali ke zgike karni .i to'e zanru la'o gy.Eurythmics.gy.**
> *I just bought a bad music-magazine. It dissed the Eurythmics.*

That's one way of grouping together verbs in tanru. The other way is to use a particle **bo** in a new role. When **bo** appears between two verbs, it means that those verbs group together more tightly than anything else. So an alternative

way of saying *bad {music magazine}* is

> **lo**
> **xlali**
> **zgike**
> **bo**
> **karni**
> *= a bad music-magazine*

bo here is similar to the hyphen in English translation. This means that **zgike bo karni** should count as a unit, to which **xlali** (*bad*) applies.

tighter connections

So **bo** makes

the connections tighter.

> **la .jasmin. je la .alis. jonaibo la .bob.**
> *Jasmine and (either Alice or Bob)*

ke can also be used with connectives (though not with sentences; they have their own kind of bracket, **tu'e … tu'u**.) So we could also say

> **la .jasmin. je ke la .alis. jonai la .ranjit**

.

Remember that the right bracket **ke'e** can be left out in most cases without changing the meaning (like in this case).

Forethought conjunction are also used a lot since they can eliminate the need in right brackets:

> **gaje** la .jasmin. gi **gajonai** la .alis. gi la .bob.
>
> *Jasmin*

e and either Alice or Bob

and

g̲a̲j̲o̲n̲a̲
i̲ gaje
la
.jasmin
. gi la
.alis.
g̲i̲ la
.bob.
Either Jasmine and Alice, or Bob}}

We don't need **bo** or **ke** with forethought conjunctions.

co for changing the order

in compound verbs

There is another way of restructuring compound verbs.

mi fanva se jibri
I'm a professional translator

> **jibri** = *x1 is a job of x2*
> **dotybau** = *x1 is German used by x2 to say x3*
> **glibau** = *x1 is English used by x2*

to say x3

If I wanted to say that I'm a professional translator from English to German, I could mess around with **be**, **bei**:

> **mi fanva be lo dotybau bei lo glibau be'o se jibri**
> *I'm a professional translator from English to German*

The fact that it was a compound verb could quickly be lost in speech due to the complicated structure of the sentence. Here, we

can use the word **co**:

co — inverts the compound verb, making the rightmost verb word modify the leftmost instead of the other way around. Any previous noun fills the modified, any

following noun fills the modifier.

mi se jibri co fanva lo dotybau lo glibau

It is the same clause as the previous Lojban one, but much more easy to understand. Notice that any noun before the compound verb fills **se jibri**, while any following it only fills the modifying verb: **fanva**.

The strength by which

two verbs are bound together with **co** is very weak – even weaker than normal compound verb grouping without any grouping words. This makes sure that, in a co-construct, the leftmost verb word is always the verb being modified, and the rightmost always modifies, even if any of those parts are compound verbs. This makes a co-construct easy to understand:

> ti
> pelxu
> plise
> co
> kukte

is read as **ti (pelxu plise) co kukte**, which is the same as **ti kukte pelxu bo plise**. This also means that a **ke ... ke'e** cannot encompass a **co**.

However, **ja cu**, **ja cu** etc. bind even looser than **co**. This is in order to totally avoid confusion about which verb word binds to which in a **ja cu**-construct. The answer

is simple: **ja cu** never emcompasses any verb groups.

How can you express "I am an important American buyer of computers" using a **co**?

Answer: **mi skami te vecnu co vajni merko**

If it's of any use, this is the list of different kind of verb word groupers ranked by strength:

1. **bo** and **ke ... ke'e**
2. Logical connectiv

es other than **ja cu** series

3. not using grouping words

4. **co**

5. **ja cu** series (clause-tail afterthought connectives)

Lesson 10

Internal nouns and be

As **be** allows attaching to nouns other nouns as their place this means that you can nest noun inside noun inside noun, up to and including the

point where you fry your brain.

This means, by the way, that you can nest noun inside noun inside noun, up to and including the point where you fry your brain. To hold off on frying your brain just a little, you need to be able to say *this is where the list of nested noun stops* — at least at the current level of nesting. To close the list of nouns attached with **be** we put the word **be'o** at the

end:

lo xatra be la .ian. bei la .alis. *The letter to Yan from Alice*

la .jasmin. cu mrilu ti la .bob. *Jasmine mails this to Bob*

la .jasmin. cu mrilu lo xatra be la .ian. bei la .alis. la .bob. *Jasmine mails {Alice's letter to Yan} to Bob.*

lo
mrilu
be lo
xatra
be la
.ian.
bei la
.alis.
be'o
bei la
.bob.
The
one
who
mails
{Alice's
letter
to Yan}
to Bob.

lo
mrilu
be lo
xatra
be la
.ian.
bei la
.alis.
bei la
.bob.
The
one
who
mails
{Alice's
letter
to Yan
about
Bob}.

Advanced styles: More about

short relative clauses

We've covered **pe** and **ne**.

A construct sometimes used by Lojbanists is **lo {noun} {verb}**. This is equivalent to **lo {verb} pe {noun}**. For example, **lo mi gerku** is equivalent to **lo gerku pe mi**. However, this is okay only with pronouns. If you want to use a noun converted from a verb (for example, with **lo**) then it's advisable to use **pe**: **lo**

gerku pe la .alis. = *the Alice's dog.*

You can see that the order is the other way around from English: **lo gerku pe lo nanla** looks more like *the dog of a boy.* Now, English uses both '*s* and *of* for this kind of association. The choice between the two is complicated, but basically depends on whether the 'possessor' is a person or not — which is why *the dog of a boy* sounds odd, as does

English's verbs.

In Lojban you can move a pronoun to the left:

> **lo gerku pe mi** is the same as **lo pe mi gerku**. This is literally *The of me dog/ my dog*.

However, this applies only to pronouns, not to **lo**-nouns or **la**-names.

In short it's much safer

to always use **pe** and put it after the noun to which it is attached: **lo gerku pe la .alis.** and **lo gerku pe mi** are most intuitive constructs.

Situation: "My garden"

ti me lo purdi pe mi .i mi cadzu bu'u py.	*This is my garden. I walk in the garden.*
.i mi tirna lo cipni poi sanga .i lo sance be cy. na cladu	*I hear birds singing. The sound of birds is not loud.*
.i lo sance cu tolycladu .i lo rilti cu pluka .i lo tonga cu galto'a	*The sounds is quite. The rhythm is nice. The tone is high.*
.i tcima fa lo solri .i mi catlu lo tsani	*The weather is sunny. I look to the sky.*
.i mi na viska lo solri .i lo dilnu cu fanta lo solri gusni	*I don't see the sun. Clouds covers its beams.*
.i ku'i mi ca'o ganse lo glare gau lo solri	*But I can still feel the heat of the sun.*
.i mi viska lo plise tricu .i ri clani .i lo plise cu crino	*I see apple trees. The trees are tall. The apples are green.*

.i mi klama lo plise tricu .i mi ganse lo lenku ni'a lo tricu	*I go to the apple trees. I feel cold under the trees.*
.i mi jdice lo ka sumne lo plise .i mi sumne lo panci	*I decide to smell an apple. I smell it's flavour.*
.i lo panci cu pluka .i mi denzalvi lo plise	*The flavour is pleasant. I chew the apple.*
.i mi smaka lo plise .i ri titla	*I taste the apple. It's sweet.*
.i mi klama lo crane .i mi viska lo flora	*I go forward. I see flowers.*
.i mi co'a zutse tezu'e lo ka sumne lo panci be lo flora	*I sit down to smell their flavour.*
.i lo mlatu cu klama mi .i mi palpi lo mlatu	*A cat comes to me. I touch the cat.*
.i lo sefta be ri cu ranti je xutla .i loi kerfa cu xutla	*Its surface is soft. loi kerfa is soft.*
i mi co'a sanli .i lo purdi pe mi melbi	*I stand up. My garden is beautiful.*
.i mi cinmo ma .i lo ka gleki i mi cinmi lo ka na badri	*What are my emotions? Happiness. I feel that I am not sad.*

Task.
Answer
these
questions
(close the
right part of
the table):

lo sefta be lo mlatu cu mo	**xutla** or **ranti je xutla** — *What is the cat's surface? — Smooth, smooth and soft.*
xu do cinmo lo ka badri	**je'unai** *— Do you feel sad? — No.*

Dictionary

In this dictionary I will list words needed for basic conversation. Please, note:

- this dictionary lists only basic words. Lojban is a live and dynamic language and accumulates more words over

time.

- examples are provided only for most useful places of verbs.
- not all examples are written in an easy style. I added them to show different (sometimes more powerful) applications of a word. You may study them later.
- if there are, for example, 5 places of a verb it doesn't mean you need to

remember them all. Not all of them are always needed. Practice will allow you to gradually internalize them while speaking to Lojbanists in real time.

- people may use other places of verbs in their speech or even verbs not listed here. Feel free to ask them about the meaning of them. In this dictionary we

mention only those who define the basic structure of verbs. Other Lojban dictionaries can mention more places which are used more seldom.

Types of places

Each place in Lojban can contain one of the following:

- clause
- entity or text
- number

Situations

1. an *entity* place in a noun matches an *entity* place of the main verb:

> **plise** = x_1 *(entity) is an apple of species x_2*
>
> **grute** = x_1 *(entity) is a fruit of plant x_2*

> **lo plise cu grute**
> *Apple is a fruit.*

Here the

first place of **plise** is a topic and it matches the first place of **grute** which is also a topic.

2. a *clause* place in a noun matches a *clause* place of the main verb.

It means that the place is filled either with a clause or another place of *event* type:

> **djica** = x_1 wants x_2 (clause)
>
> **nitcu** = x_1 needs

x_2 *(clause)* **se nitcu** $= x_1$ *(clause) is needed by x_2*

> **mi djica lo se nitcu**
> *I want what is needed.*

Here the second place of **djica** is a clause and it matches the second place of **nitcu** which is also a clause.

nicte $= x_1$ *(event) is a nighttime*

lo nicte cu nu lo solri na te gusni

Nighttime is when the Sun isn't shining.

crisa = x_1 (event) is a summer

citsi = x_1 (event) is a season

lo crisa cu citsi

3. an *entity* place in a noun is vague when put into a *clause* place of the main verb. Putting a topic place into a clause place

denotes an obvious relation:

> **mi djica lo plise**
> *I want an apple.*

The second place of **djica** is a clause. Thus **lo plise**, *an apple* plays some role in that clause. Probably it means:

> **mi djica lo nu mi citka lo plise**
> *I want to eat an apple.*

but may be I just want to hold an

apple in my hand. If you need vagueness or just lazy to say more you can use this method.

> **mi lerci** *I'm late.*

probably means that e.g. my arrival happened late.

4. *text* place is filled with quotes and start with **zo**, **lu ... li'u**, **zoi**, **zo'oi** or some other particles.

5. Numbers are marked with **li**

A number

specified with **li** goes there:

> **ti mitre li mu**
> *This is 5 meters long.*

or a "number" place from another verb: **lo namcu**, **lo se mitre**.

6. Properties are a special kind of clauses. Clause can be used as a property. It has a **ce'u** particle

- When used in the first place of the verb **ce'u** refers to the second

place of the verb.

- When used in the another place of the verb **ce'u** refers to the first place of the verb.
- If explicitly specified in the definition then it refers to what is described in the definition.

> **ckaji** = x_1 (infinitive of x_2) is a property of x_2

lo ka kukte cu ckaji lo badna
Bananas are characterized as being sweet.
Being tasty is a property of bananas. [literally]

mi kakne lo ka limna
I am able to swim.

Some properties can refer equally to several places:

mi zmadu do lo ka clani vau lo centre be li mu
I am 5 centimeters taller than you.
I am more than you in length by 5 centimeters. [literally]

zmadu = x_1 *(any type) exceeds or is more*

than x_2 (any type) in x_3 (property of x_1 and x_2 with {kau}) by amount x_4

Here, **mi** and **do** are compared, and **ce'u** in the third place refers to each of them equally.

In case of doubt open the dictionary and look

at the examples. At least on of the usage examples will have all places filled.

7. 'proposition *- a place filled with **du'u**. It works exactly as **nu** but is traditionally used with some places and always mentioned for them in the*

dictionary:

djuno

$= x_1$

(entity)

knows that x_2

(proposition)

is true

**mi
djuno
lo
du'u
do
stati**
*I
know
that
you
are
smart.*

Dictionary