

**Ling 98/198: Constructing Languages DE-Cal**  
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### Notes on this reader

This reader contains nearly the entire corpus of well-known essays and introductory material worth reading published on the subject of conlangs in general, plus several minor essays (like mine) and related items (like the Omniglot pages). There is, however, a *lot* more available – serious stuff, even – on newsgroups, mailing lists, and other media. There is hardly any print literature at this point – not including that which is about some particular conlang, mainly Volapük and its offshoots, like Esperanto - and what there is, is (alas) not terribly good nor complimentary. Thus, nearly everything good is online. So here it is, in print.

*You are responsible for having read and understood the syllabus.* I will not go over it in detail except as necessary; I assume that you are all literate people. If you have any questions about the course, the grading requirements, etc., please let me know before they become a problem.

Most of this reader is for *your benefit*, not for “homework”. You can skip reading it if you don’t want to (or delay doing so until months from now) – but you’ll be missing out on a lot of good stuff that will seriously help your conlanging. I would advise that you at least page through each of the major entries, and read the shorter ones (e.g. *Taste for Makers* and *Conlang Errors*) in their entirety. I will try to refer to reader articles in class, but I won’t be assigning them explicitly. Many sections will be pretty obviously synchronistic with what we are currently covering in class. If you do read something in here that you have questions about or comments on, or that you think is relevant to class discussion, by all means bring it up during class and share.

Nearly all of the authors included here have written other works, many of which I strongly recommend you go find and read.

Some parts of this reader have been copied directly from their webpages. I have tried to edit them to look decent in print, but I may have missed some parts. Also, I may have edited, deleted, reformatted (to 12 pt black-text Times New Roman), or other revised parts; however, I have not changed anything of substance. Links present in the online version were removed by the transition. As always, look at the originals if you want the up-to-date version. The ones in this reader are current as of 1/21/05.

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# THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993)

## CONSONANTS (PULMONIC)

### WITH CXS

### EQUIVALENTS IN BLUE

|                     | Bilabial                       | Labiodental                   | Dental                        | Alveolar                       | Postalveolar                  | Retroflex                         | Palatal                         | Velar                         | Uvular                        | Pharyngeal                     | Glottal                       |
|---------------------|--------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|-----------------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|
| Plosive             | p <sub>p</sub> b <sub>b</sub>  |                               |                               | t <sub>t</sub> d <sub>d</sub>  |                               | t̪ <sub>t̪</sub> d̪ <sub>d̪</sub> | c <sub>c</sub> ɟ <sub>ɟ</sub>   | k <sub>k</sub> g <sub>g</sub> | q <sub>q</sub> ɢ <sub>ɢ</sub> |                                | ʔ <sub>ʔ</sub>                |
| Nasal               | m <sub>m</sub>                 | ɱ <sub>F</sub>                |                               | n <sub>n</sub>                 |                               | ɳ <sub>n̠</sub>                   | ɲ <sub>J</sub>                  | ŋ <sub>N</sub>                | ɴ <sub>N̥</sub>               |                                |                               |
| Trill               | ʙ <sub>B</sub>                 |                               |                               | ʀ <sub>r</sub>                 |                               |                                   |                                 |                               | ʀ <sub>R</sub>                |                                |                               |
| Tap or Flap         |                                |                               |                               | ɾ <sub>r̥</sub>                |                               | ɽ <sub>r̥</sub>                   |                                 |                               |                               |                                |                               |
| Fricative           | ɸ <sub>p̥</sub> β <sub>B</sub> | f <sub>f</sub> v <sub>v</sub> | θ <sub>T</sub> ð <sub>D</sub> | s <sub>s</sub> z <sub>z</sub>  | ʃ <sub>S</sub> ʒ <sub>Z</sub> | ʂ <sub>s̺</sub> ʐ <sub>z̺</sub>   | ç <sub>c̺</sub> ʝ <sub>j̺</sub> | x <sub>x</sub> ɣ <sub>ɣ</sub> | χ <sub>X</sub> ʁ <sub>R</sub> | ħ <sub>X̥</sub> ʕ <sub>ʕ</sub> | h <sub>h</sub> ɦ <sub>ɦ</sub> |
| Lateral fricative   |                                |                               |                               | ɬ <sub>K</sub> ɮ <sub>K̥</sub> |                               |                                   |                                 |                               |                               |                                |                               |
| Approximant         |                                | ʋ <sub>P (or v̥)</sub>        |                               | ɹ <sub>r̥</sub>                |                               | ɻ <sub>r̥</sub>                   | j <sub>j</sub>                  | ɰ <sub>M</sub>                |                               |                                |                               |
| Lateral approximant |                                |                               |                               | l <sub>l</sub>                 |                               | ɭ <sub>r̥</sub>                   | ʎ <sub>L</sub>                  | ʟ <sub>L̥</sub>               |                               |                                |                               |

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

## CONSONANTS (NON-PULMONIC)

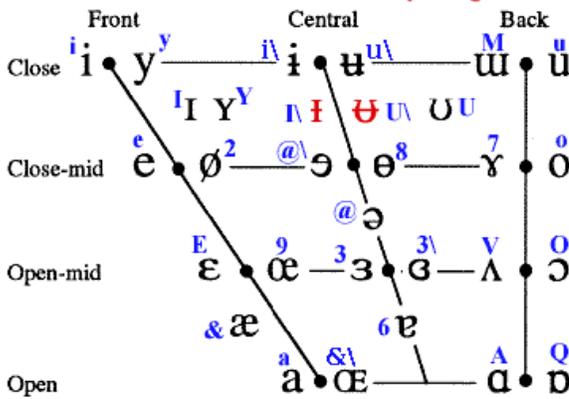
| Clicks             | Voiced implosives                   | Ejectives                               |
|--------------------|-------------------------------------|---|
| ○ Bilabial ɔ̥      | ɓ Bilabial b <sub>&lt;</sub>        | '-> as in:                              |
| Dental ɗ           | ɗ Dental/alveolar d <sub>&lt;</sub> | p' Bilabial p <sub>&gt;</sub>           |
| ! (Post)alveolar ɰ | ɟ Palatal ɟ <sub>&lt;</sub>         | t' Dental/alveolar t <sub>&gt;</sub>    |
| ≠ Palatoalveolar ɠ | ɣ Velar ɣ <sub>&lt;</sub>           | k' Velar k <sub>&gt;</sub>              |
| Alveolar lateral ɮ | ʀ Uvular ʀ <sub>&lt;</sub>          | s' Alveolar fricative s <sub>&gt;</sub> |

## SUPRASEGMENTALS

|                                | TONES & WORD ACCENTS                     |
|--------------------------------|--|
|                                | LEVEL CONTOUR                            |
| ˈ Primary stress %foʊn@ˈtɪs@n  | ˈ Extra high -T ẽ or ˈ Rising -R         |
| ˌ Secondary stress founəˈtɪsən | ˌ High -H ê or ˌ Falling -F              |
| ː Long eɪ e:or, foʊn@ˈtɪs@n    | ː Mid -M ẽ ː High rising -H_T            |
| ˑ Half-long eˑ eˑ              | ˑ Low -L ẽ ˑ Low rising -B_L             |
| ˑˑ Extra-short ẽ eˑˑ           | ˑˑ Extra low -B ẽ ˑˑ Rising-falling -R_F |
| · Syllable break ɪ.ækt rɪ.&kt  | · Global rise <R> etc.                   |
| Minor (foot) group ẽ           | ↑ Upstep ^ ↘ Global fall <F>             |
| Major (intonation) group       |  |
| ˘ Linking (absence of a break) |  |

## VOWELS

Red vowels not officially recognized.



Where symbols appear in pairs, the one to the right represents a rounded vowel.

## OTHER SYMBOLS

|                                       |   |
|---------------------------------------|---|
| W ʍ Voiceless labial-velar fricative  | ʃ ʒ Alveolo-palatal fricatives  |
| w ʋ Voiced labial-velar approximant   | ɭ Alveolar lateral flap   |
| H ʉ Voiced labial-palatal approximant | ʎ Simultaneous ʃ and ʒ  |
| H ʁ Voiceless epiglottal fricative    | Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary. |
| < ʕ Voiced epiglottal fricative       |   |
| > ʔ Epiglottal plosive                |   |

k̠p̠ t̠s̠  
(kp ts) (or k\_p t\_s)

## DIACRITICS

X-SAMPA diacritics come after symbols, e.g. n\_0 ɲ̥

Diacritics may be placed above a symbol with a descender, e.g. ɲ̥

|   |  |   |
|---|--|---|
| ◌ <sup>(zero)</sup> ɲ̥ d̥   | ◌ <sup>..</sup> Breathily voiced ɓ̠ ɗ̠   | ◌ <sup>◌</sup> Dental ɗ̠ t̠ d̠                                    |
| ◌ <sup>˘</sup> Voiced ɟ̠ ʒ̠   | ◌ <sup>˘</sup> Creaky voiced ɓ̠ ɗ̠   | ◌ <sup>◌</sup> Apical ɗ̠ t̠ d̠                                    |
| ◌ <sup>h</sup> Aspirated ɓ̠ <sup>h</sup> ɗ̠ <sup>h</sup>                      | ◌ <sup>˘</sup> Linguolabial ɓ̠ t̠ d̠   | ◌ <sup>◌</sup> Laminal ɓ̠ t̠ d̠                                   |
| ◌ <sup>◌</sup> More rounded ɔ̠ ɟ̠   | ◌ <sup>w</sup> Labialized ɓ̠ <sup>w</sup> ɗ̠ <sup>w</sup>  | ◌ <sup>˘</sup> Nasalized ẽ̠ or ẽ̠                                 |
| ◌ <sup>◌</sup> Less rounded ɔ̠ ɟ̠   | ◌ <sup>j</sup> Palatalized ɓ̠ <sup>j</sup> ɗ̠ <sup>j</sup>   | ◌ <sup>n</sup> Nasal release ɓ̠ <sup>n</sup> ɗ̠ <sup>n</sup>      |
| ◌ <sup>+</sup> Advanced ɓ̠ <sup>+</sup> ɗ̠ <sup>+</sup>                       | ◌ <sup>Y</sup> Velarized ɓ̠ <sup>Y</sup> ɗ̠ <sup>Y</sup>   | ◌ <sup>l</sup> Lateral release ɓ̠ <sup>l</sup> ɗ̠ <sup>l</sup>    |
| ◌ <sup>-</sup> Retracted ɓ̠ <sup>-</sup> ɗ̠ <sup>-</sup>                      | ◌ <sup>ʕ</sup> Pharyngealized ɓ̠ <sup>ʕ</sup> ɗ̠ <sup>ʕ</sup>  | ◌ <sup>˘</sup> No audible release ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup> |
| ◌ <sup>˘</sup> Centralized ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                    | ◌ <sup>˘</sup> Velarized or pharyngealized ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                             | (or velarized ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup> )                   |
| ◌ <sup>x</sup> Mid-centralized ɓ̠ <sup>x</sup> ɗ̠ <sup>x</sup>                | ◌ <sup>˘</sup> Raised ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup> (ɓ̠ <sup>˘</sup> = voiced alveolar fricative)    |   |
| ◌ <sup>◌</sup> Syllabic (or ɓ̠ <sup>◌</sup> ) ɓ̠ <sup>◌</sup> ɗ̠ <sup>◌</sup> | ◌ <sup>˘</sup> Lowered ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup> (ɓ̠ <sup>˘</sup> = voiced bilabial approximant) |   |
| ◌ <sup>˘</sup> Non-syllabic ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                   | ◌ <sup>˘</sup> Advanced Tongue Root ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                                    |   |
| ◌ <sup>˘</sup> Rhoticity ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                      | ◌ <sup>˘</sup> Retracted Tongue Root ɓ̠ <sup>˘</sup> ɗ̠ <sup>˘</sup>                                   |   |

## CLASS SYLLABUS

[Last Modified: 1/24/05 8:24PM PST]

### Constructing Languages: Applied Seminar DE-Cal - Ling 98/198 SPRING 2006

**Units:** 0-2 (see below)

**When:** TBD, 1-2 hr/week (see below)

**Where:** TBA

#### Facilitator:

 [saizai](#) - Sai Emrys (just call me Sai)

4th yr. CogSci

email: conlangs@saizai.com

URL: [http://www.livejournal.com/~conlangs\\_decad](http://www.livejournal.com/~conlangs_decad)

Office hours: Office? What office?

If you want to talk to me in person outside of class, do so before or after class (hopefully I'll be there early most days). If that doesn't work, contact me and we'll arrange something.

#### Sponsoring Professor (second year running!):

Leanne Hinton, Chair, Linguistics Dept.

#### Synopsis:

Constructed languages (conlangs) - a.k.a. "artificial languages", etc - include a wide variety of languages. Esperanto, Klingon, Quenya, Loglan / Lojban, Signed Exact English, proto-Indo-European, and many many others are all conlangs. Arguably, this list includes Received English, Korean, and Turkish as well.

This class will be about designing your own language, mostly from the bottom up. We will work on a class language together, using ideas from various students, as you create (or continue to work on) your own languages at home (and discuss them in class). The class will *not* cover the history or theory of conlangs, nor formal linguistics, except as necessary. The main focus will be on actually getting "into it" – starting from day one – and learning what you need as you go.

If you are interested in these more in-depth topics, talk to me. There is plenty of material available, including some videos from the previous year's class, and books in the library.

## Conlangs DE-Cal – Spring 2006

No linguistic background is necessary for this class, though it will certainly be useful. Likewise, reading through the reader will be very useful (especially for those new to conlanging), as will be reading the recommended text, though these are both optional.

This class will be run in a manner fairly different from last year's Conlangs DE-Cal – less intense, and more hands-on. Last year's was closer in scope to a full Ling 1 or Ling 101 class.

Returning students *MAY* take this class for credit again, but will need to do a new final project, or an expansion to their previous year's. Talk to me if this applies to you.

### **Timing:**

This class will generally meet two hours a week. If the enrollment of students interested in taking 2 units is too low, then this will be reduced to one hour a week.

On a side note: I am graduating in May, and obviously won't be around to teach the class any more after that. If you are interested in taking over from me, please let me know.

If you have knowledge of linguistics or conlangs, you are very much welcome to teach some of the classes in my stead – using my notes if you like (and can decipher them).

### **Grading:**

This is a variable-unit, pass / no pass class. There is no difference between the 98 and 198 versions; choose whichever you prefer.

To get 1 unit: Show up most of the time – enough for me to know your name when they ask me whether or not you passed. That's it.

To get 2 units: Attend class regularly, and do the final project (which you'll be doing the work for over the course of the semester anyway) at a level that shows effort. Again: simple.

*(How to get a NP grade: don't show up to class a lot; don't turn in the final project, or turn in work that's clearly BS; plagiarize; lie; etc. You know how. Don't. I will give a grade of "incomplete" for honest students who simply haven't finished the work [or want more time to do it]; I will NP you without compunction if you are dishonest.)*

If, for whatever reason, you want fewer units than you qualify for – e.g. 1 if you're doing the final project, or 0 for anyone – we can do that. You do need to decide relatively early on in the semester how many units you want (e.g. before the add deadline); it is difficult to change later on.

### **Goals: What you should get out of this class**

On finishing this class, you will be well on your way to having your very own language. Obviously, it is not possible to get something that complex “finished” in one semester, but you’ll have started.

If you've done the final project, then you will probably have done even more on your language – complete with its own phonology, morphology, syntax, and all the rest. You will have had some experience translating from English to your new language, including the Babel text.

Now, what other class can give you **that** to take away from the experience?

### **Linguistic Background**

This is not a class on introductory linguistics. However, it *is* a class with no linguistics knowledge prerequisite. If you know nothing about modern formal linguistics, you will probably want to take more time to read up on basics, such as the IPA, the meanings of basic terminology such as phone, phoneme, morpheme, syntax, etc., and anything else you don't understand. We will cover some of this in class, but mainly from a perspective of use and application rather than theory and description.

You will probably find an introductory text on linguistics, such as *Language Files* or *Contemporary Linguistics*, very useful. If you don't have one and aren't already very familiar with introductory linguistics concepts, get one.

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### **Course Website / LJ Community**

This course's website is [http://www.livejournal.com/~conlangs\\_decal](http://www.livejournal.com/~conlangs_decal) (same as last year). You will need a LiveJournal (LJ) account; these are free and easy to create - visit <http://www.livejournal.com/create.bml> to do so. The account under which you post to the community must have your legal name (whatever Cal thinks it is) associated with it. If you already have a LJ account which you don't want to have identified with your legal name, you can post under a different account, or simply identify yourself by legal name only on the (screened) signup form.

If you have any problem with this requirement, please talk to me.

All course material (inasmuch as possible) will be posted to the LJ community, so it would be in your best interests to monitor it. You might also benefit from it as a discussion forum, and a place to have your work peer-reviewed (and give your own rants/raves to others).

### **Some other useful sites**

*General Conlangs Sites*

- <http://www.livejournal.com/~conlangs> - the general-purpose LJ  [conlangs](http://www.conlangs.com) community
- <http://listserv.brown.edu/archives/conlang.html> - "the" conlang mailing list, hosted by Brown U.
- <http://www.langmaker.com> - [Conlang Profiles at Langmaker](#). Also has a huge amount of other links and resources.
- <http://www.omniglot.com> - Omniglot, a guide to writing systems (natural and onstructed)
- <http://en.wikipedia.org/wiki/Conlangs> - the Wikipedia entry for Conlangs

#### *Theory & Essays*

- <http://www.eskimo.com/~ram/essays.html> - Essays on language creation by Rick Morneau, including [Lexical Semantics of a Machine Translation Interlingua](#) (most of these are general-audience; LSoaMTI is a bit more diffiuct, but doesn't *require* an excessive linguistics background to understand)
- <http://www.nkuitse.com/conlang/glosses/> - "How to make good glosses", by Paul Hoffman
- <http://www.langmaker.com/backissu.htm> - Model Languages newsletter, by Jeffrey Henning
- <http://www.livejournal.com/users/saizai/352316.html> - an incomplete list of posts by myself ( [saizai](#)) about various design ideas, particularly [On the Design of an Ideal Language](#)
- <http://students.washington.edu/jaspax/conlang.htm> - Conlanger's Manifesto, by David Peterson
- <http://www.valdyas.org/apologia.html> - Apologia pro Imaginatione, by Boudewjin Rempt

#### *Linguistics Sites*

- <http://www.rosettaproject.org> - [the Rosetta Project](#) - a free online database of every documented human language
- <http://www.ling.hf.ntnu.no/ipa/full/> - a click-to-hear chart of the International Phonetic Alphabet (IPA)
- <http://cassowary.free.fr/Linguistics/cxschart.png> (PNG image) or <http://www.theiling.de/ipa/> (text) - how to write the IPA in plaintext (using CXS, the Conlang-modified X-Sampa method)
- <http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/Index.htm> - a, um, glossary of linguistic terms. Pretty straightforward.

#### *Specific Conlangs' Sites*

- <http://www.geocities.com/eastonde/conlib.html> - a very long (1100+) list of conlangs with links to websites describing them
- <http://www.uib.no/People/hnohf> - [Ardalambion](#), probably the best resource on JRR Tolkein's conlangs
- <http://www.kli.org> - the [Klingon Language Institute](#)
- <http://www.lojban.org> - Lojban/Loglan

- <http://home.inreach.com/sl2120/Ithkuil/> - Ithkuil, by John Quijada
- <http://www.esperanto.net/> - Esperanto
- <http://www.ptialaska.net/~srice/solresol/intro.htm> - Solresol

#### *Language-creation resources*

- <http://www.zompist.com/kit.html> - [the Language Construction Kit](#)
- <http://www.angelfire.com/ego/pdf/ng/lng/how/index.html> - "How to create a language", by Pablo David Flores
- <http://kwet.sourceforge.net> - Kwet (by Paul Hoffman), a rules-based random word generator
- <http://metafont.latex.free.fr/> - METAFONT / L<sup>A</sup>T<sub>E</sub>X tutorial

#### **Reader/Syllabus:**

I'm a student, and like "poet", that abbreviates to "po". I can't afford to print out syllabi - or other reading materials - for a classful of people. For that matter, neither can the linguistics department. I will make a reader available at one of the copy stores near campus; buy it if you want hard copies. Everything in it will be available either directly from a library book or online at the URL above. (Presumably, if you're reading this, you already know that.)

The online version ~~may~~ will be more current than the printed one, and will always take precedence. I will tell you if I update anything in the reader after its print date, of course.

#### **Texts / Reading materials:**

I strongly recommend that you have at least one good introductory linguistics textbook. The one I used for Ling 100 was *Contemporary Linguistics*, 4<sup>th</sup> ed. There are others. Get one if you don't already have it.

The reader will have its own table of contents; take a look there. In addition to that, there will be some items I want you to look up online, to read or research or work on. If you're interested in any of the items we go over briefly during class, I can probably give you some pointers for where to get more. In any case, just Google it.

One more text I strongly recommend for this class is Thomas E. Payne's *Describing Morphosyntax*. It is very well written and very useful, but does assume at least a rudimentary knowledge of linguistics. If you know basics, or are up for a challenge, buy it and read it. With some simple translation, it's practically a manual for how to make a conlang grammar, and gives you a good idea of the breadth of options available just from what natural languages are known to do.

#### **Assignments**

There is only one – optional for those taking 1 unit, required for those taking 2.

*Reminder: Don't plagiarize. Really.*

### **The Final Project / Research Paper**

You have three standard options, the first being strongly recommended. I am very much open to suggestions if you want to do something different that is substantially similar in difficulty and related to the class.

Do remember to **START EARLY**. You can do this very easily if you just do it as we go.

If you decide to do a final project, be sure to consult with me *\*very\** early on. Tell me what you intend to do, why, and how. Keep me apprised of how it's going. If you choose something other than Option 1, make sure I approve it **FIRST**.

#### *Option 1: Create your own language*

You read that right: you will create an entire language, including all parts of grammar that we talk about in class.

I realize that this is probably an intimidating concept for you. It's really not as hard as you might think, and the work that we'll be doing over the course of the class will go over all aspects of language design; you will essentially be building it as we go. Of course, your early work will probably be revised several times by the time you are ready to submit the final revision.

There are a few boundary criteria for this project. When you are out on your own as a conlanger, even these will disappear, but for now, here are your limits:

1. Your language must be geared towards human use. Any literate person in the world should be able to learn and use your language. (This does NOT mean that it need be an auxlang!)
2. Your language **MAY NOT BE** like either a) English, or b) your native language, if other than English. I *\*will\** push you to break away from your default assumptions about how a language can or should work.
3. Your language must be a full working language in intended scope (although it need not have a multi-thousand-word vocabulary, etc.), and should NOT be simply a code for another language. (Obviously, it need not be a full working language at the time of writing this paper.)
4. The phonetic inventory should preferably be drawn from within the IPA, and all aspects should be described in ways any linguist would be able to understand. If you want to make it layperson-understandable, that works also.
5. You will have to translate a few sample phrases and short samples from English, most prominently, the [Babel Text](#), from Genesis 11:1-9 - more [here](#). This is NOT a "literal" translation; I will be looking for something that translates the essence of meaning into a form that is more appropriate for your language.

Within these five criteria, you will have considerable leeway. Do whatever kind of language you want; choose any typology, morphology, etc., as you like. Create a novel orthography. Create a language that uses a primary modality other than speech. BE CREATIVE!

*Option 2: Modular Systems*

For this variation, you will create only certain parts of a language - e.g., an orthography.

The criteria are the same as above where applicable (minus the translation), however:

1. You will have to compensate for reduced scope by a major increase in the amount of detail, originality, and creativity you give to those parts you do.
2. Since they are not in the context of a full language, you will need to make them modular - provide explicit ways for yourself others to use your systems as part of a full language, how they can be integrated with, etc.
3. Your systems **MUST BE ENTIRELY NEW**. No rehashes, no slightly-different versions of something you've seen elsewhere. The point of this option for a final project is for use in the case of your thinking up some very new, very original way of doing something. This is a much stronger criteria than for Version 1.

*Option 3: Research Project*

If you have an idea for something else you'd like to do that would be equivalent in scope and amount of work to the previous two, come up with a plan and tell me about it.

This is a fairly open-ended option, but you will have to convince me that it is indeed equal. Possible ideas could include conducting original, scientific research; writing a major paper on a topic of your choosing; etc. Talk to me.

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**Schedule:**

The schedule is TENTATIVE, and listed separately. I may change things around, add new topics or remove them as time and interest dictate, etc.

One important side effect of this is that You The Student can change the schedule, if you have input on what you'd prefer we talk about, what not, and when. 15 weeks is a fairly long time, yes, but there can be a \*lot\* of material to cover. Inevitably, we will have to skip or gloss over some topics. Let's try to make the best use of the time we have.

**Credits**

Leanne Hinton, for agreeing to sponsor this class. Yay!

[David Peterson](#), for suggesting Leanne Hinton as my advisor, recommending various other resources, and his extensive collaboration and help on the course design, homework, etc.

 [ged](#), for more resources

**Genesis 11:1-10**

From the King James Edition.

1 And the whole earth was of one language, and of one speech.

2 And it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar; and they dwelt there.

3 And they said one to another, Go to, let us make brick, and burn them throughly. And they had brick for stone, and slime had they for mortar.

4 And they said, Go to, let us build us a city and a tower, whose top may reach unto heaven; and let us make us a name, lest we be scattered abroad upon the face of the whole earth.

5 And the LORD came down to see the city and the tower, which the children of men builded.

6 And the LORD said, Behold, the people is one, and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do.

7 Go to, let us go down, and there confound their language, that they may not understand one another's speech.

8 So the LORD scattered them abroad from thence upon the face of all the earth: and they left off to build the city.

9 Therefore is the name of it called Babel; because the LORD did there confound the language of all the earth: and from thence did the LORD scatter them abroad upon the face of all the earth.



**Conlanger's Manifesto —**  
**<http://students.washington.edu/jaspax/conlang.htm>**

Artlanger's Manifesto © 2002 Jesse Bangs – [jaspax@gmail.com](mailto:jaspax@gmail.com).

Conlanger's Manifesto © 2002 David Peterson — [dedalvs@gmail.com](mailto:dedalvs@gmail.com).

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## MANIFESTO

This manifesto was originally written by David Peterson as a defense of the art of Conlanging against those who would degrade the art as frivolous, unimportant, or even dangerous. He posted it to the conlang discussion list, and I liked it so much that I decided to include it on this page until I have time to write my own manifesto. There are a few places where this goes overboard—for example, I don't seriously see language creation as a path to world peace—but in general this is exactly right:

To me, it seems odd to have to defend language creation, and yet it's been repeatedly attacked, mainly by linguists (which is the most baffling part about the whole business), and decried as a form of frivolity which should not and cannot be taken seriously by anyone, or even wicked (I've heard it). To such claims, I say the following things.

I would hope that many would agree that doing something that neither harms the doer nor anyone else is not wrong. That said, creating languages, to my knowledge, has never resulted in the harming of another human being, or of the language creator (at least, I've heard of no reports of a language creator driven insane). Like any other hobby or activity, the only requirement is a requirement of time, and time management has nothing to do with the activity itself, but only with the one performing it. Thus, it can't be argued that language creation is “a waste of time”, it can only be argued that certain people are wasters of time—how they do it is irrelevant.

The other argument—whether language creation can be taken seriously—is a bit stickier. The main problem I see that people have with language creation is that it's “weird”—that is, not usual. As such, anything that is not usual will be regarded with apprehension initially; it's as old as Copernicus—even older than that. If you point this out to the arguer, s/he will usually counter with the argument that language creation is useless, and therefore, frivolous. And, looking only at the utilitarian end of it, if the creator isn't going to use his/her language for communication, and since language can be viewed only as a means of communication, language creation is pretty useless.

But is this all language is: A method of communication? If so, what is poetry? What is literature? What possible use could James Joyce's *Ulysses* have? I suppose if you were on a desert island and needed to smash crabs, it would do the trick—it's pretty thick, after all. But beyond that? According to them, it would

have no use. And why stop there? What good do paintings do anyone? They just sit there, after all, doing nothing for nobody. And along with this goes any other form of visual art: Pottery, jewelry, tapestry, mosaic, sculpture, animation! And what about architecture? You just need a roof over yor head; no reason it needs to look fancy. So out the window it goes, too. And music?! My word! There's not even any functional value in music! So let's burn all our musical instruments and albums: Goodbye Tchaikovsky, bye-bye Beatles, see ya' Enya, aloha Israel Kamakawiwo'ole (that's the "aloha" that means "goodbye", not "hello"). Pretty soon what you're left with is a world without art.

At this point, the argument should come to an end. The frivolity and usefulness of art is an argument that has been argued many times but many people much more articulate than I, and by now (I certainly hope), the whole world should have figured out that art really does pull its weight on Earth. So, let's continue from here. Any university worth its salt is going to have an art department. Millions of people every year study useless, frivolous art. So why not language creation? Nearly every serious subject has an art associated with it that's also studied: Literature has poetry and prose; computer science has computer graphics and video games (another under-appreciated form of art); functional architecture has artistic architecture; art history has art; music theory has music. If you take this to its natural conclusion, is not language creation the art most closely associated with linguistics?

This is particularly why I find the condemnation of language creation by linguists so befuddling. Aside from art, though, language creation has other uses. First, creating a language allows one to better understand language itself. One who creates an ergative language is far more likely to understand ergativity in natural languages than one who does not, I say. What's more, this same understanding can ease foreign language learning considerably—not to mention linguistics itself. More importantly, it gets one thinking about the multifariousness and beauty of language, and one who can appreciate this is less likely to misunderstand, deprecate and stereotype those speaking other languages, which is one of the main causes of racism and ethnocentrism. In short, language creation is one of the keys to social harmony and world peace. If one is going to take anything seriously, certainly world peace is it, and if so, shouldn't language creation be given some credit too?

## **THE ARTLANGER'S RANT**

David Peterson's manifesto does a great job of justifying conlanging to the non-conlanging public, and as such serves as a wonderful first step towards the legitimization of conlanging. However, I take conlanging a bit more seriously than that—I think of it as a legitimate form of art, and I would like to see it recognized as such. This thought, combined with some bad tendencies I was seeing on Conlang at the time, prompted the following verbal explosion from me, which I posted to Conlang:

From: Jesse Bangs  
Date: Mon Mar 11, 2002 8:16 pm  
Subject: Lighting Some Flames: Towards conlang artistry  
To All Who Care About Conlanging:

The conlang community, both on this list and off, has been growing steadily in the past several years, and it has just gotten another big burst of growth from the release of the LOTR movies in the U.S. We now have a famous, visible patriarch in the person of JRR Tolkien, at least one professional member, Mark Okrand. Quenya and Klingon have entered the common parlance as names of languages, and they have a growing body of L2 speakers, a subculture, and media presence. Add to this the hundreds of conlang websites that may be found in the Internet and the presence of this community itself, and it seems that conlanging may be on the verge of breaking into mainstream awareness and acceptance. The “secret vice” has been out of the closet for a while, and it may soon be into the limelight.

Yet there are still major obstacles to conlanging’s acceptance as an art form, both within the community of conlangers and without. The obstacles from without include prejudices against conlangs as real languages, the “nerdy” perception that conlangers have (and often cherish), and distrust from the linguistic community. These problems have been addressed and rebutted before, so I won’t do it again here. Only time may remove all of those problems. However, the obstacles from conlangers themselves are greater, and can be addressed immediately. Of these problems, the one that I wish to address here is the lack of a critical perspective within the conlang community.

It should not need to be proved that some art is better than others. If we as conlangers wish to gain acceptance for our art, then we need to acknowledge this and allow for the judgement that some conlangs are better than others. We need a serious body of \*conlang criticism\*. Currently, this is almost entirely lacking on the Conlang list. When someone posts texts or grammatical sketches, the responses are generally entirely congratulatory, or they are concerned only with correcting technical errors or confusions within the grammar. Often there are no responses at all. While technical accuracy and consistency are important, it’s outrageous that this is where our critique stops. We need to move beyond the foundation of technical accuracy and allow for the artistic analysis of our conlangs.

Of course the objection is “by what criteria?” It’s clear that we can’t all agree on one style of phonetic beauty, much less on which syntax, morphology, or vocabulary is best. But this is, in fact, exactly what we expect. The study of the history of art, music, or literature is a long series of redefinitions of what is proper, what is better, and a constant critical re-evaluation of everything that’s gone before. This chronological tension is an essential part of the formation of literatures and arts, and if conlanging is to be an art instead of a hobby, then it must also expect this. The important thing is that conlanging start to have a

critical apparatus within which the artistic merits of conlangs can be evaluated and where different schools of thought can define and defend themselves.

The thing to do, then, seems to be to start such a school, and simply get down to the business of evaluating conlangs as works of art. I therefore announce the founding of the Naturalist school of conlanging, which regards the following three things as values:

Naturalness, as the name implies. We prefer languages that resemble natural languages, that could fool a linguist examining them into thinking that they actually existed somewhere on the globe. Auxlangs and philosophical langs are anathema because their very nature goes against this value.

Complexity and completeness. No natural language is completely regular or completely simple, so neither will our languages. Furthermore, we seek to describe and develop our languages as completely as possible. Those who make dozens of half-finished sketches are creating the equivalent of commercial jingles. We seek to create symphonies.

Creativity, defined as difference from your native language. If your native language is Chinese, your target should be Ancient Greek. If your native language is English, your target is Dyirbal (tonal, ergative Australian language). Those who speak Italian and are only interested in Romance-style conlangs earn no respect in this area. Those that seek to challenge themselves and their learners are applauded.

Of course this won't be popular with everyone, especially not when I start telling people why their conlangs suck. Why should it? If you disagree with me, form your own school. But by all means, we have to start allowing for the critical analysis of conlangs to make them into an actual art form. As a side effect of this, we also have to start taking each others conlangs seriously—putting in the time to understand and evaluate them. Like everyone else on this list, my time is limited and I can hardly take the time to look at every conlang that comes my way. But I intend to start taking time to look closely at the conlangs of others and myself and seeing how well they hold up to the Naturalist values. I also intend to post my critiques to the list. Hopefully, we're mature enough (as individuals and as a community) to take and give criticism without resorting to whining and hurt feelings. And once again, if you don't like it form your own school.

Responses, comments, counter-flames?

*Originally from <http://groups.yahoo.com/group/conlang/message/67563>*

This was doubtlessly the most controversial thing I have ever posted to Conlang, and it did exactly what I had hoped—generated a huge amount of commentary and opinion, most of it disagreeing with me. The most vehement disagreement that people had was with the suggestion that we form conlanging schools. People found this suggestion

worrying, fearing that it would lead to another break-up of the conlang list and would destroy the spirit of camaraderie that makes the list so agreeable now. Jan van Steenbergen had a well-reasoned response typical of the concerns that others raised:

The diversity of our languages is enormous. Some of us are deeply into science-fiction and like to create strange, alien languages for strange, alien beings that sound like: “qipL##53x&p’omn3çyy\$faor/bzzzzz...”, while others rather enjoy creating a latinoid language with some local flavour from elsewhere in Europe. Or try to create a present-day version of Crimean Gothic or Dalmatian. Not to mention the creators of logical and auxiliary languages.

My point is: we have a very small and very diverse community. If we were to follow your ideas, it would soon split up into numerous tiny fractions, part of which would instantly cease to exist. I don’t see what purpose can be served with such developments. Why create tension between those for whom it is art and those for whom it is hobby, or between professional linguists and amateurs?  
*Originally from <http://groups.yahoo.com/group/conlang/message/67578>*

This objection I completely agreed with, and sort of did agree with all along. I never wished to split up conlang, nor to destroy the positive atmosphere of the list. A little friendly competition wouldn’t hurt anyone, but the serious divisiveness that some people feared was never in my intent. Perhaps, if my rant were fully carried it, it would be inevitable. I don’t think so, but this is still a very valid criticism.

Muke Tever had another angle on the question of conlang-as-art, which several people echoed:

Me personally, I look at conlangs more as craft than art--the things I think make a good conlang first are standard things like that: the quality and readability of the presentation; whether standard notations including but not limited to phonemic/phonetic brackets, X-SAMPA, unicode, etc. are used; completeness [not necessarily complexity or quantity of data, but at least a workable phonology, morphology, syntax, lexicon, and texts]. A conculture per se is not necessary, although a statement of the purpose of the language is always useful (at the very least something along the lines of "used in the ancient scriptures of Martian ringworms in my new book")  
*Originally from <http://groups.yahoo.com/group/conlang/message/67585>*

It seems to me that conlang-as-craft is not incompatible with conlang-as-art—Christophe Grandsire raised the analogy of architecture, which requires tremendous technical skill but is still doubtlessly artistic. Nonetheless, it turns out that there are a great many people on conlang who think of themselves more as hobbyists than artists. This baffled me at first—who wouldn’t want to see their creations valued as art? Nonetheless, plenty of self-proclaimed conlang hobbyists supported this distinction, so I retreated just a little bit to allow that not all conlangs are art or need to be viewed as such. Still, craftsmanship is

essential to good artistry, and a strong community of non-artist conlangers will still be good for those of us who actually view our creations as art.

The final criticism that people had that I agree with was actually one of the strongest—that the entire notion of critical schools is unnecessary and banal. Peter Clark made this wonderful observation:

But if you will permit me to be negative for a moment, setting up “schools” is not the way to do it. I was an English major (Planned Poverty, I call it) in college, and had to suffer through the various “schools.” Let’s see if I can remember all five: Marxist, Feminist, Psychoanalytic, Reader-Response, and...darn, I forgot. You know what? It was all a bunch of bull. You know who ends up in literary schools? The ones who can’t write. They can’t write decent literature to save their skins, so they fill up journal after journal with this phony nonsense. I was so happy to get out of that and into the creative writing classes. There, no one ever said one word about “schools”. We would read each other’s works, try to understand what the author was trying to communicate, and comment on how well the plot structure and devices aided toward the communication of that idea and how successful we felt the writing to be. That is the only “school” I will ever believe in, because it doesn’t limit me to one set of glasses. Getting genuine feedback from others \*who knew that they were talking about\* was extremely valuable, infinitely more so than trying to read a classic through a Marxist critique, especially when the author predated Marxism!

Ok, enough rant. So, once again, I applaud your instinct, but discourage your solution. If we as a group commit to more in-depth analysis and study of each other’s languages, we would do quite well. If we could figure out a way to dedicate a period of time, say a week, to the detailed examination of one conlang, that would be wonderful, as it would reduce the distraction created by other examinations. Conlanging is an art, but I don’t want it to become “ART” (said with a very nasal tone.) It would suck the life, the fun out of conlanging if we suddenly had to deal with intellectual snobbery. I come from the world of literature, where the snobbery is so thick you can cut it with a knife. That’s not what I want to see happen. We don’t need to be like everybody else. After all, we clearly are not like everyone else. ☺ We are practitioners of the domestic art, the quiet hobby, the silent symphony. I don’t want my conlang to become a vehicle of some “message.” It is because it is. Critique it for its success in reaching its desired goals, but let’s not seek to turn conlanging into something that it is not.  
*Originally from <http://groups.yahoo.com/group/conlang/message/67588>*

## The Construction of Laadan, from A First Dictionary and Grammar of Láadan, 2<sup>nd</sup> ed.

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### Introduction: The Construction of Láadan

In the fall of 1981, I was involved in several seemingly unrelated activities. I had been asked to write a scholarly review of the book *Women and Men Speaking*, by Cherris Kramarae; I was working on a speech for the WisCon science fiction convention scheduled for March 1982, where I was to be Guest of Honor; and I was reading – and re-reading – Douglas Hofstadter’s *Göedel, Escher, Bach*. I had also been reading a series of papers by Cecil Brown and his associates on the subject of lexicalization – that is, the giving of names (words, in most cases, or parts of words) to units of meaning in human languages. Out of this serendipitous mix came a number of things.

(1) I became aware, through Kramarae’s book, of the feminist hypothesis that existing human languages are inadequate to express the perceptions of women. This intrigued me because it had a built-in paradox: if it is true, the only mechanism available to women for discussing the problem is the very same language(s) alleged to be inadequate for the purpose.

(2) There occurred to me an interesting possibility within the framework of the Sapir-Whorf Hypothesis (briefly, that language structures perceptions): if women had a language adequate to express their perceptions, it might reflect a quite different reality than that perceived by men. This idea was reinforced for me by the papers of Brown *et al.*, in which there was constant reference to various phenomena of lexicalization as the only natural and self-evident possibilities. I kept thinking that women would have done it differently, and that what was being called the “natural” way to create words seemed to me to be instead the male way to create words.

(3) I read in *Göedel, Escher, Bach* a reformulation of Göedel’s Theorem, in which Hofstadter proposed that for every record player there were records it could not play because they would lead to its indirect self-destruction. And it struck me that if you squared this you would get a hypothesis that for every language there were perceptions it could not express because they would lead to its indirect self-destruction. Furthermore, if you cubed it, you would get a hypothesis that for every culture there are languages it could not use because they would lead to its indirect self-destruction. This made me wonder: what would happen to American culture if women did have and did use a language that expressed their perceptions? Would it self-destruct?

(4) I focused my Guest of Honor speech for WisCon on the question of why women portraying new realities in science fiction had, so far as I knew, dealt only with Matriarchy and Androgyny, and never with the third alternative based on the hypothesis that women are not superior to men (Matriarchy) or interchangeable with and equal to men (Androgyny) but rather entirely different from men. I proposed that it was at least possible that this was because the only language available to women excluded the third reality. Either because it was unlexicalized and thus no words existed with which to write

about it, or it was lexicalized in so cumbersome a manner that it was useless for the writing of fiction, or the lack of lexical resources literally made it impossible to imagine such a reality.

Somewhere along the way, this all fell together for me, and I found myself with a cognitive brew much too fascinating to ignore. The only question was how I was to go about exploring all of this. A scientific experiment and a scholarly monograph would have been nice; but I knew what the prospects of funding would be for an investigation of these matters, and I was without the private income that would have let me ignore that aspect of the problem. I therefore chose as medium the writing of a science fiction novel about a future America in which the woman-language had been constructed and was in use. That book, called *Native Tongue*, was published by DAW Books in August 1984. Its sequel, *Native Tongue II: The Judas Rose*, appeared from DAW in February 1987.

In order to write the book, I felt obligated to at least try to construct the language. I'm not an engineer, and when I write about engines I make no attempt to pretend that I know how engines are put together or how they function. But I am a linguist, and knowing how languages work is supposed to be my home territory. I didn't feel that I could ethically just fake the woman-language, or just insert a handful of hypothetical words and phrases to represent it. I needed at least the basic grammar and a modest vocabulary, and I need to experience what such a project would be like. I therefore began, on June 28, 1982, the construction of the language that became Láadan.

Because I am a linguist, I have studied many existing languages, from a number of different language families. In the construction of Láadan I have tried to use features of those languages which seemed to me to be valuable and appropriate. This method of construction is often called "patchwork", and is not looked upon with great favor in the Patriarchal Paradigm that dominates contemporary science. I would remind you, nonetheless, that among women the patchwork quilt is recognized as an artform, and the methodology of patchwork is respected.

My original goal was to reach a vocabulary of 1,000 words – enough, if well chosen, for ordinary conversation and informal writing. I passed that goal early on, and in the fall of 1982 the journal *Women and Language News* published the first writing in the language, a Nativity story written from Mary's point of view.

There was one more factor that entered into my decision to construct Láadan, and I saved it for last because it was not there originally but developed out of the work that I was doing. I found myself discussing the idea of the woman-language, proposed need for it, etc., at meetings and conferences and among my friends and colleagues. And I found that it was possible to get the necessary concepts across, if I was patient. (There was, for example, the useful fact that English has no word whatsoever for what a woman does during the sexual act... this generally helps to make some points more clear.) But I got thoroughly tired of one question and its answer. People would ask me, "Well, if existing human languages are inadequate to express women's perceptions, why haven't they ever made one up that is adequate?" And all I could ever say was that I didn't know.<sup>1</sup> This

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<sup>1</sup> At that time I had not yet had the opportunity to read Mary Daly's book, published in May 1984, called *Pure Lust*. In that book Daly tells us that St. Hildegard of Bingen, who lived from 1098-1179, constructed a language consisting of 900 words, with an alphabet of 23 letters. She was a distinguished scholar, with publications to her credit in a number of fields; as Daly says, it is impossible for us to know how much of value was lost to us when this language was lost. And I now have an alternative answer to that persistent

became tiresome, and frustrating, and it was a relief to me when I was at last able to say, “Well, as a matter of fact, a woman did construct such a language, beginning on June 28, 1982, and its name is Láadan.”

This book is a teaching grammar of Láadan, with an accompanying dictionary. It is only a beginning, and for all I know, the beginning of a failure, something that will never be of interest to anyone but the collector of linguistic exotica. But because this book exists, it will be very hard to “lose” Láadan in the way that other languages have been swallowed up by the History of Mankind. For that, I am most grateful to the members of SF<sup>3</sup>, who thought the work was important enough to justify publication.

Suzette Haden Elgin  
near Old Alabam, Arkansas

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question, although I have no way of knowing whether St. Hildegarde’s motivation for the construction of her language was a sense that no language adequate to express her perceptions was available to her.



## **Taste for Makers - <http://www.paulgraham.com/taste.html>**

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“...Copernicus’ aesthetic objections to [equants] provided one essential motive for his rejection of the Ptolemaic system...”

- Thomas Kuhn, *The Copernican Revolution*

“All of us had been trained by Kelly Johnson and believed fanatically in his insistence that an airplane that looked beautiful would fly the same way.”

- Ben Rich, *Skunk Works*

“Beauty is the first test: there is no permanent place in this world for ugly mathematics.”

- G. H. Hardy, *A Mathematician’s Apology*

I was talking recently to a friend who teaches at MIT. His field is hot now and every year he is inundated by applications from would-be graduate students. “A lot of them seem smart,” he said. “What I can’t tell is whether they have any kind of taste.”

Taste. You don’t hear that word much now. And yet we still need the underlying concept, whatever we call it. What my friend meant was that he wanted students who were not just good technicians, but who could use their technical knowledge to design beautiful things.

Mathematicians call good work “beautiful,” and so, either now or in the past, have scientists, engineers, musicians, architects, designers, writers, and painters. Is it just a coincidence that they used the same word, or is there some overlap in what they meant? If there is an overlap, can we use one field’s discoveries about beauty to help us in another?

For those of us who design things, these are not just theoretical questions. If there is such a thing as beauty, we need to be able to recognize it. We need good taste to make good things. Instead of treating beauty as an airy abstraction, to be either blathered about or avoided depending on how one feels about airy abstractions, let’s try considering it as a practical question: *how do you make good stuff?*

If you mention taste nowadays, a lot of people will tell you that “taste is subjective.” They believe this because it really feels that way to them. When they like something, they

have no idea why. It could be because it's person c , or because their mother had one, or because they saw a movie star with one in a magazine, or because they know it's expensive. Their thoughts are a tangle of unexamined impulses.

Most of us are encouraged, as children, to leave this tangle unexamined. If you make fun of your little brother for coloring people green in his coloring book, your mother is likely to tell you something like “you like to do it your way and he likes to do it his way.”

Your mother at this point is not trying to teach you important truths about aesthetics. She's trying to get the two of you to stop bickering.

Like many of the half-truths adults tell us, this one contradicts other things they tell us. After dinning into you that taste is merely a matter of personal preference, they take you to the museum and tell you that you should pay attention because Leonardo is a great artist.

What goes through the kid's head at this point? What does he think “great artist” means? After having been told for years that everyone just likes to do things their own way, he is unlikely to head straight for the conclusion that a great artist is someone whose work is *better* than the others'. A far more likely theory, in his Ptolemaic model of the universe, is that a great artist is something that's good for you, like broccoli, because someone said so in a book.

Saying that taste is just personal preference is a good way to prevent disputes. The trouble is, it's not true. You feel this when you start to design things.

Whatever job people do, they naturally want to do better. Football players like to win games. CEOs like to increase earnings. It's a matter of pride, and a real pleasure, to get better at your job. But if your job is to design things, and there is no such thing as beauty, then there is *no way to get better at your job*. If taste is just personal preference, then everyone's is already perfect: you like whatever you like, and that's it.

As in any job, as you continue to design things, you'll get better at it. Your tastes will change. And, like anyone who gets better at their job, you'll know you're getting better. If so, your old tastes were not merely different, but worse. Poof goes the axiom that taste can't be wrong.

Relativism is fashionable at the moment, and that may hamper you from thinking about taste, even as yours grows. But if you come out of the closet and admit, at least to yourself, that there is such a thing as good and bad design, then you can start to study good design in detail. How has your taste changed? When you made mistakes, what caused you to make them? What have other people learned about design?

Once you start to examine the question, it's surprising how much different fields' ideas of beauty have in common. The same principles of good design crop up again and again.

**Good design is simple.** You hear this from math to painting. In math it means that a shorter proof tends to be a better one. Where axioms are concerned, especially, less is more. It means much the same thing in programming. For architects and designers it means that beauty should depend on a few carefully chosen structural elements rather than a profusion of superficial ornament. (Ornament is not in itself bad, only when it's camouflage on insipid form.) Similarly, in painting, a still life of a few carefully observed and solidly person objects will tend to be more interesting than a stretch of flashy but mindlessly repetitive painting of, say, a lace collar. In writing it means: say what you mean and say it briefly.

It seems strange to have to emphasize simplicity. You'd think simple would be the default. Ornate is more work. But something seems to come over people when they try to be creative. Beginning writers adopt a pompous tone that doesn't sound anything like the way they speak. Designers trying to be artistic resort to swooshes and curlicues. Painters discover that they're expressionists. It's all evasion. Underneath the long words or the "expressive" brush strokes, there is not much going on, and that's frightening.

When you're forced to be simple, you're forced to face the real problem. When you can't deliver ornament, you have to deliver substance.

**Good design is timeless.** In math, every proof is timeless unless it contains a mistake. So what does Hardy mean when he says there is no permanent place for ugly mathematics? He means the same thing Kelly Johnson did: if something is ugly, it can't be the best solution. There must be a better one, and eventually someone will discover it.

Aiming at timelessness is a way to make yourself find the best answer: if you can imagine someone surpassing you, you should do it yourself. Some of the greatest masters did this so well that they left little room for those who came after. Every engraver since Durer has had to live in his shadow.

Aiming at timelessness is also a way to evade the grip of fashion. Fashions almost by definition change with time, so if you can make something that will still look good far into the future, then its appeal must derive more from merit and less from fashion.

Strangely enough, if you want to make something that will appeal to future generations, one way to do it is to try to appeal to past generations. It's hard to guess what the future will be like, but we can be sure it will be like the past in caring nothing for present fashions. So if you can make something that appeals to people today and would also have appealed to people in 1500, there is a good chance it will appeal to people in 2500.

**Good design solves the right problem.** The typical stove has four burners arranged in a square, and a dial to control each. How do you arrange the dials? The simplest answer is to put them in a row. But this is a simple answer to the wrong question. The dials are for humans to use, and if you put them in a row, the unlucky human will have to stop and think each time about which dial matches which burner. Better to arrange the dials in a square like the burners.

A lot of bad design is industrious, but misguided. In the mid twentieth century there was a vogue for setting text in sans-serif fonts. These fonts *are* closer to the pure, underlying letterforms. But in text that's not the problem you're trying to solve. For legibility it's more important that letters be easy to tell apart. It may look Victorian, but a Times Roman lowercase g is easy to tell from a lowercase y.

Problems can be improved as well as solutions. In software, an intractable problem can usually be replaced by an equivalent one that's easy to solve. Physics progressed faster as the problem became predicting observable behavior, instead of reconciling it with scripture.

**Good design is suggestive.** Jane Austen's novels contain almost no description; instead of telling you how everything looks, she tells her story so well that you envision the scene for yourself. Likewise, a painting that suggests is usually more engaging than one that tells. Everyone makes up their own story about the Mona Lisa.

In architecture and design, this principle means that a building or object should let you use it how you want: a good building, for example, will serve as a backdrop for whatever life people want to lead in it, instead of making them live as if they were executing a program written by the architect.

In software, it means you should give users a few basic elements that they can combine as they wish, like Lego. In math it means a proof that becomes the basis for a lot of new work is preferable to a proof that was difficult, but doesn't lead to future discoveries; in the sciences generally, citation is considered a rough indicator of merit.

**Good design is often slightly funny.** This one may not always be true. But Durer's engravings and Saarinen's womb chair and the Pantheon and the original Porsche 911 all seem to me slightly funny. Godel's incompleteness theorem seems like a practical joke.

I think it's because humor is related to strength. To have a sense of humor is to be strong: to keep one's sense of humor is to shrug off misfortunes, and to lose one's sense of humor

is to be wounded by them. And so the mark—or at least the prerogative—of strength is not to take oneself too seriously. The confident will often, like swallows, seem to be making fun of the whole process slightly, as Hitchcock does in his films or Bruegel in his paintings—or Shakespeare, for that matter.

Good design may not have to be funny, but it's hard to imagine something that could be called humorless also being good design.

**Good design is hard.** If you look at the people who've done great work, one thing they all seem to have in common is that they worked very hard. If you're not working hard, you're probably wasting your time.

Hard problems call for great efforts. In math, difficult proofs require ingenious solutions, and those tend to be interesting. Ditto in engineering.

When you have to climb a mountain you toss everything unnecessary out of your pack. And so an architect who has to build on a difficult site, or a small budget, will find that he is forced to produce an elegant design. Fashions and flourishes get knocked aside by the difficult business of solving the problem at all.

Not every kind of hard is good. There is good pain and bad pain. You want the kind of pain you get from going running, not the kind you get from stepping on a nail. A difficult problem could be good for a designer, but a fickle client or unreliable materials would not be.

In art, the highest place has traditionally been given to paintings of people. There is something to this tradition, and not just because pictures of faces get to press buttons in our brains that other pictures don't. We are so good at looking at faces that we force anyone who draws them to work hard to satisfy us. If you draw a tree and you change the angle of a branch five degrees, no one will know. When you change the angle of someone's eye five degrees, people notice.

When Bauhaus designers adopted Sullivan's "form follows function," what they meant was, form *should* follow function. And if function is hard enough, form is forced to follow it, because there is no effort to spare for error. Wild animals are beautiful because they have hard lives.

**Good design looks easy.** Like great athletes, great designers make it look easy. Mostly this is an illusion. The easy, conversational tone of good writing comes only on the eighth rewrite.

In science and engineering, some of the greatest discoveries seem so simple that you say to yourself, I could have thought of that. The discoverer is entitled to reply, why didn't you?

Some Leonardo heads are just a few lines. You look at them and you think, all you have to do is get eight or ten lines in the right place and you've made this beautiful portrait. Well, yes, but you have to get them in *exactly* the right place. The slightest error will make the whole thing collapse.

Line drawings are in fact the most difficult visual medium, because they demand near perfection. In math terms, they are a closed-form solution; lesser artists literally solve the same problems by successive approximation. One of the reasons kids give up drawing at ten or so is that they decide to start drawing like grownups, and one of the first things they try is a line drawing of a face. Smack!

In most fields the appearance of ease seems to come with practice. Perhaps what practice does is train your unconscious mind to handle tasks that used to require conscious thought. In some cases you literally train your body. An expert pianist can play notes faster than the brain can send signals to his hand. Likewise an artist, after a while, can make visual perception flow in through his eye and out through his hand as automatically as someone tapping his foot to a beat.

When people talk about being in "the zone," I think what they mean is that the spinal cord has the situation under control. Your spinal cord is less hesitant, and it frees conscious thought for the hard problems.

**Good design uses symmetry.** I think symmetry may just be one way to achieve simplicity, but it's important enough to be mentioned on its own. Nature uses it a lot, which is a good sign.

There are two kinds of symmetry, repetition and recursion. Recursion means repetition in subelements, like the pattern of veins in a leaf.

Symmetry is unfashionable in some fields now, in reaction to excesses in the past. Architects started consciously making buildings asymmetric in Victorian times and by the 1920s asymmetry was an explicit premise of modernist architecture. Even these buildings only tended to be asymmetric about major axes, though; there were hundreds of minor symmetries.

In writing you find symmetry at every level, from the phrases in a sentence to the plot of a novel. You find the same in music and art. Mosaics (and some Cezannes) get extra visual punch by making the whole picture out of the same atoms. Compositional symmetry yields some of the most memorable paintings, especially when two halves react to one another, as in the *Creation of Adam* or *American Gothic*.

In math and engineering, recursion, especially, is a big win. Inductive proofs are wonderfully short. In software, a problem that can be solved by recursion is nearly always best solved that way. The Eiffel Tower looks striking partly because it is a recursive solution, a tower on a tower.

The danger of symmetry, and repetition especially, is that it can be used as a substitute for thought.

**Good design resembles nature.** It's not so much that resembling nature is intrinsically good as that nature has had a long time to work on the problem. It's a good sign when your answer resembles nature's.

It's not cheating to copy. Few would deny that a story should be like life. Working from life is a valuable tool in painting too, though its role has often been misunderstood. The aim is not simply to make a record. The point of painting from life is that it gives your mind something to chew on: when your eyes are looking at something, your hand will do more interesting work.

Imitating nature also works in engineering. Boats have long had spines and ribs like an animal's ribcage. In some cases we may have to wait for better technology: early aircraft designers were mistaken to design aircraft that looked like birds, because they didn't have materials or power sources light enough (the Wrights' engine weighed 152 lbs. and generated only 12 hp.) or control systems sophisticated enough for machines that flew like birds, but I could imagine little unmanned reconnaissance planes flying like birds in fifty years.

Now that we have enough computer power, we can imitate nature's method as well as its results. Genetic algorithms may let us create things too complex to design in the ordinary sense.

**Good design is redesign.** It's rare to get things right the first time. Experts expect to throw away some early work. They plan for plans to change.

It takes confidence to throw work away. You have to be able to think, *there's more where that came from*. When people first start drawing, for example, they're often reluctant to redo parts that aren't right; they feel they've been lucky to get that far, and if they try to redo something, it will turn out worse. Instead they convince themselves that the drawing is not that bad, really—in fact, maybe they meant it to look that way.

Dangerous territory, that; if anything you should cultivate dissatisfaction. In Leonardo's drawings there are often five or six attempts to get a line right. The distinctive back of the

Porsche 911 only appeared in the redesign of an awkward prototype. In Wright's early plans for the Guggenheim, the right half was a ziggurat; he inverted it to get the present shape.

Mistakes are natural. Instead of treating them as disasters, make them easy to acknowledge and easy to fix. Leonardo more or less invented the sketch, as a way to make drawing bear a greater weight of exploration. Open-source software has fewer bugs because it admits the possibility of bugs.

It helps to have a medium that makes change easy. When oil paint replaced tempera in the fifteenth century, it helped painters to deal with difficult subjects like the human figure because, unlike tempera, oil can be blended and overpainted.

**Good design can copy.** Attitudes to copying often make a round trip. A novice imitates without knowing it; next he tries consciously to be original; finally, he decides it's more important to be right than original.

Unknowing imitation is almost a recipe for bad design. If you don't know where your ideas are coming from, you're probably imitating an imitator. Raphael so pervaded mid-nineteenth century taste that almost anyone who tried to draw was imitating him, often at several removes. It was this, more than Raphael's own work, that bothered the Pre-Raphaelites.

The ambitious are not content to imitate. The second phase in the growth of taste is a conscious attempt at originality.

I think the greatest masters go on to achieve a kind of selflessness. They just want to get the right answer, and if part of the right answer has already been discovered by someone else, that's no reason not to use it. They're confident enough to take from anyone without feeling that their own vision will be lost in the process.

**Good design is often strange.** Some of the very best work has an uncanny quality: Euler's Formula, Bruegel's Hunters in the Snow, the SR-71, Lisp. They're not just beautiful, but strangely beautiful.

I'm not sure why. It may just be my own stupidity. A can-opener must seem uncanny to a dog. Maybe if I were smart enough it would seem the most natural thing in the world that  $e^{i\pi} = -1$ . It is after all necessarily true.

Most of the qualities I've mentioned are things that can be cultivated, but I don't think it works to cultivate strangeness. The best you can do is not squash it if it starts to appear.

Einstein didn't try to make relativity strange. He tried to make it true, and the truth turned out to be strange.

At an art school where I once studied, the students wanted most of all to develop a personal style. But if you just try to make good things, you'll inevitably do it in a distinctive way, just as each person walks in a distinctive way. Michelangelo was not trying to paint like Michelangelo. He was just trying to paint well; he couldn't help painting like Michelangelo.

The only style worth having is the one you can't help. And this is especially true for strangeness. There is no shortcut to it. The Northwest Passage that the Mannerists, the Romantics, and two generations of American high school students have searched for does not seem to exist. The only way to get there is to go through good and come out the other side.

**Good design happens in chunks.** The inhabitants of fifteenth century Florence included Brunelleschi, Ghiberti, Donatello, Masaccio, Filippo Lippi, Fra Angelico, Verrocchio, Botticelli, Leonardo, and Michelangelo. Milan at the time was as big as Florence. How many fifteenth century Milanese artists can you name?

Something was happening in Florence in the fifteenth century. And it can't have been heredity, because it isn't happening now. You have to assume that whatever inborn ability Leonardo and Michelangelo had, there were people born in Milan with just as much. What happened to the Milanese Leonardo?

There are roughly a thousand times as many people alive in the US right now as lived in Florence during the fifteenth century. A thousand Leonardos and a thousand Michelangelos walk among us. If DNA ruled, we should be greeted daily by artistic marvels. We aren't, and the reason is that to make Leonardo you need more than his innate ability. You also need Florence in 1450.

Nothing is more powerful than a community of talented people working on related problems. Genes count for little by comparison: being a genetic Leonardo was not enough to compensate for having been born near Milan instead of Florence. Today we move around more, but great work still comes disproportionately from a few hotspots: the Bauhaus, the Manhattan Project, the *New Yorker*, Lockheed's Skunk Works, Xerox Parc.

At any given time there are a few hot topics and a few groups doing great work on them, and it's nearly impossible to do good work yourself if you're too far removed from one of these centers. You can push or pull these trends to some extent, but you can't break away from them. (Maybe *you* can, but the Milanese Leonardo couldn't.)

**Good design is often daring.** At every period of history, people have believed things that were just ridiculous, and believed them so strongly that you risked ostracism or even violence by saying otherwise.

If our own time were any different, that would be remarkable. As far as I can tell it isn't.

This problem afflicts not just every era, but in some degree every field. Much Renaissance art was in its time considered shockingly secular: according to Vasari, Botticelli repented and gave up painting, and Fra Bartolommeo and Lorenzo di Credi actually burned some of their work. Einstein's theory of relativity offended many contemporary physicists, and was not fully accepted for decades—in France, not until the 1950s.

Today's experimental error is tomorrow's new theory. If you want to discover great new things, then instead of turning a blind eye to the places where conventional wisdom and truth don't quite meet, you should pay particular attention to them.

As a practical matter, I think it's easier to see ugliness than to imagine beauty. Most of the people who've made beautiful things seem to have done it by fixing something that they thought ugly. Great work usually seems to happen because someone sees something and thinks, *I could do better than that*. Giotto saw traditional Byzantine madonnas painted according to a formula that had satisfied everyone for centuries, and to him they looked wooden and unnatural. Copernicus was so troubled by a hack that all his contemporaries could tolerate that he felt there must be a better solution.

Intolerance for ugliness is not in itself enough. You have to understand a field well before you develop a good nose for what needs fixing. You have to do your homework. But as you become expert in a field, you'll start to hear little voices saying, *What a hack! There must be a better way*. Don't ignore those voices. Cultivate them. The recipe for great work is: very exacting taste, plus the ability to gratify it.

## Notes

Sullivan actually said “form ever follows function,” but I think the usual misquotation is closer to what modernist architects meant.

Stephen G. Brush, “Why was Relativity Accepted?” *Phys. Perspect.* 1 (1999) 184-214.

**Some questions, excerpted from Describing Morphosyntax: A Guide for Field Linguists**

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Excerpted by [pc451@yahoo.com](mailto:pc451@yahoo.com), and found at <http://members.nbci.com/pc451/Conlang/questions.html> (via archive.org).

**Chapter 1: Demographic and ethnographic information**

Name of the language?

1. What is the language known as to outsiders?
2. What term do the people use to distinguish themselves from other language groups?
3. What is the origin of these terms (if known)?

1.2 Ethnology

1. What is the dominant economic activity of the people?
2. Briefly describe the ecosystem, material culture, and cosmology (these will be intimately related).

1.3 Demography

1. Where is the language spoken, and how are the people distributed in this area?
2. Are there other language groups inhabiting the same area?
3. What is the nature of the interaction with these language groups? Economic? Social? Friendly? Beligerent?
4. In social/economic interactions with other groups, which groups are dominant and which are marginalized? How so?

1.4 Genetic Affiliation

1. What language family does this language belong to?
2. What are its closest relatives?

1.5 Previous Research

1. What published and unpublished linguistic work has been done in this language and/or its closest relatives?

1.6 The sociolinguistic situation

1.6.1 Multilingualism and Language attitudes

1. What percentage of the people are monolingual? (Treat men and women separately.)
2. What language(s) are people multilingual in, and to what degree?
3. As far as you can tell, what is the attitude of the speakers of this language toward their language, as opposed to other languages they may know? If possible, give evidence for your claims even though it may be anecdotal.

1.6.2 Contexts of use and language choice

1. In what contexts are multilingual individuals likely to use the language described in this sketch? When do they use other languages?

1.6.3 Viability

1. Are children learning the language as their first language? If so, how long do they remain monolingual?
  2. What pressures are there on young people to (a) learn another language, and (b) reject their own language? How strong are these pressures?
  3. Are there partially competent speakers?
- 1.6.4 Loan words
1. Does the lexicon of this language contain many words from other languages? If so, in what semantic domains do these tend to occur? Give examples.
- 1.7 Dialects
- Is there significant dialect variation? What kinds of differences distinguish the dialects? Give examples.
- What dialect is represented in the sketch?

## **Chapter 2: Morphological typology**

### 2.1 Traditional morphological typology

#### 2.1.1 Synthesis

#### 2.1.2 Fusion

1. Is the language dominantly isolating or polysynthetic?
2. If the language is at all polysynthetic, is it dominantly agglutinative or fusional?
3. Give examples of its dominant pattern and any secondary patterns.

### 2.2 Morphological processes

1. If the language is at all agglutinative, is it dominantly prefixing, suffixing, or neither?
2. Illustrate the major and secondary patterns (including infixation, stem modification, reduplication, person class modification, and person class).

### 2.3 Head/dependent marking

1. If the language is at all polysynthetic, is it dominantly “head-marking,” “dependent-marking,” or mixed?
2. Give some examples of each type of marking the language exhibits.

## **Chapter 3: Grammatical categories**

### 3.1 Nouns

1. What are the distributional properties of nouns?
2. What are the structural properties of nouns?

#### 3.1.1 Types of Nouns

1. What are the major formally distinct subcategories of nouns?

#### 3.1.2 The structure of the noun word

2. What is the basic structure of the noun word (for polysynthetic languages) and/or noun phrase (for more isolating languages)?

#### 3.1.3 Pronouns and/or anaphoric clitics

3. Does the language have free pronouns and/or anaphoric clitics? (these are distinct from grammatical agreement. Agreement will be discussed later. Also, the functions of pronouns and clitics will be discussed later.)
4. Give a chart of the free pronouns and/or anaphoric clitics.

### 3.2 Verbs

1. What are the distributional properties of verbs?
2. Describe the order of various verbal operators within the verbal word or verb phrase.
3. Give charts of the various paradigms, e.g., person marking, tense/aspect/mode etc. Indicate major allomorphic variants.
4. Are directional and/or locational notions expressed in the verb or verb phrase at all?
5. Questions to answer for all verbal operations:
  - (a) Is this operation obligatory, i.e., does one member of the paradigm have to occur in every finite verb or verb phrase?
  - (b) Is it productive, i.e., can the operation be specified for all the verb stems, and does it have the same meaning with each one? (Nothing is fully productive, but some operations are more productive than others.)
  - (c) Is this operation primarily coded morphologically, analytically, or lexically? Are there any exceptions to the general case?
  - (d) Where in the verb phrase or verbal word is this operation likely to appear? Can it occur in more than one place?

#### 3.2.0 Semantic roles

##### 3.2.1 Verb classes

1. What are the major subclasses of verbs?

##### 3.2.2 Verb structure

1. What are the structural properties of verbs?

### 3.3 Modifiers

#### 3.3.1 Descriptive adjectives

2. If you posit a morphosyntactic category of adjectives, give evidence for not grouping these forms with the verbs or nouns.
3. What characterizes a form as being an adjective in this language?
4. How can you characterize semantically the class of concepts coded by this formal category?
5. Do adjectives agree with their heads (e.g., in number, case, and/or noun class)?

#### 3.3.2 Non-numeral quantifiers

#### 3.3.3 Numerals

1. What kind of system does the language employ for counting? Decimal, quinary?
2. How high can a fluent native speaker count without resorting either to words from another language or to a generic word like many? Exemplify the system up to this point.
3. Do numerals agree with their head nouns (e.g., in number, case, and/or noun class)?

### 3.4 Adverbs

1. What characterizes a form as being an adverb in this language?

2. If you posit a distinct class of adverbs, argue for why these forms should not be treated as nouns, verbs, or adjectives.
3. For each kind of adverb listed in this section, list a few members of the type and specify whether there are any restrictions relative to that type, e.g., where they can come in a clause, any morphemes common to the type, etc.
4. Are any of these classes of adverbs related to older complement-taking (matrix) verbs?

#### 3.4.1 Manner

#### 3.4.2 Time

#### 3.4.3 Direction/location

#### 3.4.4 Evidential/epistemic

### **Chapter 4: Constituent order typology**

#### 4.1 Constituent order in main clauses

1. General questions for all units of structure:
  - (a) What is the neutral order of free elements in the unit?
  - (b) Are there variations?
  - (c) How do the variant orders function?
2. What is the pragmatically neutral order of constituents (A/S, P, and V) in basic clauses of the language?

#### 4.2 Verb phrase

1. Where do auxiliaries occur in relation to the semantically “main” verb?
2. Where do verb-phrase adverbs occur with respect to the verb and auxiliaries?

#### 4.3 Noun phrase

1. Describe the order(s) of the elements in the noun phrase.

#### 4.4 Adpositional phrases (prepositions and postpositions)

2. Is the language dominantly prepositional or post-positional? Give examples.
3. Do many adpositions come from nouns or verbs?

#### 4.5 Comparatives

1. Does the language have one or more grammaticalized comparative constructions?
2. If so, what is the order of the standard, the marker, and the quality by which an item is compared to the standard?

#### 4.6 Question particles and question words

1. In yes/no questions, if there is a question particle, where does it occur?
2. In information questions, where does the question word occur?

#### 4.7 Summary

1. How does this language compare in its constituent orders to universal expectations, as represented by Greenberg (1963), Hawkins (1983), or some other well-known typology?

### **Chapter 5: Noun and noun-phrase operations**

#### 5.1 Compounding

2. Is there noun-noun compounding (e.g., windshield)?
3. How do you know it is compounding?
4. Is there noun-verb (or verb-noun) compounding that results in a noun (e.g., pickpocket, scarecrow)?
5. Are these processes productive (like noun-verb-er in person can-opener)?
6. How common is compounding?

#### 5.2 Denominalization

1. Are there any processes (productive or not) that form a verb from a noun?
2. An adjective from a noun?
3. An adverb from a noun?

#### 5.3 Number

1. Is number expressed in the noun phrase?
2. Is the distinction between singular and non-singular obligatory, optional, or completely absent in the noun phrase?
3. If number marking is “optional,” when does it tend to occur, and when does it tend not to occur?
4. If number marking is obligatory, is number overtly expressed for all noun phrases or only some subclasses of noun phrases, such as animates?
5. What non-singular distinctions are there?

#### 5.4 Case

1. Do nouns exhibit morphological case?
2. If so, what are the cases?

#### 5.5 Articles, determiners, and demonstratives

1. Do noun phrases have articles?
2. If so, are they obligatory or optional, and under what circumstances do they occur?
3. Are they separate words, or bound morphemes?
4. Is there a class or classes of demonstratives as distinct from articles?
5. How many degrees of distance are there in the system of demonstratives?
6. Are there any other distinctions besides distance?

#### 5.6 Possessors

1. How are possessors expressed in the noun phrase?
2. Do nouns agree with their possessors? Do possessors agree with possessed nouns? Neither, or both?
3. Is there a distinction between alienable and inalienable possession?
4. Are there other types of possessions?
5. When the possessor is a full noun, where does it usually come with respect to the possessed noun?

#### 5.7 Class (including gender)

1. Is there a noun class system?
2. What are the classes, and how are they manifested in the noun phrase?
3. What dimension of reality is most central to the noun class system (e.g., animacy, shape, function, etc.)? What other dimensions are relevant?
4. Do the classifiers occur with numerals? Adjectives? Verbs?
5. What is their function in these contexts?

#### 5.8 Diminution/augmentation

1. Does the language employ diminutive and/or argumentative operators in the noun or noun phrase?
2. Questions to answer for all nominal operations:
  - (a) Is this operation obligatory, i.e., does one member of the paradigm have to occur in every full noun phrase?
  - (b) Is it productive, i.e., can the operation be specified for all full noun phrases and does it have the same meanings with each one? (Nothing is fully productive, but some operations are more so than others.)
  - (c) Is this operation primarily expressed lexically, morphologically, or analytically? Are there exceptions?
  - (d) Where in the noun phrase is this operation likely to be located? Can it occur in more than one place?

## **Chapter 6: Predicate nominals and related constructions**

### 6.1 Predicate nominals

1. How are proper inclusion and equative predicates formed?
2. What restrictions are there, if any, on the TAM (Tense/Aspect/Mode) marking of such clauses?

### 6.2 Predicate adjectives (attributive clauses)

1. How are predicate adjectives formed? (Include a separate section on predicate adjectives only if they are person c lly distinct from predicate nominals.)

### 6.3 Predicate locatives

1. How are locational clauses (or predicate locatives) formed?

### 6.4 Existentials

1. How are existential clauses formed? (Give examples in different tense/aspects, especially if there is significant variation.)
2. How are negative existentials formed?
3. Are there extended uses of existential morphology? (Provide pointers to other relative sections of the grammar.)

### 6.5 Possessive clauses

1. How are possessive clauses formed?

## **Chapter 7: Grammatical relations**

### 7.1 Systems for grouping S, A, and P

### 7.2 Functional explanations for grouping S, A, and P

### 7.3 Split systems

#### 7.3.1 Split intransitivity

#### 7.3.2 Split ergativity

##### 7.3.2.1 Split ergativity based on topic-worthiness of A and P

##### 7.3.2.2 Split ergativity based on tense-aspect

##### 7.3.2.3 Summary of split systems for organizing grammatical relations

### 7.4 “syntactic” ergativity

### 7.5 Summary

1. Exemplify some simple intransitive, transitive, and ditransitive clauses. Three-argument clauses may not unequivocally exist.
2. What are the grammatical relations of this language? Give morphosyntactic evidence for each one that you propose.
  - (a) Subject?
  - (b) Ergative?
  - (c) Absolutive?
  - (d) Direct object?
  - (e) Indirect object?
3. There are basically four possible sources of evidence for grammatical relations:
  - (f) morphological case on NPs;
  - (g) person marking on verbs;
  - (h) constituent order;
  - (i) some pragmatic hierarchy.
4. Is the system of grammatical relations in basic (affirmative, declarative) clauses organized according to the nominative/accusative, ergative/absolutive, tripartite, or some other system?
5. Is there a split system for organizing grammatical relations? If so, what determines the split?
  - (j) Is there split intransitivity? If so, what person or discourse/pragmatic factor conditions the split?
  - (k) Does the system for pronouns and/or person marking on verbs operate on the same basis as that of full NPs?
  - (l) Are there different grammatical-relation systems depending on the clause type (e.g., main vs. dependent clauses, affirmative vs. negative clauses)?
  - (m) Are there different grammatical-relation assignment systems depending on the tense and/or aspect of the clause?
  - (n) Are there any synthetic processes (e.g., conjunction reduction, relativization) that operate on an ergative/absolutive basis?

## Chapter 8: Voice and valence adjusting operations

### 8.1 Valence increasing operations

#### 8.1.1 Causatives

1. How are causatives formed in this language? There are basically 3 possible answers to this question:
  - (a) Lexical: kill
  - (b) Morphological: die + cause
  - (c) Analytic/periphrastic: cause to die
2. Give examples of both causatives of intransitive verbs (e.g. He made Shin Jaa wash the dishes).
3. What happens to the person in each type of causative?
4. Does the causative morphosyntax also serve other functions (e.g. permissive, applicative, benefactive, instrumental, etc.)?

5. Are there any interesting or unusual facts about causatives in the language?
- 8.1.2 Applicatives
    1. Are there any operations by which a participant which has a semantic role normally expressed in an “oblique” phrase can “advance” to direct object status?
    2. What semantic roles are subject to these operations and how common are these constructions?
  - 8.1.3 Dative shift
    1. Is there a dative shift construction?
    2. What semantic roles can be dative shifted?
    3. Is dative shift obligatory?
  - 8.1.4 Dative of interest
  - 8.1.5 Possessor raising or external possession
  - 8.2 Valence decreasing operations
    - 8.2.1 reflexives and reciprocals
      1. How are reflexives expressed?
        - (a) Lexically?
        - (b) Morphologically?
        - (c) Analytically?
      2. Are reflexives and reciprocals formally identical?
      3. Are there any “unusual” uses of reflexive/reciprocal morphosyntax? For example, does a reflexive marker appear in a noun phrase to indicate that the possessor of the noun phrase is the subject of the clause?
      4. Does reflexive/reciprocal morphology ever indicate interclausal coreference?
      5. Are there other “extended” uses of reflexive or reciprocal morphosyntax?
    - 8.2.2 Passives
      1. Which type(s) of passive construction does the language have? Exemplify each type, and describe its function or functions.
        - (a) Lexical?
        - (b) Morphological?
        - (c) Analytic?
      2. Are there “impersonal” passives, i.e., passives of intransitive verbs, or passives where there is not necessarily an Agent implied?
      3. Is a passive construction obligatory in any particular environment, e.g., when a Patient outranks an Agent on some pragmatically defined hierarchy?
      4. Are there other types of passives?
    - 8.2.3 Inverses
      1. Does the language have a grammatically instantiated inverse construction?
      2. If so, what type is it?
    - 8.2.4 Middle constructions
      1. Are there grammatically instantiated middle constructions?
    - 8.2.5 Antipassives
      1. Are there grammatical structures that specifically function as antipassives?
      2. Is some other structure used to express transitive concepts when the P is very low in topicality?
    - 8.2.6 Object demotion or omission
    - 8.2.7 Object [noun] incorporation

1. Does the language have object demotion or omission constructions (as distinct from antipassives)?

## **Chapter 9: Other verb and verb-phrase operations**

### 9.1 Nominalization

#### 9.1.1 Action nominalization

#### 9.1.2 Participant nominalizations

##### 9.1.2.1 Agent nominalizations

##### 9.1.2.2 Patient nominalizations

##### 9.1.2.3 Instrument nominalizations

##### 9.1.2.4 Location nominalizations

##### 9.1.2.5 Product nominalizations

##### 9.1.2.6 Manner nominalizations

2. Describe the processes (productive or not) that form a noun from a verb. Include at least:
  - (a) action nominalizations
  - (b) agent nominalizations
  - (c) patient nominalizations
3. Is there a distinction between agent nominalizations that refer to characteristic activities (e.g., teacher) and those that refer to specific events (e.g., the one who is teaching)?
4. Describe any other participant nominalization strategies (e.g., instrument, location, product, or manner nominalizations).

### 9.2 Compounding (including incorporation)

1. Can subject, person, and/or other nouns be incorporated into the verb?
2. Are there verb-verb compounding processes that result in a verb?

### 9.3 Tense/Aspect/Mode (TAM for short)

1. Is there a tense system? How does it operate? Future/non-future, past/non-past, past/present/future, or other? (You may want to treat these separately or group them, depending on how the language works.)
2. How is aspect expressed?
3. Is there a clear dividing line between tense/aspect and mode (probably not)?
4. What are the modes?
5. Is the case-marking pattern influenced at all by TAM?

### 9.4 Location/direction

1. Does the language employ verbal affixes, or verb-phrase grammatical functors that specify the spatial orientation or grounding of the situation?

### 9.5 Participant reference

1. Does the language mark the person and/or number of verbal arguments or speech act participants on the verb?
2. Provide charts of the various paradigms.

### 9.6 Evidentiality, validationality, and mirativity

1. Are there any grammaticalized indicators of evidentiality, validationality, or mirativity?

### 9.7 Miscellaneous

- (a) lexical time reference (as opposed to tense) e.g., yesterday, tomorrow.
  - (b) Distributive, i.e., “all over the place,” “with a back-and-forth motion.”
  - (c) Environmental, e.g. “at night,” “over water” (on motion verbs).
  - (d) Speaker attitude, e.g. “complaining,” “frustration,” “disgust.”
2. does the language have any other “miscellaneous” verb or verb-phrase operations?
  3. For any such miscellaneous operations, argue for why you have not treated them as TAM or location/direction marking.

## Chapter 10: Pragmatically marked structures

### 10.0 Pragmatic statuses

#### 10.1 The morphosyntax of focus, contrast, and “topicalization”

1. Are there special devices for indicating pragmatic statuses in basic clauses, e.g., special constituent orders, left- and/or right-dislocation, affixes, or particles indicating referentiality, specificity, topic, focus, contrast, etc.?
2. Describe cleft constructions. If possible, give a characterization of their discourse functions.
3. What different types of pragmatic status is the grammar of this language sensitive to?

#### 10.2 Negation

1. What is the standard means of forming a negative clause in this language?
2. What secondary strategies are there? When are they used?
3. Is there constituent negation? Derivational negation?

#### 10.3 Non-declarative speech acts

1. How are yes/no questions formed?
2. How are information questions formed?
3. How are imperatives formed?
4. Are there “polite” imperatives that contrast with more direct imperatives?
5. Are there “first person” imperatives (e.g., Let’s eat)? If so, how are they used?

## Chapter 11: Clause combinations

### 11.1 Serial verbs

1. Does the language have serial verbs (or “co-verbs” in the East Asian tradition)?
2. Which verbs are most likely to occur in serial constructions?
3. Are there any that are losing their semantic content and becoming more like auxiliaries, adpositions, or tense/aspect/mode markers when they occur in serial constructions?

### 11.2 Complement clauses

1. What kind of complement clause does the language have?
2. Are particular complement types common for particular classes of complement-taking verbs?

3. Does the language allow subject and object complements, or just object complements?

#### 11.3 Adverbial clauses

1. How are adverbial clauses formed?
2. What kinds of adverbial clauses are there, e.g., time, manner, purpose, reason, consequence, sequence, conditional?
3. Can adverbial clauses occur in more than one place in a clause?
4. If so, are there any differences in meaning associated with the various allowable positions for any given adverbial clause type?
5. Among the conditionals, are there any subdivisions, e.g., contrafactual (If I had done it differently, that wouldn't have happened), hypothetical (If I were you, I'd do it differently)?
6. What restrictions are there on the tense/aspect/mode marking of the conditional clauses?

#### 11.4 Clause chaining, medial clauses, and switch reference

1. Does the language have any grammaticalized device that explicitly indicates whether a participant in one clause is the same as or different than some participant in another clause?
2. If so, answer the following questions:
  - (a) What direction does the dependency go? That is, does a marker signal coreferentiality with a yet to be mentioned participant, or an already mentioned participant? (Maybe both, depending on other factors.)
  - (b) What can “antecede” one of these markers? That is, coreferentiality always with respect to a “subject” participant, or can non-subject AGENT, or nominals of other grammatical relations also antecede a coreference form?
  - (c) On what categories of elements can these markers go, e.g., verbs, nouns, conjunctions, etc.?
3. Can one clause be inflected for the person/number of the subject of some other clause?
4. Do the markers of interclausal coreference also carry other information, e.g., tense/aspect or semantic relations between clauses?
5. How extensive is this phenomenon?

#### 11.5 Relative clauses

1. What kind or kinds of relative clauses does the language have?
  - (a) Prenominal?
  - (b) Postnominal?
  - (c) Internally headed?
  - (d) Headless?
  - (e) Correlative?
2. What positions on the following relativizability hierarchy can be relativized?
3. subject > direct object > indirect object > oblique > possessor
4. What relative clause type or “case recoverability strategy” is used for each position?

#### 11.6 Coordination

1. How are the following kinds of logical relations between clauses typically expressed?

- (a) Conjunction (a and b)/(neither a nor b)?
- (b) Disjunction (a or b)?
- (c) Exclusion (a and not b)?

## **Chapter 12: Conclusions: the language in use**

1. What are the discourse functions of the various referential devices? That is, which code highly continuous referents, and which code highly discontinuous referents?
2. Related questions: how are referents introduced into narrative and/or conversational discourse?
3. Are referents introduced differently depending on whether or not they are “destined” to figure prominently in the following text? (That is, does the language clearly distinguish introductions of “discourse manipulable” referents?)
4. Are there different coding devices used to introduce referents that have some honorific status?
5. How is tense/aspect marking deployed in discourse? (Answer will probably vary according to genre.)
6. What morphosyntactic devices are used to signal the “events” in a narrative discourse? What about “non-events,” i.e., collateral descriptive material?
7. What devices are used to ascribe special prominence to portions of texts?
8. Can you isolate the kinds of prominence that the language is sensitive to?
9. Are there special morphosyntactic devices characteristically used at the climax or peak of a narrative?
10. Is there a recognizable peak in other genres?
11. Are rhetorical questions and/or negation used as “highlighting” devices in discourse? Give examples.
12. What discourse genres are demonstrably distinct in this language? Exemplify and discuss the significant characteristics of each.
13. Does the language make extensive and productive use of sound symbolism?
14. What are some common ideophones?
15. How is the phonological system of ideophones and sound symbolism different than that of the rest of the language?
16. How is the morphology different? How is the syntax different?
17. What are the features of this language that are particularly interesting?
18. What typological surprises does it present?
19. How does this work contribute to our understanding of the notion “possible human language?” What directions for further research do you recommend and/or plan to undertake yourself?
20. Can you qualitatively describe the “character” of this language? What are its dominant features?
21. What are the characteristics of a skilled orator in this language?
22. Can you provide some explicit examples that will contribute to the reader’s sense of how this language is used? Some possibilities might be jokes, prayers, metaphorical expressions, or other culturally relevant discourse samples.

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*Preface*

*This how-to guide is based on a newsletter I wrote in 1995 and 1996. This is the original introduction. -- Jeffrey, 6/30/01*

One of the reasons I've started the newsletter is to increase awareness of the hobby of model languages and to provide a banner for language enthusiasts to rally around. There is little awareness about *model languages* as a hobby; in fact, no one is quite sure what to call it, with **Tolkien** referring to it as *private languages*; and others calling it *constructed languages* or *imaginary languages*. I've chosen to call it **model languages** because models are not intended to be full-scale replicas, but miniaturized versions that provide the essence of something, even if certain details have to be skipped over; in the same way, no one can construct a complete language, but a model of a language can be very useful. Additionally, as much of the joy is in building the languages as in actually using them; one of my colleagues is into model airplanes, and he and his son spend more time building them than flying them, a passion I understand completely.

Language modelers do not gather together in local clubs or display the results of their craft. Many look at their model languages as private experiments that they would be too self-conscious to discuss with others. Inventing *model languages* is an unusual hobby, though really it is no different than hobbies of those who write poems or short stories.

The hobby has a disparate group of adherents that do not communicate with one another. *Model languages* or *language modelers* can be found among writers, game players, computer game designers, science-fiction and fantasy fans, professional linguists and teachers. The community of hobbyists is a large one, with approximately 40,000 people in the United States having invented their own languages and some 250,000 having used model languages such as Esperanto, Quenya and Klingon.

It is my personal goal to increase public awareness of *model languages* as a legitimate hobby. One day, when somebody asks me what my interests are, I'd like to be able to say *model languages* and have them know what I'm talking about. I also have this fantasy where there is enough interest in the topic to be able to publish a small monthly magazine dedicated to it.

To help achieve these goals, I encourage you to spread the word about model languages. Please feel free to post sample issues of **Model Languages** to groups, forums or mailing lists that you think would be interested; myself, I've posted the newsletter to the TOLKLANG and CONLANG **Internet mailing lists** and to RPGAMES, WRITERS, FLEFO, SFMEDI and SFLIT on **Compuserve**. Please forward issues to friends, and

mention this newsletter to writers, gamers, linguists, science fiction lovers, and anyone else you think might share your interest in *model languages*.

Feel free to drop me a note at any time to discuss questions you might have or issues you might like to see covered, or stories or knowledge you would like to share with other subscribers. If you want to start general discussions for others to join in on, I suggest you join CONLANG (*CON*structed *LANG*uages).

Best regards,

Jeffrey

*What range of accomplishment there is among these hidden craftsmen, I can only surmise - and I surmise the range runs, if one only knew, from the crude chalk-scrrawl of the village schoolboy to the heights of palaeolithic or bushman art (or beyond). Its development to perfection must none the less certainly be prevented by its solitariness, the lack of interchange, open rivalry, study or imitation of others' technique.*

from the essay "A Secret Vice", J.R.R. Tolkien

*We were listening to somebody lecturing on map-reading, or camp-hygeine, or the art of sticking a fellow through without (in defiance of Kipling) bothering who God sent the bill to; rather we were trying to avoid listening, though the Guards' English, and voice, is penetrating. The man next to me said suddenly in a dreamy voice: 'Yes, I think I shall express the accusative case by a prefix!'*

from the essay "A Secret Vice", J.R.R. Tolkien

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## *Introduction*

*Volume I, Issue 1 -- May 1, 1995*

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### **An introduction to the hobby of model languages**

Some people build model airplanes, some craft model trains and some... well, they invent model languages. Model languages can be everything from a few words of made-up slang to a rigorously developed system of interrelated imaginary tongues. It is not a hobby many people know about, since model languages cannot be flown in the park like a model airplane or displayed in full glory in the basement like a model railroad. Model languages exist on paper or in computer files and may be shared only with a few close friends or may be used to give depth to imaginary worlds read or watched by millions.

Millions of people have created model languages of some small scope. Many children invent their own secret vocabularies to share with friends, while teenagers may develop their own private slang to talk about the opposite sex. If few adults seem to create model languages, it is only because schools teach us that language is a formal structure, not a casual, informal world to be explored. The teaching of rigid dictionary definitions, sentence parsing and grammar dry up our interest in the wellspring of language.

Model languages demystify and demythologize the study of language. For too often, our desire to learn to express ourselves with language, to create new words, has been suppressed in favor of rigid conformance to the norm.

People now regard creating new words as a magical and distant process, yet it is something that we all engage in, though we may not even realize it at the time. While working as a market researcher, my boss once told me to "take the executive summary and bulletize it," offhandedly inventing the word *bulletize* to describe the act of paring paragraphs down to phrases preceded by bullets. Over breakfast one morning, my wife asked me if I wanted an English, inadvertently inventing a new, shortened form of *English muffin*. During her pregnancy, we adopted the word *soogob* (*bogus* pronounced backwards) to describe how she was feeling. After our twins were born, we used the word *mouthies*, as in "Alex is making mouthies," to refer to the sucking motion each of the boys would make with their mouths when hungry.

Not one of these words will end up in the dictionary, but each serves a purpose and each demonstrates that we are all constantly inventing words, in a more carefree fashion than we might imagine. Lexicographers might decry the creation of many of these barbarisms, but it is from such coinages that the English language adapts to our times and needs. Millions of speakers provide a check and balance to ensure that only the most useful or needed of these coinages gains wide currency.

## Different types of model languages

Why invent a model language? Someone might craft a language as a personal code, shared with a few compatriots. A fiction writer might want to add depth to an imaginary place or world, creating a language for inventing character names and place names or even for translating a few key proverbs or poems. A person who designs their own setting for a role-playing game might create a language for the same reason, or a person might invent a language to gain a better understanding of how true languages are structured and evolve. For a few, creating a language can be an almost spiritual effort, intended to close the gap that separates man from the Word of God. People create model languages for a myriad of other reasons -- to create a universal language, to create a language for programming computers, or to simply learn more about how real languages work.

Even as a model railroad can vary in complexity from a simple loop to a switching yard to a railroad empire, a model language can be small or large. At its smallest, a model language might consist of a few coined words used in a short story. For instance, a science-fiction story I once wrote used the words *reconsat*, *moby* and *etlang* to describe a reconnaissance satellite, a cetacean alien and an extraterrestrial language, respectively. A larger model language might be an entire dialect or slang, based on English. In "A Clockwork Orange", Anthony Burgess writes the entire book in Nadsat, a slang used by teenagers in a post- modern Britain. A sample:

*Oh, it was gorgeosity and yumyummy. When it came to the Scherzo I could viddy myself very clear running and running on like very light and mysterious nogas, carving the whole litso of the creeching world with my cutthroat britva. And there was the slow movement and the lovely last singing movement still to come. I was cured all right.*

The reader finds herself learning the language as she reads each page -- learning by immersion. Nadsat has about 300 words.

Even more ambitious is the creation of a unique language, to add verisimilitude to a world. Harry Harrison in his book "West of Eden" had a linguist, T.A. Shippey, create a language for his saurians, the ruling race of an alternative earth where the dinosaurs evolved into sentient beings. An example:

*Enge hantèhei, agatè embokèka lirubushei kakshèsei, hèawahei; hevai'ihei, kaksheintè, enpelei asahen enge.*

To leave father's love and enter the embrace of the sea is the first pain of life -- the first joy is the comrades who join you there.

Shippey did not create an entire language, of course, but outlined a structure and then created a simple grammar and skeletal lexicon to give the impression of a full language.

More ambitious still is a model language that is actually meant to be used to communicate. Such a language requires a vocabulary of at least 1,000 to 2,000 words and

a detailed grammar. The most famous such language is Esperanto. Dr. Zamenhof invented Esperanto as a universal language to enable everyone to communicate with having to use any one social group's language. Esperanto was seen as perfect for a country like India, which has over 150 languages, with speakers of different languages separated by centuries-old hatreds.

Finally, the most ambitious language involves the creation of an entire diachronic language system -- an imaginary language descended from other real or imaginary languages, based on principles of sound change and semantic shift. J.R.R. Tolkien, in "The Silmarillion", created an entire language system with two primary languages and five secondary languages descended from a common root tongue. Thus primitive *galadaa*, "tree", became *alda* in Quenya and *galadh* in Sindarin. Such a system is so detailed that it can enthrall someone for a lifetime, and Tolkien never finished his system (though completion was not one of his goals).

### **This newsletter's goals**

*The Kings Heath house backed on to a railway line, and life was punctuated by the roar of trains and the shunting of trucks in the nearby coal-yard. Yet the railway cutting had grass slopes, and here he [a young J.R.R. Tolkien] discovered flowers and plants. And something else caught his attention: the curious names on the coal-trucks in the sidings below, the odd names which he did not know how to pronounce but which had a strange appeal to him. So it came about that by pondering over Natyglo, Senghenydd, Blaen-Rhondda, Penrhiwceiber, and Tredegar, he discovered the existence of the Welsh language.*

*Later in childhood he went on a railway journey to Wales, and as the station names flashed past him he knew that here were words more appealing to him than any he had yet encountered, a language that was old and yet alive.*

"Tolkien: A Biography", p. 28, *Humphrey Carpenter*

If you've read this far, model languages intrigue you, and you might even try your hand at creating your own. Alternatively, perhaps language in general fascinates you, and you want to understand better how languages work. In either case, this newsletter will introduce you to the basic principals that undergird real languages and will show you how to create your own languages, whether of a few words or a complete historic system. The purpose of this newsletter is to teach you just enough about linguistics to be able to create your own model languages. It is not meant as a formal survey of the entire field of linguistics. Linguistics is too often presented in a dry manner, when it can be a source of endless wonder. It is no coincidence that a linguist created one of the most amazing novels of the twentieth century (Tolkien and *The Lord of the Rings*). This newsletter is meant to evoke the playfulness of linguistics and to give us an opportunity for hands-on training, as it were.

Issues of this newsletter will discuss how languages use sound and sound representation, how they form words, shapes meanings, and represent grammar. It will also outline how each of these characteristics of a language change over time. It will provide practical

guidance on how to create your own languages, how to coin words and how to use language to add verisimilitude to imagined worlds. *Model Languages* will also examine published model languages and critique their effectiveness.

This newsletter is for those who want to learn more about language. You may have a fascination with words, wondering where they came from and how they ended up in today's most natural sounding forms. This newsletter is intended for writers, for entry-level linguistic students, for word lovers and for role-playing game players. One of the great advantages of model languages as a hobby is that it requires so little investment. Unlike model railroading, which requires costly equipment and paraphernalia, model languages require little more than pen and paper... and imagination.

Subscribe to *Model Languages*, and soon you will be combining sounds into new words, like an engineer hitching up the cars of a train to an engine. Soon you will be laying the track of a linguistic system.

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## *A Naming Language*

*Volume I, Issue 2 -- June 1, 1995*

### **Inventing a language for naming people and places**

*"My name is Alice, but-*

*"It's a stupid name enough!" Humpty Dumpty interrupted impatiently; "What does it mean?"*

*"Must a name mean something?" Alice asked doubtfully.*

*"Of course it must," Humpty Dumpty said with a short laugh: "my name means the shape I am -- and a good handsome shape it is, too. With a name like yours, you might be any shape, almost."*

from *Lewis Carroll*, "Through the Looking Glass"

Despite Humpty Dumpty's comment, Alice could not be just any shape -- her name actually summons forth an image of someone who is simple and proper, according to surveys conducted to determine the impressions people have of different names. All names have perceptions attached to them.

Etymologically speaking, Alice's name is from the Greek for "truth". Most American and European names have become simple labels, their original meanings forgotten. How many people realize that a name like *Jeffrey Henning*, if translated literally, means "Godfriend Meadowlark"? Meanwhile, Indian names like "Dances With Wolves" (to take a bad example) wear their etymologies on their sleeves.

If you are fascinated by the origins of names, then you will be happy to learn that a naming language is one of the most useful types of model languages to create -- and one of the easiest, making a great first language for the hobbyist. A naming language can be less complex than other model languages, since it does not need a detailed grammar and since it can get by with a small vocabulary: with just 150 words (revealed below), you can generate millions of names for imaginary people and places. Once you've read this issue, you'll be able to create two or three naming languages in as little as a half hour, though you'll end up fascinated by your creations and will spend many more hours on them.

To begin creating any type of model language, you must be able to create words in that language. To create words, you need to understand sounds, meaning, sound change and so forth. This issue will introduce you to the basic aspects of language; subsequent issues of *Model Languages* will explore each one in more depth.

### **Language change**

The vocabulary of languages is constantly changing, as technology changes and as our understanding changes. Twenty years ago no one talked of faxes, PCs or being on-line.

No one had heard of perestroika. Things were still groovy, nizza, happening. Besides adding and retiring words, languages put new spins on old words: *gay* now primarily refers to "homosexuality", not "happiness"; *liberal* now is almost a curse, referring to "favoring governmental power" when it once meant "favoring governmental power to promote social progress". These word changes are not surprising. Any of us can look over the linguistic landscape of our lives and see how the terrain has changed. If you project this forward a thousand years, it is easy to see how the shape of a language's vocabulary will go through major upheaval.

It's harder to see that the grammar of the language, the way we put words together, will change too. While saying *hopefully* is still frowned upon, it is no longer viewed as completely ungrammatical. The pronoun *them* is often used to refer to one person, rather than the plural it is formally meant to refer to; in casual conversation and writing, *them* is now the gender-indifferent alternative to *he* or *she* (incidentally, as it was four hundred years ago, before pedantic grammarians -- yes, *them* -- stepped in). Looking a thousand years out, other grammatical distinctions will have been leveled, revealing new horizons behind them.

Finally, it can be hard to realize that the very sounds we use for words change. It's not hard to believe the occasional word changes, such as knowing that *cup board* is now pronounced *cupboard*, the [p] sound having assimilated to the following [b]. It is harder to believe that English words that now begin with [p] and date from Indo-European all began with [b] in Indo-European times. Such systemic changes, where a sound changes throughout the entire vocabulary, happen gradually.

To imagine how it happens, think of a dialect, such as the Bostonian's "idear about whether the cah is pahked in Hahvahd yahd". Sound changes systematically when these dialectal differences become emulated and become the new accepted pronunciations. Imagine an alternate universe where JFK served out 8 years as the U.S. President, and was succeeded by 8 years of RFK, who was followed by 8 years of Teddy (it had to happen in some universe!). No doubt in that universe the Bostonian accent became American English's new standahd.

Basic sound changes do not happen suddenly like earthquakes buckling the landscape, but gradually like water eroding a shoreline. Language change is for the most part slow, since change is on the whole discouraged. The whole point of language is for people to be able to make themselves understood to each other, and this happens best in an environment where the language changes no faster than the land at the water's edge.

Language change is important because it shows the best way for you to invent a model language -- by making changes to an existing language (whether natural or a model).

### **An ancestral language -- the grandmother tongue**

Every person alive today has or had a mother. Similarly, every mother tongue spoken by all these people had an ancestral language that it evolved out of. Even Proto-Indo-

European, the reconstructed ancestor language of hundreds of European and Indian languages, had an ancestral language it evolved out of: Nostratic, which some linguists hypothesize was also the ancestor to five other proto-languages. Since Nostratic itself is most likely descended from another language, records of the first language are no more knowable than records of Adam.

The ramifications for the language modeller are that the language he or she creates should not spring fully armed from the head of Zeus like Athena, but should derive from its own parent language. Most model languages are unknown orphans, when a pedigree would not have been hard to provide. Tolkien is one of the few modelers to actually create an ancestor tongue, which he used to derive many different Elvish languages for *The Lord of the Rings*, of which the best known are Quenya and Sindarin.

"Wait a minute," you might be thinking, "are you saying that to create a model language I first have to create another model language? Where does that language come from? When does it end?" Tolkien again provides the best example; he created root words in a *proto-language*; he imagined that the elves would have reconstructed their ancestral language, much as Europeans reconstructed Indo-European. Proto-languages are elaborate hypothetical constructions and, as hypotheses, are fuzzy around the edges: nothing but the bones of an extinct dinosaur, while the exact color of its flesh can never be known. A proto-language, therefore, can be a simpler form of model language.

The benefit of creating a proto-language is that it makes it easier to create sister languages to the model language you are chiefly interested in (what, more languages?!), enabling you to formulate new words based on regularly sound changes (more on this in it a minute). It also makes it easier to coin words in your desired model language, providing a rich system of root words to use to derive new words. So creating a proto-language can save you time.

The easiest way to save time on your first model language is to use an existing language as the proto-language. I once worked on a science fiction story set aboard a colony whose original settlers had been 20th-century Italians and Spaniards, who -- through centuries of living together -- had created a new, simpler language. By using Italian as the ancestor language, with many borrowings from Spanish, I not only made it easier to create a new language but I taught myself some Italian and Spanish as well!

If you are writing about a story that has taken place in the last 10,000 years and is set in Europe or India, you might even use Proto-Indo-European as the ancestral language for your languages. Check out *The Roots Of English* by Robert Claiborne for an easily readable discussion of Indo-European roots, or check out the appendix to *The American Heritage Dictionary of the English Language*, published by Houghton Mifflin; both works are biased in emphasizing those from which English words descended, but make good starting points for devising a language.

## **Sound**

To create your language, you need to decide which sounds you want speakers to distinguish. Basically, while it would be easy to think that the sound [t] is exactly the same, [t] actually describes a range of sounds, all closely approximating one another. The way you position your tongue when saying [t] will vary depending on what other sounds you say before or after it, but we both articulate [t] similarly enough to recognize it as the same thing.

There is no objective reference that says a language must have any particular sound. For instance, Old English did not distinguish between the sounds [f] and [v] or [s] and [z]. The plural of [hoof] was pronounced [hoovz] but it was not until later times that speakers treated the \f\ sound in the singular as different from the \f\ sound in the plural. In Old English times, there could be no word [vat] different from [fat] -- such a distinction was just not made. Gradually, the sounds came to be heard as distinct.

So when creating the sounds of your language, you need to realize that they will only approximate English sounds, not exactly match them, and might not reflect distinctions currently made in English. The [hw] sound in *whale* might be regarded by your speakers as the same as the [w] sound in *wail* (yes, they are different sounds, but you might have to listen closely as you pronounce them to tell the difference).

You can certainly include in your language sounds that are not part of English, say the French vowels, typically pronounced with the lips rounded, or the expectorating [kh] of Hebrew and Yiddish, let alone the clicking sounds of the Hottentots and Bushmen. However, you should refrain from having too many unusual sounds in your language; you want your readers to be able to pronounce your words without too much difficulty. Simply having regular sounds combined in unique ways (e.g., *sretan*, or *tsetet*) will be enough to convince them it is a unique language anyway.

Languages are very strict about how sounds are combined. English, for instance, allows words to begin with [sn-], but never [zn-]. The rules English uses could fill pages, but as a modeler you want to just hint at complexity. You may want to have a combination that is unusual in English and make it frequent in your language: for instance, have some words begin with [sr-], [kn-], [kth-], [tl-], but here again restraint is the order of the day.

As you specify how sounds can be combined, you may want to outline valid syllables. Your language might only allow syllables of CVC (Consonant+Vowel+Consonant) or just CV or VC. Some languages, like Japanese or Korean, have very strict limits on how syllables can be formed, making it possible to list all the valid syllables of the language. But where Hawaiian allows just 162 different syllables, Thai has 23,638 syllables.

Two languages can have the exact same consonants and vowels and yet sound very different, depending on the syllable patterns and on the frequency of the consonants and vowels. You may want to list the sounds that occur most often. By paying rigorous attention to this when developing the proto-language, you can relax a little more during creation of the descendant language, which will carry on many of the same frequency patterns, though applied to different sounds as the sounds change.

Many languages have very simple vowel systems. Eskimo-Aleut has just three vowels (the smallest number ever observed), while Spanish and Japanese each has five vowels. The typical language has between 5 and 7 vowels, but Indo-European languages usually have more; English has 12, and German has 14. The African language Khoisan has the record with 24 vowels.

Languages have been observed to have anywhere from six consonants (Rotokas) to 95 (Khoisan), with an average of 22.8 consonants. The typical language has twice as many consonants as vowels. The most common consonants include [p], [b], [t], [d], [k], [g], [gh], [f], [s], [sh], [m], [n], [ng], [gng], [w], [l], [r], [j] and [h].

For a great discussion of the sound structure of languages, check out *The Cambridge Encyclopedia of Language* by David Crystal.

### Sound change

Over time, sounds gradually change in certain circumstances. John F. Kennedy, like many Bostonians, would drop his last [-r] from words like [car], while adding an [-r] to *Cuba* [cubar] and *idea* [idear]. As alluded to before, had enough Americans adopted this, it would have been considered a regular sound change and many other words might have undergone this change. Or listen to the dialect of Brooklyn, where [bird] becomes [boyd], for instance; someday all English speakers might pronounce [ir] as [oy]. No doubt, through the rise of one dialect in Old English, the sound [sk] was gradually becoming [sh].

Over great periods of time, these changes become more pronounced. Literally and figuratively.

Here are some common ways consonants evolve into one another:

|                |                |                |                |                |                |                 |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
| b <---><br>gw  | b <---> p      | b <---> v      | ch <---><br>kw | d <---> g      | d <---> t      | d <---><br>th   | f <---> p      | f <---> v      | g <---> d      |
| g <---> k      | g <---> w      | g <---> y      | g <---> z      | gu <---><br>gw | gw <---><br>b  | gw <---><br>> d | gw <---><br>g  | gw <---><br>gu | gw <---><br>k  |
| gw <---><br>ku | gw <---><br>kw | gw <---><br>v  | gw <---><br>y  | gw <---><br>zh | h <---><br>hy  | h <---><br>k    | h <---> s      | h <---> y      | hv <---><br>hw |
| hw <---><br>hv | hw <---><br>kw | hw <---><br>p  | k <---> g      | k <---><br>gw  | k <---> h      | k <---><br>kw   | k <---> s      | k <---> th     | kh <---><br>kw |
| ku <---><br>gw | ku <---><br>kw | kv <---><br>kw | kw <---><br>ch | kw <---><br>gw | kw <---><br>hw | kw <---><br>> k | kw <---><br>kh | kw <---><br>ku | kw <---><br>kv |
| kw <---><br>p  | kw <---><br>sh | kw <---><br>t  | l <---> r      | p <---> *-     | p <---> b      | p <---> f       | p <---><br>hw  | p <---> pf     | pf <---><br>p  |
| r <---> l      | s <---> h      | s <---> k      | sh <---><br>kw | t <---> d      | t <---> th     | t <---> z       | th <---><br>d  | th <---> k     | th <---> t     |

|            |            |                |            |                 |            |                            |            |                |            |
|------------|------------|----------------|------------|-----------------|------------|----------------------------|------------|----------------|------------|
| v <----> b | v <----> f | v <----><br>gw | v <----> w | w <----> g      | w <----> v | y <----><br>* <sub>-</sub> | y <----> g | y <----><br>gw | y <----> h |
| y <----> z | z <----> g | z <----> t     | z <----> y | zh <----><br>gw |            |                            |            |                | *- (lost)  |

This list is not meant to be all inclusive, just representative of changes that occurred in Indo-European.

#### Likelihood Of Sound Change

#### # Of IE Languages Where IE Initial Consonant Changed

|     |    |    |    |   |   |   |   |
|-----|----|----|----|---|---|---|---|
| gh  | 12 | kw | 11 | d | 4 | l | 1 |
| gw  | 12 | g  | 9  | s | 4 | r | 1 |
| gwh | 12 | w  | 9  | p | 3 | m | 0 |
| bh  | 11 | k  | 7  | t | 2 | n | 0 |
| dh  | 11 | b  | 4  | y | 2 |   |   |

You can use the above table as a rough guide to determine which consonants are more likely to undergo change. It is not representative of all languages, being an analysis of 12 languages descended from Proto-Indo-European and showing the number of languages where the consonant in the word-initial position changed. The languages analyzed were Armenian, Avestan, Common Germanic, Greek, Hittite, Latin, Lithuanian, Old Church Slavonic, Old Irish, Old Persian, Sanskrit, and Tocharian.

The nasals, [n] and [m], are fairly stable, as are the liquids [l] and [r]. The stops [p], [t] and their voiced counterparts [b] and [d] change in only a third of the languages. All aspirated consonants changed in every language analyzed, being markedly unstable; [k] and [g] and their glide forms [kw] and [gw] were also more likely to change than not.

Sound changes actually vary by position, with a sound change applying to different places -- the [s] might become [h] at the beginning of a word, [k] in the middle of a word and [z] at the end of a word (though this is an extreme example). For simplicity's sake, you may just want to apply the same changes regardless of position.

Besides these phonetic changes, there are often "environmental" changes in words, where sounds change because of the sounds they are near. The following examples illustrate the major types of sound change.

#### Assimilation

**Regressive or anticipatory**, a sound is influenced by the following next sound: English [cupbord] became [cubbord]; the word *assimilation* is itself an example: Latin *adsimula-re* became *assimula-re*, since [ad-] regularly assimilated to [as-] before the [s] sound.

**Progressive**, a sound is influenced by a preceding sound

**Coalescent** or **reciprocal**, when two neighboring sounds influence one another: *don't you* becomes pronounced [donchu]

**Dissimilation**

sound moves away from the pronunciation of neighboring sound: French *marbre* became English *marble* as the second [r] became dissimilar from the first.

**Split**

a sound becomes regarded as two distinct sounds, such as Old English \s\ compared to Modern English \s\ and \z\ (Old English's failure to distinguish between the sounds is one of the reasons many Modern English words are written with 's' when [z] is pronounced)

**Metathesis**

two sounds change places, *third* from Old English *thridda*

**Elision**

sounds are omitted (elided) in rapid speed, often dropping a consonant from a cluster of consonants: [cubbord] became [cubord]; elision specifically refers to loss of an unstressed vowel or syllable: *elementary* becomes pronounced [elementry] when the final schaw sound is elided.

**Loss**

a sound disappears from the language altogether, as the velar fricative, a variant of /h/ (and the final sound of Scottish *loch*), did in English, with only a vestige remaining in English spelling: the common silent 'gh' of English words like *light*, *night*, *sight*, which were once pronounced [likht], [nikht] and [sikht].

**Haplology**

the loss of a sequence of sounds because of similarity of neighboring sounds: should this ever be called *haplogy* it will have undergone haplology itself.

**Syncope**

the loss of medial sounds, as *boatswain* lost the [t] sound as it was shortened to *bosun* ([bosun] is the correct pronunciation of *boatswain*, by the way, never [bo-tswa-n]).

**Apocope**

the loss of final sounds, as in the silent 'e' in words like *love* and *hate*; of course, the silent 'e' used to be pronounced.

**Liaison**

introduction of a sound between words, as in French when the silent final consonant of a word is pronounced when the next word begins with a vowel.

**Prothesis**

introduction of an extra initial sound, as occurred in Spanish and Old French, which frequently inserted an [e] sound before an initial [sp]: for instance, Latin *specia-is* became Old French *especial*.

**Epenthesis**

introduction of extra medial sound, as Old English *bre-mel* became Old English *braembel*.

You can quickly generate more than one language by inventing different sound change rules for each language. So perhaps the Dilbertian [d] becomes [t] in Dogbertian, whereas it becomes [th] in Dinobertian. Or take a look at how the names James, John and Katherine have evolved in seven different languages:

|   |         |             |                    |
|---|---------|-------------|--------------------|
| <b>Source: Webster's Third New International Dictionary</b> |         |             |                    |
| <b>English</b>  | James   | John        | Katherine          |
| <b>French</b>   | Jacques | Jean        | Catherine          |
| <b>German</b>   | Jakob   | Johann      | Katharina          |
| <b>Italian</b>  | Giacomo | Giovanni    | Caterina           |
| <b>Spanish</b>  | Jaime   | Juan        | Catalina           |
| <b>Swedish</b>  | Jakob   | John, Johan | Karin,<br>Katarina |
| <b>Yiddish</b>  | Dzheymz | Yohan       | Katerine           |

Names vary idiosyncratically and do not always evolve according to the regular sound changes that affect other words. Thus the English towns of *Luton* and *Leyton* are -- despite their differences -- both derived from the same word, *Lygetun*, "farm by the river Lea" (the river Lea, incidentally, may either mean "bright one" or may represent the name of a river god, *Lugus*).

Names get shortened frequently; for instance, *Johann*, *Giovanni* and *Yohan* all indicate that there used to be an [a] sound after before the [n] in *John* and that the silent [h] in *John* used to be pronounced, and still is in German, Swedish and Yiddish.

### Spelling

When inventing your own language, you can go all out -- inventing your own alphabet or even hieroglyphs to accompany it. You can have spellings that represent scholarly thinking about how the word derived, so that the word sounding like [gramilt] is actually spelled 'kramillid', for instance, because lexicographers believe the word [gramilt] used to be pronounced [kramillid]. You can invent new symbols or use old symbols to represent sounds, so that 'pra@t!so>r' is pronounced... oh, never mind.

Or, you can spare users of your language a lot of difficulty; you can strive for a system of spelling that is phonetic. Since learning a new language is difficult enough, this is the course I recommend. Yes, I'm hooked on phonics.

Be warned, however, that even a phonetic representation can present difficulties, if you yourself are mistaking English spellings and conventions for actual pronunciations. For

instance, if you were representing English phonetically, you might think that you could specify that the plural was regularly formed by adding [-s] to the end of a word. While this is true for [cat], it is not true for [dog], whose plural is actually pronounced [dogz]; [church], for its part, has a plural of [churchez]. So make sure your phonetic spelling really describes the sound you want.

One problem with phonetic spelling is that words are pronounced differently in different circumstances: the word *a* can be pronounced [ei] or as [ə] (schwa), *and* can be pronounced [ənd], [ən] or [n], depending on whether or not the speaker is placing emphasis on them.

While you can use special characters for sounds, it will be easier on your readers if you transcribe them using conventional letters. The letter 'h' is great for forming digraphs; you might say that 'rh' represents a trilled [r] sound, or that 'mh' might be an aspirated [m] (sounding similar to [v]), or that 'dh' represents the voiced *th* in *then*, while 'th' represents the unvoiced *th* in *thin*.

Your spelling may even reflect a regular sound change of the language. For instance, in German, the final 'b' in a word sounds like [p], the final 'd' like [t], and the final 'g' like [k], so 'Korb' is pronounced [korp], 'Band' [bant] and 'Tag' [tak].

## **Words**

Once you have created sounds, you can begin generating words. Words are nothing more than sounds arbitrarily linked to meanings. Onomatopoeia refers to sounds that are imitative, such as *arf*, *bark* or *bow-wow* for the sounds a dog makes. Most words are not onomatopoeic. Tolkien once remarked that he found *cellar door* to be an incredibly beautiful series of sounds, though the meaning was not worthy of it. So don't slave over matching sounds to words. If you spend all your time thinking about the exact sound each word should have you'll never flesh out your vocabulary.

## **Grammar**

It can make learning new words somewhat easier if they have to follow specific patterns depending on parts of speech. Your language might require the root form of all verbs to end in [-r] and all nouns might end in a vowel.

A naming language does not need a complex grammar. The only grammatical decision you really need to make is how to form compound words: should the modifier proceed or follow the word being modified. Assume you have a language with the word *kwan* for "dog" and *kooz* for "house". Does the phrase *kwan kooz*, then, mean "doghouse" or "house dog"?

## **Proper names**

Many common names were formed from surprisingly few elements. If you coin just 150 words in a model language, you will be able to generate millions of distinct names.

I analyzed about 300 common English and European names to come up with the following tables of common meanings underlying these names.

| <b>Adjectives for proper names</b> |               |             |            |           |
|------------------------------------|---------------|-------------|------------|-----------|
| bear-like                          | beloved       | bitter      | blessed    | brave     |
| chief                              | compassionate | constant    | desired    | divine    |
| eagle-like                         | earnest       | falcon-like | famous     | flowering |
| fortunate                          | fox-like      | free        | hallowed   | happy     |
| industrious                        | laughing      | lion-like   | loyal      | manly     |
| mighty                             | noble         | northern    | patriotic  | peaceful  |
| powerful                           | praiseworthy  | prayerful   | protecting | pure      |
| ready                              | sharp         | shining     | small      | strong    |
| strong-willed                      | swift         | valiant     | victorious | war's     |
| wealthy                            | wise          | wolf-like   | worthy     | young     |

| <b>Nouns for proper names</b> |          |          |            |            |
|-------------------------------|----------|----------|------------|------------|
| arrow                         | battle   | bearer   | brightness | counselor  |
| crown                         | defender | dweller  | earth      | farmer     |
| father                        | fighter  | forest   | gate       | gift       |
| giver                         | God      | guardian | hammer     | harvester  |
| healer                        | helper   | home     | horse      | keeper     |
| laurel                        | leader   | lily     | lover      | maid       |
| man                           | pearl    | people   | protector  | rock       |
| rose                          | ruler    | runner   | smith      | son        |
| spear                         | staff    | steward  | stranger   | stronghold |
| sword                         | traveler | twin     | warrior    | wolf       |

You can use these tables to generate names in the following ways:

- adjective1: "Pure" (*Katherine*)
- adjective1 + adjective2: "Noble and Shining" (*Alberta*)
- adjective1 + noun1: "Chief Protector" (*Howard*)
- noun1 + noun2: "Elf Ruler" (*Avery*)
- adjective1 + adjective2 + noun1: "Noble, Brave Warrior" (*Gunther*)
- adjective1 + noun1 + noun2: "Strong Warrior Twin"

- adjective1 + adjective2 + noun1 + noun2: "Young Bear-like Battle Hammer"

You can use these tables to generate almost all the names you need. Theoretically you could use these tables to generate 6.3 million names.

Feel free to use a few elements that you like in many different names; for example, "famous" in Anglo-Saxon was represented by *hroth* and is contained in the following names: *Rodney* ("famous"), *Robert* ("famous brightness"), *Roland* ("most famous of the land"), *Roderick* ("famous ruler"), *Rudolph* ("famous wolf") and *Roger* ("famous spear"). *Roger*, incidentally, was spelled *Hrothgar* in Old English, and is the name of the beleaguered king in *Beowulf*.

You can easily flesh out the above tables to better represent the culture of the people who will speak your model language. For instance, islanders would not name people after wolves and foxes, but after predators peculiar to their locale, such as sharks and octopuses. Their names would reflect people's relationship to the sea: sailors, divers, swimmers and beachcombers. The tools they would refer to would not be swords and spears, but tridents and hooks. The adjectives they would use would likewise reflect their environment: unsinkable, seaworthy and foamy.

If you want to add additional words to these tables, check out the etymologies of real names; one good source is *The Baby Boomer's Name Game* by Christopher Andersen, which includes a basic etymological dictionary of 2,500 common names.

### **Place names**

The names of people and places are intimately related. For instance, *Winslow* (a town in Buckinghamshire, England) is named after *Wine* (an Old English name meaning "friend") and means something like "Wine's hill", "Wine's burial mound" or perhaps even "Wine's estate at the burial mound". In turn, *Winslow* is a man's first name and means "from Winslow". Many place names become first or last names in this way, and these in turn might inspire new place names; some other town of Winslow might be named after a fellow named Winslow -- and so it goes.

Most names refer to a natural feature, such as a river, a hill or a forest, or to a man-made construction, such as a fort, a road or a burial mound. Place names are very seldom taken from an event that may have happened there, such as a battle or a coronation, but do sometimes take names from recurring events -- a field where people are regularly executed or married (I'll refrain from comparing these activities!) might have a name like the Hangingfield or the Weddingfield. For instance, the village of "Kingstone" is not likely to be so named because some king drew a sword from a stone there, but rather because many monarchs have been coronated there (or stoned there, depending on the kingdom's traditions!).

Place names in the British Isles tend to be formed from 50 basic root meanings, which are given below. These 50 meanings can be combined to give 2450 different names, and can

be combined to form millions more when combined with names involving people (e.g., *Boston*, "Botwulf's stone"; the ending is not *-ton*, "town", but *-ston*).

| <b>Source: Adapted from <i>Dictionary of Place Names in the British Isles</i>, by Adrian Room</b> |   |
|---|---|
| <b>Meaning</b>  | <b>English/irish/welsh word element</b>   |
| abbey   | Abbey-                                    |
| bridge  | Pont-, -bridge                            |
| castle  | Castle                                    |
| church  | Eccle(s)-, Kil(l)-, Kirk-, Llan-, -church |
| cottage   | -cot                                      |
| dwelling  | -wich, -wick                              |
| enclosure   | Lis-, -wardine, -worth                    |
| estate  | -land                                     |
| farm  | -ton, -by                                 |
| field   | -field                                    |
| ford  | -ford                                     |
| fort  | Caer-, -b(o)rough, -burgh, -bury          |
| fort(old fort)  | -caster, -c(h)ester                       |
| fort(ring fort)   | Rath-                                     |
| height  | Ard-                                      |
| highland  | Blaen-, -head                             |
| hill  | Bryn-, Dun-, -don                         |
| hilltop   | Pen-                                      |
| holy place  | -stead, -stede, -stow                     |
| home farm   | -hampton                                  |
| homestead   | Bally-, -ham(stead), -hampstead           |
| island  | Ennis-, -ey                               |
| lake  | Loch-                                     |
| meadow  | Clon-                                     |
| monastery   | -minster                                  |
| moor  | -more, -moor                              |
| mountain peak   | Ben-                                      |
| new   | New-                                      |
| pass  | -gate                                     |

|                      |                                 |
|----------------------|---------------------------------|
| people of            | -ing(s)                         |
| place                | Stock-, Stoke-                  |
| pond                 | -mer(e)                         |
| port                 | Port-, -port                    |
| resort               | -ville                          |
| river mouth          | Aber-, Bel(la)-, Inver-, -mouth |
| riverside            | -side                           |
| rock                 | Carrick-                        |
| secondary settlement | -stock, -stoke, -thorpe         |
| stone                | -ston(e)                        |
| stream               | -b(o)urne, -well                |
| town                 | Ballin(a)-                      |
| tree                 | -tree, -try                     |
| upper                | Auchter-                        |
| valley               | Glen-, Strath-, -dale           |
| valley (narrow)      | -combe                          |
| valley (wooded)      | -den                            |
| village              | Tre-                            |
| wood                 | Rhos-, Ros-, Ross-, -wood       |
| wooded angle of land | -shot(t)                        |
| woodland             | -ley, -le, -leigh               |

Place names can be formed from combinations of the affixes listed above and from other place names and proper names:

- affix1 + affix2: "New Town" (*Newton*)
- affix1 + affix2 + affix3: "New Town on the Moor" (*Newtonmore*)
- affix1 + affix2 + placename: "New Town in Mearns [a county]" (*Newton Mearns*)
- placename1 + affix1: "Newton-of-the-Abbey" (*Newton Abbot*)
- placename + propername: *Newton Stewart* [after William Stewart]
- propername + placename: "Hynca's Enclosure" (*Hinxworth*)

Often when you analyze a place name, you will find that a river runs through it: *Exeter* (from *Exchester*) means "fortification on the river Exe", *Exmoor* is "moorland along Exe", *Exmouth* is at the mouth of Exe, while *Exwick* is a "farm by the Exe".

*Exe* itself means simply "water", from the British Celtic *isca*. (This may seem boring, but *isca* is part of "the water of life" that entered English -- through Scottish Gaelic -- as *whiskey*!) Many names of rivers, mountains and other features of the landscape come

from general words. Imagine an Englishman pointing to a river and asking, "What do you call that?" The native Celt might have simply said *teme*, "river", since to him or her it was "the river", the prominent river in the area and hence not in need of its actual name in typical conversation. And thereby a noble river such as the Thames would have been christened.

To create the name of a city on a river then, you'll have to name the river first -- and that name might derive from another language, as the Thames shows.

Place names often incorporated terms from other languages. For instance, the Celtic city of *Eborakon* -- meaning "place of Eburos (the yew man)" -- had its name Romanicized to *Eburacum*. This name was meaningless to the invading Saxons, who Anglicized it as *Eofor* ("boar", which had a similar sound) and appended *wi-c* ("dwelling place"), to give it the name of *Eoforwi-c*. When the Vikings invaded, they misconstrued *wic* as *vi-k* (which meant "bay" and was inappropriate to the inland city but stuck anyway); since *Eofor* was meaningless to them, there was no pressure to keep the first syllables recognizable, and the name was gradually shortened to *Jarvik*. This in turn was later shortened to *York*, the name as it stands today and as it may stand until the city is invaded again. York's name was not directly affected by the fall of England to the Normans, the only conquerors not to leave their mark on it. If the Normans' ancestors, the Vikings, had had as little effect on the city's name, York's modern name might very well be *Everwick*.

The history of the name *York* reveals five waves of occupation (Celtic, Roman, Saxon, Viking, English) and so tells a lot about the fortunes of the city. While you do not want to go into as much detail for each name in your own imaginary world, this history is worth creating for the most important place names. To rival the history of York, you'd have to invent five model languages!

In the same way you're best prepared to write a poem if you studied a lot of poems, you're best prepared to coin a place name by studying how other people have coined place names. To this end, I definitely recommend reviewing an etymological dictionary like *Dictionary of Place Names in the British Isles*, which covers over 4,000 place names. Each name tells a story, as the name of York shows.

### **Example - quickly create your own naming languages**

The following quick sketch of three languages -- Nagada, Makata and Negasi -- will show you how you can quickly create your own naming systems.

The consonants of Nagada are [b], [d], [g], [s], [m], [n], [l], [r] and [h]. The vowels are [a], [e] and [u]. The vowels differ greatly in frequency: [a] is used about twice as often as [e], which is used slightly more often than [u]. All syllables in Nagada follow the form CV (Consonant+Vowel).

The language of Makata is descended from Nagada and showed the following sound changes: [b] > [p], [d] > [t], [g] > [k], [m] > [n] and [n] > [m].

The language of Negasi went through different changes from Nagada. The only consonantal change was that of [d] > [t] > [s]. Vowels changed depending on the syllable they appeared in:

| Vowel | First syllable | Final syllable (if more than 1 syllable) |
|-------|----------------|--|
| [a]   | [e]            | [i]                                      |
| [e]   | [u]            | [a]                                      |
| [u]   | [a]            | [o]                                      |

For instance, the Nagada word *naba* became *nebi* in Negasi.

All words in the three languages are spelled phonetically. All three languages put the modifier before the word being modified (e.g., "doghouse" means "the house for dogs").

Here are the root words of Nagada and how those words appear in Makata and Negasi.

|           | Nagada      | Makata       | Negasi       |
|-----------|-------------|--------------|--------------|
| "bearer"  | <i>ba</i>   | <i>pa</i>    | <i>be</i>    |
| "beloved" | <i>naba</i> | <i>mapa</i>  | <i>nebi</i>  |
| "blessed" | <i>luma</i> | <i>peta*</i> | <i>lami</i>  |
| "divine"  | <i>luma</i> | <i>luna</i>  | <i>luna*</i> |
| "giver"   | <i>ge</i>   | <i>ke</i>    | <i>gu</i>    |
| "healer"  | <i>dala</i> | <i>tala</i>  | <i>seli</i>  |
| "lily"    | <i>hama</i> | <i>hana</i>  | <i>heni</i>  |
| "pearl"   | <i>rele</i> | <i>rele</i>  | <i>rula</i>  |
| "shining" | <i>dube</i> | <i>tupe</i>  | <i>saba</i>  |
| "swift"   | <i>sahu</i> | <i>sahu</i>  | <i>seho</i>  |

There was not room in this short introduction to cover borrowing or meaning change or any of the other factors that can override direct descent from a parent language, and I will give only one example here: Negasi borrowed *luna* from Makata to distinguish between the meanings of "divine" and "blessed", which were both reflected by the single word *luma* in Nagada. Makata, for its part, coined the word *peta* for "blessed" to distinguish between the two concepts.

Based on these words, here are some common names in the three languages.

|                 | <b>Nagada</b>   | <b>Makata</b>   | <b>Negasi</b>   |
|-----------------|-----------------|-----------------|-----------------|
| "blessed pearl" | <i>Lumarele</i> | <i>Petarele</i> | <i>Lamirula</i> |
| "divine healer" | <i>Lumadala</i> | <i>Lunatala</i> | <i>Lunaseli</i> |
| "swift healer"  | <i>Sahudala</i> | <i>Sahutala</i> | <i>Sehoseli</i> |
| "lily giver"    | <i>Hamage</i>   | <i>Hanake</i>   | <i>Henigu</i>   |
| "pearl bearer"  | <i>Releba</i>   | <i>Relepa</i>   | <i>Rulabe</i>   |

The above table assumes the meanings of the names were kept current (like Indian names like "Dances With Wolves") rather than fossilized. If the meanings were instead forgotten, then the Makata and Negasi forms would have been shaped simply by changing the sounds of the words. So Nagada *Lumarele* would be Makata *Lumarele*, rather than *Petarele*.

If I was actually going to use these names in a story, I would spend much more time refining them to develop an affinity between the sound of a name and the character I wanted to represent. However, taking the words as they are can provide insights into the imagined people. I think *Lumarele* is a great name for an island princess, and I can picture *Sahudala*, the impotent witch doctor who wants her hand in marriage, but the name of her jealous sister *Hamage* carries with it the stench of lilies, rather than their sweet aroma...

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## *Gymnastics with Onomastics*

Hungarian Translation

Where the last issue of *Model Languages* described in detail how to create model languages for generating names, this issue specifically elaborates on how different languages and cultures form names.

Here are some useful terms to describe the study of names:

*onomastics* - the study of names (in general)

*anthroponomastics* - the study of personal names

*toponomastics* - the study of place names.

### **Structure of names**

There are many different ways a culture can structure a name, and the people who speak your language may use any of the following, or a different way besides:

[given name] - *Jeffrey*

[given name] [family name] - *Jeffrey Henning* (American)

[family name] [given name] - *Mao Ze-Dong* (Chinese)

[given name] [home town's name] - *John Zamoyski* (Polish, from town of Zamosc;  
toponymic)

[given name] [occupation name] - *John Smith* (English)

[given name] [maiden name] [husband's family name] - *Karen Flynn Henning* (American)

[given name] [middle name] [family name] - *Jeffrey Alan Henning* (American)

[given name] [middle name] [confirmation name] [family name] - *Karen Lee Kristina  
Flynn* (Catholic Irish)

[given name] [family name] [occupation name] - *Mark Jones-the-petrol* (Welsh)

[given name] [son of] [father's name] - *Bjørnstjerne Bjørnson* (Norse)

[given name] [daughter of] [father's name] - *Vigdís Finnbogadóttir* (Norse)

[given name] [father's name + "child of"] [family name] - *Mikhail Sergeyevich  
Gorbachev* (Russian)

[given name] [middle name] [maternal grandfather's family name] [paternal  
grandmother's family name] [paternal grandfather's family name] -- *Eliana Marcia  
Villela Gomes Soares* (Brazilian)

[given name] [middle name] [maternal grandfather's family name] [paternal grandfather's  
family name] [husband's mother's name] [husband's father's name] -- *Maria Beatriz  
Villela Soares Veiga de Carvalho* (Brazilian)

[given name] [father's family name] y [mother's family name] - *José Aguilar y Fernández*  
(Spanish)

[given name] [father's family name] de [husband's father's name] - *María Álvarez de  
Aguilar* (Spanish)

[given name] ["father of" eldest son]

[given name] [father's given name] - *Tafari Makonnen* (Amharic)

This list is in no means exhaustive, with the possibility of variations even within a tradition. My friend Steve and his wife recently named their baby *Joshua Patrick Lewis*

*LaFrance Weissman: Joshua Patrick* because they liked the Old and New Testament ring, *Lewis* after Steve's grandfather, *LaFrance* after his wife's surname, and *Weissman* because ... well, because!

Throughout much of history, when most people never traveled far from home, a given name sufficed, with use of a nickname in case there were two Davids in the village, for instance. As people were exposed to more and more people, the family name was added to differentiate people, then the middle name was added for the same purpose. As mass communications and the Internet expose people to that many more individuals, it would not be surprising if people begin making more prominent use of their middle names and begin adding extra middle names, like my friend Steve did for his son.

In Britain and the U.S., the first name, the given name, is the one the person regularly goes by. This is not so in Germany, where many people go by their middle names, so that *Helmut Michael Schneid* is likely to be called *Michael* by his friends, not *Helmut*.

Of course, many Oriental languages put the family name before the given name, reversing the regular order of Occidental names. Thus, *Mao Ze Dong* is known as Chairman *Mao*, not Chairman *Ze Dong*. (Hungarian is another language that puts the family name first.)

English names are unique in one respect -- no other language has a construct similar to the *Sr.* ("Senior") that gets appended to the names of fathers who have son with the same names, so that *Carl Glenn Henning's* eponymous father is known as *Carl Glenn Henning, Sr.* As for the *Jr.* appellation, it is used in English, Spanish and Portuguese names, among others, though not the Roman numeral designations II, III, IV and so on. Brazilian names have analogous structures to *Jr.*, where *Neto* is to "grandson" and *Sobrinho* is to "nephew" as *Júnior* is to "son".\*

Some languages, such as Russian, add gender endings to the family name, so that it is *Mr. Molotov*, but *Mrs. Molotova*. The Japanese routinely append an honorific to a person's name, such as *-san*; or *-sama*, a superhonorific; or *-kun*, for someone familiar or subordinate; or *-chan*, a term of endearment reserved for children.

### **Patronymics: in the name of the father**

One of the more common elements of names is a patronymic, a reference to a person's father.

| Language | Affix    | Example     |
|----------|----------|-------------|
| English  | -son     | Stevenson   |
| Greek    | -poulous | Cosmopoulus |
| Irish    | O'-      | O'Leary     |
| Polish   | -ski     | Jaruzelski  |

|       |           |           |
|-------|-----------|-----------|
| Scots | Mac-, Mc- | MacDougal |
| Welsh | Ap        | Ap Gwilym |

Related to this, *Fitz-* (as in *Fitzgerald*) is Old French for "son of", though it was typically used to mean "illegitimate son of". (So the next time you're angry with some idiot, but your kids are listening, call him a "son of a Fitz".)

Amharic (which is a language of Ethiopia) no longer has a separate word for its patronymic, so a name is simply formed from the child's given name plus the father's given name (as if Robert Stevenson was just Robert Steven).

While English has fossilized its patronymic, so that for all we know Robert Louis Stevenson's father may have been named Joe, many languages -- including Arabic, Hebrew and Icelandic -- give a new patronymic to each generation. In such a culture, Robert Louis Stevenson's son Jeffery would be known as Jeffery Robertson and his son Thomas would be known as Thomas Jefferyson, and so on, with each son give a different last name than his father.

The Russians use patronymics in such a way that children still have the same family name as their parents. In Russian, the patronymic is the middle name, so Ivan's son has the middle name of Ivanovich, while Ivan's daughter has the middle name of Ivanovna.

The Spanish and Portuguese are more fair to the people who carry these children for nine months. Both languages form last names from the family names of both the mother and father. In Brazilian, the name of the mother precedes the father's, so that the mother of Eliana Marcia Villela Gomes Soares has a surname of Villela, while Eliana's father had the surname of Gomes Soares (Gomes being the family name of his mother). Spanish reverses the order, putting the name of the father first.

Related to patronymics, but different altogether, is *teknonymy* or *paedonymy*, where the parent is named after the child. In Arabic, the parent would be known as "father of" or "mother of" the eldest son.

### **Constructing names**

#### **Forming first names first**

The story is told, perhaps apocryphally, of a tribe in Nyassaland, Africa, that took its names from a publisher's book catalog that had found its way into their hands. The chief christened himself Oxford University Press. Ox, as his friends may have called him, had chosen his name in one of the more unusual ways. Typically, first names are formed from compounds, from saints' names, from places, from personal traits -- in fact, from many things other than publisher's book catalogs.

German and Celtic frequently formed compounds (and served as the basis for the naming vocabulary described in the June issue). Examples of this style of first names include *Baldwin*, "bold friend", and *Gilbert*, "shining pledge".

The first name is often, especially in Britain, called the Christian name, because after the Norman Conquest the first name was frequently taken from that of a Christian saint (Matthew, Mark, Luke and others). Other traditions would name children after places (*Norton*, "from the northern village"; *Glenna*, "from the glen"), personal characteristics (Joy; Kent, "handsome"; Kevin, "kind") and even animals (I'm not going to mention "Dances With Wolves" again).

Arabic and Semitic, and many other languages, feature theophoric names, names referring to God, such as Arabic *Abd Alla-'h*, "slave of Allah", or Hebrew *Daniel*, "God is the judge", and *Michael*, "God-like". Anglo-Saxon names also referred to God, as in *Godfrey* referring to "God's peace" (and surviving in the more common name descended from *Godfrey*, *Jeffrey*). The Anglo-Saxons had not always been Christian, and older names made frequent use of *Alf-*, "elf", the elves being divine spirits, so that *Alfreda* meant "counselled by elves" and *Elvira* meant "elf-like" (making it a suitable name for the host of a horror-movie theater).

Since the elves, if not appeased, might take a baby and leave a changling in its place, it was hoped that a child named after elves would be left alone by them. Other cultures take the fear of evil spirits further. If a mother had already lost a child to disease, she might be likely to name her next child after something vile, to keep evil spirits away. So her baby might be given an *apotropaic* name like "Ugly" or "Misshapen".

A name like "Ugly" would not be accepted in many European countries. France, Germany and Scandinavia all have lists of approved first names; a baby must be given an approved name, or the child will not be legally recognized. (Perhaps a superstitious Norwegian will name his child "Illegal" in the hopes of keeping those modern evil spirits, lawyers, away.)

Incidentally, many languages do not have separate names for men and women, as if all names were like the English neuter names of *Chris*, *Alex*, *Lee* and *Kelly*. Other languages often use regular inflections for grammatical gender to indicate the gender of names, so that *John* and *Jane*, for instance, which are both from the same Hebrew name, are represented as *Johann* and *Johanna* in German, *Giovanna* and *Giovanni* in Italian and *Juana* and *Juan* in Spanish.

### **Forming family names**

In America, melting pot of the world, there are over 1.2 million last names, according to an analysis of the Social Security rolls. In an analysis of my own business address book, consisting of 4,240 U.S. computer professionals, I found 2,936 unique names, ranging from *Abate* to *Zytniak*. Choosing any individual at random revealed a 48% chance that no one else in the address book had the same last name as them -- this is simply an amazing

diversity, representing the hundreds of cultures who have seen citizens migrate to the United States.

Koreans, in contrast, have just a few principal last names, such as Kim, Pak and Yi, though they have different spelling variations (Yi is also spelled Li, Lee, I and Rhee). Because ancestry is so important to Koreans, they have been culturally adverse to changing their last names; in fact, family names are so important that women do not change their family names upon getting married. As a result, Koreans have preserved the last names of the three major families that first settled the present-day Korean peninsula.

Like the Koreans, the Welsh also have few family names. So to tell apart all the people named Jones, Price or Evans, the Welsh tend to distinguish people with 'by-names', so that Welsh *Mark Jones-the-petrol* is distinguished from *Mark Jones-the-gardener*.

Many family names derived from such a casual use of referring to people by their occupations: farmer, weaver (e.g., Webster), baker. One of the most prestigious occupations in ancient times was that of the blacksmith, who forged swords into ploughshares in time of peace, and pikes into pole-arms in time of war. In fact, blacksmiths were among the most influential members of community, which is why the most common family name in many cultures is "Smith":

|            |                               |
|------------|-------------------------------|
| Arabic     | <i>Haddad</i>                 |
| English    | <i>Smith, Smythe, et. al.</i> |
| French     | <i>La Fèvre, La Forge</i>     |
| German     | <i>Schmidt</i>                |
| Hungarian  | <i>Kovács</i>                 |
| Portuguese | <i>Ferreiro</i>               |
| Russian    | <i>Kuznetsov</i>              |
| Spanish    | <i>Ferrer, Herrera</i>        |

Besides occupations and patronymics, other sources of family names include places (Henning, for instances, means "the meadow filled with larks"), colors (White, Brown, Green) and virtues (Good).

### **Forming names of nations**

Many groups of people (races and nations) see themselves as "the people" of the world. If they are isolated from other tribes or realms, they are even more likely to name themselves "the people", as the Inuit (Eskimos), the Bantu (an African tribe) and the Illeni Indians (for whom Illinois is named) did. The Chinese were chauvinistic about it; their name is derived from the dynasty of Chin, with Chin being the word for "man".

The more different realms a group of people are aware of the more likely they are to name themselves after the place where they live: the Canadians live in Canada, the English live in England, the Germans live in Germany. But the Jews live in Israel (the name of one of their greatest ancestors).

If your imaginary people are imaginative enough to call themselves something besides "the people" or "the people of [place]", they will nonetheless give themselves a flattering name, something like "the people of God" or "the blessed people" or "the people of [person]", where the person is any suitably noble patriarch or matriarch.

So how did the English get to be called the English? Well, in the fifth and sixth centuries AD, the Angles, Saxons and Jutes migrated from northern Germany to southern Britain. The Angles' name was related to their word *angel*, "hook", and is assumed to refer to hook-shaped stretches of the German coast. By the ninth century, *Englaland* was used to describe the island all three tribes had settled, and the form of the name was quickly shortened (not by happenstance, but by haplology) to *England*.

### **Cultural attitudes towards names**

*No one knows a man's true name but himself and his namer. He may choose at length to tell it to his brother, or his wife, or his friend, yet even those few will never use it where any third person may hear it. In front of other people, they will, like other people, call him by his use-name, his nickname -- such a name as Sparrowhawk, and Vetch, and Ogion which means 'fir-cone'. If plain men hide their true name from all but a few they love and trust utterly, so much more must wizardly men, being more dangerous, and more endangered. Who knows a man's name, holds that man's life in his keeping.*

"A Wizard of Earthsea", Ursula K. Le Guin

Names are invested with a power. Many cultures have private names, or true names, that are only to be used by family and close friends, with a public name used regularly instead. The fear is that a wizard or witch will learn their true name and so be able to cast a spell over them.

In Múharafic, the model language spoken by desert nomads in an exceptionally dry science fiction novel a friend and I once wrote, each person's name exerts power over them. The most powerful person in the clan is the watersinger, who names each child upon ascension to adulthood, and therefore knows the names of everyone in the clan. The watersinger can declare a person outcast by announcing his true name to everyone. Alternatively, a person can *gnomifesi*, "confide one's true name to another", to give themselves in marriage to their partner.

The Todas of India are not afraid to have their names known, but they will not themselves pronounce their own names. When an individual is introduced to someone new, she asks a companion to say her name.

As David Crystal writes in *The Cambridge Encyclopedia of Language*, "People in the 20th century may find it easy to dismiss such attitudes, but things have not greatly changed. It is unlikely that popular opinion would ever allow a new ship to be named *Titanic*."

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\*Thanks to personal correspondence (January 6, 2005) from Mauro Mello Jr. for clarification on the use of Jr. in South America.

*Possibilities & Purposes*

***Model Languages***

**THE NEWSLETTER DISCUSSING NEWLY IMAGINED WORDS FOR NEWLY  
IMAGINED WORLDS**

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*Volume I, Issue 3 (2/2) -- July 1, 1995*

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***Possibilities and purposes for model languages***

*Nobody believes me when I say that my long book [The Lord of the Rings] is an attempt to create a world in which a form of language agreeable to my personal aesthetic might seem real. But it is true. An enquirer (among many) asked what the L.R. was all about, and whether it was an allegory. And I said it was an effort to create a situation in which a common greeting would be elen si-'la lu-'menn omentielmo ['A star shines on the hour of our meeting'], and that the phrase long antedated the book.*

## Letter from *J.R.R. Tolkien* to Christopher Tolkien, Feb. 21, 1958

Model languages come in many different sizes and types. You can classify a model language both for its scope and for who is intended to speak it.

Classifying by scope

Classifying by time-frame of speakers

Classifying model languages

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### ***Classifying by scope***

For different scales, a model language might be used for jargon, names, proverbs, conversations or literature. Each layer of complexity requires a more detailed lexicon and grammar, ranging from a jargon consisting of a handful of words and a way of forming plurals to a complex language that can be used to carry on a conversation or support a literature.

Most of the model languages that have gained recognition have been intended for use as true languages, but many other model languages of smaller scale exist within works of fiction. Few writers can create an entire language, as Tolkien or Anthony Burgess did; few writers need that much detail in the first place.

When trying to decide what model language to create, you should not be intimidated by the magnitude of the works accomplished by Tolkien or Burgess -- that would be like fearing to write a short story because you had read *War and Peace*.

Creating a language for jargon simply means you are only interested in having a few words to convey the flavor of another culture. A model jargon is rarely even dignified with a name, since it is so small. A science-fiction author might coin a few words for unusual aliens and new technologies. For instance, I do not recall much linguistically about Larry Niven's *Ringworld*, other than to remember that he coined the word *tang*, "there ain't no justice", as the curse word used by his characters; no doubt he had coined other words to reflect the technology and topography of Ringworld and to enhance its ambience.

---

### ***Classifying by time-frame of speakers***

Besides classifying a model language by its use, you can classify a language by whether the people who speak it are alive today or are an imagined people of the past or future. A model language might be intended to represent the language of a people who lived in the

remote past. It might be intended as a linguistic experiment, showing how a language might have evolved if the past had been changed (alternate past). A model language is commonly something intended for use in the present, such as Esperanto. Finally, it might be set in a future world, such as Burgess' Nadsat or Marc Okrand's Klingon.

### *Classifying model languages*

The following chart illustrates one way of classifying some popular languages. Most of those languages listed under "Present" and "Literature" are meant as auxiliary languages or international languages, designed to be learned as a common second language.

|               | Past              | Alternate History | Present   | Future           |
|---------------|-------------------|-------------------|---|------------------|
| Literature    | Quenya            |                   | New Norwegian<br>Esperanto<br>Basic English<br>Volapük<br>et. al. | Nadsat           |
| Conversations |                   |                   |   | Klingon          |
| Proverbs      |                   |                   |   | Yilane<br>Fremen |
| Names         | Hobbit<br>English |                   |   |                  |
| Jargon        |                   |                   |   |                  |

### *Ideas for model languages*

What follows are some ideas drawn from across the above classification matrix, to encourage you to create your own model language.

Naming languages

Alternate languages

Future languages

Auxiliary languages

### *Naming languages*

A naming language is a model language created primarily for the purpose of naming people, places and things in an imaginary country or world. It is the simplest type of language to create, since it doesn't need a detailed grammar. The last issue provided an overview on how to create such a language.

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### *Alternate languages*

Science fiction contains a sub-genre of literature known as the alternate history, which postulates worlds that never existed, but might have. What if William the Conqueror, instead of Harold, had fallen at Hastings? What if the French Quebecois and their English neighbors had assimilated? What if the Moors had not stopped at Spain but had conquered England? Alternate universes such as these suggest languages that might have emerged but didn't -- these alternate universes are ripe for the creation of model languages.

If William the Conqueror and his Norman troops had failed to conquer the Anglo-Saxons, the English language would have taken a different course altogether. English would have retained much more of its vocabulary, which instead was largely displaced by Norman French. Since an Anglo-English would have retained much of its vocabulary, it might have proven more resistant to borrowing foreign terms. Anglo-English syntax would depend more on inflections, for English lost the Anglo-Saxon inflectional endings under pressure from Norman French, which had a different system of inflections all together. Anglo-English would be a fascinating language indeed. (If anyone out there wants to be the Ivar Aasen of English, let me know.)

If the French- and English-speaking people of Quebec had been less interested in preserving their own backgrounds and more interested in building a community together, a new Gallic-English might have evolved as the two languages merged. This new language would have an even simpler grammar than English, as speakers concentrated on the distinctions that French and English had in common.

The Moors expanded from North Africa to conquer much of the Iberian Peninsula. Had al-Mansur been able to forge a kingdom that would have survived his death (rather than degenerate into quarelling taifas), the Moors might have tried to invade England, giving rise to a Moorish English.

Alternative languages are fun to think about, and you should always be able to come up with one moor version of English.

---

### *Future languages*

The model linguist need not stop at the past or imagined alternate pasts. He can move to the future, postulating languages that might come to exist.

For instance, the Roman Empire spread Latin across Europe. As the Empire declined, the farflung local speakers of Latin slowly changed the language they had learned from Rome. As a result, Latin evolved into Italian, French, Spanish, Portuguese, Romanian, Sardinian, Catalan, Rhaetian, Occitan and Dalmatian (now extinct). A different type of empire has risen today, the cultural empire of English. English is now spoken as the mother tongue in Britain, the United States, Canada, Guyana, Australia and New Zealand. Over time, the dialects of English spoken in these areas may diverge as much as Italian, Spanish and French diverged from Latin, giving rise to new languages, based on English, but different from it. English has already given rise to new Englishes, such as Krio (an African creole) and Singlish (Singaporean English).

The great thing about constructing a future English is that you already know English! You have already mastered its vocabulary and grammar and can postulate how you would like to see those evolve in a future descendant of English.

---

### *Auxiliary languages*

Anyone who has traveled extensively through foreign countries wishes there was one language she could learn that people everywhere could speak. English comes close, but carries with it a cultural baggage that many find oppressive or offensive. From Volapük to Esperanto to Interlingua, people have struggled to create languages to make it easier to bring people together. Nor are these efforts in the past. For instance, Phil Hunt is creating EuroLang, which he hopes to position as the common language of the European Union.

It is easy to think of situations where simplified bridge languages would be beneficial to people -- to Quebec and to the U.S./Mexico border, to give two North American examples. While the practical steps required to see that an auxiliary language establishes a significant community of speakers are daunting, you can always choose to create such a language as simply a fascinating linguistic exercise, rather than a new social movement.

---

The possibilities for model languages are endless. Timothy Miller has been entertaining CONLANG subscribers with his Monkey Language, and he is also developing a Ferengi language for Star Trek fans (the Ferengi are the big-eared aliens, in case you didn't know). The possibilities are endless, so get working on your language today!

---

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*Meaning Change*

***Model Languages***

**THE NEWSLETTER DISCUSSING NEWLY IMAGINED WORDS FOR NEWLY  
IMAGINED WORLDS**

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*Volume I, Issue 4 -- August 1, 1995*

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### ***Meaning change***

*Silly are the goddy tawdry maudlin for they shall christgeewhiz bow down before him:  
bedead old men, priest and prester, babeling a pitterpatternoster: no word is still the  
word, but, a loafward has become lord.*

***Ronald Suffield, "The Tenth Beatitude"***

This subtle poem by the English philologist Ronald Suffield is actually written at two levels. For Suffield intends that the reader hold in mind not just the current meanings of these words but the original meanings as well. For the meaning of a word changes over time. The example everyone knows is *gay*, which originally meant "merry", but because some people are a little too merry came to mean "wanton", and because some people are a little too wanton came to mean "homosexual", which is the sense almost exclusively used now.

A model language that you develop will have words that are descended from words with quite different meanings. Some of the words used in Ronald Suffield's poem, *The Tenth Beatitude*, will be used to demonstrate how words change through time.

Pejoration

Amelioration

---

## **PEJORATION**

Pejoration is the process by which a word's meaning worsens or degenerates, coming to represent something less favorable than it originally did. Most of the words in Suffield's poem have undergone pejoration.

For instance, the word *silly* begins Suffield's poem and meant in Old English times "blessed", which is why Suffield calls his poem a beatitude (Christ's beatitudes begin with "blessed are the..."). How did a word meaning "blessed" come to mean "silly"? Well, since people who are blessed are often innocent and guileless, the word gradually came to mean "innocent". And some of those who are innocent might be innocent because they haven't the brains to be anything else. And some of those who are innocent might be innocent because they knowingly reject opportunities for temptation. In either case, since the more worldly-wise would take advantage of their opportunities, the innocents must therefore be foolish, which of course is the current primary meaning of the word *silly*.

The word *goddy* in the poem is a metaplasmus (artful misspelling) of *gaudy*. The word *gaudy* was derived from the Latin word *gaudium*, "joy", which was applied to praying (as a type of rejoicing). Because the most common prayers in Middle English times were the prayers of the rosary, Middle English *gaude* came to be associated with the rosary and came to mean "an ornamental rosary bead". Unfortunately, not all who prayed with the rosary were genuinely pious; many were like the Pharisees of old and just wanted to be seen praying -- religion for them was decorative (ornamental) rather than functional. As a result, modern English *gaudy* gradually acquired its current meaning of tasteless or ostentatious ornamentation.

A related word to *gaudy*, which is not explicitly referenced in Suffield's poem but is implied, is *bead* (in the poem, *bedead* is probably an anagrammatic play on *beaded*). In Middle English times, *bead* (then spelled 'bede') referred only to a rosary bead. Middle English *bede* was itself descended from Old English *gebed*, prayer. The phrase *telling one's beads* was literally "saying one's prayers", with each rosary bead used to keep count of the number of prayers said. In the days when all English-speaking Christians were Catholics, using the rosary was such a common practice that it was only natural for the word for prayer to become the word for the bead used to say a prayer.

In this way, Suffield is arguing, deep spiritual communication has been trivialized into a trinket. Modern English *bead* has come so far from its original center that its sphere of meaning no longer includes prayer -- but does include other small round objects, such as beads of sweat.

The word *rosary*, incidentally, originally was Latin for "a rose garden", which was applied as a metaphorical description of the prayer cycle, which was "a rose garden of prayers", with the rose garden symbolizing both the Garden of Eden (or paradise, which originally meant, well we could go on forever...) and the rose of the Virgin Mary.

A word that has shown similar semantic degeneration to *gaudy* is *tawdry*. In the eighth century, Aethelthyrth, Queen of Northumbria, abdicated her office and renounced the pleasures of the flesh, having her marriage to the King of Northumbria annulled to

become abbess of a monastery on the Isle of Ely. This act of sacrifice and her subsequent holiness prompted others to revere her as a saint. Legend has it that she died of a disease of the throat, a disease that she regarded as judgment upon the vanity of her youth, when she loved to wear beautiful necklaces in court. Eventually, Aethelthyrth was beatified, and -- as by this time phonetic change had simplified her name to *Audrey* -- she was known as St. Audrey. An annual fair was held in her memory each October 17th, and at the fair were sold cheap souvenirs, including a neck lace called *St. Audrey's lace*. In England, the initial [s] of saints' names is often elided (for instance, the town of St. Albans in Hertfordshire is locally pronounced as [talbans] by some). As a result of this process, by the 1800s, the necklaces were called *tawdry laces*. It wasn't long before *tawdry* was applied to the other cheap souvenirs sold at the annual fair, with the result that *tawdry* became a general adjective meaning "gaudy and cheap in appearance".

The word *tawdry* is not the only eponymous word to degenerate: the last word in Suffield's first stanza, *maudlin*, is short for Magdalene. Mary Magdalene was the reformed prostitute who wept at Christ's tomb that first Easter morning; this weeping has been memorialized in innumerable medieval paintings and stain-glass windows. As a result, her name came to be used to describe anyone who was weeping, and from there the meaning radiated out to "excessively sentimental." *Magdalene* came to be pronounced *maudlin* through gradual phonetic change; in fact, *Magdalen College* at Oxford University is locally known as *Maudlin*. *Silly are the goddy tawdry maudlin*.

Moving on to the next line of Suffield's poem (*for they shall christgeewhiz bow down before him*), we find another religious figure, of greater stature than Mary Magdalene or St. Audrey, who has had his name spawn many new words. Of course, this is Jesus Christ, whose name has become an oath. Because swearing is considered inappropriate in polite society, people slightly changed the sound of the invective. *Damn it!* became *darn it!*, *shit!* became *shoot!*, *Jesus!* became *gee*, *gee whiz* and *geez* and *Jesus Christ!* became *Jiminy Crickets*, among others. These euphemistic changes are called minced oaths.

The final word in Suffield's poem to undergo pejoration is *paternoster*, which is descended from the Latin *pater noster*, which represents "Our Father", the first words of the Lord's Prayer. As a result of this relationship, the words came to be known as another name for the Lord's Prayer and came to mean one of the large beads on a rosary on which the Paternoster was recited (those beads again!). As its meaning radiated outward from "large bead", it even came to mean "a weighted fishing line with hooks connected by bead-like swivels". The word *paternoster* also came to mean any word-formula spoken as a prayer or magic spell. Since the Paternoster was in Latin, and in Medieval times Latin was no longer the native language of any of the reciters, the prayer was often recited quickly and with little regard for the sense of the words. Because of this, *paternoster* came to mean meaningless chatter, words empty of meaning -- this sense of the word gave rise to the form *patter*. (The word *pitter-patter*, though used by Suffield in his poem, is actually etymologically unrelated to the word *patter* with this meaning.)

*Patter* has the sense of meaningless words, and sharp words can become rounded and dull. But although Suffield laments that no word is still the Word [of God], some words do assume a dignity they had not before possessed.

---

## AMELIORATION

Amelioration is the process by which a word's meaning improves or becomes elevated, coming to represent something more favorable than it originally referred to.

Two words that have undergone amelioration are *priest* and *prester*. Both words (along with *presbyter*) are descended from the Greek word *presbuteros*, "older man, elder", a comparative form of the word *presbus*, "old man". Because churches of most religions are headed by elders and not youth, and because age is often equated with wisdom, the Greek word gradually acquired the meaning of "church leader, priest". The different forms represent borrowings made at different times, with *priest* being the oldest English form, followed by *prester*, followed by the learned borrowing of *presbyter*.

In what for Suffield is the greatest example of amelioration, the early Old English word *hláfweard*, which if translated using its descendant words would be rendered *loafward*, meant "the keeper of the bread" and was applied to the head of a household. Although "keeper of the bread" might bear witness to the importance of that most basic of foodstuffs to early Anglo-Saxons, alternatively one might argue that it had no more literal sense than *bread-* does in the modern word *breadwinner*. The word *hláfweard* has been shortened over time, first to *hláford* and then to *lord*. Over time, the word has been used of not just any head of household but of princes and nobility; this sense was extended to include the Prince of Light, God. For Suffield, this extension of *lord* makes a fitting appellation for Christ, given that Christ was the keeper of the bread of communion. The word *lord*, which ends the poem, stands in stark contrast to the demeaning phrase *christgeewhiz* used earlier in the poem as an example of pejoration. By ending the poem with the word *lord*, Suffield offers a hope for redemption for all words.

Clearly the poet Suffield believes that man has taken the meaning out of God's words, reducing *pater noster* to *patter* and God's son's name to a curse. Yet if he is extreme in his view of pejoration as an example of man's trivialization of God and rejection of divine meaning, the process of semantic change is almost universally condemned by teachers, scholars and other concerned language speakers. In fact, semantic drift is as natural as continental drift and almost as inexorable. The meanings of words change, sometimes for the worse, but sometimes providing useful distinctions. Some words, like *lord*, are even inspired.

---

## *Categories of semantic change*

As the above discussion shows, many people view semantic change with strong emotions. Some, like Suffield, may even perceive it as an almost diabolical force. The discussion of meaning change is often emotionally charged, with the meanings perceived as "improving" (amelioration) or "worsening" (pejoration) over time. This next section will attempt to provide a more clinical overview of how words change meanings.

Try this: flip through the dictionary and look at random for a word with four or more meanings, preferably a word you think you know. Chances are you will find that it has an unlikely hodge-podge of meanings, at least one of which will surprise you. Here's what I found when I tried this myself: *daughter* has these senses, among others:

One's female child.

A female descendant.

A woman thought of as if in a parent/child relationship: *a daughter of Christ*.

Something personified as a female descendant: *the Singer sewing machine is the daughter of the loom*.

Physics. The immediate product of the radioactive decay of an element.

The last sense makes me want to write a short story, *The Daughter of Fat Man*, in which I could use the word *daughter* in at least three of its senses. How does a word come to have such broad, often very different, meanings?

At the simplest level, words do undergo only two types of meaning change, not amelioration and pejoration, but generalization (a word's meaning widens to include new concepts), and specialization (a word's meaning contracts to focus on fewer concepts).

Generalization

Specialization

A taxonomy of semantic change

---

## GENERALIZATION

Also known as extension, generalization is the use of a word in a broader realm of meaning than it originally possessed, often referring to all items in a class, rather than one specific item. For instance, *place* derives from Latin *platea*, "broad street", but its meaning grew broader than the street, to include "a particular city", "a business office",

"an area dedicated to a specific purpose" before broadening even wider to mean "area". In the process, the word *place* displaced (!) the Old English word *stow* and became used instead of the Old English word *stede* (which survives in *stead*, *steadfast*, *steady* and -- of course -- *instead*).

Generalization is a natural process, especially in situations of "language on a shoestring", where the speaker has a limited vocabulary at her disposal, either because she is young and just acquiring language or because she is not fluent in a second language. A first-year Spanish student on her first vacation in Spain might find herself using the word *coche*, "car", for cars, trucks, jeeps, buses, and so on. When my son Alexander was two, he used the word *oinju* (from *orange juice*) to refer to any type of juice, including grape juice and apple juice; *wawa* (from *water*) referred to water and hoses, among other things.

Some examples of general English words that have undergone generalization include:

| Word         | Old Meaning   |
|--------------|---|
| <i>pants</i> | "men's wide breeches extending from waist to ankle" |
| <i>place</i> | "broad street"                                      |

## SPECIALIZATION

The opposite of generalization, specialization is the narrowing of a word to refer to what previously would have been but one example of what it referred to. For instance, the word *meat* originally referred to "any type of food", but came to mean "the flesh of animals as opposed to the flesh of fish". The original sense of *meat* survives in terms like *mincemeat*, "chopped apples and spices used as a pie filling"; *sweetmeat*, "candy"; and *nutmeat*, "the edible portion of a nut". When developing your model language, it is meet to leave compounds untouched, even if one of their morphemes has undergone specialization (or any other meaning change).

For an example from another language, the Japanese word *koto* originally referred to "any type of stringed instrument" but came to be used to refer only a specific instrument with 13 strings, which was played horizontally and was popular in the Edo Period.

Other examples of specialization, from the development of English, include:

| Word             | Old Meaning   |
|------------------|---------------|
| <i>affection</i> | "emotion"     |
| <i>deer</i>      | "animal"      |
| <i>forest</i>    | "countryside" |

|               |                  |
|---------------|------------------|
| <i>girl</i>   | "a young person" |
| <i>starve</i> | "to die"         |

---

## A TAXONOMY OF SEMANTIC CHANGE

All other semantic change can be discussed in either terms of generalization or specialization. The following diagram shows different subtypes of meaning change.

### Generalization, or extension

Metonymy

Metaphorical extension

Radiation

### Specialization or narrowing

Contextual specialization

### Shift

Amelioration

Pejoration

Semantic reversal

Contronyms

### Meaninglessness

A shift in meaning results from the subsequent action of generalization and specialization over time: a word that has extended into a new area then undergoes narrowing to exclude its original meaning. In the unlikely event that all the senses of *place* except for "a business office" faded away, then *place* would be said to have undergone a shift.

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## Generalization

### Metonymy

Metonymy is a figure of speech where one word is substituted for a related word; the relationship might be that of cause and effect, container and contained, part and whole. For instance, Shakespeare's comment "Is it not strange that sheep's guts should hale souls out of men's bodies?" (from *Much Ado About Nothing*) uses "sheep's guts" to refer to the music produced by harpstrings. Had *guts* come to mean "music", then the meaning would have shifted due to metonymy.

The Greek word *dóma* originally meant "roof". In the same way English speakers will metonymically use *roof* to mean "house" (as in "Now we have a roof over our heads"), the Greeks frequently used *dóma* to refer to "house", so that that is now the standard meaning of the word. A Russian word will provide a similar example: *vinograd*, "vineyard", was so frequently used to refer to "grapes", as in "Let's have a taste of the vineyard" that it has come to mean "grapes".

### Metaphorical extension

Grace Murray Hopper, the late Admiral and computer pioneer, told a story of an early computer that kept calculating incorrectly. When technicians opened up its case to examine the wiring, which physically represented the machine's logic, a huge dead moth was found, shorting out one of the circuits and causing the faulty logic. That moth was the first of its kind to achieve immortality. Because of it, software is now frequently plagued with "bugs".

The use of *bug* to refer to an error in computer logic was a metaphorical extension that became so popular that it is now part of the regular meaning of *bug*. The computer industry has a host of words whose meaning has been extended through such metaphors, including *mouse* for that now ubiquitous computer input device (so named because the cord connecting it to the computer made it resemble that cutest of rodents).

Metaphorical extension is the extension of meaning in a new direction through popular adoption of an originally metaphorical meaning. The *crane* at a construction site was given its name by comparison to the long-necked bird of the same name. When the meaning of the word *daughter* was first extended from that of "one's female child" to "a female descendant" (as in *daughter of Eve*), the listener might not have even noticed that the meaning had been extended.

Metaphorical extension is almost a natural process undergone by every word. We don't even think of it as meaning change. In its less obvious instances, we don't even see it as extending the meaning of a word. For example, the word *illuminate* originally meant "to light up", but has broadened to mean "to clarify", "to edify". These meanings seem so natural as to be integral parts of the words, where senses such as "to celebrate" and "to adorn a page with designs" seem like more obvious additions.

A few specific metaphors are common to many different languages, and words can be shown to have undergone similar, if independent, developments. Thus the Welsh word *haul* and the Gaelic word *súil*, both meaning "sun", have both come to mean "eye". Nor is this metaphor a stranger to English, where the *daisy* was in Old English originally a compound meaning "day's eye", from its yellow similarity to the sun.

More often, languages will differ in the precise correspondences between words, so that some languages have broad words with many meanings, which must be translated into multiple words in another language. A word like *paternoster*, discussed earlier, with senses ranging from the "Lord's Prayer" to "a magic spell" to "a large bead" to "a weighted fishing line" will have to be translated into four different words in another language (though I challenge you to find an English-to-language-of-your-choice dictionary that indicates the four meanings of *paternoster*).

| Word              | Old Meaning   |
|-------------------|---------------|
| <i>illuminate</i> | "to light up" |

## Radiation

Radiation is metaphorical extension on a grander scale, with new meanings radiating from a central semantic core to embrace many related ideas. The word *head* originally referred to that part of the human body above the rest. Since the top of a nail, pin or screw is, like the human head, the top of a slim outline, that sense has become included in the meaning of *head*. Since the bulb of a cabbage or lettuce is round like the human head, that sense has become included in the meaning of *head*. Know where I'm headed with this? The meaning of the word *head* has radiated out to include the head of a coin (the side picturing the human head), the head of the list (the top item in the list), the head of a table, the head of the family, a head of cattle, \$50 a head. But I'll stop while I'm ahead.

Other words that have similarly radiated meanings outward from a central core include the words *heart*, *root* and *sun*.

---

## Specialization

The only specific subtype of specialization that I have identified is contextual specialization.

### Contextual specialization

The word *undertaker* originally meant "one who undertakes a task, especially one who is an entrepreneur". This illustrates contextual specialization, where the meaning of a word is reshaped under pressure from another word that had frequently co-occurred with it: thus

*undertaker* acquired its meaning from constant use of the phrase *funeral undertaker*; eventually, under the pressure towards euphemism, the word *funeral* was dropped.

Another example of contextual specialization is *doctor*, which originally meant "a teacher" and then later "an expert", where it came to be used in the phrase *medical doctor*; now of course this is redundant and *medical* is omitted, with the primary sense of *doctor* having become more specialized.

| Word              | Old Meaning    |
|-------------------|----------------|
| <i>undertaker</i> | "entrepreneur" |
| <i>doctor</i>     | "teacher"      |

## Shift

*I heard an American student at Cambridge University telling some English friends how he climbed over a locked gate to get into his college and tore his pants, and one of them asked, 'But, how could you tear your pants and not your trousers?'*

### **Norman Moss, "British/American Language Dictionary"**

Shifts occur when the sense of a word expands and contracts, with the final focus of the meaning different from the original. For some reason, words describing clothing tend to shift meanings more frequently than other words, perhaps because fashion trends come and go, leaving words to seem as old fashioned as the clothing they describe. Who today wants to wear bloomers, knickers or pantaloons?

The word *pants* has an interesting history. It's ultimate etymon is Old Italian *Pantalone*. In the 1600s, Italy developed commedia dell'arte, a style of comedy based on improvisation using stock characters. Pantalone was a stock character who was portrayed as a foolish old man wearing slippers and tight trousers. Through regular metonymy, speakers of Old French borrowed his name to describe his Italian trousers. Their word was then borrowed into English as *pantaloen*, which in time was shortened to *pants* and came to mean trousers in general. British speakers of English have modified the meaning again to the sense of "underpants", resulting in the confusing situation described in Norman Moss' quote above.

Cast like discarded laundry along the divide separating British and American English are quite a few words for clothing, as the following table shows.

| Word          | Meaning          |                             |
|---------------|------------------|-----------------------------|
| <i>jumper</i> | <b>Etymon:</b>   | English dialect <i>jump</i> |
|               | <b>Original:</b> | "loose jacket"              |

|                   |                  |  |
|-------------------|------------------|--|
|                   | <b>American:</b> | "pinafore"   |
|                   | <b>British:</b>  | "a light pullover"   |
| <i>knickers</i>   | <b>Etymon:</b>   | <i>knickerbockers</i>  |
|                   | <b>Original:</b> | "breeches banded below knee"   |
|                   | <b>American:</b> | "boy's baggy trousers banded below knee"   |
|                   | <b>British:</b>  | "bloomers, old-fashioned female underpants"  |
| <i>pants</i>      | <b>Etymon:</b>   | <i>pantaloon</i> , from Old French <i>pantalon</i>   |
|                   | <b>Original:</b> | "men's wide breeches extending from waist to ankle"  |
|                   | <b>American:</b> | "trousers"   |
|                   | <b>British:</b>  | "underpants"   |
| <i>suspenders</i> | <b>Etymon:</b>   | <i>suspend</i>   |
|                   | <b>Original:</b> | (unchanged) "straps to support trousers"   |
|                   | <b>American:</b> | (unchanged)  |
|                   | <b>British:</b>  | "garter"   |
| <i>tights</i>     | <b>Etymon:</b>   | <i>tight</i> , adj.  |
|                   | <b>Original:</b> | (unchanged) "snug, stretchable apparel worn from neck to toe; typically worn by dancers or acrobats" |
|                   | <b>American:</b> | (unchanged)  |
|                   | <b>British:</b>  | "pantyhose"  |
| <i>vest</i>       | <b>Etymon:</b>   | Old French <i>veste</i> It. Lat. <i>vestis</i>   |
|                   | <b>Original:</b> | "clothing"   |
|                   | <b>American:</b> | "waistcoat"  |
|                   | <b>British:</b>  | "undershirt"   |

## Amelioration

Suffield's poem gave many good examples of amelioration, including *priest* from "old man". A complementary term, *pastor*, likewise underwent amelioration, originally

meaning "shepherd" (a sense surviving in the word *pastoral*), but coming to mean its current sense of "minister" by the extensive Christian references to "the Lord is my shepherd" as a call to ministry.

The following table shows other examples, including *pluck* in the sense of *He has a lot of pluck*.

| Word                    | Old Meaning      |
|-------------------------|------------------|
| <i>enthusiasm</i>       | "abuse"          |
| <i>guts</i> ("courage") | "entrails"       |
| <i>pastor</i>           | "shepherd"       |
| <i>pluck</i> ("spirit") | "act of tugging" |
| <i>queen</i>            | "woman"          |

## Pejoration

King James II called the just completed St. Paul's Cathedral *amusing, awful and artificial*. Call the just completed rock and roll museum in Cleveland *amusing, awful and artificial*, and you may be accurate but you will mean something quite different from King James. When he lived, those words meant that the cathedral was "pleasing, awe-inspiring and artful" respectively. The meaning of each word has grown more negative with time. People seem much more likely to drag words down than to lift them up, to build museums instead of cathedrals, as the following examples may demonstrate.

| Word              | Old Meaning                                 |
|-------------------|---|
| <i>crafty</i>     | "strong"                                    |
| <i>cunning</i>    | "knowing"                                   |
| <i>egregious</i>  | "distinguished, standing out from the herd" |
| <i>harlot</i>     | "a boy"                                     |
| <i>notorious</i>  | "famous"                                    |
| <i>obsequious</i> | "flexible"                                  |
| <i>vulgar</i>     | "popular"                                   |

## Semantic reversal

Occasionally a word will shift so far from its original meaning that its meaning will nearly reverse. Fascinatingly enough, the word *manufacture* originally meant "to make by hand".

| Word | Old Meaning |
|------|-------------|
|------|-------------|

|                    |                   |
|--------------------|-------------------|
| <i>counterfeit</i> | "an original"     |
| <i>garble</i>      | "to sort out"     |
| <i>manufacture</i> | "to make by hand" |

## Contronyms

A contronym is like a word that has undergone semantic reversal, only the tension has not eased: the word still preserves its original meaning, along with a contradictory -- if not exactly counterposed -- meaning.

| Word             | Meanings   |
|------------------|--|
| <i>bimonthly</i> | "happening every other month", "happening twice monthly"   |
| <i>biweekly</i>  | "happening every other week", "happening twice weekly"   |
| <i>ravish</i>    | "to overwhelm with force, especially rape"*, "to overwhelm with emotion, enrapture"              |
| <i>sanction</i>  | "authoritative measure of approval"*, "coercive measure of disapproval of nation against nation" |
| <i>table</i>     | Brit. "to put on the table for discussion", Amer. "to set aside a motion rather than discuss it" |

\*The older of the two senses given

Interestingly, *biannual* means only "twice each year", with no recorded sense of "every other year" in *Webster's II New Riverside University Dictionary*.

The word *cleave* (meaning "to split or separate" or "to adhere or cling") is actually two different words, both from the Old English (*cle-ofan* and *cleofian* respectively) but by changes in pronunciation, these words have evolved the same current form.

## Meaninglessness

The nadir of semantics is meaninglessness. The final semantic change. The death of meaning. The defeat of sigor.

The word *sigor* is Old English for "victory". It is now meaningless to almost all English speakers, except for those familiar with Old English or with German (where its cognate survives in *Seig*).

Few now know what *sigor* means. Is this a change in its meaning or a change in the very state of the word? Is death part of life?

### ***Meaning change across languages***

Imagine for a moment that *sigor* had survived. It might have been changed to *siyor*, and its meaning could have generalized to "success". It would then stand in contrast to the German *Seig*.

Sister languages, or dialects of a language, often have the same basic word with different meanings. These word pairs then become known as "false friends" to speakers trying to learn the other language. For instance, German *Lust* means "pleasure", which is in fact the original meaning of the English word, which comes from the same common ancestor as *Lust*. In English, *lust* underwent specialization and pejoration, as speakers associated it with only one type of pleasure. The British and American English clothing terms also show how related languages can send words off in different directions over time.

As you develop your model languages, you should have words in related languages undergo different semantic changes. Situations where a word's meaning changes in two related languages are relatively rare, the example of the Irish and Gaelic words for "sun" evolving into "eye" notwithstanding.

When languages borrow words, they frequently change the meanings of those borrowings, typically making generic words more specific, in the same way that one language's place names often grew out of another language's generic words for concepts such as "hill", "river" and "town". Take the history of the Low German word *spittal*, derived from a generic Romance word for "hospital" but then applied to "a hospital for lepers".

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### ***Meaning change through time***

Future meaning change

The history of meaning change

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## **FUTURE MEANING CHANGE**

Words are slowly changing in meaning even now, though the changes happen at the speed of continental drift rather than with the sudden jolt of earthquakes. To conclude this issue, and to summarize the types of meaning change discussed here, I have extrapolated how some words might change meanings in the next 25 years.

**Generalization:** *entrepreneur*, "small-business owner or worker" (because of its favorable connotations, this word was widely adopted as a label, even by those who were not risk takers).

**Metonymy:** *sun-cell*, "electric car" (so called because of the prominent solar cell on the roof of the vehicle).

**Metaphorical Extension:** *surfaced*, "checked all Internet messages, including e-mail, voice mail and video mail" (originally popularized in the phrase *I just surfaced from checking my flood of e-mail*; given added cachet under the influence of *surf*, which see).

**Radiation:** *Internet*, "Internet, narrowcast television, narrowcast radio, virtual reality, videoconferencing" (because it all was added onto the 'Net).

**Specialization:** *surf*, "navigate the Internet" (traditional "water surfing" becomes called *sea-boarding*).

**Contextual Specialization:** *candidate*, "political candidate" (the word *contestant* began to be used instead of *candidate* for non-political contexts).

**Shift:** *fax*, "point-to-point e-mail" (e-mail gradually superseded fax). *post-modern*, "modern" (by calling everything modern *post-modern*, this change was inevitable).

**Amelioration:** *temp*, "specialist".

**Pejoration:** *liberal*, "idiot" (this term was used as an insult as early as 1988 and was gradually abandoned as a label by the Democrats it originally described). *job*, "drudgery".

**Semantic Reversal:** *modern*, "obsolete" (thanks to the change in meaning of *post-modern*). *putrid*, "cool" (slang).

**Conronym:** *communism*, "communism, capitalism" (courtesy of the Hong Kong communists).

**Meaninglessness:** *perestroika* (this word was used only by historians interested in how the Russian economy followed that of Sicily).

If you want to create a slang or jargon, besides coining new words you should change the meanings of current words, much as these examples did. Just be aware that it is easier for an outsider to pick up new words than old words whose meaning has changed, since the outsider will bring all his assumptions from past experience to bear, so that when he hears a teenager call something *putrid*, he will assume that it *is* putrid.

---

## THE HISTORY OF MEANING CHANGE

*To say that Bilbo's breath was taken away is no description at all. There are no words left to express his staggerment, since Men changed the language that they learned of elves in the days when all the world was wonderful. Bilbo had heard tell and sing of dragon-*

*hoards before, but the splendour, the lust, the glory of such treasure had never yet come home to him.*

**J.R.R. Tolkien, "The Hobbit"**

If the history of semantic change had to be summed up as one process, it would be that of specialization. The Anglo Saxons 1500 years ago made do with perhaps 30,000 words in their complete vocabulary, while Modern English has anywhere from 500,000 to a million words, depending on whether or not scientific vocabularies are included.

"In the beginning was the Word, and the Word was God, and the Word was with God." It could be argued that originally there was one word, from which all others have sprung. The origins of language will never be known, but the first language probably had a vocabulary of a few hundred words, providing a rich enough vocabulary for a primitive people who had few materials and fewer abstract concepts. Many of the words of the first languages had very broad senses of meaning.

For instance, the word *inspire* is from the Latin *inspirare*, which literally means "to breathe into". Its archaic meaning is "to breathe life into", with newer meanings like "to be the cause of", "to elicit", "to move to action", "to exalt" and "to guide by divine influence". Now if a minister were to speak of Adam as *dust inspired*, he might mean by that not just that the dust is having life breathed into it (the original etymological meaning), but also that the dust is being exalted and given form, that it is being moved to action, and that it is being divinely guided (these are the metaphorical or extended meanings). In other words, this minister might not mean just one of the definitions of *inspired* but all of them simultaneously.

The extended meanings are branches that have split off from the trunk, and our hypothetical minister has simply traced them back to the root.

If you seek to create a language from an earlier time, you should probably develop a small vocabulary, with its words having much more overlapping of meaning than the vocabularies of modern languages. Imagine a word *spiratholmos* -- an ancient ancestor to Latin *inspirare* -- meaning "wind, breath, voice, spirit." A speaker who used the word *spiratholmos* would regard the wind in the trees as the breath of the earth, the voice of God, the spirit animating each of us.

This is a different way of looking at words, and prompted Tolkien to write, "There are no words left to express his staggerment, since Men changed the language that they learned of elves in the days when all the world was wonderful." What Tolkien's elves might have expressed in one word, resonant with meaning, Tolkien's diminutive man cannot express at all.

Semantic change can be viewed dispassionately as a natural process, but it can also be invested with a spiritual significance, as Tolkien and Suffield have done. A model

language is an art form and its crafting can even convey this theme of spiritual isolation. As Ronald Suffield wrote, "no word is still the word, but, a loafward has become lord."

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*Sen:esepera*

## ***Model Languages***

**THE NEWSLETTER DISCUSSING NEWLY IMAGINED WORDS FOR NEWLY  
IMAGINED WORLDS**

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*Volume I, Issue 5 -- September 1, 1995*

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### ***Sen:esepera -- A Reform Of Esperanto***

Design goals

Phonology

Orthography

Morphology

Borrowings

Grammar

Sample text

Vocabulary

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*This month's issue looks at an actual model language that I have been developing, **Sen:esepera**. This issue is more technical than most issues of **Model Languages** but it is hopefully not too difficult to follow.*

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### ***Design goals***

I designed **Sen:esepera** as a dramatic reform of Esperanto, which I felt was difficult for speakers of non-European languages (especially Asian languages such as Japanese and Chinese) to pronounce.

The primary design goal was to reduce the complexity of Esperanto's phonology, which -- due to a plethora of consonants and consonant clusters -- is difficult for many native speakers of non-European languages to master.

Secondary design goals were to further simplify Esperanto's grammar and vocabulary. When words were phonetically simplified to meet the primary design goal, it became harder to recognize them from their roots, necessitating changes to keep the vocabulary easily learnable.

Note that I explicitly am not interested in proposing that *Sen:esepera* should be adopted as an international language; the creation of this language is purely an intellectual pursuit. It is also not yet complete, with the vocabulary still being simplified.

---

## *Phonology*

*Sen:esepera* contains five vowels: /a/ /e/ /i/ /o/ /u/. The language has 14 consonants: /p/ /t/ /k/ /b/ /d/ /g/ /f/ /s/ /h/ /m/ /n/ /l/ /r/ /j/.

Where Esperanto has 23 consonants, *Sen:esepera* has only the 14 most-common consonants, based on Rick Morneau's analysis of a sample of 25 world languages (for further details, refer to [ftp.eskimo.com/u/r/ram/conlang](http://ftp.eskimo.com/u/r/ram/conlang)). Of the languages he surveyed, 76% contain every sound in *Sen:esepera*; their speakers will not need to master any new sounds, while speakers of the other 24% of the languages will have to master a few new sounds.

Because *Sen:esepera* makes comparatively few distinctions between consonants, most consonants have allophones, of which only the principal ones will be mentioned here. An allophone is one of at least two alternate pronunciations for a phoneme. The phoneme /f/ has allophones [f] and [v], and /s/ has allophones [s] and [z] (similar to Old English). The phoneme /r/ includes any retroflex or any alveolar flap or trill. The phoneme /h/ has allophones [h] and [x].

As with Esperanto, the accent is always on the penultimate syllable.

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## *Orthography*

Every word is spelled phonemically.

The letter 'c' represents the phoneme /k/. The letter 'i' represents either the vowel /i/ or the semivowel /j/; if 'i' follows a vowel, then it represents /j/, otherwise it represents /i/. Thus, 'amica' ("friend") represents /amika/ and 'caim' ("where") represents /kajm/.

Separate morphemes used in a word (aside from the grammatical marker, covered below) are delimited by use of the colon (e.g., *im:amica*, "opposite-friend, enemy").

---

## ***Morphology***

Every syllable in the language follows this pattern:

[C] V [S] [N]

Where:

[C] - is an optional ordinary consonant: /p/ /t/ /k/ /b/ /d/ /g/ /f/ /s/ /h/ /l/ /r/

V - is a mandatory vowel: /a/ /e/ /i/ /o/ /u/

[S] - is an optional semivowel 'i' /j/

[N] - is an optional nasal /n/ or /m/

This provides for a comparatively small range of syllables, with just 360 (12 x 5 x 2 x 3) possible syllables, where Esperanto theoretically has over ten thousand possible syllables. (The exact number is impossible to determine, since Esperanto's vocabulary is not closed and its morphology has not been explicitly defined.)

*Sen:esepera*'s morphology is designed to eliminate complex consonant clusters (e.g., /str/, /bl/, /pr/, /sp/), which are difficult for many speakers of Asian and African languages to pronounce. See Rick Morneau's essay on morphology (at [ftp.eskimo.com/u/r/ram/conlang](http://ftp.eskimo.com/u/r/ram/conlang)) for a full description of optimizing morphology for maximum ease of pronunciation.

Every word ends in a class suffix, indicating part of speech (see GRAMMAR below).

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## ***Borrowings***

When a word is borrowed into *Sen:esepera*, it should conform to its phonology, morphology and class suffixes. Thus *Esperanto* is borrowed as *Eseperanta*.

| Sample borrowings: |                |            |
|--------------------|----------------|------------|
| <i>Sen:esepera</i> | Esperanto      |            |
| <i>pasinatan</i>   | <i>pasinta</i> | "past"     |
| <i>linegefa</i>    | <i>lingvo</i>  | "language" |

|                 |   |           |
|-----------------|---|-----------|
| <i>sciencia</i> | <i>scienco</i>                                    | "science" |
|                 | (note that Esperanto 'c' /ts/ is borrowed as /k/) |           |
| <i>seterata</i> | <i>strato</i>                                     | "street"  |

Esperanto words are nativized according to standard rules, which are too involved to detail here.

## ***Grammar***

For simplicity, the grammar has been designed to eliminate most features that are not universal to fusional (synthetic) languages and even a few features that are not always used in analytic languages. ***Sen:esepera*** lacks number, articles, declensions, inflections, and pronouns with gender distinctions.

Every word ends in a class suffix, indicating its part of speech:

|                     |                   |
|---------------------|-------------------|
| <b>Nouns</b>        | -a                |
| <b>Pronouns</b>     | -u, -un           |
| <b>Adjectives</b>   | -an, -en, -in, -m |
| <b>Verbs</b>        | -i                |
| <b>Adverbs</b>      | -e                |
| <b>Prepositions</b> | -o                |
| <b>Numerals</b>     | -in               |
| <b>Correlatives</b> | -o, -on           |

### **NOUNS: -A**

1. The language has neither a definite article (*the*, Esperanto *la*) or an indefinite article (*a*, *an*). 2. Nouns end in *-a*. They are not inflected for plural, gender or case. The relationship of case is expressed by prepositions. What Esperanto would express with the accusative case, ***Sen:esepera*** expresses with the preposition *ano*.

### **PRONOUNS: -U, -UN**

5. Personal pronouns end in /u/ and are not inflected for number, gender or case. The first person pronoun ("I, me, we, us") is *imu*; second person ("you") is *tu*; and third person ("he, him, she, her, they, them, it") is *hu*. All possessive pronouns (e.g., *mine*, *yours*, *his*) are formed by appending /n/; possessive pronouns are treated as adjectives.

### **ADJECTIVES: -AN, -EN, -IN OR -M**

3. Adjectives typically end in *-an/* and typically precede the noun they describe. The comparative is made by using the word *pelo*, the superlative by *supelo*. With the comparative, the conjunction *olo* is used.

### VERBS: -I

6. The verb undergoes no change with regard to person or number or tense, which is instead conveyed as necessary through context. The passive is rendered by preceding a verb with *esete*.

### ADVERBS: -E

7. Adverbs end in *-e*; comparison is as for adjectives.

### PREPOSITIONS: -O

All prepositions end in *-o*. Each preposition has a definite and constant meaning, but if the direct sense does not indicate what it should be (e.g., if the preposition is used idiomatically), the preposition *lo* (corresponding to Esperanto *je*), is used instead.

### NUMERALS:

4. The first 10 ordinal numerals are, when used as adjectives, *unin, duin, tirin, forin, fifin, sesin, sepin, ocin, enin, decin*. Tens and hundreds are formed by joining the numerals. The suffix *-en* indicates fractional numbers.

### CORRELATIVES: -O, -ON

Correlatives end in *-o/* or *-on/*. Esperanto's correlatives are concise but hard to remember. **Sen:esepera** instead uses compound words, which provide greater clues for remembering. Thus Esperanto *kiu* [*< ki-*, "which" + *u*, "one"] equals **Sen:esepera's** *caim:uno*. Sample correlatives are *tin:obico*, "this thing"; *dem:sepeco*, "that kind of"; *sum:loco*, "somewhere"; *an:emodo*, "nohow"; and *omin:cuso*, "for every reason".

A correlative consists of a modifier followed by a context. The six possible modifiers are:

|             |                    |
|-------------|--------------------|
| <i>caim</i> | "which, what"      |
| <i>tin</i>  | "this"             |
| <i>dem</i>  | "that"             |
| <i>sum</i>  | "some"             |
| <i>an</i>   | "no"               |
| <i>omin</i> | "each, every, all" |

The 9 possible contexts are:

|               |            |
|---------------|------------|
| <i>uno</i>    | "one"      |
| <i>obico</i>  | "thing"    |
| <i>sepeco</i> | "kind"     |
| <i>loco</i>   | "place"    |
| <i>emodo</i>  | "way"      |
| <i>cuso</i>   | "reason"   |
| <i>tempo</i>  | "time"     |
| <i>enumo</i>  | "quantity" |
| <i>unon</i>   | "one's"    |

Correlatives total 54 different words.

The contexts can be inflected like other words in most instances.

## WORD ORDER:

Like Esperanto, *Sen:esepera* has no fixed word order.

### *Sample text*

|   | <b>Basic english</b>   | <b>Sen:esepera</b>   |
|---|--|--|
| 1 | And all the earth had one language and one tongue.   | O tutan tera eseti codo unin lingifa, o codo unin parola.  |
| 2 | And it came about that in their wandering from the east, they came to a stretch of flat country in the land of Shinar, and there they made their living-place.                                       | O tina ocase, caim:tempo hu foiagi delo orienta, demo hu terofi pelatan loca eno loca codo Sinara [Shinar]; o hu domi dem:loca.  |
| 3 | And they said one to another, Come, let us make bricks, burning them well. And they had bricks for stone, putting them together with sticky earth.   | O hu paroli unin alo omin:una, "Feni, imu posete cusi berica, o pele beruli hu." O hu hafi berica contero setona, o cota hafi hu contero unigi berica.   |
| 4 | And they said, Come, let us make a town, and a tower whose top will go up as high as heaven; and let us make a great name for ourselves, so that we may not be wanderers over the face of the earth. | O hu paroli, "Feni, imu posete conseteri imu ureba, o tura, caim:unon supera ebele atingi alo paradisa; o imu posete cusi imu enoma, ro imu ebele pere:emeti foran supero:eno fisaga codo tutan tera." |

- |   |   |   |
|---|---|---|
| 5 | And the Lord came down to see the town and the tower which the children of men were building.   | O Dia feni im:supere o fidi ureba o tura, caimo dimin:homa codo homa conseteri.   |
| 6 | And the Lord said, See, they are all one people and have all one language; and this is only the start of what they may do; and now it will not be possible to keep them from any purpose of theirs. | O Dia paroli, "Fidi, homa eseti unin, o hu hafi tutan unin lingifa; o tino hu comenci o fari: o ene hu ebele inhibici delo an:obica, caimo hu ebele emagi o fari. |
| 7 | Come, let us go down and take away the sense of their language, so that they will not be able to make themselves clear to one another.  | Feni, imu posete iri im:supere, o dem:loca sangi hun lingifa, demo hu im:ebele compereni unin omin:unan parola."  |
| 8 | So the Lord God sent them away into every part of the earth; and they gave up building their town.  | Dia posete pere:emeti hu foron pano fisaga codo tutan tera: o hu cesige conseteri ureba.  |
| 9 | So it was named Babel, because there the Lord took away the sense of all languages; and from there the Lord sent them away over all the face of the earth.  | Hun enoma eseti Babela [Babel]; cuso Dia dem:loca sangi lingifa codo tutan tera: o delo dem:loca Dia pere:emeti hu foran supero:eno fisaga codo tutan tera.       |

**From "The Bible In Basic English", first published by the Syndics of the Cambridge University Press (London and New York) in 1949**

**Translated by Jeffrey Henning, Sep 24th, 1995, author of *Sen:esepera***

(see also: *The Babel Text*)

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## ***Vocabulary***

***Sen:esepera*** is almost entirely derived from Esperanto and has approximately 1700 words, derived from around 1200 basic morphemes. The final version of the vocabulary will attempt to reduce the number of basic morphemes to 600. As part of this effort, all homonyms will be removed from the vocabulary: e.g., *aga* [from Esp. ag<sup>o</sup>.], "age", and *aga* [Esp. ago.], "act".

***Sen:esepera*** words are typically longer than Esperanto words, due both to ***Sen:esepera***'s strict morphology and to its use of mnemonic affixes in place of Esperanto's esoteric affixes. As the vocabulary is reformed, ***Sen:esepera*** words will grow even longer.

(This is a subtle contribution towards Esperanto's goal of encouraging world peace by offering an easy-to-learn language. *Sen:esepera*, by offering a long-winded language, hopes to discourage people from talking too much, which will increase the likelihood of world peace...)

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*Meaning*

***Model Languages***

**THE NEWSLETTER DISCUSSING NEWLY IMAGINED WORDS FOR NEWLY  
IMAGINED WORLDS**

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***Volume I, Issue 6 (1/2) -- October/November 1, 1995***

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***Meaning***

*I won't use words again*

*They don't mean what I meant*

*They don't say what I said*

*They're just the crust of the meaning*

*With realms underneath*

*Never touched*

*Never stirred*

*Never even moved through*

*If language were liquid*

*It would be rushing in*

***Suzanne Vega, "Language"***

If language **were** liquid, we could enter a submersible and use sound waves to reveal the subterranean terrain. For each word floats like a buoy, anchored to some unseen spot far

below. The meanings of the word *brother* seem easy to pick out from the waters, but in fact the possible meanings stretch deeper than you might expect, ranging from "full brother" to "any kinsman" to "any fellow human" to "anything related" (as in *the brother vices of greed and selfishness*). Since we can't use sonar, how can we sound out the meanings of words?

It used to be thought that any word could be described in terms of semantic primitives. For instance, M. Bierwisch, writing in 1970, said that semantic features do not differ from language to language, but are rather part of the general human capacity for language, forming a universal inventory used in particular ways in individual languages.

According to this theory, every word can be broken up into primitive kernels of meaning, called *semantemes* (also called *semantic features* or *semantic components*). Some sample definitions using semantemes:

| Word     | Semantemes         |
|----------|--------------------|
| father   | male + parent      |
| mother   | female + parent    |
| son      | male + offspring   |
| daughter | female + offspring |
| brother  | male + sibling     |
| sister   | female + sibling   |

The process of breaking words down into semantemes is known as *componential analysis* and has been most often used to analyze kinship terms across languages. The components are often given in more detail. For instance, kinship terms like those shown above might have three components: sex, generation, lineage. Sex would be male or female; generation would be a number, with 0 = reference point's generation, -1 = previous generation, +1 = next generation; lineage would be either direct, colineal (as in siblings) or ablineal (as in uncles and aunts).

This is obviously a highly technical way to define words we all know and use without overdue consideration, but -- by using these components -- you can concisely define a variety of English kinship terms.

| Word     | Generation | Lineage  | Sex    |
|----------|------------|----------|--------|
| mother   | -1         | Direct   | Female |
| father   | -1         | Direct   | Male   |
| aunt     | -1         | Ablineal | Female |
| uncle    | -1         | Ablineal | Male   |
| sister   | 0          | Colineal | Female |
| brother  | 0          | Colineal | Male   |
| daughter | 1          | Direct   | Female |

|        |   |          |        |
|--------|---|----------|--------|
| son    | 1 | Direct   | Male   |
| niece  | 1 | Ablineal | Female |
| nephew | 1 | Ablineal | Male   |

This can be the starting point of a more detailed analysis of English terms. One advantage of isolating and identifying each component is that it then becomes possible to identify "holes" in a language's vocabulary, areas for which it lacks a direct term. For instance, English lacks a genderless word for an aunt or uncle; you can't fill in the blank for the statement "*parent* is to *mother* and *father*, as \*\*\* is to *aunt* and *uncle*". You can still express this concept in English (we typically refer to *aunts and uncles* but you can more formally refer to *parents' siblings*), but you will likely express it less often than you would if there was a word for it.

Another gap is the lack of words for either "male cousin" or "female cousin". The paradigm *parent/mother/father, sibling/sister/brother* is just not carried out for *cousin*. This is unlike other Germanic languages, including Danish (*Faetter* and *Kusine* for male and female cousins respectively), Dutch (*neef* and *nicht*) and German (*der Vetter* and *die Kusine*). Old English probably also made this distinction, but lost it under influence of Norman French, which -- like most, if not all, Romance languages -- does not make this distinction.

The following table more fully fleshes out the distinctions English does make in kinship terms.

| Word               | Generation | Lineage  | Sex    |
|--------------------|------------|----------|--------|
| parent             | -1         | Direct   | x      |
| mother             | -1         | Direct   | Female |
| father             | -1         | Direct   | Male   |
| [parent's sibling] | -1         | Ablineal | x      |
| aunt               | -1         | Ablineal | Female |
| uncle              | -1         | Ablineal | Male   |
| sibling            | 0          | Colineal | x      |
| sister             | 0          | Colineal | Female |
| brother            | 0          | Colineal | Male   |
| cousin             | 0          | Ablineal | x      |
| [female cousin]    | 0          | Ablineal | Female |
| [male cousin]      | 0          | Ablineal | Male   |
| child, offspring   | 1          | Direct   | x      |

|                      |   |          |        |
|----------------------|---|----------|--------|
| daughter             | 1 | Direct   | Female |
| son                  | 1 | Direct   | Male   |
| [niece or<br>nephew] | 1 | Ablineal | x      |
| niece                | 1 | Ablineal | Female |
| nephew               | 1 | Ablineal | Male   |

There are many more "holes" or gaps in the vocabulary than those labeled here. What about terms where the generation is not specified? Where the lineage is not specified?

Please note that the combination of {Generation 0, Lineage Direct} is meaningless (except for some backwater place -- choose your own to make fun of -- where brothers marry their sisters and people can be their own fathers). Since the sense of {Lineage Colineal} only applies to a generation of 0, it could be thought of as the manifestation of Direct in that area. (The term Ablineal can apply to any generation.)

A fuller componential analysis (yes, fuller) of kinship terms is presented in a sidebar below.

While componential analysis is useful for some exercises, it is not a representation of how language works; no linguist has ever been able to develop a complete list of semantic primitives. Invariably, some of the primitives identified are actually molecules that can be broken down into new atoms. For instance, *parent*, *offspring* and *sibling* are all interrelated terms; the word *parent* can be defined as "a person who has offspring" and *sibling* can be defined as "a person with a parent who has other offspring". If semantic primitives were to exist, they would number in the thousands and would resemble a mathematical logic system more than the mind's loom of language.

### ***The bother of brother***

While Suzanne Vega sings of language being liquid, the rigidity of componential analysis makes language seem like frozen liquid: ice cubes. While semantemes have their place, especially to compare and contrast languages' lexicons, they do not indicate how we actually define terms in our minds.

One of the problems with semantemes is that they assume words have a single basic meaning. Take *brother*, which was defined above first as "male sibling" and then as {Generation 0, Sex Male, Lineage Colineal}. The English word actually has a much broader meaning than either of these definitions, with many degrees of *brother*-ness radiating out from a core meaning of "male sibling", as shown below in a no-means exhaustive list.

brother-german (male sibling)

half brother

stepbrother

kinsman

comrade

fraternity member

co-religionist

lay person

racial brother

fellow man

Defining these labels in more detail we have:

A male having the same biological parents as another person: a brother-german

A male having one biological parent in common with another person: a half brother

The son of one's stepparent by a previous spouse or lover: a stepbrother

A male with the same ancestor as another person: a kinsman

A male friend who is loved as if he were a biological brother: a comrade

A male friend who belongs to the same fraternity: fellow fraternity member

A man who follows the same religious beliefs: a co-religionist

A male lay member of a religious order: a monk or lay person

A person of the same race or nation

A fellow man

Something that closely resembles another in kind

Even this radius of meaning is not exhaustive: a *brother* can mean a "brother-in-law", a *brother* can be an adopted son raised by your parents, a *brother* can be used in the strict

sense of "a fellow African American". The gender of a brother does not even have to be male -- *we must help our brothers in the Fatherland* uses *brother* to include both men and women (as illustrated in meaning #9 above).

As this example shows, people think of words not as fixed definitions composed of semantic primitives, but as examples or prototypes. The prototypical brother has the same biological parents as another person and has an emotionally close relationship with his siblings. On a scale of *brother-ness* from 0 to 100 the prototype is 100. A 90 might be a brother who was twenty years older than another person and as a result was never close to him, or the brother who was abusive and was disliked -- even though these examples are biologically brothers, they do not share in that emotional closeness of true *brother-ness*. A best friend can be considered a *brother* on the basis of emotional closeness, rather than kinship. The brother virtues of love and charity are considered brothers only because they resemble one another -- this is a metaphorical use of the primary sense of *brother*, scoring perhaps a 10 out of 100 on our hypothetical scale of *brother-ness*.

The word *brother*, then, is defined not in terms of semantic primitives, but in terms of a network of associations with other words. The human brain recursively defines words by words (just like a dictionary).

---

### ***Translations (meanings across languages)***

When you decide to translate *brother* into your model language, you will have to decide which of its many meanings you wish to convey. Too often we assume that an English word has exact counterparts in other languages. We say that English *brother* = Spanish *hermano*, when in fact *hermano* has different connotations. For one thing, *hermano* is the expression of a root form *herman-* with a masculine ending; give it a feminine ending and you have *hermana*, "sister"; *hermano* has less of a distinctively masculine connotation than *brother* does.

Rather than considering the breadth of the meaning of *brother*, let's take a simpler example. It is tempting to say that *casa* in Spanish equals *house* in English, like  $1+1=2$ .

*casa = house*

In fact, *casa* also equals *home*, since Spanish does not distinguish between *house* and *home* with separate words. (Spanish does make a similar distinction, but it does so grammatically, by saying *el casa*, "the house", contrasted with *casa*, "home".)

*casa = home*

Of course, in English *house* and *home* are different.

*house* <> *home*

If this is so, then:

*casa* <> *casa*.

Clearly, semantics can never be reduced to an algebra of translation.

As further evidence that words with common meanings are not exactly equivalent, review some double-translations. The story is told of an American in the USSR who received a telegram, *Your daughter was hung for juvenile crimes*. In fact, the Soviet censor had translated the telegram into Russian, and then back into English. The original English telegram read *Your daughter was suspended for delinquency*. The words *suspended* and *delinquency* had different prototypes (different spheres of meaning) than the Russian words they were paired with.

Words in other languages will make different distinctions. Some will encompass a wider range of meanings than corresponding English words. For instance, Rick Harrison's planned language Vorlin has some interesting words: the basic sense of the word *bat* is "a ball-hitting tool", with its radiated meanings including "bat, hockey stick, and tennis racket", while the word *sop* means "soup" and "stew". Other Vorlin words cover a smaller range of meanings, so that *for*, "form, shape", does not include other senses of English *form* like "a paper document to be filled in", "a molding to be filled with concrete" or "manners or conduct".

As you determine what the words in your model language mean, you have to keep in mind that they will not exactly equal English words. But, as a practical matter, you probably don't want to create words for each separate meaning of *brother* and have each word assigned only to that meaning, like the following English words: *brother german* ("full brother"), *half-brother*, *stepbrother*, *brother-in-law*, *comrade*, *fellow*, *kinsman*, *fraternity member*, *coreligionist*. Doing so loses much of the flexibility of *brother*.

As an example, here's how I translated the different realms of *brother* into the model language Negasi.

|               |   |  |
|---------------|---|--|
| <i>nemi</i>   | [ Nagada<br><i>nama</i> .]                                    | A brother, ranging from the meanings of a full biological brother to a distantly related kinsman, but excluding the broader senses of fellow man, fraternity member, or coreligionist. |
| <i>sanami</i> | [ Nagada<br><i>dunama du +<br/>nama</i> , "near<br>brother".] | A half-brother, a stepbrother or a brother-in-law.   |
| <i>henami</i> | [ Nagada<br><i>hanama ha +<br/>nama</i> , "far<br>brother".]  | A comrade, fellow or kinsman.  |

|                 |  |   |
|-----------------|--|---|
| <i>sanemi</i>   | [ <i>sa + nemi</i> ,<br>"near brother" .]        | A best friend.  |
| <i>lunanemi</i> | [ <i>luna + nemi</i> ,<br>"divine<br>brother" .] | A coreligionist, though for this imagined<br>culture it would refer to a specific religion. |

Translating the English word *comrade* into Negasi *henami* will result in totally different associations. The Negasi view comrades as close to kin, and their word that would be translated *comrade* of course has no taint of communism. So the word *henami* has a stronger familial association than English *comrade* does. While an English-to-Negasi dictionary might list *henami* = *comrade*, this oversimplifies the relationship between the prototypes represented by each word. The words intersect; they are not mutually inclusive.

As an aside, please note the difference between *sanami* and *sanemi*. The word *sanami* was coined in the Nagada language, so its literal meaning of "near brother" has been forgotten, since it underwent sound change differently than *sa nemi* -- "near brother" as two words -- did. This allowed the literal meaning "near brother" to be used to coin a new word in Negasi, in this case referring to "a best friend", a previously absent word meaning.

---

### ***Prototypes for the birds***

Another useful example to describe semantic prototypes or semantic stereotypes is birds: the prototypical bird has feathers and wings and can fly. Yet penguins, ostriches and Big Bird are considered birds, even though they can't fly. A duck-billed platypus, on the other hand, isn't considered a bird, despite the fact that it lays eggs and has a beak; it is not considered a bird since it has no feathers, no wings and can't fly.

Prototypes are also a more useful way to describe meaning than semantic primitives, because prototypes embrace the connotations of a word, rather than just the denotations. The notion of prototypes can be used to show how words overlap. For instance, the following table roughly summarizes different types of body builds:

|                             |        |
|-----------------------------|--------|
| <b>Above-average weight</b> | obese  |
| fat                         | chubby |
|                             | plump  |
| <b>Below-average weight</b> |        |
| thin                        | skinny |

scrawny

The words *skinny* and *scrawny* as meanings are subsets of *thin*; *plump*, *chubby* and *obese* are subsets of *fat*. Noticeably absent are any words for average weight. English, like many languages, rarely has words to describe midpoints, only extremes.

Words are often grouped together like this in semantic networks. However, these word sets can be exceedingly complicated. For instance, the words used to describe body builds each have complex connotations as part of their prototypes: *plump* is used more often to describe food such as meat and fruits than *fat* is; similarly, *chubby* is more often used for little boys (or girls) than *fat* is. The word *scrawny* also suggests *bony*; there are other words not shown on this list that also have connotations and specific uses, like *lean*, which suggests "muscular", and *slim*, which suggests "tall", and *slender*, which suggests "graceful". Connotations are not specified in dictionaries and are rarely articulated.

Besides connotations, there are habits governing what other words to use with a word. The synonyms *pursue* and *chase* are almost interchangeable, except that *pursue* is preferred when the object to be chased is highly desirable - *pursue truth*, *pursue wisdom*, *pursue happiness*, but *chase a thief*, *chase a bus*, *chase a fox*. You could write an essay on the difference between *he pursued love* and *he chased love*.

Obviously, it is very difficult to translate these prototypes from one language to another. Failure to properly account for the radius of meaning of a word often has comical results, as evidenced by this sign in a Bucharest hotel lobby: *The lift is being fixed for the next day. During the time we regret that you will be unbearable*. Historically speaking, the word *unbearable* had began with a strict literal meaning, but over time its radius of meaning had expanded to include a figurative sense as well. The combinations of connotations and detailed usage preferences for any word are not articulated, but mastering them is one of the hallmarks of literary writing.

---

## ***Conclusion***

Meaning is therefore a combination of prototypical examples. The important thing to keep in mind, when creating your own languages, is that the words you invent will not exactly equal the English words you define them as. While, for practical purposes, you will define most words very straightforwardly in English, you will want to highlight the unique culture of your language's speakers by noting how the range of meanings and the range of possible uses distinguishes your invented lexicon from English words.

No wonder Suzanne Vega sang, "I won't use words again. They don't mean what I meant. They don't say what I said."

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*Kinship Terms*

***Model Languages***

**THE NEWSLETTER DISCUSSING NEWLY IMAGINED WORDS FOR NEWLY  
IMAGINED WORLDS**

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***Volume I, Issue 6 (2/2) -- October/November 1, 1995***

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### ***Sidebar: relative terms for relatives***

Kinship terms have been widely analyzed across languages, which often make quite different distinctions. We broke English kinship terms down into Generation, Sex and Lineage earlier, but to translate terms from other languages we will need to add additional semantic components.

We will outline *KinDEEP* (KINship Distinctive Elements, Exhaustive Profile) here, a detailed framework for defining kinship terms from different languages. *KinDEEP* has semantic components for Generation, Lineage, Sex, Side Of Family, Relative Birth Order and Person.

---

### ***Generations***

The value for Generation is any number, with 0 indicating the base or current generation, negative numbers indicating ancestors of the base generation, and positive numbers indicating descendants.

One of the more unusual kinship terms in the world is *maili*, from Njamal, an Australian aborigine language. The word *maili* means "any relative two generations distant", such as a father's father (two generations before) or a daughter's son's wife's sister (two generations after). *KinDEEP* expresses this as simply {Generation: +2}{Generation: -2}.

---

### ***Lineage***

As described in the [main article](#), Lineage can be either Direct, Colineal or Ablineal.

---

### ***Sex***

Sex is either Male, Female or Corresponding.

The atom Corresponding is necessary to analyze some Hawaiian terms. For instance, the Hawaiian word *kaikaina* means "younger sibling of the same sex as the referent". So a man's *kaikaina* would be his younger brother; a woman's *kaikaina* would be her younger sister.

---

## *Side of family*

Languages often make distinctions between the sides of a family, such as maternal, paternal, *step-* and *half-*. The semantic component of Side of Family can take any of these values: {Maternal}, {Paternal}, {Step}, {Half} and {Honorary}.

Maternal/paternal

The family's dark side

The family's bright side

---

## **MATERNAL/PATERNAL**

One difference might be as simple as distinguishing between a mother's brother and a father's brother, as Latin and many other European languages do. Latin has two different words for "uncle" depending on the exact relationship, *avunculus* for "mother's brother" and *patruus* for "father's brother". Thus Latin lacks one word to collectively describe what we think of as "uncle" (how did schoolchildren cry "surrender!" we wonder?) or -- for that matter -- "aunt". Like Old French, other Romance languages lost this distinction, adopting the maternal terms to refer to either side of the family; thus, Modern French has *oncle* and *tante*, which were adopted into English as *uncle* and *aunt* respectively, displacing the Old English tradition of referring to this generation as "father's brother", "mother's sister", etc.

Just as Latin has no single words for either "uncle" or "aunt", Swedish has no single words equivalent to either "grandmother" or "grandfather", but must specify which side of the family the relationship is through. Swedish does this concisely, using *far* to mean "father", *mor* to mean "mother", for:

*mormor*, "mother's mother, maternal grandmother"

*farmor*, "father's mother, paternal grandmother"

*morfar*, "mother's father, maternal grandfather"

*farfar*, "father's father, paternal grandfather"

Interestingly, however, Swedish does not use *mor* and *far* by themselves for "mother" and "father" respectively, using *moder* and *fader* for that instead. No sense taking logic to far in a natural language! (I am not aware of any other European language that distinguishes between maternal and paternal grandparents.)

## THE FAMILY'S DARK SIDE

Besides referring to the maternal or paternal side of a family, it is also possible to refer to other blood distinctions, especially those regarding re-marriage. English uses the prefix *step-* to refer to relatives related only by re-marriage, not blood, as in the *evil stepmother* (which is not redundant) and the *ungrateful stepdaughter*, for instance. English uses the suffix *-in-law* to refer to relatives related by marriage, as in the *evil mother-in-law* and the *ungrateful daughter-in-law*. When all this familial love becomes too much to bear, English uses *ex-* in front of many or all the other terms, so that you can refer to your *ex-husband*, your *ex-stepdaughter*, your *ex-mother-in-law*, even your *ex-great-grandfather-in-law*. But you're not likely to hear the terms *ex-mother* or *ex-brother* to describe estranged relatives...

English also uses the prefix *half-* to refer to children who share only one parent (*half-brother* and *half-sister*) but the term is not used to refer to other relatives (no *\*half-mother*, *\*half-grandson*).

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## THE FAMILY'S BRIGHT SIDE

Families often have unofficial members, as English recognizes by encouraging the use of *Aunt* and *Uncle* for close family friends of the same generation as a child's parents. I have an Uncle Bill and Aunt Jill, close friends of my parents' from their college days, who were the only honorary parentsibs that I had. To support this almost metaphoric use of *Aunt* and *Uncle*, *KinDEEP* uses the value {Honorary} as part of the semantic component of Side Of Family.

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### *Relative birth order*

Japanese also makes distinctions of another variety, distinguishing between younger and elder siblings. For instance, *ane*, "older sister"; *ani*, "older brother"; *oto/to*, "younger brother"; *imo/to*, "younger sister". Of course, these words also have first- and second-person forms.

In total, therefore, Japanese has six words for "brother", with separate words making the following distinctions:

"older brother"

"younger brother"

"my older brother"

"my younger brother"

"your older brother"

"your younger brother"

*KinDEEP* has the semantic component {Relative Birth Order}, with values for {Older} and {Younger}.

In natural languages, this distinction is almost always used for siblings, but *KinDEEP* extends it for the common siblings of any generation, making it easy to express terms such as "younger uncle", for instance.

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### ***Person***

The Japanese are strongly oriented around family and ancestry, and accordingly their language is richer in kinship terms than English. One of the distinctions Japanese makes is that it has separate forms for "my relative" and "your or other's relatives". For instance, *mago* is "my grandson"; *omagosan* is "your grandson". Think of this as a combination pronoun/kinship term, with the term specifying either first person ("my") or second person ("your"). All of Japanese' second-person forms end in the *-san* suffix or a variant of it. The base word may be different, as in *haha* for "my mother" but *oka/san* for "your mother" (rather than *\*hahasan*).

Therefore, *KinDEEP* recognizes the semantic component Person, with values of {First} and {Second}. It would be easy to suggest a third-person form -- e.g., "their mother" -- but I am not aware of any language that makes this distinction.

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### ***Kindeep examples***

The following table provides a framework to present the kinship terms of many different languages. If you have a term from a language that does not fit, please pass it on!

When you create your own model language, you can decide which components you want to include. A typical minimal profile involves just three components, as in English's use of Generation, Lineage and Sex, though it is easy to imagine a language that does not distinguish between terms based on sex.

*KinDEEP* (KINship Distinctive Elements, Exhaustive Profile) is actually exhausting, rather than exhaustive! For instance, it fails to have terms that have been enabled by reproductive science: the womb-mother (she carried the child of another in her womb), the egg-donor (she provided the egg that was fertilized and carried by the womb-mother),

the caretaker-mother who actually raised the child but was not biologically related, the sperm donor and caretaker-father!

***Table of kinship terms***

**Legend**

**L.** Language: D = Danish, E = English, H = Hawaiian, J = Japanese, L = Latin, M = Malay, N = Njamal (Australia), P = Pitjanjatjara (Australia), S = Swedish

**Gen.** Generation

**Ln.** Lineage: A = Ablineal, C = Colineal, D = Direct

**Sx.** Sex: F = Female, M = Male, S = Corresponding

**Sid.** Side of Family

**Per.** Person: 1 = First, 2 = Second

**B.** Relative Birth Order: O = Older, Y = Younger

| <b>L</b> | <b>Term, Translation</b>            | <b>Gen.</b> | <b>Ln.</b> | <b>Sx.</b> | <b>Sid.</b> | <b>Per.</b> | <b>B.</b> |
|----------|-------------------------------------|-------------|------------|------------|-------------|-------------|-----------|
| E        | great great grandparent             | -4          | D          |            |             |             |           |
| E        | great grandparent                   | -3          | D          |            |             |             |           |
| E        | great aunt                          | -2          | A          | F          |             |             |           |
| S        | mormor, maternal grandmother        | -2          | D          | F          | maternal    |             |           |
| S        | farmor, paternal grandmother        | -2          | D          | F          | paternal    |             |           |
| E        | grandmother                         | -2          | D          | F          |             |             |           |
| S        | morfar, maternal grandfather        | -2          | D          | M          | maternal    |             |           |
| S        | farfar, paternal grandfather        | -2          | D          | M          | paternal    |             |           |
| E        | grandfather                         | -2          | D          | M          |             |             |           |
| E        | grandparent                         | -2          | D          |            |             |             |           |
| L        | matertera, maternal aunt            | -1          | A          | F          | maternal    |             |           |
| P        | kurntili, paternal aunt             | -1          | A          | F          | paternal    |             |           |
| L        | amita, paternal aunt                | -1          | A          | F          | paternal    |             |           |
| E        | aunt                                | -1          | A          | F          |             |             |           |
| J        | haha, my mother                     | -1          | D          | F          |             | 1           |           |
| J        | okásan, your mother                 | -1          | D          | F          |             | 2           |           |
| E        | mother                              | -1          | D          | F          |             |             |           |
| P        | ngunytju, mother or mother's sister | -1          | D,A        | F          | maternal    |             |           |
| E        | "uncle", man of father's generation | -1          | A          | M          | honorary    |             |           |
| P        | kamura, maternal uncle              | -1          | A          | M          | maternal    |             |           |
| L        | avunculus, maternal uncle           | -1          | A          | M          | maternal    |             |           |
| L        | patruus, paternal uncle             | -1          | A          | M          | paternal    |             |           |

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|   |  |        |     |   |          |   |   |
|---|--|--------|-----|---|----------|---|---|
| E | uncle                                  | -1     | A   | M |          |   |   |
| E | father                                 | -1     | D   | M |          |   |   |
| P | mama, father or father's brother       | -1     | D,A | M | paternal |   |   |
| E | father or uncle                        | -1     | D,A | M |          |   |   |
| E | parent's sibling                       | -1     | A   |   |          |   |   |
| E | parent                                 | -1     | D   |   |          |   |   |
| D | kusine, female cousin                  | 0      | A   | F |          |   |   |
| E | stepsister                             | 0      | C   | F | half     |   |   |
| E | stepsister                             | 0      | C   | F | step     |   |   |
| J | [N/A], my sister                       | 0      | C   | F |          | 1 |   |
| J | [N/A], your sister                     | 0      | C   | F |          | 2 |   |
| J | ane, older sister                      | 0      | C   | F |          |   | O |
| J | imóto, younger sister                  | 0      | C   | F |          |   | Y |
| E | sister                                 | 0      | C   | F |          |   |   |
| D | fætter, male cousin                    | 0      | A   | M |          |   |   |
| E | stepbrother                            | 0      | C   | M | half     |   |   |
| E | stepbrother                            | 0      | C   | M | step     |   |   |
| J | [N/A], my brother                      | 0      | C   | M |          | 1 |   |
| J | [N/A], your brother                    | 0      | C   | M |          | 2 |   |
| J | ani, male older brother                | 0      | C   | M |          |   | O |
| J | otóto, male younger brother            | 0      | C   | M |          |   | Y |
| E | brother                                | 0      | C   | M |          |   |   |
| H | kaikaina, younger sibling of my gender | 0      | C   | S |          |   | Y |
| E | cousin, child of aunt or uncle         | 0      | A   |   |          |   |   |
| E | sibling                                | 0      | C   |   |          |   |   |
| M | [N/A], sibling or cousin               | 0      |     |   |          |   |   |
| E | daughter                               | 1      | D   | F |          |   |   |
| E | son                                    | 1      | D   | M |          |   |   |
| E | cousin, first cousin once removed      | 1      | A   |   |          |   |   |
| E | offspring                              | 1      | D   |   |          |   |   |
| E | granddaughter                          | 2      | D   | F |          |   |   |
| J | mago, my grandson                      | 2      | D   | M |          | 1 |   |
| J | omagosan, your grandson                | 2      | D   | M |          | 2 |   |
| E | grandson                               | 2      | D   | M |          |   |   |
| E | grandchild                             | 2      | D   |   |          |   |   |
| E | family, parents and siblings           | [-1,0] | D,C |   |          |   |   |
| E | ancestor                               | [      |     |   |          |   |   |
| E | descendant                             | [>0]   |     |   |          |   |   |

- N maili, anyone two generations removed [2,-2]  
 E cousin, relative from common ancestor\* A  
 E cousin, member of kindred group honorary  
 E cousin, relative by blood or marriage  
 E relative  
 E kin

*\*English cousin is a relative descended from a common ancestor by two or more divergent steps, so KinDEEP does not offer a perfect translation, since it includes uncle and aunt*

### *Sen:esepera kinship terms*

For my model language Sen:esepera, which is designed to fulfill the role of an interlanguage for use by people of all the world's linguistic backgrounds, I chose a maximally expressive way of forming kinship terms. All kinship terms are compounded from roots representing each symantic component and its atoms, as shown in the following table.

| Person             | Sex          | Side         | Generation   | Order        | Lineage      |
|--------------------|--------------|--------------|--------------|--------------|--------------|
| <b>English</b>     |              |              |              |              |              |
| <i>excl.</i>       | <i>excl.</i> | <i>excl.</i> | <i>incl.</i> | <i>excl.</i> | <i>incl.</i> |
| my                 | male         | paternal     | -3           | older        | direct       |
| your               | female       | maternal     | -2           | younger      | ablinal      |
|                    | corres.      | half-        | -1           |              | colinal      |
|                    |              | step-        | 0            |              | unspecified  |
|                    |              | honorary     | 1            |              |              |
|                    |              |              | 2            |              |              |
|                    |              |              | 3            |              |              |
| <b>Sen:esepera</b> |              |              |              |              |              |
| imun               | eman         | pam          | intensin     | tempan       | pa           |
| tun                | fem          | fam          | inten        | im:tempan    | ta           |
|                    | sim          | duen         | in           |              | sa           |
|                    |              | tepin        | u            |              | coganta      |
|                    |              | belim        | dim          |              |              |
|                    |              |              | dimin        |              |              |
|                    |              |              | diminten     |              |              |

[afo:] before intensin, diminten means "great-"

[afo:] before in, dim means "all" (e.g., "afo:in" means "all ancestors")

Thus an English speaker can talk about his cousin, *u:ta* in Sen:esepera, if that is the term he is most comfortable with, while a Dutch speaker can talk about her *nicht* ("female cousin"), *fem:u:ta* in Sen:esepera, if that is the term she is most comfortable with. The word *fem:u:ta* will stand out to the English-speaker reading Sen:esepera, who does not habitually make the distinction of sex for cousin, but he will immediately know the meaning of the word.

| <b>Sen:esepera</b> | <b>Translation</b>         | <b>Generation</b> | <b>Sx</b> | <b>Ln</b> | <b>Side</b> | <b>Pe R</b> |
|--------------------|----------------------------|-------------------|-----------|-----------|-------------|-------------|
| afo:intensin:pa    | great great grandparent    | -4                |           |           | D           |             |
| intensin:pa        | great grandparent          | -3                |           |           | D           |             |
| fem:inten:ta       | great aunt                 | -2                | F         |           | A           |             |
| fem:fam:inten:pa   | maternal grandmother       | -2                | F         | D         |             | mater       |
| fem:pam:inten:pa   | paternal grandmother       | -2                | F         | D         |             | pater       |
| fem:inten:pa       | grandmother                | -2                | F         |           | D           |             |
| eman:fam:inten:pa  | maternal grandfather       | -2                | M         | D         |             | mater       |
| eman:pam:inten:pa  | paternal grandfather       | -2                | M         | D         |             | pater       |
| eman:inten:pa      | grandfather                | -2                | M         |           | D           |             |
| inten:pa           | grandparent                | -2                |           |           | D           |             |
| fem:fam:in:ta      | maternal aunt              | -1                | F         | A         |             | mater       |
| fem:pam:in:ta      | paternal aunt              | -1                | F         | A         |             | pater       |
| fem:pam:in:ta      | paternal aunt              | -1                | F         | A         |             | pater       |
| fem:in:ta          | aunt                       | -1                | F         |           | A           |             |
| imun:fem:in:pa     | my mother                  | -1                | F         | D         |             | 1           |
| tun:fem:in:pa      | your mother                | -1                | F         | D         |             | 2           |
| fem:in:pa          | mother                     | -1                | F         |           | D           |             |
| fem:fam:in:ta:pa   | mother or mother's sister  | -1                | F         | D,A       |             | mater       |
| eman:belim:in:ta   | man of father's generation | -1                | M         | A         |             | honor       |
| eman:fam:in:ta     | maternal uncle             | -1                | M         | A         |             | mater       |
| eman:fam:in:ta     | maternal uncle             | -1                | M         | A         |             | mater       |
| eman:pam:in:ta     | paternal uncle             | -1                | M         | A         |             | pater       |
| eman:in:ta         | uncle                      | -1                | M         |           | A           |             |
| eman:in:pa         | father                     | -1                | M         |           | D           |             |
| eman:pam:in:ta:pa  | father or father's brother | -1                | M         | D,A       |             | pater       |
| eman:in:ta:pa      | father or uncle            | -1                | M         | D,A       |             |             |
| in:ta              | parent's sibling           | -1                |           |           | A           |             |
| in:pa              | parent                     | -1                |           |           | D           |             |
| fem:u:ta           | female cousin              | 0                 | F         |           | A           |             |
| fem:duen:u:sa      | stepsister                 | 0                 | F         | C         |             | half        |
| fem:tepim:u:sa     | stepsister                 | 0                 | F         | C         |             | step        |

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|                     |                                 |        |     |       |
|---------------------|---------------------------------|--------|-----|-------|
| imun:fem:u:sa       | my sister                       | 0      | F C | 1     |
| tun:fem:u:sa        | your sister                     | 0      | F C | 2     |
| fem:u:tempan:sa     | older sister                    | 0      | F C | O     |
| fem:u:im:tempan:sa  | younger sister                  | 0      | F C | Y     |
| fem:u:sa            | sister                          | 0      | F C |       |
| eman:u:ta           | male cousin                     | 0      | M A |       |
| eman:duen:u:sa      | stepbrother                     | 0      | M C | half  |
| eman:tepin:u:sa     | stepbrother                     | 0      | M C | step  |
| imun:eman:u:sa      | my brother                      | 0      | M C | 1     |
| tun:eman:u:sa       | your brother                    | 0      | M C | 2     |
| eman:u:tempan:sa    | male older brother              | 0      | M C | O     |
| eman:u:im:tempan:sa | male younger brother            | 0      | M C | Y     |
| eman:u:sa           | brother                         | 0      | M C |       |
| sim:u:im:tempan:sa  | younger sibling of my gender    | 0      | S C | Y     |
| u:ta                | child of aunt or uncle          | 0      | A   |       |
| u:sa                | sibling                         | 0      | C   |       |
| u:coganta           | sibling or cousin               | 0      |     |       |
| fem:dim:pa          | daughter                        | 1      | F D |       |
| eman:dim:pa         | son                             | 1      | M D |       |
| dim:ta              | first cousin once removed       | 1      | A   |       |
| dim:pa              | offspring                       | 1      | D   |       |
| fem:dimin:pa        | granddaughter                   | 2      | F D |       |
| imun:eman:dimin:pa  | my grandson                     | 2      | M D | 1     |
| tun:eman:dimin:pa   | your grandson                   | 2      | M D | 2     |
| eman:dimin:pa       | grandson                        | 2      | M D |       |
| dimin:pa            | grandchild                      | 2      | D   |       |
| in:ta:o:u:sa        | parents and siblings            | [-1,0] | D,C |       |
| afo:in:coganta      | ancestor                        | [      |     |       |
| afo:dim:coganta     | descendant                      | [>0]   |     |       |
| inten:dimin:coganta | anyone two generations removed  | [2,-2] |     |       |
| ta                  | relative from common ancestor*  |        | A   |       |
| belim:coganta       | member of kindred group or nati |        |     | honor |
| coganta             | relative by blood or marriage   |        |     |       |
| coganta             | relative                        |        |     |       |
| coganta             | kin                             |        |     |       |

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## *On Tolkien*

### ***Growing up with language***

*The Shakespeare of model languages is J.R.R. Tolkien. His best-selling fantasy novel, The Lord Of The Rings, now considered a literary classic, achieved much of its believability from the depth of its invented languages: Quenya, Sindarin, Adu<sup>n</sup>aic and others. The following article provides a broad overview of Tolkien's seminal work with model languages.*

Tolkien was exposed to languages to a remarkable degree. He learned Latin, German and French from his mother. At school, he learned or taught himself Middle English, Old English, Finnish, Gothic, Greek, Italian, Old Norse, Spanish, modern Welsh and medieval Welsh. He had an amazing working knowledge of languages, and was familiar with Danish, Dutch, Lombardic, Norwegian, Russian, Swedish and many ancestral Germanic and Slavonic languages. It would have been no surprise to his mother that he became a professional philologist.

He even had a part-time job as a lexicographer for the original Oxford English Dictionary -- the New English Dictionary, as it was known then. He worked for the dictionary in 1919-1920 and learned more about language than in any comparable period of his life. For instance, he had to develop the etymologies of words like *water*, *wick* and *winter*, and in so doing had to cite comparable forms in other languages like proto-Teutonic, Old Teutonic, Old Saxon, Middle Dutch, Modern Dutch, Old High German, Middle High German, Middle Low German, Modern German, Old Slavonic, Lithuanian, Russian and Latin. He did this commendably well; the head of the Dictionary, Dr. Henry Bradley, said of Tolkien, "His work gives evidence of an unusually thorough mastery of Anglo-Saxon and of the facts and principles of the comparative grammar of the Germanic languages. Indeed, I have no hesitation in saying that I have never known a man of his age who was in these respects his equal."

These were the natural languages that Tolkien learnt, and they served as an inspiration for his model languages.

As a child, Tolkien was first exposed to model languages when he learned a language his cousins had invented, called Animalic, which primarily consisted of English animal names. For instance, *Dog nightingale woodpecker forty* meant "You are an ass." Animalic served as an inspiration for Tolkien to create not just words, but his own language. He and one of his cousins created a more involved language than Animalic called Nevbosh (meaning New Nonsense) based on disguised pieces of English, Latin and French.

Nevbosh was his first attempt at creating an entire language. Already, when learning Greek, he had made up pseudo-Greek words, but Nevbosh went beyond that. Later, in his adolescence, Tolkien recalled Nevbosh and resolved to invent a serious language, one richly developed to model a natural language.

It is not surprising that Tolkien as a teenager attempted such an ambitious undertaking, given Tolkien's already established love of language. As Tolkien's biographer, Humphrey Carpenter, writes, "If he had been interested in music, he very likely would have wanted to compose melodies, so why should he not make up a personal system of words that would be, as it were, a private symphony?" Since Tolkien's education had been intensively centered around language, when he began to create, those creations took a linguistic form.

Tolkien's first serious model language was called Naffarin. It was strongly influenced by Spanish, but with its own phonology (sound structure) and grammar. Tolkien chose Spanish because his guardian (he had been orphaned at the age of twelve) was half-Spanish and had lent him books on that language, which Tolkien found attractive.

Naffarin was but the first of many model languages that Tolkien would create. His next language began after he had purchased a Gothic primer from a friend and become captivated by that language. Years later, in a letter to W.H. Auden, Tolkien wrote, "I discovered in it [Gothic] not only modern historical philology, which appealed to the historical and scientific side [of me], but for the first time the study of a language out of mere love: I mean for the acute aesthetic pleasure derived from a language for its own sake, not only free from being useful but free even from being the vehicle of a literature."

Since little of Gothic's vocabulary survives in its small corpus, Tolkien soon found himself inventing words to fill in the gaps. This in turn inspired him to create a hypothetical historical Germanic language, one hitherto never discovered but with established relationships to Old English, Gothic and other Germanic tongues.

From Naffarin and Neo-Gothic, Tolkien went on to create a new model language, inspired by Finnish. He had been studying for exams in the Exeter College library at Oxford when he first encountered Finnish. Years later, he compared the experience to tasting a fine wine: "It was like discovering a complete wine-cellar filled with bottles of an amazing wine of a kind and flavour never tasted before. It quite intoxicated me; and I gave up the attempt to invent an unrecorded Germanic language, and my own language -- or series of invented languages -- became heavily Finnicized in phonetic pattern and structure." This was to become Quenya, his principal Elvish language, but elves had not yet entered the picture.

### **Chronological development of Tolkien's principal model languages**

Nevbosh (inspired by English, French and Latin)

Naffarin (inspired by Spanish)

Neo-Gothic (filling holes in Gothic's vocabulary)

"Unrecorded Germanic" (unnamed language related to Old English, Gothic and other Germanic tongues)

Quenya (inspired by Finnish, influenced by Latin and Greek)

Primitive Eldarin

Sindarin (inspired by Welsh)

Tolkien had devoted considerable efforts to fleshing out Quenya, when he had begun to realize that he could not continue to create the language without knowing something of the people who spoke it. He had written poems in this language, but now he found himself needing to creating a history for these people, whoever they might be.

It so happened, at the age of 21, that he had an epiphany. He read for the first time the Old English religious poem *Crist of Cynewulf*. In it, he encountered two lines that were to fire his imagination for years: *Eala Earendel engla beorhtast ofer middengeard monnum sended*. "Hail Earendel, brightest of angels, above middle earth sent unto men." The words seemed to hint at something beautiful and remote. While the Old English dictionary recorded Earendel as a ray of light, Tolkien interpreted it literally as the star that heralded the dawn's light (Venus) and figuratively as John the Baptist, presaging Christ. In fact, Earendel heralded the light that would be diffused into the Two Trees, the Silmarils and the vial of Galadrial: all prominent works of light in his fiction. Tolkien wanted to discover the truth behind these two Old English lines, and he began to conceive of a greater story, involving a mariner. From this simple line about Earendel, the line itself "a leaf caught in the wind", Tolkien began to discover the great tree of his mythology, which would pass through many seasons, growing from "The Lay of Earendel" to *The Book of Lost Tales* to *The Silmarillion*, *The Hobbit* and *The Lord of the Rings*.

As Tolkien wrote in his allegorical story "Leaf By Niggle", about a painter with a painting too detailed to ever finish:

*There was one picture in particular which bothered him. It had begun with a leaf caught in the wind, and it became a tree; and the tree grew, sending out innumerable branches, and thrusting out the most fantastic roots. Strange birds came and settled on the twigs and had to be attended to. Then all round the Tree, and behind it, through the gaps in the leaves and boughs, a country began to open out; and there were glimpses of a forest marching over the land, and of mountains tipped with snow.*

From that first leaf caught in the wind, that first glimpse of Earendel, Tolkien then discovered elves, who were very different from the fairy folk he had once composed poems about. Elves possessed grandeur and dignity, being in fact -- in Tolkien's mind -- Un-Fallen Man. He realized that the language he had created was in fact spoken by these elves. As a result, he began to spend more time composing the stories of this imaginary world, "middle earth" (which was a common name for the world in Old English times, setting earth between heaven and hell). Still, the languages and name-making occupied as much of his time as the actual writing, since the writing of the history was for Tolkien but a subset of the act of language creation (or subcreation, to use his word for it, as he explicitly defined himself in relation to the Creator).

By 1917, Tolkien had expanded Quenya to many hundreds of words and had even outlined its ancestral tongue, Primitive Eldarin. Primitive Eldarin then gave rise to another prominent elvish language, Sindarin, which was modelled on the Welsh language that had fascinated Tolkien from boyhood and which he had finally begun to study at Oxford.

While Quenya was originally patterned on Finnish, it was later influenced by Latin and Greek. Quenya and Sindarin were both intended to be of a European kind in style and structure (but not in specifics) and both were meant to satisfy Tolkien's aesthetic taste in sound structure. Sindarin, or Grey-elven, resembles Welsh phonologically and has a similar relationship to Quenya, or High-elven, as exists between British (meaning Celtic languages at the time of the Roman invasion) and Latin (both descended from Proto-Indo-European, as both Quenya and Sindarin were descended from Primitive Eldarin). The creation of Primitive Eldarin enabled Tolkien to later outline many other elvish languages, primarily as a backdrop for Quenya and Sindarin.

Tolkien had started out to create a language. He was now creating languages, peoples and a world.

Tolkien would often create a word by first starting with the needed meaning, then coming up with the forms as they would exist in Quenya and Sindarin. Other times, he would just make up a name in the heat of writing; later, he would either try and determine how the name had reached such a form or he would dismiss the form and come up with a new name. He viewed his languages as real languages that he was discovering, rather than inventing, and in one of his unfinished novels, *The Lost Road*, he has the protagonist, a philologist, gradually discover the lost words of a previously unknown tongue (Quenya or Sindarin), before being transported back into time towards the source of those words.

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### ***Characteristics of the Middle-Earth languages***

Tolkien once said that he wrote *The Lord of the Rings* simply to create a world in which "A star shines on the hour of our meeting" (*Elen síla lumenn' omentielvo*) was a common salutation. While this exaggerates Tolkien's motivation (*The Lord of the Rings* was originally conceived of simply as a sequel to capitalize on the commercial success of *The Hobbit*), it does highlight how interrelated writing and linguistic invention were for Tolkien.

Tolkien developed a very elaborate linguistic background for *The Lord of the Rings*, for it both as a hypothetically historical document and as an imagined world. He wrote the book as if it were the translation of an ancient manuscript, which he called the Red Book. The Red Book was written in a language called Westron, which was the tongue of the hobbits who narrated the tale. Tolkien decided that languages related to Westron would have to be translated into languages with equivalent relationships to English. The result is two layers of linguistic invention.

| Model language     | Represented as                          |
|--------------------|---|
| Westron            | English                                 |
| Hobbit Westron     | "Hobbit English"                        |
| "Rohirrimic"       | "Rohirrimic Old English"                |
| "language of Dale" | Old Norse                               |
| Sindarin           | Sindarin                                |
| Quenya             | Quenya (transliteration reflects Latin) |

Hobbit English is the imaginary dialect of English that Tolkien chose to translate the hobbits' language into. This language differs somewhat from English, adapting some archaisms to its needs (reflecting the fact that Hobbit Westron was a dialect of Westron):

The word *mathom* is used for a gift of dubious usefulness that one is reluctant to discard; Tolkien adapted it from the Old English *mathm*, "treasure".

Another example is *Thane*, an inherited title of the leader of the Took clan of hobbits, adapted from the Old English *thegn*, a title for a noble who served an earl.

The word *orc* is used to describe goblins and is from the Old English word for "demon", a word used in *Beowulf*.

One of the most interesting parts of Hobbit English isn't even used in the text of *The Lord of the Rings*, but is reserved for the appendices. Tolkien posed a linguistic what-if question: What if the Latin calendar's names for months hadn't supplanted the Anglo-Saxon names? What would the names of months look like in English then? The result is names like *Afteryule* for January and *Blotmath* for October, names true to the original forms. The fact that such details had to be crammed into an appendix illustrates how -- even though Tolkien was primarily interested in the languages -- he could subordinate that material to the story when appropriate, including it as notes rather than cluttering the story.

| Month names in Hobbit English |                                   |          |
|-------------------------------|-----------------------------------|----------|
| Hobbit English                | Old English                       | English  |
| Afteryule                     | <i>aeftergeola</i> "afteryule"    | January  |
| Solmath                       | <i>solmonath</i> , "mire-month"   | February |
| Rethe                         | <i>re-the</i> , "fierce, furious" | March    |

|             |  |           |
|-------------|--|-----------|
| Astron      | <i>Easter-monath</i> , "Easter-month"  | April     |
| Thrimidge   | <i>thri-milce</i>                      | May       |
| Forelith    | <i>lith</i> , "midsummer (June, July)" | June      |
| Afterlith   | <i>aefter-lith</i>                     | July      |
| Wedmath     | <i>weth</i> , "mild, gentle"           | August    |
| Halimath    | <i>halig-monath</i> , "holy-month"     | September |
| Winterfilth | <i>winter-fylleth</i> , "winter fall"  | October   |
| Blotmath    | <i>blotmonath</i> , "blood-month"      | November  |
| Foreyule    | <i>geo-la</i> , "Yule"                 | December  |

**J.R.R. Tolkien, *The Lord of the Rings***

In ancient times, the hobbits lived near the riders of Rohan, whose language had changed little from those times. With Hobbit Westron now translated as English, to convey this relationship Tolkien translated the language of the Rohirrim (in the hypothetical manuscript) into words and names that were similar, though not exactly like, Old English words and names.

Since Tolkien conceived of the language of Dale and the Long Lake (regions in Middle Earth) as somewhat more removed from the hobbits' language, he represented it as Old Norse in a few names, primarily that of the dwarves. While dwarves had their own language, they considered their names private and adopted outward names that were common among the people they dwelt by.

Westron is descended from the human Adu<sup>^</sup>naic language, but almost all of the names in Gondor are Elvish, as a result of the long alliance between the men of Gondor and the elves in their wars against the dark powers.

The Elvish languages were of course the source of most of Tolkien's energies when it came to the creation of model languages. For these languages, Tolkien created a vocabulary of incredible detail. By 1938, he had prepared a base vocabulary of 800 root words of Primitive Eldarin, from which he could derive many other words for many other languages. For instance, the root *\*bes-* meant "wed" and had descendents *\*besno/*, "husband"; *\*bessel/*, "wife"; and *\*besu/*, "husband and wife, married pair"; and *\*besta/*, "matrimony". Each of these roots then had different descendants in different languages; the six known descendents of just *\*besno*, "husband" are shown below.

| Sample cognate Elvish words |      |         |  |
|-----------------------------|------|---------|--|
| Language                    | Word | Meaning |  |
|                             |      |         |  |

|                   |                |           |  |
|-------------------|----------------|-----------|--|
| Primitive Eldarin | *besnó         | "husband" |  |
| Quenya            | <i>verno</i>   | "husband" |  |
| Old Noldorin      | <i>benno</i>   | "husband" |  |
| Exilic Noldorin   | <i>benn</i>    | "man"     | [Replacing in ordinary use the old word <i>di^r</i> (< *der-, "adult male").]  |
| Exilic Noldorin   | <i>hervenn</i> | "husband" | [< <i>her-</i> (< * <i>kher-</i> , "rule, govern, possess") + <i>benn</i> , counterpart to <i>hervess</i> , "wife".] |
| Ilkorin           | <i>benn</i>    | "husband" |  |
| Danian            | <i>beorn</i>   | "man"     | [Blended with * <i>ber(n)o/</i> , "man" (< * <i>ber-</i> , "valiant man").]  |

**J.R.R. Tolkien, *The Lost Road and Other Writings***

Incidentally, the asterisk is a common philological symbol to indicate that there is no direct extant evidence that such a form existed but it is assumed to exist based on reconstruction from the available descendents. The asterisk is frequently used to indicate Indo-European roots, from which most European languages are descended. Tolkien used it to indicate that the root forms had been reconstructed by Elvish scholars.

Tolkien developed a regular system of sound change to govern how words were typically modified from Primitive Eldarin to the descendent languages. Sometimes these regular sound changes were overridden, as in Danian *beorn*, whose form developed idiosyncratically under the influence of \**ber(n)o/*, which had come to mean "man" by semantic change, broadening its meaning from "valiant man". Such an instance of semantic change demonstrates how richly Tolkien developed his model languages in order to make them more true to real life linguistic processes. After all, as his son Christopher Tolkien -- close confidant and later editor of many of his father's papers -- was to phrase it:

*"He did not, after all, invent new words and names arbitrarily: in principle, he devised them from within the historical structure, proceeding from the bases or primitive stems, adding suffix or prefix or forming compounds, deciding (or, as he would have said, finding out) when the word came into the language, following through the regular changes of form that it would thus have undergone, and observing the possibilities of formal or semantic influence from other words in the course of its history. Such a word would then exist for him, and he would know it. As the whole system evolved and expanded, the possibilities for word and name became greater and greater."* (Christopher Tolkien, *The Lost Road and Other Writings*, p. 342)

Or as Tolkien himself put in when writing about Niggle: "He used to spend a long time on a single leaf, trying to catch its shape, and its sheen, and the glistening of dewdrops on its edges. Yet he wanted to paint a whole tree, with all of its leaves in the same style, and all of them different."

As the cognate terms of *besno*/ imply, Tolkien had conceived of a complex tree of interrelated languages.

**Tree of tongues: interrelationship of elvish languages**

Valarin

Valinorian

Ingwiquenya

Quenya (Elf-latin)

Quendian

Lembian

\*many dialects

Danian

Taliskan

tongues of Western men

Leikvian (East Danian)

\*Ossiriandic

Eldarin

Koreldarin

\*Lindarin

\*Kornoldorin (Finrodian)

Noldirin (in Beleriand)

Telerin

\*Telerin (in Valinor)

Beleriandic

\*Doriathrin

\*living language

- J.R.R. Tolkien, *The Lost Road and Other Writings*, p. 196

This is just one of Tolkien's conceptions (circa 1937) of the interrelationships of the Elvish languages. He often revised it and reconsidered it. However, the two principal languages were always Quenya and Noldirin (the earlier name of Sindarin).

Tolkien invented the most elaborate model language system ever published as part of a work of fiction. What had started out quite simple had grown. Yet, again and again, Tolkien failed to prepare a final grammar and lexicon for any of his languages. His goal was not to create a finished language system, but to simply delight in creating words and linguistic shapes in the fabric of an imagined time. The joy was in the finding.

Here is the most well known of Tolkien's Elvish poems. This is a hymn to Elbereth that was sung in the house of Elrond in *The Fellowship Of The Ring*:

|                                |  |
|--------------------------------|--|
| <i>A Elbereth Gilthoniel</i>   | "O Star-queen, Star-kindler,                     |
| <i>silivren penna miriel</i>   | glittering down and sparkling like jewels        |
| <i>o menel aglar elenath!</i>  | from the firmament's glory of the host of stars! |
| <i>Na-chaered palan-díriel</i> | To remote distance after having gazed            |
| <i>o galadhremmin ennorath</i> | from tree-woven middle-earth,                    |

*Fanuilos le linnathon*      Snow-white, to thee I will chant,  
*nef aear, si nef aearon!*      on this side of the ocean, here on this side of the great ocean!"  
For Tolkien, inventing model languages was an intellectual exercise of great seriousness, yet he realized how unusual these activities were. While he felt many children created simple languages, as he and his cousins had done, he was not aware of many others who took inventing languages as seriously as he did. Indeed, while he found his "private lang." activities to be a source of constant amusement, he would dismiss these activities when discussing them, calling it "a mad hobby" when talking to friends or "my nonsense fairy language" when talking about it with his wife.

Yet for him his model languages were an almost spiritual exercise as he followed his love of language and myth. He viewed his creation of languages as a Christian art, an act of subcreation that assisted the Lord in creating the world, perhaps creating even a part of heaven.

Tolkien's Niggle, once he had completed his "long" and "distasteful" journey (an allegory for death), at last found his way to a new country:

*Before him stood the Tree, his Tree, finished. If you could say that of a Tree that was alive, its leaves opening, its branches growing and bending in the wind that Niggle had so often felt or guessed, and had so often failed to catch. He gazed at the Tree, and slowly he lifted his arms and opened them wide.  
"It's a gift!" he said.*

---

### ***For further reading***

"Leaf By Niggle", in J.R.R. Tolkien, *Poems And Stories*, Houghton Mifflin: Boston, 1994.

Tolkien, Christopher; Ed. *The Lost Road And Other Writings: Language And Legend Before 'The Lord Of The Rings'*. Houghton Mifflin: Boston, 1987. --About 50 pages of etymologies for Primitive Eldarin and its daughter tongues, providing a unique behind-the-scenes look at Quenya and Sindarin.

Carpenter, Humphrey. *Tolkien: A Biography*. Ballantine Books: New York, 1978.

Carpenter, Humphrey; Ed. *The Letters Of J.R.R. Tolkien*. Houghton Mifflin: Boston, 1981. --Tolkien discusses his languages and approach to creating them in some of these letters. One example, from a letter to Naomi Mitchison, 4/25/1954:

*"Two of the Elvish tongues appear in this book... They are intended (a) to be definitely of a European kind in style and structure (not in detail); and (b) to be specially pleasant. The former is not difficult to achieve; but the latter is more difficult, since individual's personal predilections, especially in the phonetic structure of languages, varies widely, even when modified by the imposed languages (including their so-called native tongue). I have therefore pleased myself. The archaic language of lore is meant to be a kind of Elven-latin, and by transcribing it into a spelling closely resembling that of Latin (except that y is only used a consonant as y in E. Yes) the similarity to Latin has been increased*

*ocularly. Actually it might be said to be composed on a Latin basis with two other (main) ingredients that happen to give me phonaesthetic pleasure: Finnish and Greek. It is however less consonantal than any of the three. This language is High-elven or in its own terms Quenya (Elvish)."*

## *Emulating Tolkien*

Continued from On Tolkien.

### ***Emulating Tolkien***

When learning a craft, whether writing, sculpting or creating model languages, it always helps to begin by purposefully copying a master's style. This enables you to begin creating and gives you time to experiment prior to developing your own style. For instance, my first poetry slavishly followed e.e. cummings. My first attempt at a children's book faithfully echoed the voice of Dr. Seuss. Interestingly, my first attempt at a model language did not emulate Tolkien, but copied Clyde Heaton's Orcish, a language he published in an article called "Even Orcish is logical" (*Dragon* magazine, July 1983), which started me on this hobby.

One of the language families I have tinkered with the longest is meant to be spoken by elves, like Tolkien's Quenya and Sindarin; my Alvisish and Old Alvisish languages date back some 13 years now. My first attempt at Alvisish was patterned closely on Anglo-Saxon, and the language existed as little more than a source language for Karkrak, then the principal language I was working on. About five years ago, I revamped Alvisish to resemble ancient Greek, which I first thought gave the language a noble sound. When that did not meet my fancy, I revamped the language again and developed a 3000-word vocabulary for it. Some sample vocabulary, from Alvisish III:

|                 |  |
|-----------------|--|
| age, n.         | thufpaxef, neut. (thoofPAHKSeF)        |
| age, v.         | thufpaxere, neut. (thoofpahksEre)      |
| agree, v.       | cupfuscrifere, neut. (koopfooskriFEre) |
| agreement, n.   | cupfuscrifep, neut. (koopfoosKRIfep)   |
| agriculture, n. | mudolrelep, neut. (moodolRElep)        |
| ahem, interj.   | ixax (IKSahks)                         |
| ahoy, interj.   | esathnebis (eSAHTHnebis)               |
| aid, v.         | ethere, neut. (Ethere)                 |
| air, n.         | tusef, neut. (TOOSef)                  |
| alarm, v.       | esadadere, neut. (esahDAHdere)         |
| alas, interj.   | frithfrith (FRITHfrith)                |
| alienate, v.    | apadere, neut. (ahpahDEre)             |
| alignment, n.   | fadap, f. (FAHdahp)                    |
| all, adj.       | quafeth, neut. (QUAHfeth)              |
| all, adv.       | quaferemi, neut. (quahFERemi)          |
| all, n.         | quafep, neut. (QUAHfep)                |

|                   |                   |
|-------------------|-------------------|
| alleluia, interj. | ipipneb (Ipipneb) |
|-------------------|-------------------|

I have no idea what I was aiming for, but the result is undeniably ugly. Ipipneb? Frithfrith?

Recently, I have decided to try and pattern Alvisish more closely on Quenya and Sindarin, inspired in part by a recent discussion on the CONLANG mailing list, where David Bell discussed his language Amman-lar, originally a Tolkien clone, before Bell found his own voice (you can subscribe to CONLANG by sending an e-mail with the subject text SUBSCRIBE CONLANG <YOUR NAME> to majordomo@diku.dk).

Before creating Alvisish IV, I closely studied the Quenya and Sindarin words published in *The Silmarillion*. I decided that what sounded pleasing to me was the emphasis on sounds produced towards the front of the mouth (e.g., /p/, /b/, /f/, /v/, /i/, /e/, /a/). Additionally, syllables in Sindarin and Quenya typically followed the style CV or CVN, where N was a nasal (/m/ or /n/), lateral (/l/) or approximant (/r/). Based on this insight, I then produced the following definition of the phonotactics (sound and syllable structure) for Old Alvisish, the ancestor of Alvisish:

(Con1) Vwl (Con2)

where

Con1 = p, b, f, v, t, d, c, g, y, w, ch, gh

Vwl = i, a, o, u, uu

Con2 = m, l, n, r, s

The /c/ is pronounced as in *cat*, /ch/ as in *loch*, /gh/ is a voiced /ch/ (as /g/ is a voiced /c/). Each of the above lists of phonemes is roughly arranged with those sounds pronounced closest to the front of the mouth listed first. Sounds are listed in declining order of occurrence in actual Old Alvisish words.

A further restriction to possible combinations of phonemes is that whenever there are two adjacent vowels (e.g., the /i/ and /o/ are in separate syllables in *dios*, /di-os/) they can only be one of the following: i-o, i-uu, i-a, u-o, u-i, u-a, o-i. So, for example, *diis* is not a valid Old Alvisish word, since /i-i/ is not a valid combination. (The dash - is used to indicate syllable breaks.)

Some sample Old Alvisish words and phrases:

anim  
basuus  
buci  
chi gicuu  
dafon  
ghis  
gibas  
ogus dian  
toman  
vafus

The sound system for Old Alvish is less flexible than that of Tolkien's languages. Words like *Aglarond*, *Amarth*, *Bragollach* and *Minas Tirith* could not be formed in Old Alvish, due its different syllable structure, but would be probably be borrowed in forms like *Agelaronde*, *Amarte*, *Beragolcha* and *Minas Tirti*.

But Old Alvish's sole purpose in my design is to provide a source for Alvish. I designed Old Alvish to have an elegant structure, which has become more complicated (and therefore more flexible) in Alvish.

I decided that Alvish developed from Old Alvish according to the following steps. First, Middle Alvish was distinguished from Old Alvish by the following sound shifts, designed to give the language even more front sounds:

*/c/ > /th/*  
*/g/ > /h/*  
*/ch/ > /c/*  
*/gh/ > /g/*  
  
*/a/ > /e/*  
*/uu/ > /o/*  
*/o/ > /a/*

This had the net effect of giving Middle Alvish three sounds that it did not have before (*/th/*, */h/* and */e/*) while eliminating three sounds that it had had (*/ch/*, */gh/* and */uu/*).

Some examples:

MA *buthi* < OA *buci*  
MA *ci hitho* < OA *chi gicuu*  
MA *defan* < OA *dafon*  
MA *gis* < OA *ghis*

As this example should illustrate, you can quickly generate your own languages, based on a source language, simply by preparing tables of sound correspondences such as the one above. (Refer to the "Sounds" section of [MODLANG 2](#) for more information on this.) A phoneme can gradually become pronounced as any "neighboring" sound, where a "neighborhood" consists of similar physical positions of articulation. By this measure, the shift of */c/* to */th/* is unlikely, as the physical positions of the two sounds are far apart, but this can be explained away by positing an intermediate step; e.g., the sound */c/* came to be pronounced as */t/* (as in OA *buci* becoming Early Middle Alvish *buti*), before the */t/* phonemes so produced came to be pronounced as */th/* (MA *buthi*).

The next series of sound shifts distinguishes Middle Alvish from Alvish and is more complex. In this series, there are no straightforward one- to-one correspondences, where one occurrence of a phoneme always becomes another phoneme. In the transition to

Alvish, sounds changed only because of their environment (the other sounds they are pronounced near). While the notation used to describe these can grow quite complex, inventing sound changes like the following is not difficult. Basically, I spent a lot of time trying to make sure that Alvish words fit my preconceptions of what words I found aesthetically pleasing, and I then formulated rules to give me a way to get from the strict phonotactics of Old Alvish to something looser.

The main changes from Alvish to Old Alvish are in the phonotactics. An Alvish word can begin or end with any consonant, but the consonants in the middle must follow similar patterns to Old Alvish.

FIRST SYLLABLE

(ConWI) Vwl (ConSF)

INTERNAL SYLLABLES

(ConSI) Vwl (ConSF)

TERMINAL SYLLABLE

(ConSI) Vwl (ConWF)

ONE-SYLLABLE WORD

(ConWI) Vwl (ConWF)

where

ConWI = p, b, f, v, t, d, c, g, y, w, th, h, m, l, n, r, s, sp, st, sc

ConSI = p, b, f, v, t, d, c, g, y, w, th, h, s, sp, st, sc

Vwl = i, e, a, u, o

ConSF = m, l, n, r

ConWF = p, b, f, v, t, d, c, g, y, w, th, h, m, l, n, r, s

Clearly, this sort of mapping out of all sound combinations can grow much more complex than you want or need for a model language, but the complexity of Alvish phonotactics pales in comparison to the phonotactics of English, which would take a small book to describe in detail (e.g., the only time an English word can begin with three consonant sounds the first consonant has to be /s/, as in *spring*, not something like *zbring*).

The rules for deriving Alvish words from Middle Alvish are:

/ti/ > /thi/

/a-i/ > /i-a/ (eliminating the only vowel pair to begin with /a/; e.g., /thi-al-fu/ < MA /tha-il-fu/)

/s-/ > /-s/ (removing /s/ from being a possible final consonant for internal syllables; e.g., /i-san/ > MA /is-an/)

/-sX/ > /-X/ where X <> /a/, /e/, /i/, /o/, /u/, /p/, /t/, /c/ (any /s/ that migrated before an X is omitted; e.g., /pa-fu/ < MA /pas-fu/)

/-DVC#/ > /D#/ where D = /t/, /d/; V is a vowel, C is consonant and # indicates the end of a word (this rule indicates that final syllables that begin with /t/ or /d/ move the dental phoneme to the end of the previous syllable and truncate the remaining syllable; e.g., /alt/ > MA /al-ten/)

/mD#/ > /nD#/ (any final /md/ or /mt/ formed by the previous rule replaces /m/ with /n/)

/#V1T-V2/ > /#TV2/ where T=/m/,/n/,/l/,/r/,/s/ (any word that begins with a vowel and is followed by a syllable-terminating consonant and a following vowel -- starting a new syllable -- drops the initial vowel and moves the consonant to the next syllable; e.g., /nim/ > MA /en- im/).

One thing I've ignored when doing sounds shifts is whether a phoneme was in a stressed or unstressed syllable. Contrast English /ob-JECT/ ("I object, your honor") to /OB-ject/ ("the object of the game is this"). In English, the vowel /o/ has become a schwa in the unstressed syllable in /ob-JECT/ but not in the stressed syllable in /OB-ject/. Rather than deal with the issue of stress (which in the Alvish languages always falls on the penultimate -- next-to-last -- syllable), I decided that elves are more fastidious in their pronunciation and blur sounds less in unstressed syllables than mere mortals do... It's a cop out, but this is supposed to be fun, right?

I won't formally describe the rules for forming compound words in Alvish. But forming compounds does have a number of twists, mainly designed to make sure that the resulting word matches the phonotactics of Alvish defined above. The rules:

For the first of the two words compounded, anytime a vowel immediately follows another vowel (e.g., /e/ in /i-e/), that vowel is dropped.

When the first word ends in a vowel and the second word begins with a vowel, those vowels change into an acceptable vowel pair (if they're not already); e.g., i-a, i-o, i-e, u-a, u-i, u-e.

When the first word ends in a consonant, that consonant can be only /m/, /n/, /l/ or /r/, otherwise it moves to the front of the second word (if the second word begins with a vowel) or it is deleted.

This process is inverted when the second word \*begins\* with a consonant; since that consonant cannot be /m/, /n/, /l/ or /r/, the consonant moves to the end of the first word, unless the first word ends in a consonant, in which case it is dropped altogether. Whew!

Based on all these rules, I derived some sample words for Alvish. These words have no assigned meanings, since I have just been experimenting to make sure that I like the resulting sounds of the words generated.

a-hu-di-en [< a-hus di-en < OA o-gus + di-an.]

a-pun [< OA o-pun.]

alt [< MA al-ten < OA ol-tan.]

as [< OA os.]

ban-u [< OA bon-u.]

be [< OA ba.]

be-sos [< MA bes-os < OA bas-uus.]

bel [< OA bal.]

bet [< MA be-tu < OA ba-tu.]  
 bi-al [< MA ba-il < OA bo-il.]  
 bi-hi-bes [< OA bi + gi-bas.]  
 bi-om [< OA bi-uum.]  
 bo-ses [< MA bos-es < OA buus-as.]  
 bol-i-e-ba [< bol-e e-ba < OA buul-a + a-bo.]  
 bot [< MA bo-thar < OA buu-cor.]  
 bul-a-sim [< bu-el a-sim < MA bu-el as-im < OA bu-al + os-im.]  
 but [< MA bu-thi < OA bu-ci.]  
 ci-hit [< MA ci hi-tho < OA chi + gi-cuu.]  
 de-fan [< OA da-fon.]  
 di-os [< OA di-uus.]  
 di-si [< di-as i < OA di-os + i.]  
 dir-a-bi-en [< di-ar-a bi-en < OA di-or-o + bi-an.]  
 du-an [< OA du-on.]  
 du-ha [< OA du-go.]  
 e [< OA a.]  
 e-bun-bid [< MA e-bun bi-da < OA a-bun + bi-do.]  
 e-pa-tam-en [< OA a-po + tom-an.]  
 em-ho [< OA am-guu.]  
 fa-po [< OA fo-puu.]  
 far [< OA for.]  
 fe-pu [< OA fa-pu.]  
 fe-vin-ve-fus [< OA fa-vin + va-fus.]  
 fel-im-fon-et [< fel-i-am fon-et < MA fel-a-im fon-e-tul < OA fal-o-im + fuun-a-tul.]  
 fes [< OA fas.]  
 fir-o [< OA fir-uu.]  
 fu-en [< OA fu-an.]  
 gi-su [< gis u < OA ghis + u.]  
 hit [< MA hi-tan < OA gi-ton.]  
 i-ba [< OA i-bo.]  
 i-fen-pur [< OA i-fan-pur.]  
 i-san [< MA is-an < OA is-on.]  
 ir-u-se [< MA ir us-e < OA ir + us-a.]  
 ni [< MA on-i < OA uun-i.]  
 nim [< MA en-im < OA an-im.]  
 nur [< MA en-ur < OA an-ur.]  
 o-fam [< OA uu-fom.]  
 pa-fu [< MA pas-fu < OA pos-fu.]  
 pa-fu [< OA po-fu.] (arrived at the same form as the previous word but by a different route)  
 pe-yil [< OA pa-yil.]  
 pi-em-do [< OA pi-am-duu.]  
 pi-fem [< OA pi-fam.]  
 pi-sun-bi-as [< MA pis-un ba-is < OA pis-un + bo-is.]

pir-di-fus [< pi-ar di-fus < OA pi-or + di-fus.]  
 po-fu [< OA puu-fu.]  
 po-vi [< OA puu-vi.]  
 pod [< MA po-des < OA puu-das.]  
 pom-i [< OA puum-i.]  
 pu-em [< OA pu-am.]  
 pu-il [< OA.]  
 pul-on [< OA pul-uun.]  
 ran [< MA er-an < OA ar-on.]  
 te [< OA ta.]  
 ter-in [< OA tar-in.]  
 the-wom-o [< OA ca-wuum-uu.]  
 thi [< OA ci.]  
 thi-al-fu [< MA tha-il-fu < OA co-il-fu.]  
 thi-as [< OA ci-os.]  
 thin-o [< thi-on no < MA thi-on an-o < OA ci-uun + on-uu.]  
 tho-pa [< OA cuu-po.]  
 thot [< MA tho-tol < OA cuu-tuul.]  
 ti-po-dom-pi [< OA ti-puu + duum-pi.]  
 ti-vol [< OA ti-vuul.]  
 tim-vul-po-wim [< OA tim-vul + puu-wim.]  
 tin [< OA.]  
 to-por [< OA tuu-puur.]  
 tu-es [< OA tu-as.]  
 u-fi [< OA.]  
 u-va [< OA u-vo.]  
 um [< OA.]  
 urt [< MA ur-thi < OA ur-ci.]  
 ut [< MA u-tho < OA u-cuu.]  
 va [< OA vo.]  
 val-i [< OA vol-i.]  
 vam [< OA vom.]  
 vem [< OA vam.]  
 vi-al [< MA va-il < OA vo-il.]  
 vi-fom-fe-hu [< OA vi-fuum + fa-gu.]  
 vim-u [< OA.]  
 vo-fi [< OA vuu-fi.]  
 vod [< MA vo-di < OA vuu-di.]  
 wil-pe [< OA wil-pa.]  
 ya-wir-os [< OA yo-wir-uus.]  
 yar-o [< OA yor-uu.]  
 ye-bon [< OA ya-buun.]  
 yed [< MA ye-dum < OA ya-dum.]  
 yi-si-pu [< yis i-pu < OA yis + i-pu.]  
 yo [< OA yuu.]

yu-es [< OA yu-as.]  
yu-pi [< OA.]

Some sample sentences (really just random sequences of words):

Ut ofam tivol pomi fes te pafu firo vial fevinvefus.  
Bihibes fepu yupi be thopa biom ahudien vali yed puem.  
Vifomfegu wilpe iba apun iruse piemdo thino duha bulasim fapo.  
Ut tipodompri dirabien boses bial e terin yebon ufi ni.  
Vam va dios thewomo thi defan urt bot ifenpur uva.  
Fuen pofu vem as nur bet pirdifus ebunbid tin bel.  
Pifem hit isan epatamen tues nim duan bolieba vofi pisunbias.  
Disi vimu banu cihit pod thialfu pulon yawiros besos yaro.  
Yo pafu ran peyil timvulpowim puil alt thias topor um.  
Yisipu be felimfonet thot emho vod povi yues far gisu.

So there you have the sounds of Alvish.

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**On the Design of an Ideal Language -**  
**<http://www.livejournal.com/community/conlangs/14524.html>**

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***On the Design of an Ideal Language, Revision 6.6***

**Comment!** Response is appreciated, and helps catalyze thought.

*Note: this is a document under revision. Even \*I\* don't agree with myself all the time, and I expect people to disagree with the points I have to make here. As that happens, I'll do what I can to reconcile their opinions into some compromise, or at least list "dissenting opinions" alongside the major points, and give a decent answer as to why I said what I did.*

**Read others' comments!** There are a \*lot\* of interesting ones, and some of the threads serve to explain my meaning a bit better than stated here. Not to mention that there are some excellent points of disagreement.

v6.6: changed title from "On Designing the Ideal Language" to "On the Design of an Ideal Language"; better reflects the no-single-answer aspect  
v6.5: added anchor tags for easier navigation, copyright notice, various minor edits  
v6: added Other Things to Consider: Temporal Order, Analog vs. Quantum Descriptors, and Purposely Wasting Space  
v5: added Applying the PSD: Writing  
v4.5: added lj-cut  
v4: added the section on Combining/Utilizing Input Streams  
v3: added the Principle of Cross-Modality and the Principle of Semantic Conservation  
v2: added (per Axiem's reminder) the redundancy vs. corruption clause to the PSD

As you may know, I am (was?) attempting to construct my own language (known for now as Saigrok). However, I've run into a stumbling block - namely, my own ambition. I keep learning that I can't make a decision because I haven't yet decided on some higher-order feature of the language. I decided to compile a top-down view of what I want from it; language should not be designed in a bottom-up piecemeal fashion if one wants the top-down principles to hold.

Therefore, I'll try to describe here exactly what the desirable qualities of an ideal language are (or should be), and how exactly one could go about putting those ideals into a more concrete form.

First, let's define "language". I'm going to use "a system for transmitting or recording ideas". Is that ambiguous? Damn right. But as you'll see, there's a reason for that.

## **Guiding Principles:**

### **1. Principle of Least Effort**

Slang, as well as general "language evolution", have generally resulted from some more-difficult form being "corrupted" to an easier one. (e.g.: "thee" being removed, "whom" -> "Who", "television" -> "TV", vowel shift, etc.)

Therefore, the language should \*start\* with simplicity in mind. This means that things should be "regular" (linguistic term, meaning "hopefully the rules don't have many exceptions") as much as possible, that vocabulary should be as dense as possible (long words for oft-used concepts, especially when shorter words are not "taken", \*will\* be broken down with natural use), etc.

An example from ASL is that most signs that are physically difficult to make - palm out around chest, below waist, hands together above shoulder, etc. - tend to become simplified into ones that don't involve any strain.

### **2. Principle of Semantic Density**

Any medium used - e.g., speech, 2d static visuals ("writing"), 3d static visuals ("sculpture"), 2d moving visuals ("movies"), 3d moving visuals ("live performance" [maybe eventually "movies", when tech evolves]), touch, etc. (I'll have more on this later) - should be used optimally.

"Optimally"...

This means that

- a) everything that \*can\* be done (bounded by the PLE), is done - in speech, for example, use of all available phonemes, tones, etc.
- b) simpler things are done first. For example, the nonsense word "aijmapnargath" should be much later on in the vocabulary than "jaf". Or another example would be ICQ numbers: start from 1 and work up. Why assign #9143018 when #1402 isn't taken?
- c) simpler things are reserved for simpler things. A word for the rotational axis of a particular molecule of some new-age plastic should be implicitly more difficult than a word for "good".
- d) all available mediums are used to their fullest potential. This is bounded by a few things.  
First, the capacity of the receiver(s) to interpret - e.g., radio & deaf people don't work well. (Clause: sometimes this is desirable, in that a multi-channel communication is

interpreted at different levels by those able to receive it on different levels [e.g., signing "this is a lie" while talking, for the respective benefits of the person in front of you and the person listening to the room's mic].)

Second, the capacity of the sender and the medium to \*encode\* the data in the first place. Does it have to be static, as in a written document or movie? Is it interactive? Do you have the benefit of three dimensions, or four? Can you \*produce\* it? (e.g.: singing tones, or writing ideographs, or using color, or instruments [music carries data, damn it!])

Third, the density of the medium as used. How many WPM of English can native users do? What about ASL? Manual alphabets? Etc...

e) yes, I said \*all\* available mediums.

That means that if you're communicating with someone in front of you, and both of you are ordinary non-impaired humans, you should be using your full body movement (bounded by the PLE), full vocal capacity, etc. If it's dark, or someone's blind, you should be using touch instead. Etc.

**SIMULTANEOUSLY.**

**HOWEVER...** as Axiem points out (and I forgot to mention on first revision), there comes a point at which you must trade semantic space for redundancy. Such is the case with the armed forces' alpha/bravo/charlie alphabets, and with .rar format "recovery" space (an added 1% or so of space can protect against a surprising amount of corruption).

Thus, there should be a means of doing this - adding "buffer space" to the data - in whatever mode presented. However, it should \*not\* be a rigid thing; after all, I said "optimal". That means different things in different conditions - clear or foggy, quiet or noisy, etc. Ignoring this means, on one side, having to repeat (or simply losing the message, or losing precision [as is the case in many examples of humorously misplaced/missing commas]), and on the other, losing precious semantic space and thereby conveying less information.

### **3. Principle of Desired Clarity**

Every statement (though "statment" may well be an inaccurate word for a gesture or other "unusual" mode) should be as exactly as semantically precise as the sender wishes.

It should be no less - if you want to specify "table" over "some sort of furniture designed for things to be placed upon" (like shelves, chairs, desks, etc.), you should be able to do so.

Neither should it be any \*more\* precise. First, if you want to know where somebody's conveyance is, you should not need to first know what method of conveyance they used (car, train, motorcycle, horse, feet...) Second, if you want to be ambiguous, you should be able to... and, as an important sub-principle, ambiguity should always be \*implicit\*. If the gender-neutral pronoun is more difficult to produce than "he" or "she", it will be

received as a \*deliberate\* ambiguity. Of course, that too should be able to be expressed, but it should be different than \*implicit\* ambiguity, in that the former is inclusive and the latter exclusive.

#### **4. Principle of Default Simplicity**

The easiest concepts to render should be the simplest. E.g., Gender-neutral pronouns should be slightly simpler / easier than gender- or quantity- specific ones. The more complex the idea, the more correspondingly complex its expression.

#### **5. Principle of Iconicity**

As much as possible, the medium used should represent the thing expressed. This is hard to explain, but an intuitive principle.

If you're making a sign for "rain", for example, wiggling your fingers in a downward sweep is more "natural" than, say, making a circling motion with your fists. The same works with other mediums also; harsh concepts should \*sound\* harsh when heard, whereas gentle ones should be more mellifluous.

There are two cautionary notes to this principle, however.

First, there is the danger of culture bias. Onomatopoeia in spoken languages is a good example; I doubt most English speakers would recognize the Japanese equivalent of "woof woof" or "hee haw", nor vice versa. Also, a sign that represents "money" that symbolizes a sack of coins could well be outdated in fifty years when everybody uses plastic (or other yet-to-be-devised means of exchange). So if there's any question as to the Platonic nature of the representation, it should be completely arbitrary.

Second, there is the implication of this principle: that entities unfamiliar with the rules of expression (i.e., people who don't know the language) will have an easier time understanding it, because it is as "intuitive" / "natural" as possible. The problem is that sometimes, this is \*not\* a desirable feature - like when one is trying to be secretive. However, I believe that some form of encryption should be devisable, and the base nature (by the PDS) of the language should be intuitive.

#### **6. Principle of Cross-Modality**

Anything should be expressible in any/all available means.

There should be absolutely \*nothing\* lost in "mode shift" - e.g., the written transcript of a radio talk show. This includes all subtleties and other "meta" features that one normally ignores in English, like vocal intonation, pitch, speed, sarcasm, etc.

However, there's two clauses to this.

First, it may be desirable (\*optionally\*) to drop meaning (like the fact that someone used a word in a derogatory fashion) in favor of brevity, simply because some modes (like those available in communicating with the deaf-blind) are so limited in "bandwidth". I stress however that this is an OPTIONAL and (if relevant) explicit drop; if you want a full mode shift, so be it; it'll just take longer.

Secondly, some mediums may not allow for quite the degree of implicit or other meta-contextual meanings - how, for example, would you indicate that someone had a sarcastic voice when mode-shifting to touch signing? Pressure of the fingers? So, if need be, a shift from implicit to explicit is allowable, following the PDS: it's dropped unless you add it explicitly.

## 7. Principle of Semantic Conservation

Simply put, there should be no such thing as a "nonsense" or "incorrect" phrase. This overlaps with the PSD.

In English, for example, the phrase "man got job now" is ungrammatical, though composed of acceptable parts - though one could guess at its "proper" translation. However, why not have this \*mean\* something? I call this "wasted space". Another example: the non-existent, yet short and easily-pronounced word "bock" (unless I'm missing some extremely rare jargon...). Why? Yet we have words like "inexperienced".

There are (again) two warning clauses to this.

First, one must leave "space" for new, yet-unformed vocabulary, and an "official" means of its creation. I find English's way - make up a word that isn't yet taken - rather haphazard. How much space to leave, and how "valuable" (i.e., short words are more "desirable"), is an open question.

Second, similar to the previous mention of clarity vs. density, the first things to go (if there is some sort of "static" or "corruption") should be the higher-end ones; if a message is garbled, its basic meaning should remain intact; oh well if you lose the speaker's emotion.

Third, there is the (open) question of overlap. The word "blue" in English means several things - a color, a mood (depressed), a type of media (soft-pornographic), a blue \*thing\* ("the blue"), etc. Or "rehd" (when spoken) - a color, past tense of the verb "read", etc.

What to do about it? Should there be a one-to-one correlation of meaning and form? I think perhaps not. If a form can "hold" several meanings, like English words, let it, so long as a) those meanings would not, in most cases, be confused with each other (contextual clarification) and b) those meanings can easily be distinguished (by the PDC) with slightly more effort (e.g., "get", meaning #4, but less obtuse).

Finally, there is the question of how to deal with the fact that, in a fully conserved system,

"noise" would have meaning. Literally speaking, everything you hear, see, smell, etc., should (in principle) carry some meaning. How do you choose which are and are not relevant? A hard (and open) question. (Another example: somebody speaking in sign language, which incorporates the whole body as well as facial affect, who also has some sort of culturally-inbred or physical "noise", like a tic or a tendency to grimace when thinking about a particular topic, even though a grimace would normally be an actual semantic component of the message "at hand".)

Hmm... this does seem to echo the PSD a lot. But it's already so big... \*sigh\*

### **Other Things to Consider:**

#### **1. Temporal Order**

This only applies, of course, to modes that *\*are\** temporal, such as speech; ordinary writing would not count.

The question is thus: which should come first, the more or less important? [*unresolved*]

\* more: If the message gets cut off, then at least you'll have communicated the maximum possible amount of data for the given (shortened) length allotted.

\* less: People tend to remember best what happened last. It's a fairly simple fact of memory and psychology. Also, one might not be completely attuned to the first part of a temporal communication - like when you're starting a speech or getting someone's attention - and thus "lose" data. So, if you're going to have loss, it may as well be less-important. The drawback of this is as above: what if it gets cut off?

#### **2. Analog vs. Quantum Descriptors**

In English, all modifiers - adjectives, color names, etc., - are quantum. You choose one from a spectrum of meanings ("loud", "quiet", "soft", etc.), trying to find the one that best suits the *\*actual\** point on the continuum that you intend. (Note, btw, that the continuum might not be one-dimensional; in the case of color, there's r/g/b, brightness, reflectivity, etc.)

Therefore, I propose that all descriptors be, instead, *\*analog\**. This is difficult to conceptualize for some. An example is ASL's sign for size - the hands spread apart. One can make rather fine shades of meaning simply by changing the distance between the hands, and the speed of their movement. Thus, though one might have certain indexes ("this" = big, "that" = very big, etc.), it is at least in principle infinitely mutable.

One could do something similar for color, by deriving the name for any given color from its scientific rendition - in RGB, spectrum wavelength, etc. Thus, words for different shades of (say) orange would be very similar, but there would be some particular ones

marked out as being common reference points - "generic" orange, as it were. Thus, though you wouldn't need to give a measurement in describing a table's size, you could give a fairly accurate \*relativistic\* term to describe it.

### 3. Purposely Wasting Space

Every language - or more precisely, every culture - has some form of "um". ("y'know", "uh", "ah", "and", "like", etc.) Instead of fighting this, I would suggest that it be standardized; these filler words \*do\* serve an important purpose - indicating that the speaker is not relinquishing control, but is not giving any particular data either. Again, standardization would hopefully avoid the social stigma associated with some filler-words ("like" and "y'know" in particular make my mother rather condescending ;-)).

OK then. These will be the Guiding Principles of what is to follow.

#### Getting More Concrete:

##### Combining/Utilizing Input Streams

*note: Yes, I'm fully aware that I'm making liberal use of computer/programming references in a linguistic discussion. If you want clarification, ask.*

"Input Stream": Any utilized means of conveying information. e.g.: Voice (speech), body movement ("sign language"), text (linear static b&w 2d), etc.

Putting aside for the moment the question of \*how\* to optimally utilize a given IS, how is one to go about \*combining\* them in a meaningful and useful manner?

##### 1. Redundancy

The simplest. Conveying the same message in parallel, e.g., signing while speaking the same thing.

However, while it may help in case of "corruption" (as discussed earlier), it serves little other purpose. Also, in the case of temporal streams (like anything you'd do one-on-one, vs. recorded in static form), there's the "weakest link" problem: some streams can inherently carry less data. So, you have to either "dumb down" all of them to that level, or simplify (by the PDS) so that you can keep up with the higher-level streams. (e.g.: When talking about something, you gesticulate the basic meanings of what you're saying, ignoring the intonations, overtones, etc.)

Frankly, I find this option rather boring.

##### 2. Complementary

2a. "stacked"

In this version, you would have a hierarchy of streams, with the base one (probably the highest-bandwidth) conveying some data, and the others adding on to or modifying it. For example, if you consider "color" a separate stream than the text it colors, one could add special meaning (sarcasm, negation, ...) to the base, b&w message.

2b. "intertwined"

In this version, all streams would be parallel, and the data would be portioned out between them. Thus, continuing the previous example, color could be used to signify grammatical structures (tense, aspect, etc.) that would then be \*removed\* from the text itself, resulting in a more compact (PSD, yay) result.

The potential problem with this is that if the receiver loses one stream, the total content of the message is drastically altered, or even made indecipherable, whereas the "stacked" method would have it merely "dumbed down".

However, I think that one could find clever ways to (ab)use this effect: varying the message by recipient (if there's multiple ones with varying capabilities), humor, etc. Also, it may sometimes be desirable to make a message indecipherable without all of its parts.

3. Interchanged

In this case, one would switch between streams. This could be useful, for example, if your arms get tired and you'd rather talk, or vice versa, but I think this doesn't quite qualify as a means of \*combining\* input streams *per se*.

\*\*\* This needs a **lot** more thought. It may also have implications for things outside language. (Think about it...) The basic question is, how do you send information, using multiple sources, so that the recipient(s) get something that is more than the sum of its parts?

**Applying the PSD**

In order to do this - and thus have input streams available for the previous discussion - we first have to list the various possibilities for input...

- \* static 2d colored line-based (writing)
- \* static 2d colored non-line-based (drawing)
- \* dynamic 2d colored ? (movies of some sort)
- \* static 3d colored (sculpture? hologram?)
- \* sound, naturally human-produceable (speech) [sound is intrinsically temporal, so "dynamic" is redundant]

- \* sound, artificially human-produceable (music / instruments)
- \* sound, artificially machine-produceable (anything else)
- \* dynamic visuals, human-produceable (sign language) - subdivided by sections (1 or 2 arm, legs, torso, head, neck, face, etc.)
- [ etc ]
- ....

Let's start with the first...

## Writing

Frankly, I think that most people's conception of writing is very limited compared to its potential. We do not need a \*mere\* transcription, as it were, of the phonology of the oral streams; that's redundant (though useful, certainly). And Asian-style ideograms are also limited in their own fashion. I would call all present writing systems "linear 2d", as they depend on discrete units (letters, kanji, hanzi, whatever) which are put in a line. They do not take advantage of the fully 2d nature of their writing surface, nor of the semantic possibilities of their color.

I envision something more like a "web", that is read from any given point in a semi-stream-of-consciousness fashion. It would take some thought to get the design quite right, as my proposal is (to my knowledge) completely novel. However, it brings up intriguing possibilities: true branching grammar (as opposed to "traversing" grammar we have now), fractal detailing (have letters made up of letters for applying adjectives, or have branches for less-important "footnote"-type clauses), etc. I'm sure the more imaginative of you out there can come up with several more applications (post 'em!).

The point is simply: why limit oneself?

Yes, there are cases where it may be desirable to have a "linear 2d" writing system - computer input, for example (though one could devise a linear transcription). It also needs to be practical in that modern materials (books) generally require discrete chunks (pages), so would need a way in which to do so. Also, it would hopefully be at least as semantically dense as its single-spaced linear counterpart.

More to come later.

*NOTE: This work is **my copyright**. Don't use it without permission, and even then only if you give due credit. **I** wrote it.*



**Good Glosses – <http://www.nkuitse.com/conlang/glosses/>**

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## ***Good Glosses***

### ***The problem***

When creating a language, you might find yourself making a simple word-list something like this:

**adri** *v.i.* walk.

**ahyoloi** *n.* flower.

**aprangu** *v.t.* bury.

**asopa** *v.i.* fall apart.

**awiru** *v.i.* sink.

But if you look in a good bilingual dictionary of natural languages, you'll see something more like this (adapted from Doke and Vilakazi's Zulu-English dictionary, Witwatersrand University Press, 1958):

**hamba** *v.i.* **1.** travel, move along, go, walk, proceed; **2.** flow, run (as water); **3.** live, be well.

**mbali** *n.* **1.** flower, blossom. **2.** comely person, with well-formed features.

**ngcwaba** *v.t.* **1.** bury. **2.** forget.

**phihlika** *v.i.* **1.** fall apart, crumble, decay; get smashed. **2.** fall in showers (as rain). **3.** break out in sores. **4.** be abundant (as harvest).

**shona** *v.i.* **1.** sink, go down; **2.** go out of sight, disappear; **3.** set (of sun or moon); **4.** die; **5.** lose heavily, go broke, become ruined.

Now, you don't necessarily want to get *that* elaborate, but if you want your language to seem natural, you'll need to go beyond a word-list that's comprised mostly of one-to-one translations. In other words, you need **Good Glosses**.

### ***Some possible solutions***

In an attempt to help solve the problem of impoverished glosses, I've written up some notes on [how to make good glosses](#). This how-to guide goes through a few examples using relatively simple techniques, and touches on something I call **semantic n-space** (which some of you may recognize, though almost certainly under a different name; I'm afraid I haven't had time to research the subject and provide references).

A fairly long list of ready-made glosses may also be useful (and much quicker). These glosses might further be altered or expanded using techniques such as those described in the how-to document. These ready-made glosses have been made the old-fashioned way: by real speakers of real languages over hundreds of years.

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## How to make good glosses

### *Introduction*

For me (and probably for you, too), creating a language is a very personal thing. Each creator has her or his own strategies and tactics, which are liable to change over time, and what works for one person may not work for another. My hope in writing this how-to is to help glottopoeists of all stripes, but it would be silly to pretend that there is some ideal, universally useful, process for creating good glosses; the best I can do is this description of some methods that work well for me. *Caveat lector.*

### *Gloss-making methods*

In general, I recommend a simple three-step approach:

1. Find one or more English\* words that are somehow related (in meaning) to the one-word gloss you're trying to expand upon.
2. Think about what the English words have in common. (You may have already done this in finding the words in step 1.)
3. In your mind, stake out an area that covers one or more of these related meanings, picking two or three English words that seem representative. (You may decide simply to list two English words with the same meaning.)

\* Substitute your preferred *language of description* for English, of course.

### USING A THESAURUS

Let's use the Sinampaiton noun **odande** as an example. This is currently glossed 'hook'. To fill out this gloss I'll begin by finding one or two close synonyms. My Roget's International Thesaurus (Thomas Y. Crowell Co., 1977) lists **hook** under 9 entries; picking one at random (entry 252.2) I see the following:

**curve**, curvi-, sinus; **bow**, **arc**; **crook**, **hook**; parabola, hyperbola; ellipse; [etc.].

Nearby (252.3) I also see the following:

**bend**, bending; **bow**, bowing, oxbow; **turn**, turning, [etc.].

This is good; I'll give **odande** two basic senses: (1) a hook (like you'd use to catch a fish or hang a coat on), and (2) a sharp bend in a curving (or sometimes straight, sometimes curving) thing--e.g., a river or other geographical feature. I see (1) as a more specific application of the more abstract (2); if I want to, I can go on to specify other applications of (2): a cape or spit of land, an elbow, a kink in a garden hose, and so on. Hey presto--mission accomplished.

Now, if you like, you can go on to other related entries in the thesaurus, but for the sake of brevity I'll leave it at that.

## USING A DICTIONARY

The simplest way to come up with good glosses is simply to copy glosses from a bilingual dictionary. That's easy enough, but it can introduce a bias toward the language whose words' glosses you're copying; besides, it's boring!

The second way is practically identical to the thesaurus approach, but I tend to use it more so I'll run through it in more detail. As an example, I'll use the Sinampaiton verb **lapen**, currently glossed 'push'. But first, a note about the dictionary I'll use...

One of my favorite bilingual dictionaries is the Zulu-English dictionary by C. M. Doke and B. W. Vilakazi; I have the second edition, published in 1958 by Witwatersrand University Press in Johannesburg. When I was in high school, my father, who was once more or less fluent in Mpondo (a dialect of Xhosa, closely akin to Zulu), gave me this dictionary and a number of other books on Zulu and Xhosa. (Thanks, Dad!) *Doke & Vilakazi* is a wonderful dictionary of a language very unlike English, containing some 900 pages of Zulu-to-English entries. (A companion work by Doke et al., going from English to Zulu, is helpful but not in the same league as the Zulu-English work). Though I can't really judge the quality of the entries from a purely practical point of view (i.e., to Zulu speakers or to others learning the language), the dictionary is filled with multiple senses, the typography is terrific, and there are lots and lots of good examples of usage, including many that illustrate idiomatic uses.

Getting back to the task at hand, I begin by looking up the word **push** in the English-Zulu dictionary. Several Zulu translations are listed: **phusha** (borrowed from English), **hlohla**, **hlukumeza**, **qhuba**, **sunduza**, and **qhubusha**. I'll skip the English borrowing, since one of my aims in using a bilingual dictionary is to minimize the bias toward the language of description (English, in this case). Instead, I'll just pick two whose shapes appeal to me; here they are in the Zulu-English dictionary (edited for clarity):

**hlohla** **1.** push, ram, drive in; **2.** get flooded, become over-clouded. **3.** load (a gun). **4.** Idioms: *hlohla ikhwelo* blow ("push") a whistle, *hlohla umsindo* make ("push") a noise. **sunduza** move, shift; push aside; shove.

(Interesting sidenote: compare **hlohla** with French **pousser** 'push', which is used, like Zulu **hlohla**, to denote the production of various non-verbal sounds and utterances: e.g., **Elle poussa un cri** 'She shouted/cried out'.)

At this point, I could stop and assign the Sinampaiton verb **lapen** a gloss like 'push, shove; drive (in or away)' that combines senses from both of these entries without being overly complicated. That would be a perfectly satisfactory gloss, but I'll go on instead.

One thing I noticed is that sense 1 of **hlohla** and the middle sense of **sunduza** both denote a (somewhat forceful) movement of an object away from the speaker: the former more specifically *into* another object, the latter simply *out of the way* of the speaker. On the other hand, **hlohla** in sense 3 and **sunduza** in its first sense don't necessarily entail motion away from the speaker. Also, I particularly like the grouping of the two senses 'push away' and 'push aside'. Make what you will of these observations; it can be very helpful to notice things like this, but I won't dwell on them here.

The next step is to look up the words **ram**, **drive (in)**, **move**, **shift**, and so on in the English-Zulu dictionary, seeing where they take me in the Zulu-English dictionary. I don't want to go overboard, so I'll just look up the translations for **move** and **drive** in their transitive uses (again, edited for clarity):

**move** *v.t.* susa, nyikinya, nyukuza.

**drive** *v.t.* qhuba; hambisa, shayela.

Quick trips to the words **susa** and **hambisa** yield the following:

**susa** [Interestingly, the word **move** doesn't appear in this entry! Nevertheless, I think it's fair to say that its underlying meaning is 'take or (cause to) move off or away'.] **1.** remove, take away; drive off. **2.** deduct, subtract. **3.** kill, remove, get rid of. **4.** erase (from a list or register). **5.** Idioms: *susa insini* (be humorous [lit., 'move off laughter?']), *susa umsindo* (make a noise) [lit., 'move off sound/din'].

**hambisa** [This is a causative form of the verb **hamba** 'go, travel, etc.'.] **1.** cause to walk or travel; make flow. **2.** send off, drive. *hambisa incwadi* dispatch a letter. **3.** accompany on wedding trip. **4.** purge (as medicine).

There's plenty of good material to choose from here; you can mix and match words from these entries, or look up the other Zulu words to branch out more. (**Shayela** in particular looks intriguing; it's derived from **shaya** 'strike' and means, essentially, 'drive along or away by striking').

## OTHER MEANS

Another approach, which to me is much more of a game than a chore, is to take two or three bilingual dictionaries and follow a chain of meaning through all of them. This sort of thing can be a lot of fun, though there's the risk of getting carried away and ending up with hideously complicated glosses.

Another tool you might find handy is WordNet. Looking up troponyms and hypernyms can be particularly helpful. For example, a troponym of **push** is a verb that designates a particular way of pushing something. A hypernym of **push** is ... well, the easiest way to define it is to say that the hypernyms of **push** are those words to which **push** is a troponym. Got that? WordNet lists **move** and **displace** as hypernyms of **push**.

## **Tools**

### **IMAGINATION**

I've already mentioned bilingual dictionaries and thesauri; these and similar tools can be very helpful. The most important tool of all, however, is your own mind, and especially your imagination and your capacity to think abstractly. Dictionaries and thesauri are very useful tools, but remember that you can always put down the books and just think about a word and the "thing" (object, action, etc.) it represents, focusing on a particular aspect of it and thinking of other things that share that same aspect (closely or otherwise). This is perhaps easiest when done with nouns that denote a physical object, but can work well for other kinds of words, too.

### **DICTIONARIES**

In general, I look for dictionaries with sizeable entries (preferably of "exotic" languages which nonetheless seem easy to pronounce, at least approximately). I have some favorites besides Doke and Vilakazi's Zulu-English dictionary; here are a few of them. As you can see, these are all quite old; I suppose I should buy some new ones:

- *Harrap's new collegiate French and English dictionary*. Edited by Peter Collin, et al. London : Harrap, 1982. ISBN: 0-8442-1859-6.
- *Cassell's German-English English-German dictionary*. [Edited by] Harold T. Betteridge. London : Cassell ; New York : MacMillan, 1978. ISBN: 0-304-52293-7 (Cassell; thumb-indexed).
- Pukui, Mary Kawena, et al. *The Pocket Hawaiian dictionary with a concise Hawaiian grammar*. Honolulu : University of Hawaii Press, 1975. ISBN: 0-8248-0307-8. [A 276-page paperback, very nice.]
- Ramos, Teresita V. *Tagalog dictionary*. Honolulu : University of Hawaii Press, 1971. ISBN: 0-87022-676-2. [Typescript, but well laid out and very readable. Unfortunately, there's no English-Tagalog section.]

### **THESAURI**

I prefer the *true* Roget's--i.e., editions of Peter Mark Roget's original thesaurus, which consist of numbered entries. I prefer this method of organizing groups of synonyms because of the way it keeps clusters of meaning close to each other (for the most part). Furthermore, it keeps together words with different parts of speech that nonetheless share a common meaning. A quote from the thesaurus's front matter (*How to use this book*) explains (emphasis mine):

[This thesaurus] has a structure especially designed to stimulate thought and help you organize your ideas. The backbone of this structure is the ingenious overall arrangement of the large categories. [...] Beginning at 448, for example, you will see HEARING, DEAFNESS, SOUND, SILENCE, FAINTNESS OF SOUND, LOUDNESS, etc., a procession of similar, contrasting, and opposing concepts, all dealing with the perception

and quality of sounds. So, *when you are not quite satisfied with what you find in one glance, glance at nearby categories too [...]*.

### ***Other thoughts***

#### **ABOUT SEMANTIC N-SPACE**

I like to think of word senses (meanings) as points in an *n*-dimensional space. Well, OK, I just imagine a cloud of senses and think about how they're clustered and the shapes those clusters take. Perhaps a simple two-dimensional example will help. I'll have to resort to ASCII art, I'm afraid.

I'll begin with the word **sharp**. Looking in my thesaurus, I'll pick an antonym: **dull**. Here's a diagram:

```
sharp -----+----- dull
```

The plus sign in the middle is meant to represent a central "point"--a semantic point which denotes neither sharpness nor dullness.

Next, I'll pick another antonym of sharp: **smooth**. To plot it, I'll make another axis. Note that I put the word **sharp** in a second time:

```
      smooth
      /
     /
    /
sharp -----+----- dull
    \
     \
      \
      sharp
```

The fact that **sharp** appears twice is a reflection of its two distinct meanings. The sharp-dull axis has something to do with the cutting potential of an edge, while the sharp-smooth axis has to do with (say) taste. (It could be something else, but let's stick with taste.) In some hard-to-define way, these two meanings are quite similar. In fact, it may help to think of **sharp** as two different, synonymous, words.

Another thing you might observe from this diagram is that **smooth** and **dull** are, in a way, synonymous. Or rather, they're synonymous in the same way that their antonyms, the two senses of **sharp**, are synonymous. To see this more clearly, reverse the situation. Let's create a word **ndiyo** that carries both "un-sharp" meanings: 'smooth (of an edge), dull (of taste)'. And let's give it two distinct antonyms: **kluva** 'sharp (of an edge)' and **kwetta** 'sharp (of taste)'. Here's what the diagram looks like now; compare it to the English diagram above:

```
ndiyo
```

/  
    /  
    /  
kluva -----+----- ndiyo  
    /  
    /  
    /  
    kwetta

Et voilà! Another good gloss...

### ***Conclusion***

Try out some of these techniques and see what you think. If you'd like, you may contribute your creations to the list of ready-made glosses by sending them to me at [nkuitse@nkuitse.com](mailto:nkuitse@nkuitse.com). In the meantime, have fun!

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## **Apologia pro Imaginatione - <http://www.valdyas.org/apologia.html>**

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### **BACKGROUND**

The focus on theology might be surprising to people who don't know that I try to be a sincere Christian. I belong to the Orthodox church, under the Patriarch of Constantinople. I really can't separate my beliefs from the rest of my life - there are no compartments where I don't allow God to be.

### **CHARYA**

Even so, is Charya not rather un-Christian, immoral and depraved? How can a Christian create something with a content like that?

I don't think it's as immoral and depraved as that. One argument is that Charyan People are still people, like people everywhere, and I believe (in contrast to what Terry Pratchett maintains) in the essential goodness of men (not necessarily greatness, or holiness), but just, everyday, humdrum goodness. In that I follow Mencius and Pelagius.

But primarily, I think the essence of Christian morality is unconditional love - love of people for themselves, for other people, for their surroundings, and finally, and most importantly, love for God. In this, the people from Andal are not our inferiors, and by creating a culture that celebrates this love, I hope to share some of my essential Christian beliefs.

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## **Apologia pro Imaginatione**

As I said, people seem to feel quite strongly about the 'waste of time' I have perpetrated, and am perpetrating, in preparing this website. Giving free reign the the figments of my imagination, spending countless hours on completely unproductive activities (whether unproductive is defined as not making money or not bringing me closer to God) - that is surely wrong, and should be corrected! \*

I might answer that the knowledge gained by playing around with websites and code and stuff *does* make me money - since I can use a lot of that in my daily job, or that it *does* bring me closer to God, since it means I meet a lot of people who do the same thing better than I do, thus bringing me humility. Or I could argue that I don't waste *that* much time - but I won't.

My true argument is that in creating worlds, cultures and languages, in writing computer programs (as Brooks has noted (\*\*), in drawing sketches, sculpting and writing stories and bits of poetry, in constructing music and in preparing those works for reception, I am following my nature, doing what God intended me to do.

I am created in the image of God the creator - after all, in the first bit of Genesis, it is said that 'God created this and God created that, and finally he created man in his image'. To me (and to Dorothy L. Sayers \*\*\*, to whom I am indebted for that observation) this means that one of the primary characteristics of God is that God creates. Being created in that image, means that I must create, too - even if it is, as Tolkien said, *sub-creation*.

It's an old idea, and according to Stephan Belsky, it goes back to Judaism:

I don't know that much about the inner workings of Christian theology/philosophy, but to take this idea of subcreation back a generation, in Judaism one of the commandments ... is what i've seen called in Latin *imitatio Dei*, or in Hebrew some probably conjugated form of *lehidamot laBorei*, "imitation of God" / "to become similar to the Creator". If i remembered the expression exactly in Hebrew, i'd quote it, but part of the probably most famous expression of what this means (i think the commandment comes from Dvarim/Deuteronomy) goes something like "...because He is merciful, you be merciful; and because He is patient, you be patient..."

Therefore, because He creates, you create.

I think therefore that sub-creating is following my created nature. Lucifer has revolted against his created nature, and lost that nature, meaning he can't follow it anymore. That's why the Devil can't create, only warp - he can't even sub-create. The grace of God lets us make; whoever refuses the grace, loses the ability to make.

As Irina Rempt has said on the Conlang mailing list, where this subject has been discussed:

But Lucifer never created anything - at least not in orthodox (note the lowercase initial) doctrine. He just took what was already there, what God had already created, and warped it to his purposes. Being a creature himself, he couldn't create anything *new* except with the support of God, which he didn't accept. The point - as Tolkien understood very well - is that subcreation can *only* be done in the image of God (whether one acknowledges that or not; you can't help being an icon of God), or you'll destroy rather than create.

and:

... an image representing God. Lucifer's mistake was to renounce that image of God in himself, so he couldn't draw on it to (sub)create.

People tell me that my work is warping the creation, like the Lucifers work is, since I merely take what exists and rearrange that. To that I can only answer that all creative work, including the great Icons and all art is a form of sub-creation - rearranging of what already existed. And that's good - things that are completely original cannot be but boring since they are unconnected to anything the audience knows and therefore can recognise.

Making something induces a concentration and focus that makes me feel one with the Maker - when I am truly *making* I am nearly as close to God as I can be - I'm nearly as much in communion with God as when I commune with Him during the holy Liturgy.

By making an honest job of sub-creating, as good as I can, with a feeling of love and interest in my own creation, I think I can say that I dedicate my creative work to God.

*Boudewijn Rempt*

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*John 15:4-5 Abide in me, and I in you. As the branch cannot bear fruit of itself, except it abide in the vine; no more can ye, except ye abide in me. I am the vine, ye are the branches: He that abideth in me, and I in him, the same bringeth forth much fruit: for without me ye can do nothing.*



**Glossopoeia for Fun and Profit -**

**<http://greenbooks.theonering.net/ostadan/files/040101.html>**

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**OSTADAN'S LORE & LETTERS:  
Glossopoeia for Fun and Profit**

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***What is Glossopoeia?***

One of J.R.R. Tolkien's less famous works is *A Secret Vice*, a lecture first presented in 1931, and reprinted as an essay in *The Monsters & the Critics and Other Essays*. The “vice” to which the essay refers is the peculiar practice of creating languages, not as a code, but as an art form, perhaps to be shared for the use or appreciation of interested parties, as one would share a painting or manuscript. The word *glossopoeia* is a coinage derived from Greek, meaning “the making of tongues.” As Tolkien explains, the creation of languages offers both intellectual and aesthetic satisfaction, but at the time he wrote, there were few such creations known to the public. As we will see, this situation has changed considerably since that time. In this article, we will consider the genesis and effects of the three best-known glossopoeic works in chronological order: the international language *Esperanto*; the *Elvish* cluster of languages; and *tlhIngan Hol*, better known by its English name, “Klingon”.

***Esperanto: Language of Hope***

Esperanto was conceived and developed during the 1870s and 1880s by L.L. Zamenhof (1859–1917). Dismayed as a child by the mistrust that followed when people did not share a common language, he made it his life's work to create a language that could be learned by people in many lands as a common second language. Zamenhof's language was first published in 1887 as *La Lingvo Internacia*, with Zamenhof assuming the pseudonym of “Dr. Esperanto”; the word *esperanto* in the new language meant “one who hopes”, and indeed Zamenhof hoped that his language would help the cause of international peace and understanding by encouraging communication among ordinary citizens of the world. Before long, the name became associated with the language itself, rather than the author. Esperanto was designed to be easy to learn and understand, at least

relative to other European languages. As an example of what Esperanto looks like, here is a couplet, translated by Bertil Wennergren, that may seem familiar:

*Unu Ringo ilin regas, Unu ilin prenas,  
Unu Ringo en mallumon ilin gvidas kaj katenas.*

This example shows a few of Esperanto's interesting features. The vocabulary is largely derived from Latin roots (*reg-*, “rule”), but has some Germanic or English roots like *ring-* in the mix as well. The word *mal-lumon* for “darkness” demonstrates how the vocabulary is extended by using affixes; the word can be literally analyzed as “un-light”.

The number of Esperanto speakers grew steadily after its publication. A number of literary translations<sup>[1]</sup>, as well as original articles, prose, and poetry, appeared during the next twenty years, and the first international congress conducted entirely in Esperanto was held in France, in 1905.

Among the people who eventually learned Esperanto to the point of being able to write in it was a young English Boy Scout named John Ronald Reuel Tolkien. In 1909, he wrote a small sixteen-page notebook, the *Book of the Foxrook*<sup>[2]</sup> partly in Esperanto, describing a “privata kodo” for scouts. This private code consisted of a rune-like alphabet and a set of ideographs and represents the earliest known alphabet invented by Tolkien.

Tolkien maintained some interest in Esperanto even while his own linguistic creativity was in full bloom. He refers to the language favorably in *A Secret Vice*, and in 1932 wrote an open letter to the British Esperanto Association. In part, he wrote,

... technical improvement of the machinery ... tends ... to destroy the “humane” or aesthetic aspect of the invented idiom. This apparently unpractical aspect appears to be largely overlooked by theorists; though I imagine it is not really unpractical and will have ultimately great influence on the prime matter of universal acceptance. ... [one rival language] ... has no gleam of the individuality, coherence, and beauty, which appear in the great natural idioms, and which do appear to a considerable degree (probably as high a degree as is possible in an artificial idiom) in Esperanto ...

Here Tolkien, echoing some of his thoughts in *A Secret Vice*, is observing that the creation of a language is more than the simple creation of a tool or code; it is an endeavor that must give not only intellectual satisfaction, but aesthetic pleasure in the arrangement of sounds and meaning. Indeed, Zamenhof evidently spent a fair amount of time “taste-testing” his developing language before deciding on the words and sounds that would finally be part of the language.

Tolkien's feelings for Esperanto apparently cooled in later years based on his belief that language and myth are inseparable. In a letter to one Mr. Thompson in 1956 [*Letters*, #180], he wrote,

Volapük, Esperanto, Ido, Novial, &c &c are dead, far deader than ancient unused languages, because their authors never invented any Esperanto legends.

Nevertheless, it is worth observing that, of the dozens of prospective international language projects that have appeared in the last 150 years (including the three others Tolkien mentioned), only Esperanto has continued to grow substantially after the death of its creator. Estimates of the number of competent speakers range in the hundreds of thousands, and a Google search for “Esperanto” produces more than 850,000 matching Web pages. There is even an Esperanto translation of *The Lord of the Rings* in print.

Arguably, Tolkien was wrong about Esperanto — but for exactly the right reason. Unlike the other languages he mentions, Esperanto does indeed have its own mythology. It does not consist of magical legends, but is a kind of political mythology of hope, a shared belief among its speakers that the world would be a better and friendlier place if everyone in the world could communicate across borders as easily as Esperantists do, in a language that belongs to no single nation or people. This notion, called the *interna ideo* by Esperantists, is sometimes a source of embarrassment. Nevertheless, this idealism pervades much of Esperanto literature, especially from the first fifty years of its existence. Many, if not most, biographies of Zamenhof tend to mythologize his life, treating the behavior of some of those who tried to gain control of Esperanto's development with the sort of language usually reserved for the likes of a Lucifer or Sauron. So, if Esperanto is not dead, it is precisely because there *are* legends and myths connected with the language.

### ***That Elvish Vice***

In *A Secret Vice*, Tolkien distinguishes languages like Esperanto, devised for the practical purpose of serving as an interlanguage, from the real subject of his article — languages constructed as an Art or Game. Tolkien, indeed, was addicted to this “game”. Over the years, he created perhaps a dozen or more identifiable languages, including Dwarvish, Adûnaic, Black Speech, Valinorean, and several dialects of Elvish. He wrote,

You must remember that these things were constructed deliberately to be personal, and give private satisfaction — not for scientific experiment, nor yet in expectation of any audience.

The Elvish languages, and Qenya (later Quenya) in particular, were thus a way for Tolkien to express his individual taste in languages. As has been discussed many times elsewhere, Qenya was strongly influenced by Tolkien's attraction to the Finnish language. In early Qenya for example, the word for “twenty-three”, his age at the time, was *leminkainen*, quite similar to Lemminkäinen, one of the major heroes of the Finnish epic, the *Kalevala*. Similarly, Goldogrin, the Gnomish language of the Noldor, was heavily influenced by Tolkien's love of Welsh. There is no question that the Elvish languages represent the most complicated such creation ever seen. Not only did Tolkien devise Qenya and Goldogrin, but also a common proto-language from which those two were (within the mythology) derived, and hints of several other related Elvish dialects.

Closely bound up with the Elvish languages was Tolkien's own emerging mythology, recorded in the *Book of Lost Tales*. In *A Secret Vice*, he wrote

... for perfect construction of an art-language it is found necessary to construct at least in outline a mythology concomitant. Not solely because some pieces of verse will inevitably be part of the (more or less) completed structure, but because the making of language and mythology are related functions ... The converse indeed is true, your language construction will *breed* a mythology.

So closely bound were the languages and myth that it is impossible to tell where a phrase or word in the language inspired a new part of the story, and where the languages were expanded or changed to suit the tale.

Unlike a practical language like Esperanto, in which stability is (as Tolkien himself observed) critically important to its goal of widespread propagation, Tolkien's languages were dynamic and changed as his own tastes changed and, indeed, as his mythology of Arda itself grew and evolved. “There is no finality in linguistic invention and taste,” Tolkien wrote in 1932, and his own languages demonstrated that dramatically. But Tolkien's private game took a different turn when his fiction was published. In *The Hobbit*, there are a few hints of the Gnomish language — names like Orcrist, Glamdring, and Elrond, with English meanings given for the two weapons. *The Lord of the Rings*, however, entailed the publication of dozens of such names, and examples of complete sentences and even poetry in both Quenya and Sindarin. In fact, the names and relationships of Sindarin and Quenya themselves changed during the writing of the novel, another example of how the mythology and languages influenced one another reciprocally.

The publication of so much Elvish had two profound effects. The first was that Sindarin and Quenya became essentially “frozen”. With few exceptions, the names and interpretations that had appeared in print were no longer subject to revision, and had to be considered definitive. To Tolkien, this was just a new feature of the game. Previously, if a word was changed or added, the existing languages were retroactively modified, sometimes extensively, to accommodate the change. But after publication, whenever he devised a new grammatical construct or vocabulary element, he felt bound to make sure it conformed to the published material, even when this was inconvenient.

The second effect was that the game was no longer private. Fans of the books quickly learned to write (at least in English) using Tolkien's Cirth and Tengwar, and began their own linguistic game, that of reconstructing the Elvish languages based on the “linguistic evidence” that appeared in *The Lord of the Rings*. Tolkien, for as long as his time and energy permitted, encouraged and even participated in this activity. He would answer language-related inquiries<sup>[3]</sup>, and prepared a detailed analysis of two Elvish poems for publication with the *Road Goes Ever On* song-book. As a result, Elvish linguistics became its own sub-fandom within organized Tolkien fandom. The journal *Parma Eldalamberon* first appeared under the auspices of the Mythopoeic Society in September, 1971 and contained articles on writing English using the Tengwar and on the formation of

plurals in Sindarin. The journal is still irregularly published; the most recent issue contained the first publication of Tolkien's Quenya Lexicon. Many other journals relating to Tolkienian linguistics have appeared over the years, and with the rapidly-expanding use of the Internet, we now see electronic mailing lists and dozens of Web pages devoted to this esoteric field. One can even find translations into Elvish such as this Sindarin couplet by Ryszard Derdzinski:

*Er-chorf hain torthad bain, Er-chorf hain hired,  
Er-chorf hain toged bain a din fuin hain nuded.*

In all likelihood, there are some thousands of Tolkien fans around the world who, like the herb-master in the Houses of Healing, “know somewhat of the Valinorean<sup>[4]</sup>.”

With the publication of the *Silmarillion*, *Unfinished Tales*, and each volume of *The History of Middle-earth*, more of Tolkien's linguistic invention has been revealed. Nevertheless, even Quenya, the most well-documented of Tolkien's languages, will never be fully known. Nobody can hope to speak Quenya fluently because neither its vocabulary nor grammar is complete — Tolkien never intended for them to be! Nor is there ever likely to be an official Academy of Elvish that can expand and establish some kind of “canonical” Quenya or Sindarin that everyone can agree upon. In a private correspondence, one professor of linguistics expressed his personal dissatisfaction with Elvish as an area of study:

Elvish satisfies a very different need, I think. In some ways, it strikes me as studying Latin. The language is basically dead. It exists in fragments as a fascinating puzzle, but it's not going anywhere. Klingon, on the other hand ...

### ***tlhIngan Hol: The Warrior's Tongue***

Perhaps the most profound effect of the prominence of the Elvish languages in Tolkien's hugely popular work was that it made glossopoeia respectable. Indeed, it seems that fantasy and science fiction works in the post-Tolkien milieu practically require the appearance of some exotic language spoken by alien or mythic races, or at least some systematic phonological structure in the names of people and places. One can now find several Web pages devoted to glossopoeia, or “conlangs” as such constructed languages are sometimes called.

It was in this post-Tolkienian world that Paramount and Gene Roddenberry created the *Star Trek* motion pictures of the 1970s. The first film had a short subtitled dialogue among the Klingons, as well as a snippet of Vulcan dialogue, but these were *ad hoc* creations, not part of any systematic language. For the 1982 *Star Trek* film, *The Wrath of Khan*, the studios were looking for a linguist to construct a few lines of Vulcan dialogue and recruited one Dr. Mark Okrand, a linguist with whom a producer's secretary happened to be acquainted. It represented a few days' work, but the producers called upon Okrand again for the somewhat more extensive Klingon dialogue in the 1984 film, *The Search for Spock*. Unexpectedly, and perhaps himself inspired by Tolkien's work, Okrand

created an extensive phonology, grammar, and lexicon for the Klingon language, and even retro-fitted the haphazard speech from the first film into his language as “clipped” Klingon, a battle dialect. The first edition of *The Klingon Dictionary* was published in 1985, and has had several reprintings (including updates based on additional material appearing in later films).

In a sense, Klingon is a linguistic joke. It disobeys certain rules recognized as human language universals by linguists, and its Romanized orthography uses upper and lower case letters in a most idiosyncratic manner. As an example of the language, here once more is the familiar couplet, rendered into Klingon by Ivan Derzhansky:

*Hoch SeHmeH wa' Qeb 'ej bIH maghmeH wa' Qeb,  
Hoch qemmeH 'ej ramDaq bIH baghmeH wa' Qeb.*

With the many harsh aspirants and glottal consonants, the Klingon language would likely have struck Tolkien as an Orkish “brutal jargon,” and indeed does have superficial phonological resemblances to Black Speech.

The Klingons, however, are a much more richly depicted culture than Orcs, and have captured the imagination of many viewers. Consequently, *The Klingon Dictionary* has sold hundreds of thousands of copies, a figure which usually leads to rather inflated numbers claimed for the number of Klingon “speakers”. There are instructional language tapes available, and the Klingon Language Institute even produced a Klingon version of *Hamlet* not long ago, largely as a result of a joke in a *Star Trek* film<sup>[5]</sup>. In the case of Klingon, the popularity can be attributed to the mythology that produced it: the mythical future world of *Star Trek*. While only a small number of people can actually speak it fluently<sup>[6]</sup>, it is nearly certain that there are a large number of fans who can, with the aid of the dictionary and grammar, construct a grammatical Klingon phrase or sentence, or who have memorized some of the “useful phrases” such as “Surrender or die!” (*bljehbe'chugh vaj bIHegh*) — almost certainly more than the number of people who can do the same with Quenya or Sindarin.

### ***The Languages of Myth***

All three of these invented languages have had considerable success in their own rights. Perhaps to understand why, we can compare the “cultures” associated with Esperanto, Elvish, and Klingon. The stereotypical Esperantist is a slightly naïve idealist who sees Esperanto as a way of increasing the brotherhood of mankind through improved communication, and tries to correspond with pen-pals in as many countries as he or she can. The stereotyped student of Elvish is inspired by a language in which one routinely says things like, “a star shines on the hour of our meeting,” and may write Elvish poetry filled with natural imagery about oceans, forests, trees, rivers, and clouds. The Klingon speaker enjoys the dark irony of a language in which the standard greeting translates as, “what do you want?” and even “I love you” is expressed in a guttural phrase like *qamuSHa*<sup>[7]</sup>. While this is obviously a too-facile characterization, we can see that each of these languages fulfills some need (albeit not necessarily practical) of its community:

aesthetically, politically, literarily, or indeed, mythically. They enjoy unusual success out of the hundreds of glossopoeic inventions that have doubtless occurred in the past, because they touch some part of the human linguistic facility in ways that other efforts have not.

### *Other References*

There are many sources on the Web for information about Esperanto. In North America, a good starting point is [The Esperanto League for North America](#), while those in other countries might look at [The Multi-lingual Esperanto Information Center](#). Two good URLs to find out more about Elvish are [Resources for Tolkienian Linguistics](#) and [Ardalambion](#). The leading organization for Klingon is [The Klingon Language Institute](#). There are dozens of other conlangs that you can read about on the Web, including the logical language Lojban and the Tsolyani language from the fantasy role-playing world of Tekumel. One useful starting point is Richard Kennaway's [Constructed Languages List](#), which has an astonishing number of links and thumbnail descriptions.



Finally, the author gratefully acknowledges the article by Patrick Wynne and Arden Smith, *Tolkien and Esperanto*, which appears in issue 17 of the journal [Seven](#).

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<sup>[1]</sup> including Zamenhof's own translation of Shakespeare's *Hamlet*.

<sup>[2]</sup> The first page of this notebook was exhibited by the Bodelian Library as part of a Tolkien centenary exhibition in 1992.

<sup>[3]</sup> An important source of information about Quenya nouns is the so-called “Plotz Declension”, a letter Tolkien wrote to Richard Plotz showing standard Quenya noun declensions.

<sup>[4]</sup> and who know that the herb-master was a bit mistaken in referring to Quenya as ‘Valinorean.’

<sup>[5]</sup> although many agree that the play is better in the original Esperanto.

<sup>[6]</sup> The head of the Klingon Language Institute has said that he does not know of a hundred people who can speak the language fluently, although the criteria for judging fluency are necessarily nebulous.

<sup>[7]</sup> If you really like stereotypes, the Esperantist is a 1940s-style leftist; the Elvish scholar is a 1960s hippie, and the Klingon speaker is a biker in black leather.