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Seminar in Constructed Languages

Tlon
Final

1. Introduction

Tlon is a semi-constructed language. It was originally thought to be related to similar Semitic languages, from its time period, but since Jorge Luis Borges' journalistic exposé *Tlön, Uqbar, Orbis Tertius* it's historical credence has been called into doubt. Borges claimed that the language was a fabrication, a network of inserted material in books and museums, instead of a true spoken language contemporary with Ancient Persian.
There seems to be evidence in both directions. Some of the material one thought to be indisputable evidence of Tlon's existence has now been proven to be forgery. But new primary materials continue to surface, even in otherwise respected archaeological expeditions regarding nearby cultures. Unless it is accepted that the Tlon conspiracy existed on an unimaginable scale there must be some reality to the language and culture, even if it has been adulterated by some form of historical tampering.

Tlon culture is a massive and poorly understood system. It's people were an insular island community, somewhat more primitive than their historical neighbors because of their reluctance to open the lines of communication and trade which would have brought advances in culture and technology. They were preoccupied with religious concepts, which were the one thing they borrowed liberally (and not very accurately) from their neighbors.
Other parts of the culture show evidence of being constructed at some later date. The only calendar system currently understood for Tlon is based around intersecting historical cycles, and although it is powerful enough to indicate historical periods accurately, it cannot always specify current dates in a reasonable way. Even on documents which were clearly dated ambiguously there is no attempt to offer more information or give some disambiguating context. Such a system would have been impractical for everyday administrative use,

The language follows the same pattern at the culture. Some aspects seem too bizarre to have possibly have developed naturally, while others are too irregular and detailed to be the likely work of a forger. Tlon's morphological system in particular was once thought to be brutally synthetic and complex. However recent work, coming from the field of codebreaking instead of linguistics, has shown it to have a strong regular structure. Albeit one which has never been found in any other human language, and which does not seem to lend itself to human language learning faculties. The structure is based on affixes being pronounced *simultaneously* with the words they modify, instead of pre-, post- or circumfixed as in other languages.
The historical aspects of the language, however, seem fairly natural, and consistent in ways which would be unlikely for a forgery. Clear signs of historical changes to the phonetics and writing system happen consistently across documents. Discovered signs of borrowing from other languages have in some cases preceded the discovery of the borrowed documents or words in the *original* language. The case marking system and pronouns do not exhibit the regularities usually found in constructed language, but neither are they totally random.

This essay does not intend to weigh in on the current controversies surrounding the language's origin, simple to describe what is currently understood about the language and its cultural surroundings. Whether these things represent actual reality hundreds of years ago, or simply the frivolous inventions of a group of conspirators in recent times is not our concern. The reality is that the language does exist in some form, and is deserving of study and interest, even if only to better understand the grip it has taken on current cultural imagination.

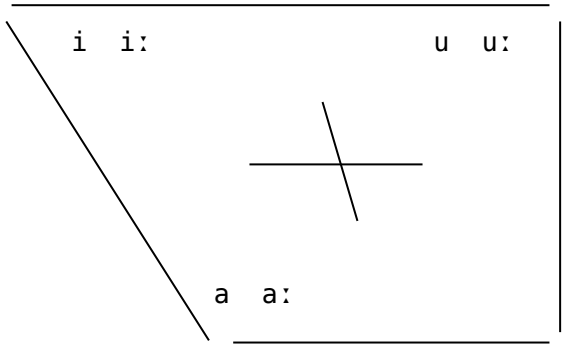
2. Phonology

2.1. Phoneme inventory

Consonants

	labial / labiodental	alveolar	post alveolar	alveo-palatal	palatal	velar	uvular	glottal
ejective	pʼ	tʼ	ʃʼ			kʼ	qʼ	
plosive	p b	t d				k g	q G	ʔ
fricative	f	s z	ʃ ʒ		ç ʝ	x ɣ	χ ʁ	
affricate			tɬ dɮ	tʃ dʒ				
nasal	m			ɲ			ɴ	
approx.					j			
lateral		ɬ						
trill							ʀ	

Vowels



2.2. Phonotactics

Construction Rules:

word → syllable (syllable (syllable ...))

Open class words tend to be disallabic, although trisyllabic and longer words are possible. Most closed class words are monosyllabic.

syllable	→	onset nucleus coda
nucleus	→	i u a iː uː aː
onset	→	C_1 C_2 C_3
	→	C_2 C_1 C_3
	→	C_1 C_2
	→	C_1 C_3
	→	C_2 C_3
	→	C_2 C_1
	→	C_3 C_3
	→	C_1
	→	C_2
	→	C_3
	→	∅
coda	→	C_3 C_2 C_1
	→	C_3 C_1
	→	C_1 C_3
	→	C_2 C_3
	→	C_1
	→	C_2
	→	C_3
	→	∅
C_1	→	nasals / approx. / lateral / trill
C_2	→	fricative / affricate
C_3	→	ejective / plosive, (not ʔ)

2.3. Morphophonology (aka things gets weird)

Tlon morphology does not use affixation. Instead words are derived and inflected with sinfixes (sin = with). Sinfixes are a series of specified places of articulation which are 'pronounced' simultaniously with the word, changing the places of articulation for its consonants.

There are four major groupings of places of articulation for sinfixes: front, mid, back, and no articulation, listed here as 1, 2, 3, and 4.

Compare with the IPA chart and notice where things have been shifted. Especially in group 2 there appears to have been a general shift toward more sonorous phonemes.

Conspicuously absent phonemes are noted with a _.

1.	2.	3.	4.
p' t' p b t d f _ s z m ɬ	ʃ' _ ʃ ʒ ç ʝ tɬ dɮ tʃ dʒ ɲ j	k' q' k g q G x ɣ χ ʁ ɴ ʀ	ø

Every word has an root form which expresses the manner, voicing, and subplace (first of second column of a grouping). These underlying representations can be thought of as being unspecified for major place grouping. The roots will be written here as though they were articulated in group 3 since it is the most fully specified. but this is a representation choice and does not represent any underlying reality. Roots are never produced in isolation.

Roots always have syllables of the form CCCVCCC, although many of those syllables are reduced to ∅ in the surface form.

1 `k'kχ aʀχɣ` CAT.ROOT
`432 214` DEF.SG.NOM

k'	k	χ	a	ʀ	χ	ɣ
[+none]	[+back]	[+mid]	[+mid]	[+front]	[+none]	
	k	tʃ	a	j	s	

`ktʃajs` CAT.DEF.SG.NOM “the cat”

2 `χʀgak'ʁʀ` MOUSE.ROOT
`432 2 14` NOUN.SG
`ʀʒaʃ'z`
`ʀʒaʃ'z` “mouse”

3 `χʀgak'ʁʀ` CAT.ROOT
`433 2 34` NOUN.PL
`ʀgaʃ'ʁ`
`ʀgaʃ'ʁ` “mice”

2.3.1. Restriction Rules:

Specific morpological rules

After morphological change (moving from one column to another) some sounds land on absent phonemes (_ in the chart above.) In those cases.

```
ɕ' → ʃ' /
v → f  /
```

4	ʀɣquɣqˈʀ	DOWN/LOW.ROOT
	341 42 3	ADJECTIVE SINFIX
	ʀ tu ɕˈʀ	
	ʀtuʃˈʀ	“low”

Some of the obstruent phonemes in class 2 are more sonorous than the corresponding phonemes in classes 1 and 3. The class can be thought of as having a simpler underlying structure and undergoing some phonological change to become more sonorous.

possible underlying forms for class 2

	post alveolar	retroflex	alveo-palatal	palatal
ejective	ʃˈ			
plosive		ʈ ɖ		c ɟ
fricative	ʃ ʒ	ʂ ʐ		ç ʝ
affricate	tɬ dɮ		tʃ dʒ	

fricatives go to affricates, and move slightly forward

```
ʃ → tɬ /
ʒ → dɮ /
ç → tʃ /
ʝ → dʒ /
```

plosives go to fricatives, retroflexes move slightly forward

```
ʈ → ʃ /
ɖ → ʒ /
c → ç /
ɟ → ʝ /
```

Other phonological rules:

Voicing before nasals

[+ejective] → [-ejective +voiced] / _ [+nasal]
[+plosive] → [+voiced] / _ [+nasal]
[+fricative] → [+voiced] / _ [+nasal]

5	gk'ɴiqχg	ROOT
	432 2 14	NOUN.SINFIX
	k'ɲiçs	
	b'ɲiçs	"river"

6	qxɴugkɴ	ROOT
	432 214	NOUN.SINFIX
	xɲuʒp	
	ɣɲuʒp	"without"

Glottal epenthesis to break up illegal consonant clusters

∅ → ʔ / C _ C,
where CC is an illegal cluster (violates the construction rules above) formed by morphological deletion

7	ʀxʀigχ ʀ	ROOT
	341 42 3	SINFIX
	ʀ ɬi tʃʀ	
	ʀʔɬitʃʀ	"pale"

Deletion for geminate consonants

$C_\alpha\ C_\alpha \rightarrow C_\alpha$ /

8	ʀgguk'xʀ	DOG.ROOT
	433 2 34	NOUN.PL
	gguʃ'x	
	guʃ'x	"dogs"

Vowel harmony for long vowel clusters

$V_\alpha\ V_\beta \rightarrow V_\beta$: /

9	stɬu	izɣt	disyllabic root with all inner consonants deleted
	stɬi:zɣt		"courier"

Vowel reduction between nasals

[+vowel] → ə / [+nasal$_\alpha$] _ [+nasal$_\alpha$]

10	xgɴiɴgg	ROOT
	432 224	SINFIX
	gɲiɲʒ	
	gɲəɲʒ	"heat"

2.4. Stress

Stress is regular and primarily follows Latin patterns, with some alterations around long vowels.

notation:

/ = primary stress
\ = secondary stress
˘ = no stress

Primary stress:
Two syllable words take initial stress.

```
  /
CVC CVC
```

Three or more syllable words take penultimate stress.

```
      /
CVC CVC CVC
```

If there is a single long vowel it takes primary stress regardless of word length.

```
  /
CV:C CVC CVC
```

If there are two long vowels (rare) then the first takes primary stress.

```
      /
CVC CV:C CV:C CVC
```

if there are three or more long vowels (very rare) then the penultimate takes primary stress.

```
            /
CVC CV:C CV:C CV:C
```

Secondary stress is iambic and lines up with primary stress.

```
  \   ˘   /
CVC CVC CV:C

  /   ˘   \
CV:C CVC CVC

  ˘   \   ˘   /   ˘
CVC CVC CVC CVC CVC

  \   ˘   \   ˘   /   ˘
CVC CVC CVC CVC CVC CVC
```

2.5. Word Classes

Word classes in Tlon are not particularly unusual. Derivational morphology is very productive, with many roots being put to work in all the multiple open classes. As a rule closed class words are monosyllabic, while open class words are disyllabic or higher. Some common open class words are also monosyllabic.

Closed
- Adposition
- Conjunction
- Pronoun
- Number

Open
- Noun
- Verb
- Adjective/Adverb
  - (there appears to be some bleed between these two categories)

Open class example

11	xɴq'iGχɴ	SLOW.ROOT
	432 442	NOUN
	ɴʃ'iɟs	
	ɴʃ'iɟs	“slowness”
12	xɴq'iGχ ɴ	SLOW.ROOT
	144 12 2	VERB
	f idtʃɲ	
	fidtʃɲ	“slowed”
13	xɴq'iGχ ɴ	SLOW.ROOT
	341 42 3	ADJECTIVE/ADVERB
	x t'i tʃɴ	
	xt'itʃɴ	“slow/slowly”

3. Syntax
3.1. Noun Phrases
The final form of the noun phrase is given in 8.1

3.1.1. Sinfixes
Noun phrases are marked for definiteness, indefiniteness, and demonstratives; Singularity, plurality, and in some cases duality; and as subject/agent, direct object and indirect object. Tlon uses highly synthetic sinfixes to mark combinations of these factors.
These combinations are somewhat, but not entirely, regular.

Nominative

	singular	dual	plural
demonstrative	422 214	423 334	423 234
definite	432 214	433 334	433 234
indefinite	432 224	-	432 224

Accusative

	singular	dual	plural
demonstrative	421 214	422 334	422 234
definite	431 214	432 334	432 234
indefinite	431 124	-	431 124

Dative

	singular	dual	plural
demonstrative	433 314	421 334	421 234
definite	432 314	431 233	432 233
indefinite	431 324	-	432 324

14 k'kχ aʀχɣ CAT.ROOT
4 32 214 DEF.SG.NOM
kt∫ajs CAT.DEF.SG.NOM
“the cat”

15 gʀχiq'ɣk' TREE.ROOT
423 2 34 DEM.PL.NOM
jχi∫'ɣ TREE.DOM.PL.NOM
“those trees”

16 χʀguʀxq FISH.ROOT
432 334 DEF.DUAL.ACC
ʀʒuʀx FISH.DEF.DUAL.ACC
“the (two) fish”

17 q'ʁk'uʀʁ k' FLOWER.ROOT
4 31 12 4 INDEF.SG.ACC
ʁp'uɬdʒ FLOWER.INDEF.SG.ACC
“flower”

3.1.2. Adjectives

Adjectives and adverbs take the sinfix 441 423

18 ʁxɣuʁʁ k DOWN.ROOT
441 42 3 A
ɣu dʒk
ɣudʒk “low”

Adjectives, and modifiers in general, come after the head noun.

19 χdʒadʒf kt'utɬg
CAT.DEF.SG.NOM BLUE.A
“the blue cat”

3.1.3. Quantifiers

Numbers and more generic quantifier like 'many' are treated similarly to adjectives. Although multiple adjectives are permitted, only one quantifier is allowed per noun phrase,.

20 ʁʃ'ujz ma
FLOWER.DEF.SG.NOM ONE
“the one flower”

21 ʁk'uʀʁ uɬ
FLOWER.DEF.DUAL.NOM TWO
“the two flowers”

Indefinite nouns cannot be dual, and instead take the plural suffix.

22 ʁʃ'ujdʒ uɬ
FLOWER.INDEF.PL.NOM TWO
“two flowers”

23 ʁk'ujʁ ʒik
FLOWER.DEF.PL.NOM THREE
“the three flowers”

24 ʁʃ'ujdʒ taz
TREE.INDEF.PL.NOM MANY
“many trees”

In noun phrases with multiple modifiers the quantifier must come immediately after the noun. Other adjectival modifiers can be ordered arbitrarily.

25 ʀgujx uɬ ʀt'içk qsuɲk
FISH.DEF.PL.NOM TWO WET SHINY
“two wet shiny fish”

26 *ʀgujx qsuɲk ʀt'içk uɬ
FISH.INDEF.PL.NOM SHINY WET TWO
“*two wet shiny fish”

3.1.3.1. Numbering
The numbering system in Tlon is base 12.

0	dag
1	ma
2	uɬ
3	ʒik
4	iɴ
5	tɬimk'j
6	k'χu
7	aʃ
8	Gix
9	faz
10	kɣiɣ
11	ɲu
12	ɟup
144	ɟupʀ
1728	ɟupmaʀ

3.1.4. Possessives
Possession is dealt with using a prepositional “of X” construction with a special possession marker ɣq'ɴuq'gq.
which agrees with the possessee. The possessor is inflected as nominative. The possessive construction comes after the noun it modifies, and after any quantifiers, but before adjectives and relative clauses.

27 qɲaʃz q'ɲuʃ'b ʒaj
HOUSE.DEF.SG.NOM POSS 1.SG.NOM
“my house”

28 ɲajpʃ' ajtɬ ʀdʒiɲq q'muʃ'b qbatɬ
TOOK.2 3.PL.NOM MONEY.DEF.PL.ACC POSS 3.SG.ACC
“they took his money”

29 ʀçukz q'ɲuq'b ʁʃiʃ's zidɮʒm qʒaʀtɬ gajx
SPEECH.DEF.SG.DAT POSS GENERAL.DEF.SG.NOM GAVE.3 3.PL.ACC 1.PL.NOM
“we gave them the general's speech”

3.2. Grammatical Relations

The arguments to a verb in Tlon are marked for the number of arguments it takes. (See 5.1 for the table of verb sinfixes)

The system is nominative/accusative

30 k'ʀNUNxk BOY.ROOT
1 32 214 DEF.SG.NOM
p'ɬɲuɲf BOY.DEF.SG.NOM

31 k'ʀNUNxk BOY.ROOT
1 31 214 DEF.SG.ACC
p'ɬmuɲf BOY.DEF.SG.ACC

32 p'ɬɲuɲf puɬʃ'tɬ
BOY.DEF.SG.NOM CRIED.1
"The boy cried"

33 p'ɬmuɲf dʒatɬpç k'tɬaʒz
BOY.DEF.SG.ACC ATE.2 LION.DEF.SG.NOM
"The lion ate the boy"

The patient takes accusative marking. Word order remains free in transitive clauses.

34 ajtɬ k'p'uʃf ʃ'uɲzç
3.SG.NOM WALL.DEF.SG.ACC HIT.2
"He hit the wall"

35 k'p'uʃf ajtɬ ʃ'uɲzç
WALL.DEF.SG.ACC 3.SG.NOM HIT.2
"He hit the wall"

36 ʃ'uɲzç ajtɬ k'p'uʃf
HIT.2 3.SG.NOM WALL.DEF.SG.ACC
"He hit the wall"

To indicate a change in grammatical relations the nominative-accusative inflections are reversed.

37 qbatɬ ʃ'uɲzç k'ʃ'uʃf
3.SG.ACC HIT.2 WALL.DEF.SG.NOM
"The wall hit him"

3.2.1. Pronouns
Pronouns are highly irregular, but seem to be derived from the root ʁqgaʀxχ.

Nominative

	1	2	3
singular	ʒaj	ɕaj	ajtɬ
dual	qgaʀx	ɕgaʀx	-
plural	gajx	ɕgajx	qajtɬ

Accusative

	1	2	3
singular	qbaj	ɕajf	qbatɬ
dual	qʒaʀx	ɕʒaʀx	-
plural	qʒajx	ɕʒaj	qbaɬtɬ

Dative

	1	2	3
singular	ʒaʀf	qaʀf	qbaʀ
dual	qbajxχ	ɕbaʀx	-
plural	qajx	ɕbajx	qʒaʀtɬ

38 zidɮʒm ʒaj ɕʒaʀx qʒaʀtɬ
GIVE.3 1.SG.NOM 2.DUAL.ACC 3.PL.DAT
“I gave them to you (2)”

3.3. Word Order
Surface word order in Tlon is very free, with more discourse-salient terms tending to occur at the beginning of a phrase. If there is a definite underlying word order it has not yet been determined.

39 ajtɬ paptɬdɮ
3.DEF.SG DIE.1
“*She* died”

40 paptɬdɮ ajtɬ
DIE.1 3.DEF.SG
“She *died”*

A sentence with no specific emphasis could use either construction.

Even in more complex phrases word order is free.

41 χdʒadʒf tʃaʃ'pç kfidʒf
CAT.DEF.SG.NOM SEE.2 KING.DEF.SG.ACC

"The cat saw the king"

42 tʃaʃ'pç kfidʒf χdʒadʒf
SEE.2 KING.DEF.SG.ACC CAT.DEF.SG.NOM
"The cat saw the king"

43 kfidʒf χdʒadʒf tʃaʃ'pç
KING.DEF.SG.ACC CAT.DEF.SG.NOM SEE.2
"The cat saw the king"

3.3.1. Dative
The dative is used for obligatory third arguments to verbs. The semantic role of this argument is controlled by the verb and varies among verbs. Not all verbs can take a dative argument.

44 qbatɬ zidɮʒm ajtɬ qbaɬtɬ
BOOK.DEF.SG.DAT GIVE 3 1.SG.NOM 3.PL.ACC
"She gave them the book"

45 ajtɬ χɬiʃ'b mudɮjs χjagt
3.SG.NOM NOTE.DEF.SG.ACC PUT.3 BOTTLE.DEF.SG.DAT
"He put the note in a bottle"

46 ɬiçdʒs χdʒadʒf qbatɬ χtɬiʒz
INTRODUCE.3 CAT.DEF.SG.ACC 3.SG.DAT COINCIDENCE.INDEF.SG.NOM
"Coincidence introduced the cat to him"

3.4. Question Formation
3.4.1. Yes/No questions are formed by the addition of a query marker dʒaj to the sentence. The verb and the other arguments of the sentence are undisturbed. The word order remains free and the question marker can be inserted at any point an argument could be. (i.e. it cannot break up the internal structure of VPs (section 3.5.7) or NPs. (section 3.8.1))

47 dʒaj ajtɬ ɲadɮp'ç qmaʃz
Q 3.SG.NOM COME.2 HOUSE.DEF.SG.ACC
"did he come to the house?"

48 çaj dʒaj tʃitʃp'ʒ
2.SG.NOM Q HEAR.2
"did you hear?"

3.4.2. WH questions are formed by the replacement of one element of the sentence with the query root q'χʁaʀgx.The query root is inflected as though it were the missing argument. The inflection defaults to indefinite singular for unknown NPs, and indicative perfective for unknown verbs.
These questions are differentiable from yes/no questions since in a yes/no question the query marker is in addition to all required arguments, but in an information question the query marker replaces one of the required arguments.

49 χdʒajʒ mafʃ'ç uf qmaʃz
Q.INDEF.SG.NOM [COME.1 [TO HOUSE.DEF.SG.NOM]]
who came to the house?

50 ajtɬ t'aɬʒtɬ
3.SG.NOM Q.INDIC.PERF.1
he did what?

51 ajtɬ ɲadɮp'ç jupʁ χzaɬʒ qmaʃz
3.SG.NOM [COME.2 [AT-TIME Q.INDEF.SG.ACC]] HOUSE.DEF.SG.ACC
when did he come to the house?

52 ajtɬ ɲadɮp'ç χzaɬʒ
3.SG.NOM COME.2 Q.INDEF.SG.ACC
he came where?

53 ajtɬ ɲadɮp'ç tuzk χdʒajʒ qmaʃz
3.SG.NOM [COME.2 [BECAUSE Q.INDEF.SG.NOM]] HOUSE.DEF.SG.ACC
why did he come to the house?

54 ɲadɮp'ç q'zaʒx ajtɬ qmaʃz
COME.2 Q.A 3.SG.NOM HOUSE.DEF.SG.ACC
how did he come to the house?

3.5. Verbs

3.5.1. Sinfixes:

1 argument

	indicative	conditional	subjunctive	imperative
perfect	144 122	144 123	144 132	144 133
imperfect	344 223	344 132	344 231	-

2 arguments

	indicative	conditional	subjunctive	imperative
perfect	244 212	244 213	244 211	244 231
imperfect	244 123	244 122	244 312	-

3 arguments

	indicative	conditional	subjunctive	imperative
perfect	144 221	144 213	144 211	144 231
imperfect	344 213	344 112	344 232	-

55 χq'giχk'g HEAR
144 12 2 1.INDIC.PERF
s isʃ ʒ
sisʃʒ HEAR.1.INDIC.PERF[1]

[1] Verb glosses will not be marked for indicative or perfective unless it is specifically relevant. It makes the glosses too

3.5.2. Adverbs

Adverbs take the same marker as adjectives, and modify the verb as part of a VP (section 3.5.7).

56 muɬdʒʃ' qbajk'
FALL.1 SPEED.A
"fell fast"

57 t'iztʃtʃ gpujɣ
LAUGH.1 MANIC.A
"laughed maniacally"

58 paptɬdɮ ɴt'ujk'
DIE.1 TRAGEDY.A
"died tragically"

3.5.3. Complement Arguments

Some verbs require complete phrasal arguments instead of noun phrase arguments. There arguments have the same structure as full sentences, with the complement ɢʀkikɣɴ inserted at the head, inflected as though it was the head of a noun phrase. Within the inner phrase the complement must come first but ordering is otherwise free. In the outer phrase the complement phrase it treated like any other VP or NP.

59 ɢʀkikɣɴ COMP.ROOT
431 124 INDEF.PL.ACC
ʀpipdɮ COMP.ACC

60 ʀpipdɮ ajtɬ fuftʃʃ' qajtɬ ʃuʃsʃ
[COMP.ACC 3.SG.NOM SING.1] 3.PL.NOM SAID.2
"They said that he sang"

61 tʃaʃ'tʒ ʀpipdɮ ʀdʒuɣt' zidɮʒm qbatɬ ajtɬ ʒaj
BELIEVE.2 [COMP.ACC MUSIC-BOX.DEF.SG.DAT GIVE.3 3.SG.ACC 3.SG.NOM] 1.SG.NOM
"I believe that he gave her the music-box"

62 ktʃajχ ɲudʒp'ʃ' ʀʃiʃdɮ ʁutʃdʒχ qɴudʒɣ qɴuqg q'ɲuʃ'b
PERSON.DEF.PL.ACC FRIGHTEN.2 [COMP.NOM INVADE.IMPERF.1 ENEMY.DEF.PL.NOM POSS 1.PL.NOM]
"that our enemies are invading frightens the people"

unwieldy. ex: KILL.2.PERF.INDIC will be written KILL.2

3.5.4. TAM

3.5.4.1. Tense

Tlon has no tense marking.[2] Tense are optionally given with time words (see section 9.) or with the prepositions “at-time.” or “time-range” (see section 7.)

63 ajtɬ puɬʃ'tɬ
3.SG.NOM CRY.PERF.INDIC.1
“He cried/cries/will cry”

3.5.4.2. Mood

Tlon has 4 moods: indicative, conditional, subjunctive, and imperative. Indicative is by far the most common.

The indicative if the general tense used in everyday speech. It indicates that something is simply true.

64 ʃiɲfj k'sadɮs çaj
READ.2.PERF.INDIC BOOK.DEF.SG.ACC 2.SG.NOM
“you read the book”

The conditional refers to an evens which depends on another event.

65 ʃiɲfʀ k'sadɮs çaj
READ.2.PERF.COND BOOK.DEF.SG.ACC 2.SG.NOM
“you would have read the book”

The subjunctive refers to a potential event, but does not specifically designate that the event depends on something else the way the conditional does.

66 ʃiɲfɬ k'sadɮs çaj
READ.2.PERF.SUBJ BOOK.DEF.SG.ACC 2.SG.NOM
“you were to read the book”

Th imperative turns a statement into a command.

67 ʃiɲxɬ k'sadɮs çaj
READ.2.PERF.IMPERATIVE BOOK.DEF.SG.ACC 2.SG.NOM
“(You) read the book!”

3.5.4.3. Aspect

Tlon verbs take perfect and imperfect aspect over each of the four moods. Imperative mood cannot take imperfect aspect.

68 ʀput'tɬ qajtɬ tʃafʃ'q'
INFORMATION.INDEF.PL.ACC 3.DEF.PL WANT.IMPERF.INDIC.2
“We want information”

69 ʀput'tɬ qajtɬ safʃ'ʃ'
INFORMATION.INDEF.PL.ACC 3.DEF.PL WANT.PERF.INDIC.2
“We have wanted information”

[2] The English glosses for examples in this paper are given with tense (mostly past) to maintain clarity.

3.5.5. Valence

3.5.5.1. Increase

3.5.5.1.1. Causatives are created using the “cause” verb and the complement construction from 5.4

70 qajtɬ dʒidɮzʃ' ʁpipdɮ sut'ʃʃ' k'tʃiʃ'f
3.PL.NOM CAUSE.2 [COMP.ACC GROW.1 PLANT.DEF.SG.NOM]
“they caused the plant to grow”

71 ʁpipdɮ xçitʃɲ qfuçʁ puɬʃ'tɬ ajtɬ dʒidɮzʃ'
[COMP.ACC CHILD.INDEF.PL.NOM SMALL.A CRY.1] 3.SG.NOM CAUSE.2
“you cause little children to cry”

3.5.5.1.2. Applicatives are formed by raising the argument number of the verb. The exact meaning of the third argument is determined by the verb semantically, although it is generally a benefactive. Verbs which are already ditransitive cannot be raised further using this construction. Instead the applicative must be expressed using prepositional phrases.

Benefactive

72 ajtɬ pufʒç ɬim ʒaj k'a qjudɮb
3.SG.NOM [SING.1 [AT 1.SG.NOM] [INST SONG.DEF.SG.NOM]]
“he sang to me with a song”

73 ʃudɮbç ɬim ʒaj qɬudɮb ajtɬ
[SING.2 [AT 1.SG.NOM]] SONG.DEF.SG.ACC 3.SG.NOM
“he sang a song to me”

74 pudɮʒt ajtɬ qɬudɮb ʒaʁf
SING.3 3.SG.NOM SONG.DEF.SG.ACC 1.SG.DAT
“he sang me a song”

Instrumental

75 dʒadʒɬdʒ k'a ɣʃ'uɲf ajtɬ ʁsiʃ'f
[HIT.2 [INST SWORD.DEF.SG.NOM]] 3.SG.NOM TREE.DEF.SG.ACC
“he hit the tree with a sword”

76 zadʒjz ɣʃ'uɴf ajtɬ ʁsiʃ'f
HIT.3 SWORD.DEF.SG.DAT 3.SG.NOM TREE.DEF.SG.ACC
“he hit the tree with a sword”

Locative

77 pafɲdʒ ɬim maʁaGix gajx
[ARRIVE.1 [AT MARAGHEH]] 1.PL.NOM
“we arrived in Maragheh”

78 ʃadɮmdʒ maʀaGix gajx
ARRIVE.2 MARAGHEH 1.PL.NOM
“we arrived in Maragheh”

3.5.5.2. Decrease

3.5.5.2.1. Passives and Antipassives

A decrease in valency requires reinflecting the verb. The verb lowers its original marking for number of arguments, and one (or two) of the arguments are dropped. Since all the arguments are unambiguously case-marked this does not affect the interpretation of the sentence. The number of arguments the verb takes cannot be lowered to 0

79 fitjʒ ɴpipdʒ
CARRIED-OUT.1 MISTAKE.INDEF.PL.ACC
“mistakes were made” (by someone)

80 ʀʃ'axs zifʒɲ
TOY.DEF.PL.DAT GIVE.1
“someone gave toys to someone else”

81 zafʃ'j ajtɬ
KILL.1 3.SG.NOM
“he killed” (someone)

3.5.5.2.2. Reflexive/Reciprocal

Reflexives and reciprocals are very similar to general sentences. The argument that refers back is replaced by a reflexive marker qχʀaɴGq, and inflected normally.

82 qajtɬ dʒadɮp'j χjaɲG
3.PL.NOM KILL.2 REF.DEF.PL.ACC
“they killed themselves/each other” (ambiguous)

83 dʒitʃbç ʒaj χɬaɲd
LOVE.2 1.SG.NOM REF.DEF.SG.ACC
“I love myself”

3.5.6 Negation

Negation on a verb is expressed through the clitic -a:

84 putjça: ʒaj
VISIT.2=NEG 1.SG.NOM
“I did not visit”

3.5.7. VP Structure
The final structure of a VP is

Verb.mood.aspect(=neg)(adverb)* (PP)*[3]

85 papxdɮa: ɴt'ujk' baɣ ɴʃatʃʃ'
DIE.PERF.SUBJ.1=NEG TRAGIC.A [FROM DISEASE.INDEF.SG.NOM]
“will not die tragically of disease”

3.6. Copular Constructions

Identification uses a null copula. The first argument is marked nominative and the second is accusative, there is no verb.

86 ajtɬ kfidʒf
3.SG.NOM KING.DEF.SG.ACC
“He is the king”

Proper inclusion uses a null copula and the same nominative/accusative distinction.

87 ʁp'atʃt ajtɬ
PAINTER.DEF.SG.ACC 3.SG.NOM
“She is a painter”

Attribution uses a 'has' verb which takes two arguments.

88 jitɬsdʒ ajtɬ ɴpasʃ'
HAS.2 3.SG.NOM DISEASE.INDEF.SG.ACC
“He is sick”

Locative constructions use a locative verb ɣχχiq'gχ.

89 dɮiʃ'btʃ ʀdʒiɲt q'zadʒt
LOC.2 MONEY.DEF.PL.NOM BAG.DEF.SG.ACC
“The money is in the bag”

Existentials can only be expressed using the verb “exists.” There is no special copular construction.

90 battɬʃ ɴjatʃʃ'
EXISTS.1 TROUBLE.INDEF.SG.NOM
“There is trouble”

Possessives use a null copula and the same possessive construction used to define the noun phrase. (ɣq'ɴuq'gq) Or they used a 'has' construction.

91 ajtɬ ɣp'adɮb q'muʃ'b ʒaj
3.SG.NOM [HORSE.DEF.SG.ACC POSS 1.SG.NOM]

[3] see section 7

“It is my horse”

92 qɲiʃ'χ jitɬsdʒ qajtɬ
KNIFE.DEF.PL.ACC HAS.2 3.PL.NOM
“They have knives”

3.7. Prepositional Phrases

Prepositional phrases can modify either noun phrases or verb phrases. A prepositional phrase cannot act as argument to the verb, and verbs do not count them in the number of arguments they inflect for. A noun phrase inside a prepositional phrase takes nominative inflection.
The prepositions given here do not map entirely to their given English translations.

jupʁ	baɣ	ɴij	iʃ'	uf
at (time)	from	out	about	to

ɬim	tuzk	Gu	k'a	kif
at	because	on	INST	with

93 ɣçadɮɬ baɣ Gdʒudʒp
WOMAN.DEF.SG.NOM FROM TOWN.DEF.SG.NOM
“The woman from the town”

94 ʀçajt iʃ' jʃ'itɬp
STORY.DEF.SG.NOM ABOUT POLITICAL-UNREST.INDEF.PL.NOM
“The story about political unrest”

Notice that “ate” is only marked for 1 argument. “with us” is modifying the verb, not filling an argument position.

95 zafʃç kif gajx k'kuɲk
[EAT.1 [WITH 1.PL.NOM]] TRAVELER.DEF.PL.NOM
“The travelers ate with us”

A preposition modifying a verb must come directly after that verb. Only adverbs and time words may intervene.

96 ʁʃ'adɮm ɬuzʒç qsaɲq uf xdʒuçɬ
HOST.DEF.SG.NOM [SPEAK.1 QUIET.A [TO VISITOR.DEF.PL.NOM]]
“The host spoke softly to the visitors”

97 baftʃʃ ɴij ʁʃ'uɲf gajx
[LEAVE.1 [OUT CITY.DEF.SG.NOM]] 1.PL.NOM
“We left the city”

98 muɬdʒʃ' i q'jajʒ baɣ q'dʒitɬm gajx
[FALL.1 [TIME-RANGE FOREVER.INDEF.PL.NOM] [FROM HIGH.INDEF.PL.NOM]] 1.PL.NOM

“we fell from up high forever”

3.8. Relative Clauses

Relative clauses further modify noun phrases. They are offset on the left by a place marker `xkqiqNN`, which serves as a placeholder for the referent and is inflected in the same way. On the right of the clause there is a relative marker `ak'`. This appears to be the only significant head-final clause in Tlon. Inside the clause word order is slightly less free than in a normal sentence. The place argument must be the first element in the clause, (think of it as being topicalized) although the verb and other arguments may be ordered freely after it.

99 `χʃitɬt kçiçm ɲadɮpç ʁpudɮp' ak'`
MAN.DEF.SG.NOM [PLACE.NOM COME.2 DINNER.DEF.SG.ACC REL]
“the man who came to dinner”

100 `χdʒadʒf kçiqm ktɬidʒf zidɮʒm χfadɮd ak'`
CAT.DEF.SG.NOM [PLACE.DAT KING.DEF.SG.NOM GAVE.3 DAUGHTER.DEF.SG.ACC REL]
“the cat that the king gave to the daughter”

101 `ʁʃ'uɲf ktiçm gajx ʃuçɬç ak'`
CITY.DEF.SG.NOM [PLACE.ACC 1.PL.NOM VISIT.2 REL]
“the city that we visited”

Relative clauses on non-nominative arguments still inflect the place marker as a nominative

102 `ɲaçfdʒ qzuʃ'm kçiçm çutɬsj xtisɲ ak' ajtɬ`
KNOW.2 MONSTER.DEF.SG.ACC [PLACE.NOM STEAL.2 CHILD.PL.INDEF.ACC REL] 3.SG.NOM
“she knew the monster who stole children”

3.8.1. Noun Phrase Structure

The full structure of a noun phrase, with all possible arguments, is:

NOUN.number.definiteness.case (quantifier) (possessive) (relative clause) (adj)* (PP)*

103 `qdʒuʃ'm iɴ kçiçm qpufʃ' jitɬsdʒ ak' ɴmiçg Gu maʁaGix`
MONSTER.DEF.SG.NOM FOUR [PLACE.NOM FUR.INDEF.PL.ACC HAS.2 REL] BAD.A [FROM MARAGHEH]
“the four bad monsters who were furry from Maragheh”

3.10. Translation Example

On Tuesday, X crosses a deserted road and loses nine copper coins. On Thursday, Y finds in the road four coins, somewhat rusted by Wednesday's rain. On Friday, Z discovers three coins in the road. On Friday morning, X finds two coins in the corridor of his house.[4]

104
ʒadʒpʝ jupʁ tudj uʀ tɬatʃfdʒ ajtɬ
CROSS.2 [AT-TIME TUESDAY] AND LOSE.2 3.SG.NOM

ɣsitɬs xsaçɣ uʀ ʁçuçʀ faz ɴbaʃ'q
ROAD.DEF.SG.ACC EMPTY.A AND [COIN.INDEF.PL.ACC NINE COPPER.A]

“On Tuesday, he crosses a deserted road and loses nine copper coins.”

ʁçuçʀ iɴ ktiçm dʱitɬzɲ ɣʒiʃ'f q'muʃ'b miɲdj
COIN.DEF.PL.ACC FOUR [PLACE.ACC RUST.2 RAIN.DEF.PL.NOM POSS WEDNESDAY]

ɲutɬɬç jupʁ tɬʁudj ajtɬ
FIND.2 [AT-TIME THURSDAY] 3.SG.NOM

“On Thursday, he finds in the road four coins, somewhat rusted by Wednesday's rain.”

ɲutɬɬç jupʁ fʁidj Gu ɣtʃitɬs ajtɬ ʁçuçʀ ʒik
FIND.2 [AT-TIME FRIDAY] [ON ROAD.DEF.SG.NOM] 3.SG.NOM COIN.DEF.PL.ACC THREE

“On Friday, he discovers three coins in the road.”

ajtɬ ɲutɬɬç jupʁ fʁidj jupʁ
3.SG.NOM FIND.2 [AT-TIME FRIDAY] [AT-TIME MORNING]

Gu gçuʃf q'muʃ'b qɲaʃz q'muʃ'b ajtɬ ʁçuqʀ uɬ
[ON CORRIDOR.DEF.SG.NOM POSS [HOUSE.DEF.SG.NOM POSS 3.SG.NOM]] COIN.DEF.DUAL.ACC TWO

“On Friday morning, he finds two coins in the corridor of his house.”

[4] from Tlon Uqbar Orbis Tertius, Borges

4. Semantics

4.1. Loanwords and Backformation

Tlon has taken a number of loan words from nearby languages over time, generally through religious texts. There words are often back-formed in bizarre ways to fit into Tlon's complex inflection system. The word is reanalyzed as though it were an inflected Tlon word, and the false root is derived, often incomplete, since roots lose some of their consonants when inflected.

Tlon can only borrow words which have enough consonants to fit its dense wordshapes. This can be accomplished by borrowing from other languages with constant clusters, or by borrowing longer words and disregarding the original vowels in syllable boundaries.

Tlon borrowings are mostly from languages and words with religious significance. Very few of them are confirmed, but the few discussed by Tlon's own linguists are given here.

4.1.1. Sanskrit

हो॒त॒व्य॑म्

105 hò:tə̪ù̪jəm̃̃

“oblations must be given”	loanword
	original meaning
tfejm	Tlon interpretation
411 214	implied sinfix
?qɣeʀɴ?	backformed root
SACRIFICE.ROOT	final meaning

दे॒वा॒सु॒राः

106 dè:ʊà:sù̪rā:hă

“the gods and the demons”

dvusʀ	
411 134	Notice that this is not an existing sinfix
?Gɣuχʀ?	but it does fit the 4XX XX4 shape of nouns in general
diety.root	

र॒थ॒न्त॒रम्

107 rət̪ʰə̪ǹt̪ə̪ɾəm̃

“a kind of melody”

ʀɲatm	
432 114	
?ʀɴaqɴ?	
SONG.ROOT	

108 तद्भव

t̪ə̪dβ̪ʱəʊə

“loanword” (sic)

tdebv	
411 114	
?qGegɣ?	
LOANWORD.ROOT	

4.1.2. Old Avestan

109 frīnəmnā — loanword
“devote ourselves” — original meaning

fʀimɲ — Tlon interpretation
413 124 — implied sinfix
?xʀiNN? — backformed root
DEVOTEE.ROOT — final meaning

110 pairī-ciθīṭ
“sometime before”

p'ʀaçt
41 3 214
?k'ʀaqq?
before the 3rd century CE (When Tlon came into contact with Avestan)

111 fraśåbyō
“to inquiries”

fʀabj
413 124
?xʀagʀ?
INTERROGATION.ROOT

112 fšuyentē
“for the cattle breeder”

fçujt
412 214
?xquʀq?
CATTLE BREEDER.ROOT

113 ivīzayathā
“abandon”

vʒajt
412 214
?ɣgaʀq?
ABANDON.ROOT

114 həñdvārəntā
“rushed headlong”

ɲdaʀt
421 314
DEFEAT.ROOT

4.1.3. Old Persian

115 dūrayapiy — loanword
"extremely far" — original meaning

dʀajp — Tlon interpretation
413 214 — implied sinfix
?Gʀaʀkʔ — backformed root
EDGE OF THE EARTH.ROOT — final meaning

116 nīšādayam
"put down"

ɲ asdj
244 112 — verbal sinfix
ɴ??aχGʀ
DROP.ROOT

117 brazmaniya
"being reverent"

bʒamj
412 124
?ggaɴʀ?
REVERENCE.ROOT

4.1.4. Reinflection

The word can then be reinfected using regular Tlon morphology, although usually it can only be inflected back into the word class the initial backformation was assumed to be from. Since words of the same class drop the same syllables the incompleteness in the root corresponds only to consonants which are not pronounced.

118 ?ggaɴʀ? — REVERANCE.ROOT
432 314 — DAT.SG.DEF NOUN
gʒaɴɬ
"reverance"

119 gʒaɴɬ q'ɲuq'b çaj qbatɬ
REVERENCE.DAT.SG.DEF POSS 2.SG.NOM GIVE.3.IMPER 3.SG.ACC
"give him your reverence"

120 ?ggaɴʀ?
244 231 — 2.IMPER VERB
? aɲʀ?
* ?aɲʀ?
"revere"

121 *?aɲʀ? ajtɬ
REVERENCE.2.IMPER 1.SG.ACC
"revere me"

122 ɴ??aχ ɢʀ
244 2 31 2.IMPER VERB
ɲ atʃGɬ
ɲatʃGɬ
“drop”

123 ɲatʃGɬ ajtɬ
DROP.2.IMPER 1.SG.ACC
“drop me”

124 ɴ??aχGʀ
441 423 ADJ/ADV
?a ɟʀɬ
* ?aɟʀɬ
“dropped” (adj)

125 *χdʒadʒf ?aɟʀɬ
CAT.DEF.SG.NOM DROP.A
“the dropped cat”

4.2. Calendar System

Tlon divides time into many cycles, and does not encourage viewing time as a chronological flow except in short sections. These cycles tend to be based on natural systems or historical events, and therefore are somewhat irregular. These cycles are imprecise and do not align with each other.

4.2.1. Days
Tlon divides days into two major sections, one from sunup to sundown, and one from sundown to sunup. The length of these sections changes naturally with the seasons. Day is further divided into eight minor sections, and night is divided into four. These sections are indicated with compound words which are added to the major section. It is incorrect to specify the major section without specifying the minor one.

ɴadʒ	day	
-m		1st eigth
-uɬa		2nd eigth
-kik		3rd eight
-ɴi		4th eight
-tɬimk'j		5th eight
-χu		6th eight
-aʃ		7th eight
-ix		8th eight

ɴact'	night	
-ɴiɴ		1st quarter
-ʒiʒ		2nd quarter
-ɬu		3rd quarter
-am		4th quarter

4.2.2. Weeks

Time is divided into five day weeks which are mostly used to organize commerce and education.

Gɣitʃ	1st
bχaz	2nd
ɟit'	3rd
dʒagk'	4th
uɲG	5th

4.2.3. Synodic Months

Synodic months are related to the changing phase of the moon, which takes approximately 27 days to complete a cycle. Like days, these cycles are divided into two sections of 14-15 days each, one for waxing, and one for waning, indicated with compound words. Waxing ends which a full moon, and waning ends with no moon. synodic months do not synchronize with siderial months.

mʃ'itɬ	-ta		full moon
taba	-ta		no moon
	-daga	0 days until	
	-ism	1 day until	
	-ɬuga	2 days until	
	-ʒika	3+ days until	
	-k'j	5+ days until	
	-i	8+ days until	
	-ɟupa	13+ days until	

4.2.4. Siderial Months

Tlon has 12 siderial months of irregular length each year, borrowed from the Arabic concept of manzil, or lunar houses. Manzil are areas of the fixed stars which the moon moves through in around 13 days, usually associated with a particular constellation. In Arabic astrology contiguous manzil are grouped together in groups of one to four into anwaa. These anwaa are borrowed into Tlon and are significant in religion and agriculture.

Tlon	**Anwaa (Arabic)**	**starting day (approx, Gregorian)**
tɬuʀj	Al Thuraya	17 May
tɬujb	Al Tuwaibe'	26 June
dʒaz	Al Jawzaa	9 July
mʀzim	Murzim	4 August
k'ɬibɲ	Kulaibain	17 August
su:ɬ	Suhail	30 August
ɬmusm	Al Wasm	21 October
muʀba	Murabaania	12 December
ʃ'abt	Ash Shabt	16 January
sadʒik	The Three Saads	11 Febuary
χmim	Hameemain	6 April
tɬaʀɲ	Al Tharaeen	19 April

4.2.5. Retrograde Motion

Tlon dates require a marker for any planet experiencing visible retrograde motion. (Appearing to move backwards against the fixed field of stars.) Times when many planets experiences simultaneous retrograde motion are considered dangerous.

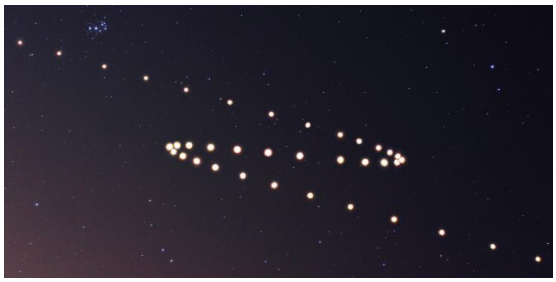
Dates may also optionally specify which planets are 'in their own shadow' (retracing a portion of the sky for the second time after experiencing retrograde motion.)

tuna jp'umq	retrograde (lit. against the tide)
fuk'f	in its own shadow

tʀaɲj	Mercury
aʀz	Mars
tʃʀiɲʀu	Saturn
zɟuʒ	Jupitor

Venus is irregular

mʀjap'umq	Venus retrograde
mʀjatʃuk'f	Venus in its own shadow



Composite image of the retrograde motion of Mars, 2005. Taken over about 35 weeks.

4.2.6. Sunspot Cycles

Tlon organizes time around sunspot cycles, (sunspots peak in intensity around every 11 years.) The current cycle is always called timbɬ. After a cycle has ended it is named by the religious authorities through obscure methods. This system makes it difficult to keep the chronology of historical events straight, which may be the point.
Future sunspot cycles are not named, and so are not included in formal dates. This makes it difficult to discuss the distant future, since years cannot be referred to chronologically. Sunspot cycles before about the 18th century BCE are also unnamed, and are referred to as jmatɣ (mythic past). Since Tlon society does no stretch back nearly to the 18th century it is clear that many of the sunspot cycles were named years after the fact.

name	years	lit.
mzifk	452-441 BCE	“the water pitcher”
ʁuska	637-626 BCE	“anxiety”
ʀʒuʀx uɬ	625-614 BCE	“two fish”
buç q'ɲuʃ'b dʒpit	1745-1732 BCE	“egyptian victory”

4.2.7. Years

Years are not numbered cronologically, as they are in most date systems. Instead they are numbered cyclicly within sunspot cycles, generally from one to eleven, or sometimes as high as fourteen.

4.2.8. Full Dates

Official Tlon dates as used in religious and government documents must specify the date from the epoch to the shortest applicable range, including all interstitial measurements, even those which are redundant. The measurements are given from least to most specific, with many dates indicating a range of possible days unless the weekday is given.

Sunspot Cycle
Year
Retrograde Motion (none or multiple possible)
Siderial Month
Synodic Month
Weekday

The interaction between siderial months, synodic months, and weekdays is far from predictable. It is only possible to determine the Gregorian date through a complex series of lookup tables.

126	lit.	Most specific possible Gregorian date given current information
ʀʒuʀx uɬ	“two fish”	637-626 BCE
ʒik	“three”	635 BCE
mʀjap'umq	“Venus retrograde”	March-August
tʀaɲj fuk'f	“Mercury in its own shadow”	April
χmim	“Hameemain”	6 April - 19 April
mʃ'itɬ-ta-ʒika	“3+ days until the full moon”	7-8 April
dʮagk'	“4th weekday”	8 April

Gregorian Date: 635 BCE April 8

In some cases there are a few Gregorian dates which fully suit the given information. It is unclear currently how or if this ambiguity is resolved.

127	lit.	Most specific possible Gregorian date given current information
mzifk	“the water pitcher”	452-441 BCE
kɣiɣ	“ten”	442 BCE
sadʒik	“The Three Saads”	11 Febuary - 6 April
taba-ta-k'j	“5+ days until no moon”	21-24 Feb, or 19-22 March
Gɣitʃ	“1st weekday”	23 Feb or 19 March

Gregorian Date: 442 Feb 23, or 442 March 19

5. Afterword

I decided to construct a language based on Borges' essay Tlön, Uqbar, Orbis Tertius because it has themes of inventions taking on a life of their own, and I wanted to be able to mix clearly constructed elements with the messiness of natural language. In th essay Borges describes a conspiracy which decided to insert a country into the historical record. To do this they start fabricating publications, adding entries to encyclopedias, and forging artifacts.
After they've done some work unsuspecting people begin to assist them by citing their articles and buying their artifacts. By the end of th essay there are implications that not only are unwitting historians adding to the conspiracy, but it appears that new evidence for the invented country is spontaneously being generated in th world. Tlon artifacts that no one ever forged start to wash up on riverbanks. Primary source documents which mention Tlon begin to be found. Somehow the conspiracy has taken on a life of its own and is self-sustaining.
My interpretation of this for Tlon was a language with clearly constructed roots, but layers of more realistic historical change on top.

The simultaneous morphology is the most obviously constructed part, since it's a relatively simple system with in terms of actual change, but completely foreign to human concept of language. The other constructed elements are somewhat more subtle. Although the syntax looks Latin-ish at a first glance, it actually is more like a formal language than a natural one. The argument number being inflected onto verbs, the general clause initial word order, and the clause-final relative clause marker were all added with an eye to making the language easy to linearly parse with a machine, not to confirm with general natural language principles.
This paper doesn't attempt to draw syntax trees, so most of the acts of generative-grammar defiance fly under the radar. One simple one is that in verbs the required arguments are less tightly bound than the optional arguments. A phrase like “I bought eggs at the store” could be written as:

> [I] [buy [at the store]] [eggs], or
> [eggs] [I] [buy [at the store]]
> with scrambling of the three top level elements

But the prepositional phrase is is tightly bound to the verb, so

> * [I] [buy] [eggs] [at the store]

is nonsensical.
The mixing of head-final and head-initial clauses is another.

Because Tlon eventually 'takes on a life of its own' I also added layers of historical change, mostly in the form of irregularity. Some of these are obvious. The pronoun system if derived from a common root, with most of the consonants sloughed off the inflected forms over time. The number system and some of the calendar system can be drawn back to their more regular past fairly easily. Looking deeper, the interactions of different parts of the verbs morphology are semi regular. The different rows, columns, and indexes of the sinfix charts have small patterns in them, although nothing definite enough to determine what they may have developed from.
The backformation was another amusing chance to look at historical influences. Since Tlonists' verbs and nouns have to be inflected in such particular ways their back-formation requires plenty of unwarranted reanalysis of the innocent surface forms of other language's words.

Although I didn't try to go into it here, I think it would be possible to reanalyze the case system as a more traditional (but massively complex) series of affixes, phonetic rules, and historical cruft. It would be interesting to see the first stabs a linguist would make at the system given just data, since the actualy morphological system is too esoteric to guess.

As a bonus Borges places Tlon somewhere near the Persian Empire (physically and temporally.) Which meant I got to use Semitic languages mixed with Latin (the common language of the conspiracy) as the template. Arabic contributed the back-heavy phonology, although inexactly, on the assumption that non-linguist non-native Arabic speakers wouldn't really understand Arabic phonology beyond 'lots of gurgling/throat clearing and few vowels'. Latin contributed the template of the case system and word order, since that was likely the only grammar the conspirators would have been schooled in. Both of them were part of the stress determinations, which have Latin's mostly-penultimate flavor, with Arabic's weighting toward long vowels.

The final element taken from Borges essay was his brief discussion of time in Tlon culture. Although unfortunately his writing takes a Whorf-y 'no word for X therefore no concept for X' tone he does offers a few ideas I used, such as the concept of difficulty with exact historical dates, and a fascination with lunar activity.

6. Appendix

6.1. Roots:

gʀkikɣɴ	COMP
xkqiqɴɴ	PLACE
ʁqgaʀxχ	PRONOUN
qχʀaɴGq	REF
ɣχxiq'gχ	LOC
ɣq'ɴuq'gq	POSS
q'χʁaʀgx	QUERY
kɣχaɣɴʁ	arrive
xɴχiqʀg	carried out
ʁχxigʁq	coincidence
gʀgaʁkG	cross
χɴuq'χɣ	cry
ʁxɣuʁʁk	down
xʁχaɣqɣ	empty
ɣqɴuʁɣg	enemy
ɴkquxʀq	find
χʀguʀxq	fish
ʁɣqiɣgɴ	give
ʀɴxixχʁ	has
ʁgxaʁʀʁ	hit
ʀkχiqʁχ	introduce
gkxiʁɣʀ	king
xgkaχxʁ	lose
ɴgguɣʀχ	put
qɣχaχɴq	quiet
kɣʁiɴxʀ	read
kʁχukχk	say
xʀqukʁq	speech
qkʀuxχʀ	steal
kxʁuqʀq	visitor
gɣqaɣʀχ	woman
ɴk'ɴiʀqg	bad
ʀq'ʁaʁqɴ	bag
χqxaq'qg	believe
kɴq'ukxg	blue
qk'χaɣχʁ	book
q'χʀagqɣ	bottle
q'χʁaʁɣq'	cat
ʁqkiɣʁk'	cause
ʀxqiχɴk'	child
xʁk'uɴɣʀ	city
qʁq'uq'ʀg	coin
ɴk'χaɣk'q	come
ɴʁgaʀq'q	copper
ʁgq'uk'xɴ	corridor
k'χɣaɣGq	daughter
ʁʀkuɣk'ʁ	dinner
ʁɴkaχq'g	disease
ʁʁk'axkq	eat
gk'χaqxk'	exists
ɴk'k'uʀʁk'	fall
qxχugk'ɴ	forever
χq'ʀaʀgɣ	forever
ɴχɴuʁk'q'	frighten
ʀqkuxq'x	fur
xʁkik'χʀ	general (military)
χʁquq'kk'	grow
χq'giχk'g	hear
ɣq'ʁixɴx	high
k'qkuɴʁq	hit
ʀɣk'aɣgɣ	horse
kʁk'aχɴq	host
χqɴakʁq'	house
q'ʀkuq'xχ	information
ʁqq'uχʁχ	invade
ʁgɣaɣk'ʀ	kill
ɴqɴiq'χɣ	knife
ɴqk'aq'ɣʁ	know
q'ʁqiʁχχ	laugh
gχk'aɣχk'	leave
gk'xagʁq'	lion
ʁq'ʀiχgq	love
ɣχk'ixq'x	man
gq'kuɴʀɣ	manic
ʁɴk'ik'ʁk'	mistake
k'ʀʁiɴq'k'	money
kqʁuq'ɴG	monster
kʀʁuχq'x	music box
k'ɣʀiq'gk'	note
qʁk'aχqG	painter
ʀk'χiq'ɣk	plant
gʀk'ixkg	political unrest
xɣgiq'xɣ	rain
qɣχixχk'	road
ɣq'kixʁɴ	rust
χk'ɴaq'kq	see
qq'χuʁɴk	sheen
qk'ɣuɣqʁ	small
k'q'ʀuɣgq	song
ʀχq'uʁgq'	speak
qʀgaxʀk'	speed
χʀq'aʀq'g	story
qɣk'uɴɣq'	sword
ɴgχaʀkq'	take
ɣGʁuʁkGq'	town
ɴʀk'axχx	toy
ɴʀq'uʀʀk'	tragedy
ɣk'kuɴkg	traveler
gʀχiq'ɣk'	tree
χɴʀaχk'x	trouble
ɣk'k'ukxʀ	wall
χɣʀaɣk'q'	want
ʀʁq'iqqk	water
kʀgakxɣ	die
k'ʀɴuɴxk	boy
kɣʀuʀk'x	cry
k'kχaʀχɣ	person
xqχuɣχq'	sing
q'ʁk'uʀʁk'	flower

Inflection Program:
https://github.com/ohnorobo/tlon

6.2.
Glosses:

DEF	definite
INDEF	indefinite
DEMON	demonstrative
SG	singular
DUAL	dual
PL	plural
NOM	nominative
ACC	accusative
DAT	dative
1.-	first person
2.-	second person
3.-	third person
PERF	perfective
IMPERF	imperfective
INDIC	indicative
COND	conditional
SUBJ	subjunctive
IMPER	imperative
NEG	negation
-.1	intransitive
-.2	transitive
-.3	ditrasitive
A	adjective/adverb
COMP	complementizer
PLACE	placeholder (for relative clauses)
REL	relativizer
REF	reflexive
LOC	locative
POSS	possessive
QUERY	question marker
INST	instrumental

6.3. Sources:

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