?a?a-FaM

A Reference Grammar of the Narish Language

Bethany E. Toma, Knut F. K. Ulstrup

15. December 2019

Foreword

?a?a-FaM is a constructed language.

Contents

Fo	rewo	ord	i
Co	nten	nts	ii
I	Gra	nmmar	1
1	Pho	onology	3
	1.1	Consonants	3
	1.2	Vowels	3
		1.2.1 Epenthetic schwa	3
	1.3	Prosody	3
	1.4	Morphophonemics	4
	1.5	Orthography	4
		1.5.1 Formal writing style	4
		1.5.2 Informal writing style	4
2	Mor	rphology	5
		Underlying roots	5
	2.2	Derivational morphology	5
		2.2.1 Primary derivation	5
		2.2.2 Secondary derivation	6
		2.2.2.1 -uru - 'to be'	6
		2.2.2.2 -ila - 'to have'	6
		2.2.2.3 -ara - wishes and greetings	6
		2.2.2.4 -iri - 'to make'	6
		2.2.2.5 -ana - person	6
		2.2.2.6 -ini - diminutive	6
		2.2.2.7 -ari - 'to become', 'to cause to be'	6
		2.2.2.8 - <i>lat</i> - 'measured in', 'comprising'	6 6
	2.3		6
	2.3	2.3.1 Verb finals	6
		2.3.2 Evidential modality	6
	2.4	Pronouns and determiners	6
		Tronound und determined to the transfer of the	Ů
3	Syn		9
		Verb stacking	9
	3.2	Subordinate clauses	9
	0.0	3.2.1 Relative clauses	9
	3.3	Comparative constructions	9
	3.4	Animacy hierarchy	10 10
	3.5	Causative constructions	10
		3.5.2 Valency-increasing verb patterns	10
		3.5.3 Periphrastic causatives	11
		o.o.o Tempinasiae causauves	11
4		1 0	13
		r	13
	4.2	Idiomatic expressions	13

CONTENTS

II Dictionary	15
Roots and Derived Words	17
?—?	17
B—T	17
C—F	17
C—NK	17
D—L	17
DR—P	18
$F \hspace{-1mm} -\hspace{-1mm} M \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} . \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} \hspace{.2mm} . .$	18
F—S	18
K—L	18
L—T	19
PL—S	19
Q—H	19
S—J	20
SL—S	20
T—LW	20
Rootless Words	23
Auxiliary Verbs	23
Postpositions	23
Pronouns	23
Numbers	23
Attitudinals	23
III Example Texts & Translations	25

Part I Grammar

Chapter 1

Phonology

1.1 Consonants

	Labial	Alveolar	Palatal	Velar	Uvular	Glottal
Fortis	$p^h \sim \widehat{p \varphi}$	$t^h \sim \widehat{ts}$	$c \sim \widehat{c c}$	$k\sim \widehat{kx}$	$q\sim \widehat{q\chi}$	2
Lenis	$p \sim b $	$t \sim d$				1
Fricative	Φ	S	ç ~	· x ~ 7	χ ~ ħ ~	~ h
Approximant		1	j	w		
Nasal	m	n				
Rhotic		$r \sim r \sim$	y ~ r	~ 1 ~	$R \sim R$	

Table 1.1: Phonemic Consonant Inventory

1.2 Vowels

	Front	Central	Back
Close	i (i:)		u (u:)
Mid		Э	
Open		a (aː)	

Table 1.2: Phonemic Vowel Inventory

1.2.1 Epenthetic schwa

1.3 Prosody

Stress, in the form of elevated pitch and volume, is placed on the first non-schwa vowel of the word, after the first root radical, on a long vowel immediately preceding the first radical, or on certain morphemes that carry stress.

nemiwi	[nəˈmiwi]	first non-schwa vowel of word
parse	[ˈparsə]	first non-schwa vowel of word
іғаам	[iˈfaːm]	vowel after first radical
Fanas	[ˈfanas]	vowel after first radical
aaniw	[ˈaːniw]	long vowel preceding radical
iLaasak	[iˌlaːˈsak]	presence of stress-carrying morpheme (imperative affix -ak)

1.4 Morphophonemics

1.5 Orthography

?a?a-FaM has two recognized orthographic conventions, both based on the Latin alphabet. Both conventions use marked letterforms to indicate which part of a word are part of the underlying root and which are grammatical markers. The precise manner in which they're marked is the major point of difference between the two orthographic styles.

By and large, both orthographic conventions attempt to use the most intuitive representation of a given phoneme. There are very few differences between the conventions. Fortis and lenis stops are written using the typical voiceless and voiced symbols, respectively, in both systems. The labial fricative is written as $\langle f \rangle$ and the dorsal fricative as $\langle h \rangle$. The palatal approximant is written using $\langle j \rangle$, and the rhotic is, of course, written as $\langle r \rangle$. The other phonemes are written with their usual IPA characters in both conventions, except for $\langle 7 \rangle$, which is dealt with differently depending on which convention one is using.

1.5.1 Formal writing style

The formal writing conventions make use of small-caps letterforms to highlight roots. In addition, it uses the glottal stop character to indicate the glottal stop phoneme, using the capital glottal stop character $\langle ? \rangle$ when the glottal stop is part of a root radical (for instance, in the word 2a?a) and the lowercase glottal stop character $\langle ? \rangle$ otherwise (such as in the suffix -(e)?).

1.5.2 Informal writing style

The informal writing conventions, also known as "texting script", is the orthography used in the majority of day-to-day communication. Rather than using small-caps letterforms, it uses true capital letters for roots. It also uses $\langle 7 \rangle$ for the glottal stop, with no difference between capital and lowercase. While these differences could be considered less aesthetically pleasing, they result in an ASCII-compatible script, which makes this writing style far easier to use in most messaging apps and computer interfaces. Texting-style ?a?a-fam also allows for several shorthand abbreviations that tend not to be used in more formal style.

Chapter 2

Morphology

2.1 Underlying roots

2.2 Derivational morphology

?a?a-FaM allows for words to be altered syntactically and semantically using a rich set of morphological operations, divided into two categories based on their concatenation.

2.2.1 Primary derivation

Primary derivation refers to the non-concatenative morphology of stems. These operations are for the most part not productive, and not all roots have a corresponding stem with each of these patterns. They may not stack, i.e. a stem may only be inflected by one pattern at a time.

	Pattern	Meaning	Example	
1.	Θ a Θ	Abstract noun	KaL	humidity (cf. iKaaL 'to rain')
2.	i⊖aa⊖	Intransitive verb	i?aa?	to act stupidly (cf. e?a?a 'dumb')
3.	Θ ii Θ	Transitive verb	FiiS	to give birth to (cf. Fanas 'person')
4.	aa⊖i⊖	Causative verb	aanim	to feed (cf. iNaam 'to eat')
5.	$\Theta \mathbf{a} \Theta \mathbf{a}$	Primary attribute	SaFRa	hot (cf. safer 'heat')
6.	Θ ana Θ	Person of X, Agentive noun	KanaJ	author (cf. KiiJ 'to write X')
7.	Θ ur Θ i	Object noun	NurMi	food (cf. Niim 'to eat X')
8.	Θ ar Θ i	Liquid noun	QarFi	coffee (cf. iQaaF 'to drink coffee')
9.	i⊖u⊖a	Place of X/with X attribute	інија	night (cf. ната 'dark')
10.	$m\Theta i\Theta$	Instrument, tool	mRiW	weapon (cf. RaQ 'pain')
11.	$in\Theta i\Theta$	Diminutive	inFiM	word (cf. FaM 'language')
12.	Θ uli Θ	Associated body part	BuliT	head (cf. iBaaT 'to understand')
13.	$\Theta u \Theta u$	Animal	BuRKu	dog (cf. iBaaRK 'to bark')
14.	Θ asi Θ	Long slender object	ваѕіт	hair (cf. BuliT 'head')
15.	⊖aju⊖a	Flat plane, surface, or object	DajuLa	mirror (cf. DiiL 'to stare at')
16.	Θ idi Θ	Loose granular mass	widiw	sugar (cf. wawa 'sweet')
17.	Θ uu Θ	Country	FuuNS	France (cf. FuNSu 'frog')
18.	$\Theta u \Theta i$	Color	BuNi	yellow (cf., Basin 'banana')
19.	a⊖i⊖u	Closed container	акіци	bottle (cf. KarLi 'water')
20.	$\Theta im i \Theta u$	Open container	QimiFu	coffee mug (cf. aQiFu 'coffee pot')

Table 2.1: Primary derivation patterns

2.2.2 Secondary derivation

Secondary derivation refers to the exclusively suffixing operations that may be applied to stems in addition to primary derivation. Unlike primary derivation, these suffixes may be stacked freely.

2.2.2.1 -uru - 'to be'

Nominal and adjectival phrases are derived into verbs with the meaning "to be X" or "to have characteristic X" with the *-uru* affix.

- 2.2.2.2 -ila 'to have'
- 2.2.2.3 -ara wishes and greetings
- 2.2.2.4 -iri 'to make'
- 2.2.2.5 -ana person
- 2.2.2.6 -ini diminutive
- 2.2.2.7 -ari 'to become', 'to cause to be'
- 2.2.2.8 -lat 'measured in', 'comprising'

For quantities expressed in explicit units, this affix is used to mark the classifier.

bar akilulat karli - three bottles of water

2.2.3 Gender

Certain lexical items may be inflected to convey the gender of its referent. On certain words, namely -ara greetings, gender marking is obligatory.

- -un Feminine gender
- -aj Masculine gender
- -uj Explicitly non-binary
- -an Gender-neutral, agender

2.3 Inflectional morphology

- 2.3.1 Verb finals
- 2.3.2 Evidential modality

2.4 Pronouns and determiners

	Nonplural	Plural
Speaker-only	nas	naswi
Addressee-only	mi	miwi
Inclusive	nemi	nemiwi

Table 2.2: Discourse participant pronouns

	Determiner	Pronoun
Proximal	wa	wase
Medial	par	parse
Distal	bu	buse
Interrogative	li	lise
Relative	kun	kunse

Table 2.3: Determiners and demonstrative pronouns

Chapter 3

Syntax

3.1 Verb stacking

3.2 Subordinate clauses

Full verb phrases may be nominalized and act as an argument of another predicate.

3.2.1 Relative clauses

Relative clauses are a type of subordinate clauses that describes a referent's states or actions. They are internally headed, always verb-final, and the relative determiner *kun* is used to mark the head of the clause, i.e. the thing that is being described.

(1) Fanas iLaas-tu SaJauru person walk-REL sleepy:COP 'The person who walked home was sleepy.'

Clauses with a single argument do not require that the head is marked, as the argument is assumed to be the head by default. Still, the verb itself can be marked to describe the realization or performance of the action.

(2) inFiM kun iMaaW-tu naswi DiiL children REL play -REL 1P.EX look 'We watched the playtime that the children were having'

In high-valency clauses, *kun* becomes more pertinent. The most agentive argument (subject) is considered to be the head of the phrase, but may still be marked for emphasis.

- (3) a. (kun) Fanas iFuSa daw fit iLaaStu nas FiiL REL person house to in walk:REL 1s see 'I saw the person who walked into the house.'
 - b. Fanas kun iFusa daw fit iLaastu nas FiiL person REL house to in walk:REL 1s see 'I saw the house that the person walked into.'
 - c. Fanas iFusa daw fit kun iLaastu nas FiiL person house to in REL walk:REL 1s see 'I saw how the person walked into the house.'

An alternative to using a determiner is simply to topicalize a given constituent. Only noun phrases may be relativized through topicalization; the relative verb may not be periphrastically topicalized (i.e. left-dislocated), as this introduces major syntactical ambiguities.

3.3 Comparative constructions

from-comparative, marks standard (to which is compared)

10 CHAPTER 3. SYNTAX

- (4) a. PuMu Fanas fun MaNTa-uru rabbit person from big -COP 'The rabbit was bigger than a person.'
 - b. TaN nemi buse fun JaL -ila
 TOP QUAL STD MRK
 time DU.IN DIST:PN from many_things-have
 'We have more time than them.'

3.4 Animacy hierarchy

- 0 Natural Forces
- 1 Pronouns (1>2>3)
- 2 Speakers of ?a?a-FaM
- 3 Non-speakers of ?a?a-FaM
- 4 Higher-order animals (mammals, octopus, intelligent creatures)
- 5 Body parts, tools, any inanimate object used for acting upon something
- 6 Lower-order animals
- 7 Plants
- 8 Inanimate objects
- 9 Abstract concepts

Table 3.1: Animacy hierarchy in nominals

3.5 Causative constructions

7a?a-FaM has several different strategies when it comes to causative constructions, depending on the nature of the predicate in question. Some of these are morphological in nature, while others more periphrastic.

3.5.1 -ari for nominal and adjectival predicates

Simple nominal and adjectival predicates are turned into causatives using the translative suffix -ari. If the predicate in question would be expressed with -uru in its non-causative form, -ari is likely appropriate for the causative.

- (5) a. *QarFi SaFRa-uru* coffee hot -COP 'The coffee is hot.'
 - b. QarFi nas SaFRa-ari coffee 1SG hot -TRANSL'I heated up the coffee.'

When used with only one argument, verbs ending in -ari are assumed to have a null subject and the argument serving as the unaccusative object. This results in -ari also serving as 'to become' (the reason for its being glossed as 'translative') as well as 'to cause to be'.

(6) QarFi saFRa-ari coffee hot TRANSL 'The coffee got hot.'

3.5.2 Valency-increasing verb patterns

Which pattern is used to form the causative of a predicate depends largely on the nature of the intransitive form of that root. There are two different potentially valency-increasing patterns that can be used for verbs:

the $\Theta ii\Theta$ and the $aa\Theta i\Theta$. The exact effect of each of these valency-increasing operations depends on the individual root; their behavior can differ.

For verbs that would be agentive ambitransitives in English, such as 'to eat', generally the behavior is rather straightforward: the $\Theta ii\Theta$ form turns the verb into a straightforward transitive, and the $aa\Theta i\Theta$ form serves as a causative of the intransitive.

(7) a. nas iNaaM 1SG eat\INTR 'I was eating.'

> b. *nas KurKi NiiM* 1SG cookie eat\TR

'I ate a cookie.'

c. nas inMiM aaNiM1SG parent_child\DIM eat\CAUS'I fed my daughter.'

It's worth noting that object of the transitive verb cannot be included as the object of the causative verb; the causative verb can still only have two arguments.

(8) *nas inMiM KurKi aaNiM
1SG parent_child\DIM cookie eat\CAUS

To express this notion, a periphrastic causative would be required.

Other types of verbal paradigms make this causative relationship less obvious and use these roots in other ways. For instance, for some roots the intransitive form is unaccusative or passive in nature. In these cases, the transitive form behaves as a causative:

(9) a. nas wan ManaM iNaaW 1SG POSS parent_child death\INTR 'My mother died.'

b. nas ManaM NiiW1SG parent_child death\TR'I killed my mother.'

For these roots, the $aa\Theta i\Theta$ form means the same thing as the $\Theta ii\Theta$ form, but while the $\Theta ii\Theta$ form implies a successfully completed action, the same implication is not present for the causative form.

(10) nas ManaM aaniW
1SG parent_child death\CAUS

'I tried to kill my mother' (and she may or may not have died).

For many of these roots, the intransitive is identical in meaning to a 'passive' use of the transitive with an omitted subject; whether there is any noticeable difference between these depends on the verb.

(11) nas wan ManaM NiiW
1SG POSS parent_child death\TR
'My mother was killed.'

Unergative verbs

3.5.3 Periphrastic causatives

In addition to the morphological causatives above and their aforementioned limitations, ?a?a-FaM has a periphrastic causative that can scope over a wider variety of predicates. This periphrasis is expressed through a serial construction using the verb *wesiin* 'to effect, to cause' followed by the description of the caused predicate.

(12) nas Wesiin , QarFi mi KiiL 1SG bring about coffee 2SG drink

'I caused you to drink coffee.' (lit., 'I brought it about, you drank coffee.')

Insert stuff about causatives and directness here.

Chapter 4

Semantics and pragmatics

4.1 Phatic expressions

Phatic expressions in ?a?a-FaM are all in some way related to the nouns they are derived from, suggesting an emphasis on acknowledging the addressee's current or upcoming actions. The addressee may respond with the same expression back, even if it does not apply to the original speaker in any way, or respond in kind with a more suitable expression.

The obligatory gender marking is a means of expressing your gender identity in an unintrusive manner.¹

Fasanara (from Fas 'life') is a catch-all greeting, suitable for any time of day.

SaJanara (from SaJ 'sleep') is similar in use to "good night", but is only used if the person is going to bed, not just leaving for the night.

YaTanara (from YaT 'travel not of one's own power or volition') is used to wish someone a pleasant trip where the person is not directly in control of their means of transportation, e.g. on public transport, a plane, or as a passenger in a car. To contrast, if the person has direct control over their travel, e.g. by walking or driving a car, one would rather use **PLaSanara** (from PLaS 'movement').

4.2 Idiomatic expressions

Cumpu Cumpuuru = no shit, preaching to the choir

¹The real reason is that as Beth once ended a conversation with "sayonara", Knut noticed some coincidental similarities with the word SaJ 'sleep' and the affix -un to indicate feminine gender, with the -ara reanalyzed as a phatic/optative marker of sorts.

Part II Dictionary

Roots and Derived Words

?	NB: the subject is reversed from its use as 'to under-
?—?	stand': mi nas BiiTibi means 'you understand me' but 'I love you'.
?a? • n. stupidity	С
i?aa? • v.intr.	C—F
to act stupidly, foolishly ?ii? • v.tr. to fail to achieve <i>smth</i> . through lack of intelligence or competence	CaF • n.1. number2. amount
aa?i? • v.tr. to turn <i>sme</i> . stupid, cause <i>sme</i> . to fail through lack of intelligence or competence	C—NK Cank • n.
?a?a • adj.stupid?ana? • n.stupid person, fool	roundness $iCaank $
В	Ciink • v.
B—T iBaaT • v.intr.	 to round <i>smth</i>. to smoothen <i>smth</i>.
 to know, to understand, to be in a state of knowing or understanding what is going on (when used reciprocally) to love each other, to have a close platonic bond, to be the best of friends nemi iBaaTami 'The two of us are thick as thieves.' 	aacink • v. to roll smth. along Canka • adj. 1. round
BiiT • v.tr.	2. fat
·	2. fat D D—L DaL • n. sight

DR-P

DRaP • n.

- 1. bad accent
- 2. funny voice, impression

buse wan DRAP BaJauru? lit. 'their impression was really bad.'

idraap • v.

to talk with an accent, talk in a funny voice

DRIIP • v.

to mimic sme., make fun of sme.

F

F-M

FaM • *n*.

language, speech, way of speaking

iFaaM • *v.intr.*

to talk, to speak, to chatter

FiiM • v.tr.

to say smth., to speak smth., to tell smth.

aafim • v.tr.

to quote sme.

infiM • n.

word

aFiMu • n.

- 1. book
- 2. (fig.) alphabet soup

Compounds & Secondary Derivations

infimini • n.

letter, character, symbol

?а?а-ғам • п.

this language, ?a?a-FaM

F-S

Fas • n.

life, life force

iFaas • v.intr.

to live, to be alive

Fiis • v.tr.

- 1. (of a human) to give birth to sme.
- 2. (of an animal that bears live young) to give birth to its offspring
- 3. (of an animal that lays eggs) to hatch its offspring

aafis • v.tr.

- 1. to resuscitate sme.
- 2. to animate *smth.*, bring life to *smth*

Fasa • adj.

live

Fanas • n.

person, predominantly human or humanoid

Fursi • n.

egg

Farsi • n.

blood

iFuSa • n.

- 1. house
- 2. home, domicile

infis • n.

human offspring, especially newborn-throughtoddler age

Fulis • n.

heart

Fusu • n.

animal, any species of the kingdom Animalia except humans

Н

J

K

K-L

KaL • *n*.

humidity, wetness, dampness
iFuSa JaBauru, da LajuSa KaLila
'The house is lovely, but the floors are
damp.'

iKaaL • v.intr.

1. (impersonal) to be a rainy day

wajHuJa iKaaL 'Today's a rainy day.'

2. (impersonal) to be raining

iMunta daw nas iJaate? kaj da buse fit

Compounds & Secondary Derivations

KasiLiri • v.intr. 'I wanted to go to the mountains, but it's raining there.' euphemistic to pee KaLa • adj. L 1. covered in water, saturated with water, wet, soaked L—T KaLa mLis Safraariak 'Warm up your wet shoes.' iLaaT • v.intr. 2. fluid, liquid, melted to excrete, poop Kasil Kala Curkliila LiiT • v.tr. 'The river was made of melted chocolate' Kurli • n. to excrete smth. the Earth, the globe aaLiT • v.tr. KarLi • n. to give sme. the shits, cause stomach upset liquid water, fresh water, water not part of a body of water or stream, water served as a bevfeces, poo erage mi Narka KarLiilali? 'Do you have any cold water?' M KasiL • n. N 1. river, stream P 2. stream or sprinkle of water, as from a faucet or tap PL-S isuna baba kasilila 'The shower is low-flow' **iPLaas** • *v.intr.* (lit., 'The shower has a mild stream') to be located, to be in a place KajuLa \bullet n. PLiis • v.tr. 1. the surface of a body of water to move oneself to smwh. naswi KajuLa tui FiiLami? dak 'We could see ourselves on the water's suraaPLis • v.tr. face.' to move smth. to a place 2. puddle nas KajuLa daw tui iLaaS PLasis • n. 'I stepped in a puddle.' line, row 3. map par кајиLa swuuTilali? aplisu • n. 'Is Switzerland on that map?' generic container, bin, box KuLu • n. Q fish, fish-adjacent aquatic animal **KuLi** • adj., n. Q—Н blue, the color blue OuHu • n. akiLu • n. lizard, reptile bottle QasiH • n. MARK se kaj akiLulat MarHiila 'Mark owned five bottles of milk.' snake

R 4. to come to an agreement **TiiLW** • v.tr. S to bury smth. aatilw • v.tr. saJ • n. 1. to drive or stick smth. into the ground 2. to employ sme. sleep, slumber, the state of being asleep TaLWa • adj. isaaJ • v. 1. earthly, not of heavenly or extraterrestrial qualto sleep, to be sleeping, to be asleep saJa • adj. 2. regular, ordinary, every-day, humdrum TanaLW • n. sleepy, tired, exhausted 1. farmer **suli** $\mathbf{J} \bullet n$. 2. employee, worker back, dorsum, the human back 3. groundskeeper, gardener TurLWi • n. Compounds & Secondary Derivations potato saJanara • int. TarLWi • n. good night, sleep well, sweet dreams, goodbye NB: The gender affix -an- can be substituted with a mud more apt gendered affix. ituLwa • n. section of land SL-S mTiLW • n. isLaas • v.intr. spade, shovel to be closed, to be locked intilW • n. SLiiS • v.tr. island to close, to shut, to lock TuLWu • n. aaslis • v.tr. mole to shut smth. inside a container or behind a door TasiLW ● n. mslis • n. 1. hill, mound 2. worm lock TajuLWa • n. slasis • n. 1. the ground, soil zipper 2. topsoil 3. field, cultivated land T 4. forest floor T—LW TidiLW • n. actual dirt TaLW • n. TuLWi • n., adj. 1. the land, like, as an idea brown, the color brown 2. job, labor, employment atilwu • n. iTaaLW • v.intr. grave, burial pit 1. to till, plow a field TimiLWu • n. 2. to dig

valley

3. to work, especially manual labor

T—LW 21

W

Rootless Words

Auxiliary Verbs

```
dak • aux.
     can, to be able to, to be allowed to
hwii • aux.
     not, no, don't, never
jaa • aux.
     already, previously, by now
kaj • aux.
     to want to, to be going to
lit • aux.
     to very, to do emphatically or to an extreme extent
naw • aux.
     to stop
tuuq • aux.
     to must, to have to
```

Postpositions

```
baj - using, by means of
daw - to, towards,
dis - because (takes subordinate VP)
fit - on, at, in,
fun - from, out of
udan - if (takes subordinate VP)
tui - on the surface of
```

Pronouns

Numbers

Attitudinals

Part III Example Texts & Translations