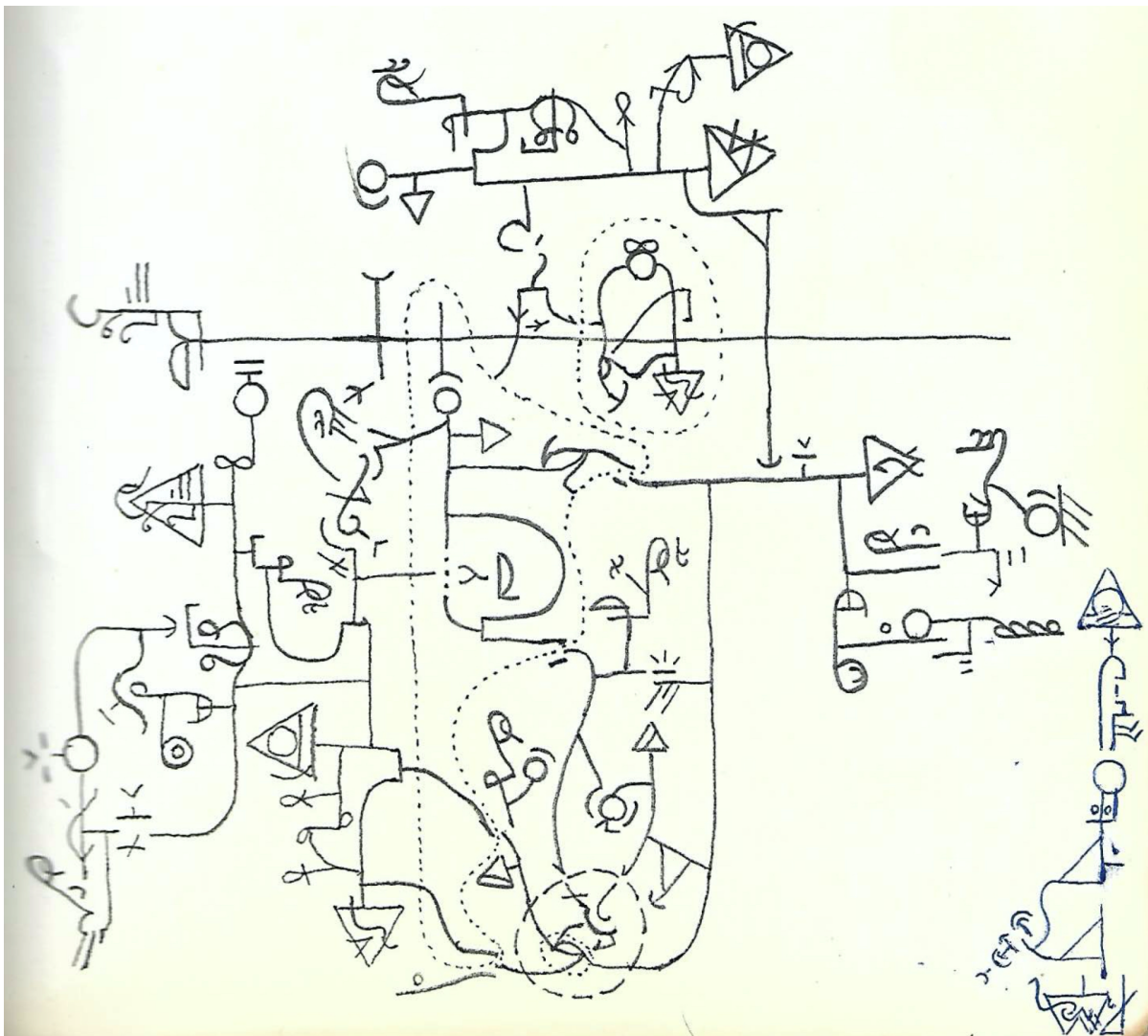# UNLWS torch for LCC10 Relay Ring I

Note: The actual text of the torch is in black ink. The text in blue ink at lower right is the authors' signature, including a note about the relay itself.

Grammar overview

UNLWS is a non-linear written-only language in which texts make full use of a 2D writing surface.

UNLWS does not have parts of speech such as nouns or verbs. Instead, UNLWS has *glyphs*, which represent predicates with one or more arguments. Texts are put together by connecting glyphs to show which of the predicates' arguments have the same referent. For example, starting from the four glyphs

"A be me"	"B eat C"	"D be a fish"	"E be large"

you can put A and B together, and C, D, and E together, to assemble the text

"I eat a large fish." (Or "ate", "will eat": tense and aspect aren't specified here.)

The rotation of glyphs doesn't matter, except in markedly spatial contexts (see e.g. gravity below).

Lines connect the *binding points* of glyphs. In the lexicon entries, the binding points are depicted as small dots in a separate colour. The length and layout of the connecting lines doesn't matter. Occasionally the layout demands that two connecting lines must cross; this crossing doesn't mean anything, but we try to avoid it.
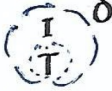
Bear in mind these ways in which UNLWS is unlike a linear language:

1. An UNLWS text has no defined reading order. You can start anywhere and proceed through the text in any fashion.
2. It is pragmatically unnatural in UNLWS to talk much about temporal sequence explicitly, since time is linear. A translation into a linear language may want to introduce a narratively compelling ordering.
3. UNLWS does without definiteness and doesn't use pronouns very often, because to achieve "interclausal coreference", it can usually just directly connect an argument of "this clause" to an argument of a "previous clause". The scare quotes are because UNLWS texts aren't actually made of separable "clauses".

A notable feature unrelated to non-linearity is that UNLWS generally leaves out optional things like tense, aspect, definiteness, plurality, sequence, causality, etc. where a Gricean interpretation would be reasonable.
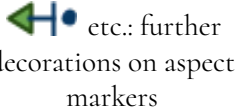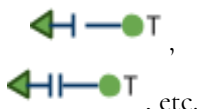
Lexis and "morphosyntax"
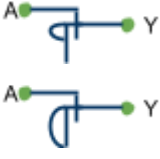
UNLWS has a lot of fusional derivation, where a glyph is made by overlaying or combining features of others from its family. We've tried to say where in the lexicon this applies, but may not have caught every case.
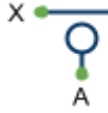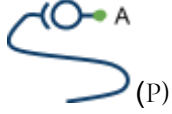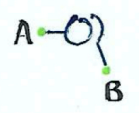
· · · · · · · · or **▬ ▬ ▬ ▬** etc.	**Scope.** A non-solid line is the boundary of a *cartouche*. Cartouches enclose parts of the text. Cartouches are how UNLWS delimits syntactic scopes, or large pieces of text that are an argument to another predicate. A connecting line can pierce a cartouche boundary normally: watch out for cases where this line is irrealis. But if a connecting line ends on a cartouche, it is a rel gap (q.v. below).
A —— —— B A ⌐—— —— B	**Irrealis.** If the line between two glyphs has a gap, that equality of their arguments is not in fact being asserted. If one side (call it A) of the gap has a hook, then everything on the A side is realis, but some larger part of the text on the B side may be hypothetical.
· · · · · · · ▬ ▬ ▬ (I)ᴼ (T)	**Implication.** When two cartouches are nested and the outer one is made of long dashes, this sets up a hypothetical or counterfactual world rendering an implication: "if [the text between the two cartouches], then [the text inside both]." In the example, O is the outside (realis) world; I is a irrealis condition; and T is an irrealis world in which that condition is fulfilled. So, O is true; if I, then T. Connecting lines can cross these boundaries as well. For example, if one were to write "Sai would eat fish if they were a cat", "be Sai" would be in O space (fun fact, Sai actually exists). "Be cat" would be in I space (it defines the conditional world), with a an irrealis line, crossing the O-I boundary, binding "be Sai" to "be cat" (this is a hypothetical predication). "X eat fish" would be in T space (it is the consequent, and is true if the defining condition is true), again with a line, crossing the O-I-T boundaries, connecting "be Sai" to "be eater".
A —/— B	**Negative.**
A —•— B	**Existential** ("indefinite") article: "*some* A is B". Virtually always omitted. Connecting lines on which no article is present can according to UNLWS grammar be read with any article, but the existential is the usual choice.
A —⌒— B	**Generic** article: "*As* are B", with the generic reading of the bare plural "As". More closely, "the A you think of by default, if I don't say anything more about it, is B".
A —o— B	**Universal** article: "*all* As are B".
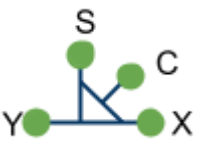
	Sense, channel, physical medium: 1. light 2. sound 3. chemical 4. physical contact 5. perceiver's internal sensations 6. a gestalt These are bound morphemes (i.e. not whole glyphs by themselves).
	be I (the author)
	be thou (the reader)
, where G is any glyph or region of text	"Clausal nominalisation", as it were (except UNLWS doesn't have "nouns" or "clauses"). "X be the fact that A is B", "X be the fact that G happens". Our name for this construction in UNLWS grammar is a *rel gap*.
An equilateral triangle, possibly with simple line(s) inside, e.g. 	Pronouns. All instances of the same pronoun are coreferential. The meaning of the text would be identical if one were to replace the pronoun glyphs with a line connecting their binding points. Remember that nouns don't exist in UNLWS. "Pronouns" of this form can bind to any predication. If the same pronoun appears multiple times, *every* predication bound to *every* instance ot the pronoun glyph is true of the pronoun — and, because glyphs act as connectors, they connect to each other also. In the example, the right-slashed pronoun is A, and it is B, and A is B.
A glyph with an equilateral triangle frame but elaborate filling, including lines piercing through to outside the triangle	Proper names. UNLWS proper names are usually made up of graphic elements drawn from lexical glyphs, but these can be abstracted to their most salient parts and arranged freeform. They're usually drawn bigger than pronouns too. (Grammatically, proper names are just pronouns but stronger: their coreference even works between texts.) An example follows.
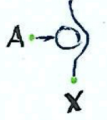
X	X be a cat
X	X be Sai. The name "Sai" is built from the ears part of "cat", a couple bespoke strokes at the top left (suggesting "emit light" below?), and an epaulet at the bottom left that is a title for an UNLWS speaker.
X	X be Alex Fink and Sai. A name for a group.
	Identity-of-sense anaphora. This construction means the same thing as , where there are two identical copies of the text Y; these two Ys are **not** coreferential. We call this the *stack* construction, imagining it as a stack of two identical copies of the text Y, one bound to A and the other to B. If one of the "arms" A or B is inside a cartouche, then the corresponding copy of Y should also be read as inside the cartouche. If this construction appears more than once, they may be interpreted with the sense of "respectively". E.g. you could write "A eats B and C eats D" this way with only one "eat". How do we know it's not "A eats D and C eats B"? In this text, the main case of concern has one member of each stack inside a cartouche and the other not; the sides in the cartouche go together, and those outside the cartouche go together.
, , etc., where the green triangles are any glyph	Aspect. The little horizontal spur on the body of a glyph (or, a few times in this text, on a connecting line) represents the focal time. The vertical line is a timeline of the duration of the event, past at top and future at bottom. Thus is imperfective, i.e. the focal time is somewhere in the middle of the event. is perfective, i.e. the focal time is the whole of the event. For the perfective you should imagine the event duration line as telescoped down to a single point, fitting entirely within the tip of the spur. Other aspect markers are given individual entries below.
	Inceptive aspect, "begin to"
	Terminative aspect, "stop"

(symbol)	Interrupted aspect, "happen except at the focal time"
(symbol) etc.	Iterative aspect, "happen repeatedly". This further bar is not a timeline but the mark of iterativity. It can combine with any aspect marker. So (symbol) is a sequence of events, each viewed perfectively; the focal time is in the middle of the sequence but not necessarily the time of one of the events. (symbol) is a sequence of imperfective events, etc.
(symbol)	"stop before its natural conclusion". The point where the diagonal tick meets the timeline indicates the time at which a process would naturally finish; here that is after the actual, premature, end.
(symbol)	"start, after which it will continue to its natural conclusion"
(symbol) etc.: further decorations on aspect markers	Tense. These extra decorations can be placed at any point on the timeline. A dot, as at left, means "now". E.g. (symbol) is present imperfective, because "now" is aligned with the focal time; (symbol) is past perfective, because "now" is in the future of the focal time.
(symbol)	A "third-person" pronoun for times. Has the same placement possibilities as "now" above. All instances of this < refer to the same time, but it has no preassigned deictic reference. A "time" can be an instant or a period.
(symbol) T , (symbol) T , etc.	T be the point or span of time marked out on the timeline. Note that the second example is **not** an iterative.
A B (symbol) Y	Y be a group of A and B (acting or being acted on in concert)
A (symbol) Y	Y be a group of A and various other things
A (symbol) Y	Y be a group of multiple As
A (symbol) Y	Y be (a group of just) one A
A (symbol) Y	Y be a group of two As
A (symbol) Y	Y be a group of nine (3 × 3) As
(symbol) X	Left: X be small. Middle: X be mid-sized. Right: X be big.
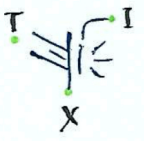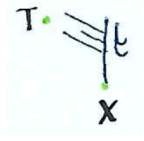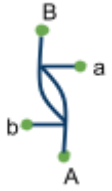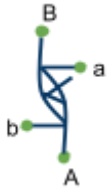
	Many UNLWS glyphs expressing gradable properties, like this one, have graphically gradable elements forming a continuous family.
A — Y (top) A — Y (bottom)	Top: Y be a small group of As. Bottom: Y be a big group of As. Intermediate sizes are possible too.
A — Y	Y be a mass of As, perceived as a gestalt. This decoration of the group glyph can fuse with the previous one.
A — Y	Y be a whole including part A. This may fuse with any of the above decorations of the group glyph.
A — Y	Y be a social group, e.g. a society or subgroup thereof, composed of As
Y — G	Graph. The place marked G holds a graph indicating to what extent or intensity Y is true. Often Y is a rel gap (q.v.). The kind of graph appearing in this text is a 1-D scatterplot: see the next entry.
Y — A B C	A be more Y than B, which be more Y than C
O — X	X exist
B — O — A	A and B be in the same place
Combinations of lines and circles, e.g. X — A	Location and motion in space. The UNLWS grammar for space applies to a region of the page at a time, large or small. Spatial facts are being asserted of glyphs drawn in this region: it's usually just the ground lines and circles, but especially if the spatial region is large, other glyphs may want to be read with respect to it as well. In the example, A is inside X. Several glyphs from this system follow. It's meant to be fairly iconic.
(outside) X — (inside)	X be a ground object. This is "ground" in the sense of "figure and ground": we care about the position of other objects with respect to X.
A X —	A be outside X
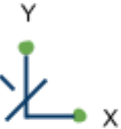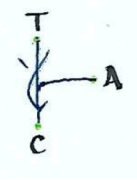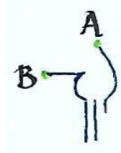
	A be inside X
	A be touching (and outside) X. The tangency of the line and circle expresses contact.
	A move, rightward
	A move fast, rightward
e.g. (P)	A move along the path P as drawn in space. P is not a binding point. If the path crosses a ground object X, the sense includes "A enter X" or "A leave X", according to which direction it's going.
	B push A; B use force to make A move. The "force" and "movement" here can be either literal or metaphorical.
	Direction of gravity in a region subject to the space grammar. As an exception to the usual rule that rotation is irrelevant, nearby glyphs' rotation indicate orientation with respect to gravity (if capable of such interpretation — e.g. "be cat" is not orientable).
	X be the ground, i.e. the surface of the earth or a comparable surface. Often there will be a gravity marker ∨ nearby, pointing in the direction of the ground.
	X be long or sticklike or rodlike in shape, X be significantly longer in one direction than the orthogonal directions
	X be long etc. in the vertical direction (i.e. upright with respect to gravity). This form contains the gravity marker ∨.
	A make or cause B. Often B is a rel gap (q.v.); A is usually an agent but it can be a rel gap as well.
	X intend that Y happen. Often Y is a rel gap.

X d _A	X intend to be (irrealis) A. A ligature of the above, pointing at the irrealis gap, with an irrealis-gapped line connecting X to A.
X●→●Y	X have meaning Y; X be "Y" (semantically). Often Y is a rel gap (q.v.)
X ●—)●Y	X have form Y; X be "Y" (verbatim). Direct speech.
X●—(	X be what? This is an invitation for the reader to fill in the relation, by connecting (in this orientation) to the right side of the line with an utterance that fulfils the predicate X.
∝ • X	X be bad. X is often a rel gap, i.e. one gets the crossed-tilde shape hovering on a line.`
⋀ • X	X be unexpected. Similar to the above.
S ● ●C Y●——●X	Y communicate S to X in modality or encoding C. If C is omitted, so is the little line leading to it.
S ● ◣●X	X perceive S
B●—╀—● A R	the identity between A and B, on B's side, is compelled by the power or authority or force of R
F ȷ ɭα	F be foot and/or leg
H·〰	H be insulating hair (as opposed to e.g. sensory hair like whiskers or inner ear hairs)
℧˙ S	S be skin qua tactile sensory organ
⊙˙ H	H be a head

A⟶◯ X	X (or its boundary) deform to accommodate A (outside it); X be shaped so as to concavely fit A
A● B	A wear B. A can be a whole creature or a part thereof.
●X	X be a snake
●P	P be a person, a sapient
●P	P be a person in a military capacity, P be a soldier etc.
X	X be a plant
X	X be a tree
X	X have a sheet-shaped piece coming off of it, X peel
X	X be a birch tree
∞● or ◯	social relationship. Bound morpheme.
A●———●B	A and B be married
A BA B	A be socially loyal to (e.g. friends with) B. The degree of loyalty is shown by how far the line in position D extends. The extension may be asymmetric; e.g. if D comes from the B side but stops short of the A side, B is more loyal to A than A is to B.

	B be socially loyal to A due to some coercive force (e.g. cultural legitimacy, legal authority, physical violence, etc.)
	A be a child of B, B be a parent of A (by social convention) If multiple glyphs with the ∞ shape appear connected, the inner lobes can be removed, for example the next entry:
	C₁ and C₂ share a parent, C₁ and C₂ be siblings
	A be female in gender
	A be male in gender
	X emit light omnidirectionally
	X emit light in a coherent direction
	X reflect light
	X scatter light
	X be star, including sun
	A be in the sunlight; it be daytime for A; the sun shines (broadly, but in particular) on A

	X emit magical or illusionary light, which looks like I, narrowly at T.
	The optional T argument is quasi-spatial: rather than a binding point, one can have a glyph sitting at the spot marked T. With the coherent emission base (three diagonal lines), T is the only entity that perceives I. With the broad emission base (two diagonal lines), T is the focal but not exclusive target.
	The I line is optional, only included if there is an I bound. Unless indicated otherwise by some other relation, I does not refer to an actually existing thing; it is an illusion.
	X direct (military) force narrowly at T.
	This may be used metaphorically.
	A give a to B and B give b to A, in an exchange or transaction.
	If a or b is omitted together with the little lines leading to it, the exchange is unidirectional, as below.
	This can, but does not necessarily, refer to concrete objects; a and b can be actions, promises (if irrealis), or any other predicate relationship.
	B give b to A in response to A giving b to B.
	A give a to B (without getting anything in return)
	B take a from A, without the consent of A
	A do violence to B; A use force to cause B to ablate; A harm B (an unmarked amount)

	Left: A harm B a small amount Right: A harm B a large amount
	A and B do violence to each other; A and B engage in mutual combat Both sides can indicate degree of harm as above, and this can take the same "in response to" diacritic in the middle as "give".
	X be angry
	X be disgusted
	X be contemptuous. These three glyphs come from the emotion system, which has some gradable and some discrete lexical parts. One gradable aspect is the sharpness of the top: a sharper shape means more affect arousal, i.e. more energy or tension. Fusions of emotions are possible.
	X be angry on account of Y. All emotion glyphs, not just "angry", can take this Y argument.
	X manipulate Y
	A use T as a tool to cause or make C
	A slice B, A cut B to leave a gouge that is deep and long but narrow