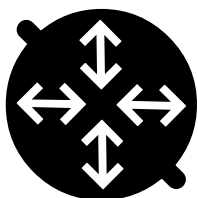Blissymbolics Communication International

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The Fundamental Rules of Blissymbolics

Please Note: This document is currently being revised (June 2020).

The fundamental rules of Blissymbolics: creating new Blissymbolics characters and vocabulary

Blissymbolics Communication International (BCI)
2004-09-28

1.0 Introduction.

This document describes the basic structure of the Blissymbolics language, and outlines both the rules necessary to be followed for creating new BCI Authorized Vocabulary, as well as procedures used for adopting that vocabulary. This reference document will guide anyone wishing to use the Blissymbolics language. Its purpose is to ensure consistency and maintain the integrity of Blissymbolics as an international language. The formal process for the development of Blissymbolics is outlined in clause 9.

> NOTE: A number of technical notes appear throughout the document in smaller type. These notes refer to a number of elements which are technical in nature, such as providing specific advice for font implementations (clause 4.3.6) or the need to keep the creation of new Bliss-characters to a minimum (clause 8.9). Many users of this document will not need to take these notes into account for purposes of teaching, but they are nonetheless important for vocabulary development work and do form a part of the official guidelines.

1.1 Target users.

This is a document intended to assist the following sets of users:
- Members of the Blissymbolics Development Secretariat (BDS) who oversee and manage vocabulary development (clause 9.1.1).
- Members of the Blissymbolics Development Panel (BDP) who develop new vocabulary items for approval (clause 9.1.2).
- Members of the Blissymbolics Editorial and Proofreading Committee (BEC) who inspect the exact shapes and glosses used to represent the vocabulary (clause 9.1.4).
- Members of the Blissymbolics Approval Committee (BAC) who decide which symbols go to the Board for approval. (clause 9.1.3.1).
- People working with Blissymbols who need to create new vocabulary, whether for temporary or permanent use.
- People who develop technology to support Blissymbols.

1.2 **Purpose**.
Creation of terminology must be carried out according to the fundamental rules of Blissymbolics to ensure the integrity of the system. The structure of Blissymbolics allows the application of consistent principles as guidelines. The reason formal guidelines are necessary is twofold:

- Because Blissymbolics is a living language, there continues to be a need to create new vocabulary and so explicit guidelines are needed to ensure precision and accuracy in those Blissymbols comprising the BCI Authorized Vocabulary.
- Computer implementation imposes some restrictions which can be met more easily by following an explicit set of guidelines.

2.0 **Blissymbolics**.

Blissymbolics Communication International (BCI) is the international authority responsible for maintaining and extending the Blissymbolics language for the purposes of augmentative and alternative communication. The authority of the BCI rests in its usage of the language since 1971, its licence and copyright obtained through legal agreements with Charles K. Bliss in 1975 and 1982, and in BCI maintaining the policy for the development of Blissymbolics as contained in this document.

The BCI standard Blissymbolics language structure and vocabulary is based on and derived from Charles K. Bliss' work *Semantography* (1949). BCI develops Blissymbolics in accordance with the needs of its users, which include:

- national, cultural, and developmental differences;
- the maintenance of the logic of the system;
- the maintenance of Blissymbolics as a multicultural language;
- sensitivity to the practical and pragmatic needs for communication.

3.0 **Definitions**.

This document uses a number of terms in a technical way, and the definitions of those terms are given here.

3.1 **BCI Authorized Vocabulary**.

The vocabulary approved and published by BCI for the use of persons with communication, language, and/or learning difficulties.

3.2 **Bliss-character**.

A basic "building block" of Blissymbolics to be encoded as an individual indivisible unit. This can be called **character** or **Blissymbolics character** when context requires. Bliss-characters may appear alone with their basic semantic meanings. (In this document, the basic semantic meanings are given in SMALL CAPITALS, and other translations are given in *italics*.) Examples:
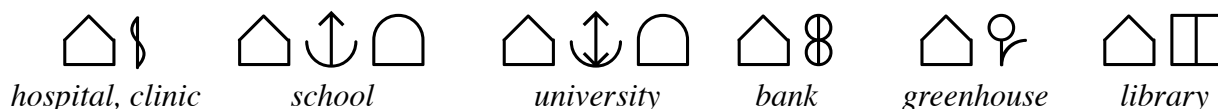
HOUSE	MEDICAL	KNOWLEDGE	MONEY	PLANT	BOOK

Bliss-characters may also appear combined with other Bliss-characters to form other words. Examples:

hospital, clinic	school	university	bank	greenhouse	library

NOTE: The term "simple symbol" was formerly used for what is now called a **Bliss-character**.

3.3 **Bliss-word**.

A Bliss-character used by itself with a specific lexical meaning, or a sequence of Bliss-characters with a specific lexical meaning. Bliss-words are separated from one another by a BLISSYMBOL FULL SPACE, or are followed by a BLISSYMBOL HALF SPACE and a punctuation mark. Bliss-characters within a Bliss-word are separated by a BLISSYMBOL QUARTER SPACE (see clauses 4.3.5 and 4.3.6). Can be called **word** or **Blissymbolics word** when context requires.

> NOTE 1: It may be useful here to point out the similarity between Blissymbolics and other written languages. In English "I" and "a" are both single characters and complete words; "if" and "all" are examples of complete words made up of multiple characters. In Swedish, "å" is both a character and a word 'river', and "år" is two characters forming a word 'year'. In Blissymbolics, "⌂" is both a character and a word 'house', and "⌂&" is two characters forming a word 'bank'.

> NOTE 2: The term "compound symbol" was formerly used for what is now called a **Bliss-word**.

3.4 **Gloss**.

The translation of a Bliss-word into another language, such as Norwegian or English. Example: the Blissymbolics word ▯ may be glossed by the Norwegian word 'bok' or the English word 'book'.

3.5 **Glyph**.

The actual drawn or printed representation of a shape or a Bliss-character, for instance as represented by different fonts. In most writing systems, characters can be distinguished from glyphs, since a single character may be represented by more than one glyph (example: a **a** *a* are all glyphs representing LATIN SMALL LETTER A). In Blissymbolics, however, font variation in the shapes of characters is not permitted, because shape change can alter the meaning or interfere with legibility for some users.

> NOTE 1: The character/glyph distinction is observed in the Universal Character Set, or UCS, an international computer standard for the interchange of data, which, in simplified terms, is intended to encode all the letters of all the alphabets of all the languages of the world. The UCS has two forms, the international standard *ISO/IEC 10646* and the industrial *Unicode Standard*. BCI has determined that a UCS encoding will greatly enhance the usability of Blissymbols on computers

> NOTE 2: Blissymbols were first registered on 1993-01-21 as ISO-IR 169. This is a registration conformant to ISO/IEC 2375, suitable for use in ISO/IEC 2022 protocols. It is a lexicon-based encoding, as opposed to the proposed UCS encoding for Blissymbols, which is character-based. BCI has determined to update the ISO-IR registration when new vocabulary is adopted, and to ensure that it is possible to map data using the ISO-IR encoding and data using a UCS encoding.

3.6 **Indicators**.

Small Bliss-characters which are placed above other characters as grammatical or semantic markers.

> NOTE: In the technical terminology used for the UCS, an indicator is called a "combining character". Indicators are non-spacing; that is, they combine with their previous character in the same way that the acute accent combines over the letter "á".

3.7 **Kern**.

To eliminate the standard spacing between the glyphs of adjacent characters so that the glyphs do not appear too widely separated on a line (clause 4.3.6).

3.8 **Shape**.

Shape is the general term originally used to describe the basic graphic elements (dots, lines, and curves of various sizes, orientations, heights, widths, and spacing). Many shapes are also Bliss-characters.

3.9 **Symbol**.

A **Bliss-character** or **Bliss-word** (clauses 3.2 and 3.3).

> NOTE: This term **symbol** can be retained for general descriptions of Blissymbolics, but in teaching materials and formal documents, the terms **Bliss-character** and **Bliss-word** should be used.

3.10 **Synonyms**.

Two or more Blissymbolics words used to represent a single word in another language, or two or more words in another language used to represent a single word in Blissymbolics. See clause 6.4 for **Bliss-synonyms** and clause 5.3.2 for **gloss-synonyms**.

4.0 **Graphic aspects of the language**.

Blissymbolics is a concept-based language which makes morphemic use of graphic entities. Spoken languages make morphemic use of sounds; sign languages make morphemic use of hand positions, locations, and movements. (*Morpheme* is a linguistic term which refers to the smallest units of meaning in a language.)

4.1 **Geometric shapes**.

The BCI Template (1980) can be used to draw the geometric shapes used to form Bliss-characters in the BCI Authorized Vocabulary.
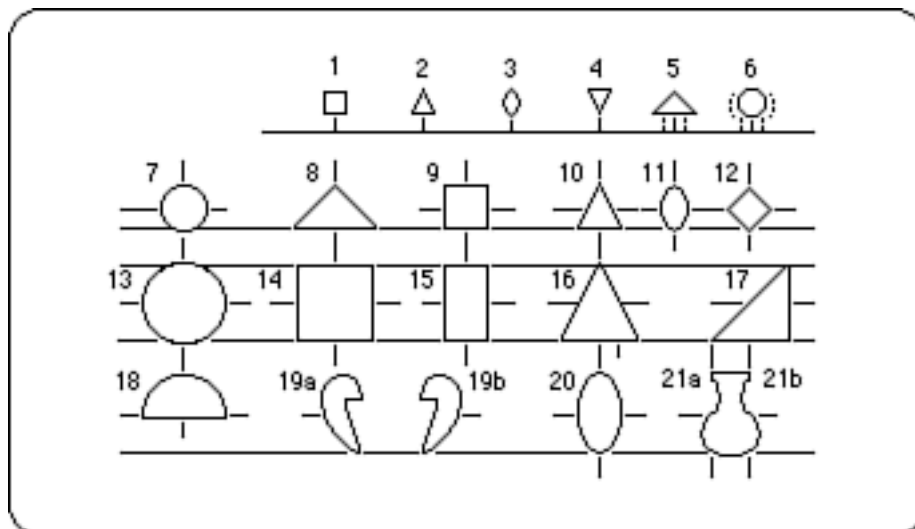
> NOTE 1: The use of the BCI Template must be respected, regardless of the development of flexible font technology, in order to sustain – and restrict – the set of easily-recognizable shapes permitted in Blissymbolics.

4.1.1 **Basic geometric shapes**. Bliss-characters are derived from standard geometric shapes and segments of these shapes used in full, half, and quarter sizes and/or in various orientations. "Size" refers to the **matrix square** (see clause 4.3).
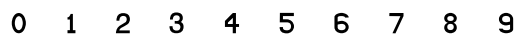
$$\square \quad \bigcirc \quad \triangle \quad \triangle \quad \square \quad | \quad)$$

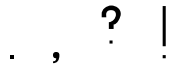4.1.2 **Additional shapes** are used in full size only.

$$\heartsuit \quad \sim \quad \wr \quad \wr$$

4.2 **International characters** are used in addition to geometric shapes.

4.2.1 **Digits** are used in half size.

$$0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9$$

4.2.2 **Punctuation marks** are used.

$$. \quad , \quad ? \quad |$$

4.2.3 **Arrows** are used in eight orientations.

$$\uparrow \quad \nearrow \quad \rightarrow \quad \searrow \quad \downarrow \quad \swarrow \quad \leftarrow \quad \nwarrow$$
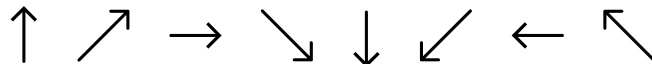
4.2.4 **Pointers** are used in four orientations. For placement of pointers, see clause 4.3.7.

$$\wedge \quad > \quad \vee \quad <$$

4.3 **The matrix square**.
The matrix for drawing a Blissymbol is a square.
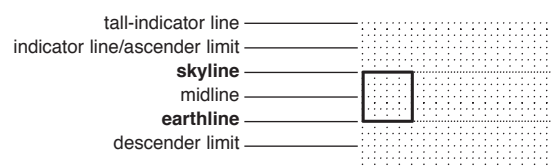
4.3.1 **Skyline, earthline, and midline**. The top of the matrix square defines the skyline. The base of the matrix square defines the earthline. The midline is midway between the two. These lines are used as the reference points for measurement when positioning Bliss-characters to form words and sentences. Most Blissymbolics glyphs are positioned between the skyline and the earthline.
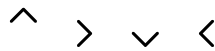
4.3.2 **Subdivisions of the matrix square**. The matrix square is subdivided into quarters, vertically and horizontally. In the vertical dimension the glyph of a Bliss-character extends no more than ½ of a matrix square above the skyline, and no more than ½ of a matrix square below the earthline. In the horizontal dimension the glyph of any individual Bliss-character *should not* be more than three matrix squares wide. Compare the examples below with the diagram in clause 4.3. *Pineapple* reaches the ascender limit, *onion* the descender limit. *Valley* is three matrix squares wide.

PINEAPPLE　　　　ONION　　　　VALLEY
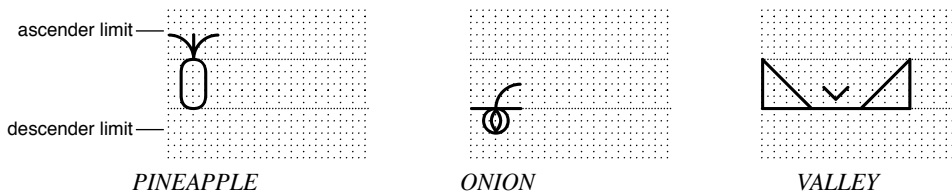
4.3.3 **General placement of indicators**. Indicators are located ¼ of the matrix square above the skyline (that is, hanging from the indicator line shown in clause 4.3). Indicators are usually centred above the glyph of a Bliss-character, but there are exceptions. See clause 7.1. Examples:

*freely*　　　*to lead, to guide*
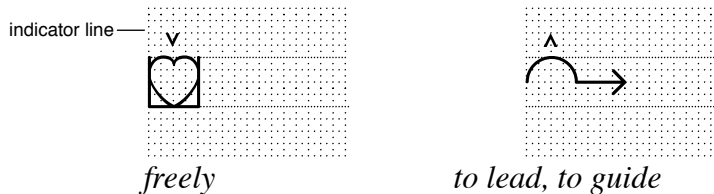
> NOTE: Indicators normally appear above the first Bliss-character in a Bliss-word (see clause 7). Exceptions to this also occur: the Jewish month ט״ו בשבט *Tu B'Shvat* is written with a plural marker over the last element ⌓ (MONTH/MOON + BIRTH + TREE + PLURAL INDICATOR).

4.3.4 **Exceptional placement of indicators**. In all cases in which the glyph of a Bliss-character extends above the skyline, indicators are located ¼ of the matrix square above the ascender limit line (that is, hanging from the tall-indicator line). See also clause 7.1. Example:

to forgive
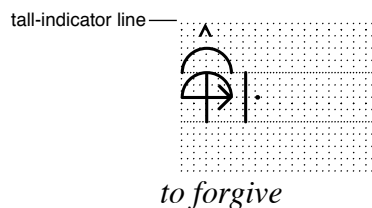
4.3.5 **Width of spaces**. The space between characters forming a word is ¼ of a matrix square (the width is ⅛ of a matrix square between two digits). The space between the last character in a word and the punctuation which follows it is ½ of a matrix square. The space following punctuation or between two words in general is the full width of a matrix square.
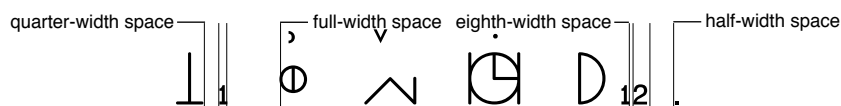
I was sick in December.

4.3.6 **Kerning**. When the glyphs of some Bliss-characters meet in a Bliss-word, the ¼ space between them is omitted entirely, either when drawing them with the BCI Template, or when represented in fonts or other graphic formats. There is no other variable kerning in Blissymbolics. (In ISO-IR 169 implementations, words are encoded, so kerning does not apply.)

> NOTE: The ¼ space between characters forming a word should be incorporated into the font glyphs themselves in order to optimize the encoding of text. Accordingly, the space between the last character in

a word and the punctuation which follows it in plain text is the BLISSYMBOL QUARTER SPACE (BQSP), which, when added to the inherent ¼ space in the font glyphs, equals ½ of a matrix square. The space following punctuation or between two words in general in plain text is the the BLISSYMBOL THREE-QUARTER SPACE (BTSP), which, when added to the inherent ¼ space in the font glyphs, equals a full matrix square. (This does not apply to ISO-IR 169 implementations.) BQSP is a non-breaking space; BTSP is a breaking space.

pain (kerned)   not   *pain (with QUARTER SPACE)*

religion (kerned)   not   *religion (with QUARTER SPACE)*
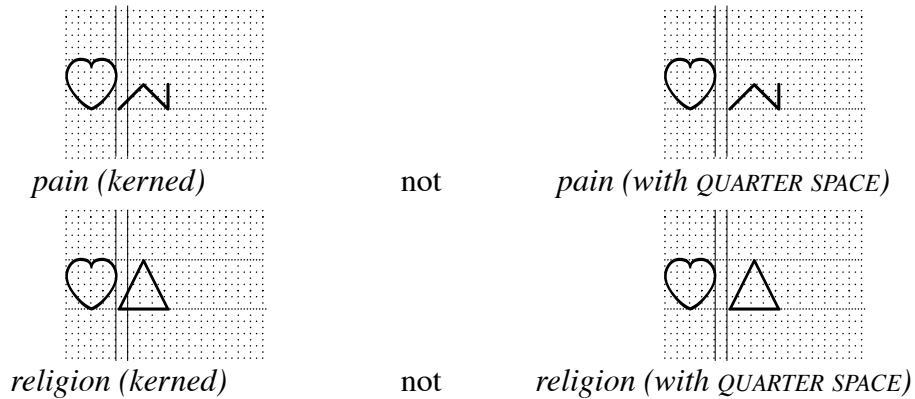
4.3.7 **Placement of pointers**. Pointers are located ⅛ of a matrix square from the part of the associated Bliss-character's glyph to which they point. In general, it is recommended to place the pointer on the right hand side of a glyph, unless it alters the meaning of the Bliss-character or is awkward to do this because of the placement of the graphic element to which the pointer relates. The highest and lowest positions possible for pointers are shown below (*these examples are not real Bliss-characters; they are only given to show the permitted pointer positions*).
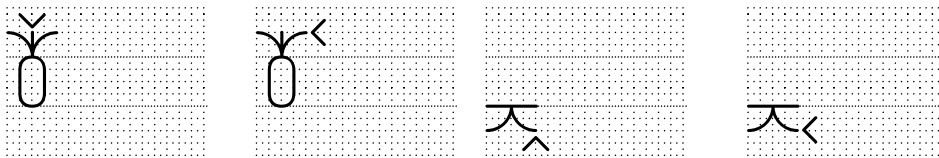
When pointers are used in other semantic ways, as intrinsic parts of Bliss-characters, they may touch other glyph elements. Compare � 'on' with ⟩| 'to'.

4.3.8 **Placement of punctuation**. Punctuation is preceded by a space ½ the width of a matrix square separating it from the Bliss-word. For the use of the comma within Bliss-words, see clause 8.7. The use of quotation marks generally follows the local language practice (for example, "English", « French », „German", "Swedish").

"Help me!" he said. "The baby is sick! Can you come here?"

5.0. **Bliss-characters**.

Approximately 900 basic characters derived from *Semantography* and other sources have been identified. Bliss-characters are used as components for generating new vocabulary. BCI maintains an established set of Bliss-characters and approves additions to it from time to time. Restricting the number of Bliss-characters has been recognized to be useful with regard to the user community as well as to technological implementation.

5.1 **Types of Bliss-characters**.

Bliss-characters may represent abstract or concrete concepts. Graphically, Bliss-characters can be arbitrary, ideographic, pictographic, or composite.

5.1.1 **Arbitrary Bliss-characters** usually are derived from Charles K. Bliss' *Semantography* and include such characters as:

╱	╱˙	╲
THE	*THIS*	*A, AN*

5.1.2 **Ideographic Bliss-characters** usually represent abstract concepts, described in *Semantography*. ("Ideograph" derives from Greek words meaning 'drawing an idea'.)

△	⌒	∧
CREATION	*MIND*	*ACTION*

Ideographic Bliss-characters can also represent concrete concepts.

♀	♀	♀
CHILD	*TEEN*	*ADULT*
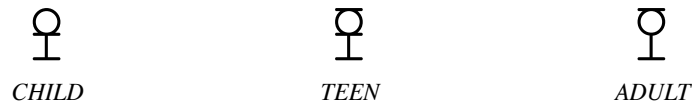
5.1.3 **Pictographic Bliss-characters** usually represent ordinary objects. ("Pictograph" derives from Greek words meaning 'drawing a picture'.)

┠	⊗	↑	╱
CHAIR	*WHEEL*	*TREE*	*NOSE*

Pictographic Bliss-characters depict the physical appearance of an object and usually have a concrete meaning.

5.1.4 **Composite Bliss-characters** are unique characters in which two or more Bliss-characters have been superimposed (merged) or superposed (one above the other) to represent a new meaning. Examples of Bliss-characters with concrete meanings:

hail	*toilet*	*food*
ICE/DOWN	CHAIR/LIQUID	MOUTH/EARTH
(superimposed)	(superimposed)	(superposed)

Examples of Bliss-characters with abstract meanings:

taste	*marriage*	*body of learning*
MOUTH/NOSE	PROTECTION/UNION	MIND/CREATION
(superimposed)	(superposed)	(superposed)

> NOTE: When new composite Bliss-characters are created, they must be coded as new characters in the UCS (see clause 8.9 for discussion of the costs of this).

5.2 Distinguishing features of Bliss-characters.

The following examples show how the configuration of shapes determine the meaning of a Bliss-character:

5.2.1 The **size** of a Bliss-character can be relevant to its meaning.

SUN	MOUTH	BODY	BUN

Often, but not always, the size difference denotes a semantic relationship:
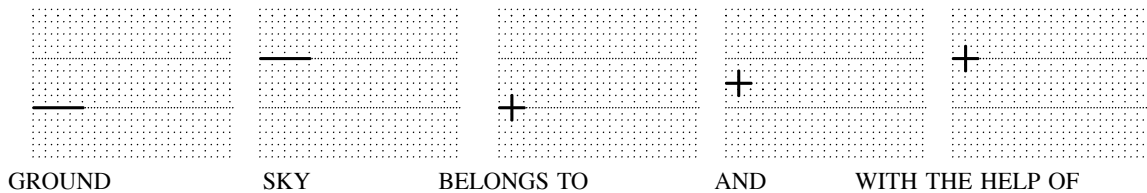
ACTION	ACTIVITY	LIVING	BEING

5.2.2 **Position in relation to skyline and earthline** can be relevant to a Bliss-character's meaning.

GROUND	SKY	BELONGS TO	AND	WITH THE HELP OF

5.2.3 **Orientation** of a Bliss-character can be relevant to its meaning.

MIND	CONTAINER	UP	DOWN

5.2.4 **Distance between graphic parts** can determine the meaning of a Bliss-character.

parallel	*copy*	*limits, limitation*
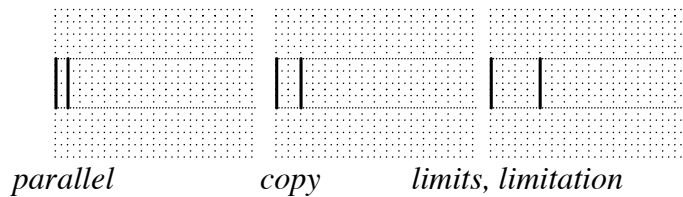
> NOTE: Graphically, it would be possible to represent these as LINE + LINE, LINE + BQSP + LINE, and LINE + BTSP + LINE respectively (see clause 4.3.6). However, combining lines in this way to create these words would be formally incorrect, because the BQSP separates a Bliss-word from the punctuation which follows it, and the BTSP separates two Bliss-words; LINE is not a punctuation character, and *limits* is a single word, not "line line". It would also be conceptually incorrect, because the three words here represent root concepts, not combinations of lines. This needs to be considered when proposing new characters. →| 'come' is a root concept, not a combination of FORWARD + LINE; therefore it is encoded as a single character.

5.2.5 The **degree of angle** can differentiate between the meaning of Bliss-characters.

FEMALE (60°)	MAKE (90°)	WORK (60°)	SON (90°)
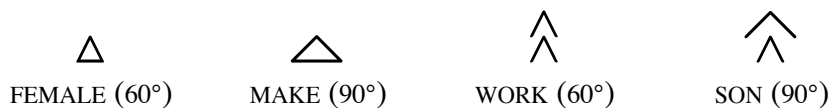
5.2.6 Positional referents can determine the meaning of a Bliss-character.

BEFORE   AFTER   ABOVE   BELOW

5.2.7 Arrows in various orientations can determine the meaning of a Bliss-character.

STEAM   RAIN

5.2.8 Location of pointers can determine the meaning of a Bliss-character. Pointers may appear in various orientations above, below, to the left of, to the right of, or within a Bliss-character's glyph (see clause 4.3.7).

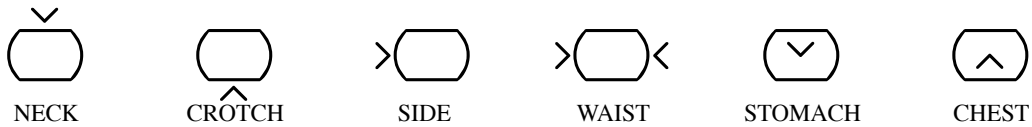NECK   CROTCH   SIDE   WAIST   STOMACH   CHEST

5.3 Meanings of Bliss-characters.
Bliss-characters have meaning individually and in combination.

5.3.1 Uniqueness. In general, a Bliss-character represents a single concept.

> NOTE: A certain number of Bliss-characters do not occur by themselves with conceptual meanings, but have been included in the *Blissymbol Reference Guide* because they are "radical" or "root" elements; see the "Finding Symbols by Shape" section of the *BRG*. From time to time, meanings for these characters have been discovered subsequently. For example, the large wheel ⊗, which occurs only as part of the character ⊗ 'tractor' or as a radical, could be used by itself to refer to the Buddhist 'Wheel of Dharma' (or, more generally, 'Buddhism'); compare ⊔⊗ 'Tibet'.

5.3.2 Gloss-synonyms. Each Bliss-character is usually associated with a word in another language. This word is referred to as a "gloss". A gloss may have synonyms. A gloss-synonym must be consistent with the Bliss-word's meaning. See also clause 3.10.

Gloss-synonyms: *shape*   *form*   WATER   *liquid*
     EYE + THING   EYE + THING

Gloss-synonyms: HELP   *aid*   *assistance*   *support*
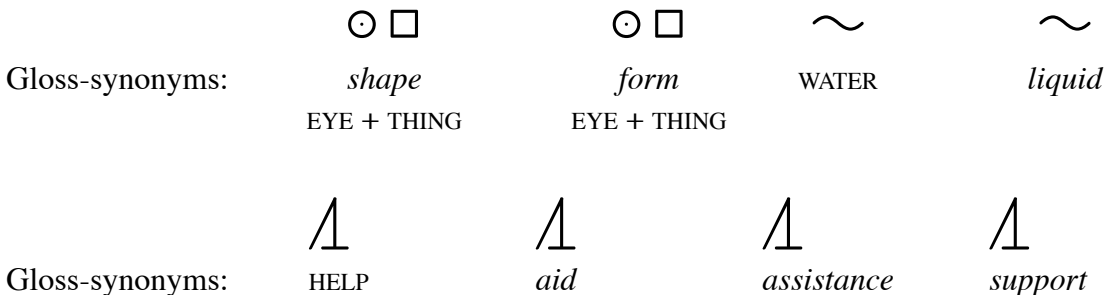
6.0 Bliss-words.

A Bliss-word represents a single concept and is spelled using one or more Bliss-characters.

6.1 Spelling of Bliss-words.

Bliss-words have standard correct spellings. These can be found in the BCI Authorized Vocabulary.

6.1.1 Single-character Bliss-words.

Bliss-words are spelt with Bliss-characters. Some Bliss-words are spelt with a single character. These may be called *single-character* Bliss-words, or *simple* Bliss-words.

FEELING	CHAIR	TASTE

6.1.2 Multiple-character Bliss-words.

Other Bliss-words are spelt with more than one Bliss-characters. These may be called *multiple-character* Bliss-words or *compound* Bliss-words.

thanks	*school*	*resource centre*
FEELING + GIVE	BUILDING + GIVE + KNOWLEDGE	BUILDING + FOR + EXCHANGE + KNOWLEDGE

6.2 Spacing of Bliss-words.

See clauses 4.3.5 and 4.3.6. For the use of the comma internally in words (and not as a mark of punctuation), see clause 8.7.

6.3 Classifiers and specifiers.

A multiple-character Bliss-word is composed of a *classifier* followed by one or more *specifiers*. The classifier identifies the semantic and/or grammatical category to which the Bliss-word belongs (see clause 8.1). The specifiers refine the concept by describing or further defining a role, function, or other features (see clause 8.2). A multiple-character Bliss-word may also contain a *modifier* (see clause 6.5).

6.3.1 Position of classifiers.

Multiple-character Bliss-words usually begin with a classifier in first position. (see clause 6.5 for exceptions).
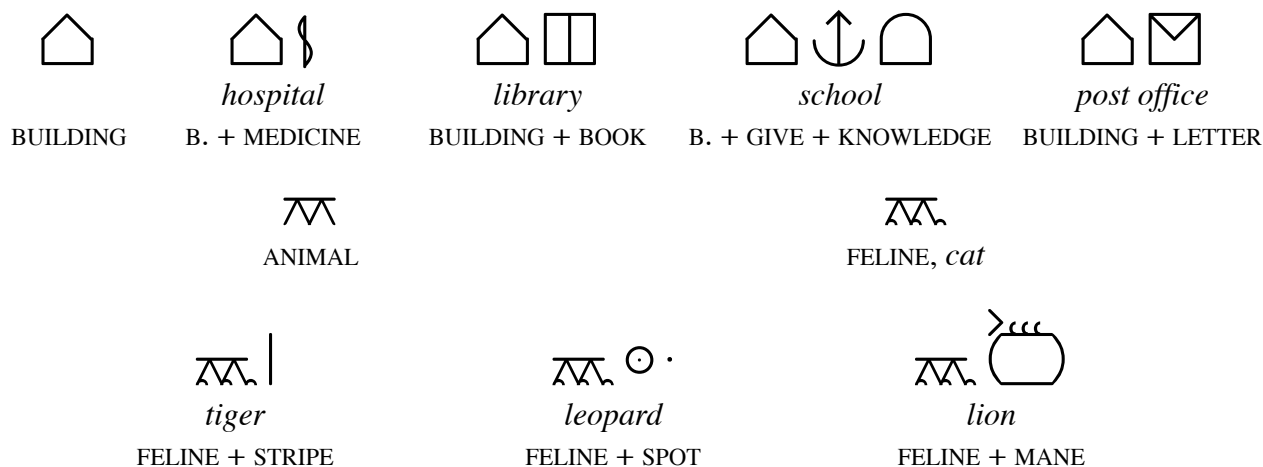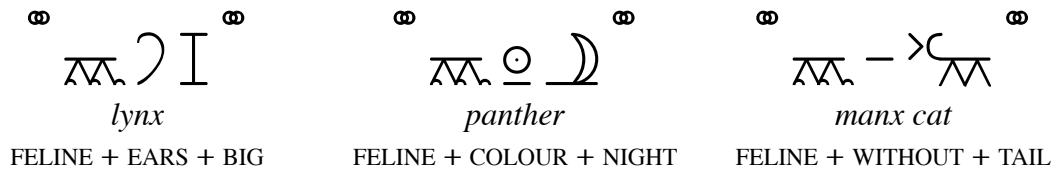
	hospital	*library*	*school*	*post office*
BUILDING	B. + MEDICINE	BUILDING + BOOK	B. + GIVE + KNOWLEDGE	BUILDING + LETTER

ANIMAL	FELINE, *cat*

tiger	*leopard*	*lion*
FELINE + STRIPE	FELINE + SPOT	FELINE + MANE

lynx

FELINE + EARS + BIG

panther

FELINE + COLOUR + NIGHT

manx cat

FELINE + WITHOUT + TAIL

NOTE: The combine modifier is used here to show that some of these vocabulary items have been invented by a user (see clause 6.5.4.5).

6.4 **Bliss-synonyms**.

To accommodate geographical, cultural, linguistic, and developmental differences, a concept may be represented by more than one Bliss-word. This means that synonyms are permitted providing a suitable rationale for each synonym is given. See also clause 3.12.

Cultural adaptation:

winter

= season 4

SUN + 4

winter (rainy regions)

= rainy season

SUN + 4 + RAIN

winter (snowy regions)

= snowy season

SUN + 4 + SNOW

Developmental adaptation:

ice cream

FOOD + TASTE + UP + ICE

ice cream

ICE-CREAM

6.5 **Modifiers**.

A special set of Bliss-characters is used as prefixes and suffixes to modify the meaning of Bliss-words. Most modifiers are prefixes. In multiple-character Bliss-words, **indicators** (see clause 7) are never applied to a modifier. See examples in clauses 6.5.1.5, 6.5.2.1, 6.5.3.1, and 6.5.3.2. There are four groups of modifiers, semantic modifiers, grammatical modifiers, numeric modifiers, and signalling modifiers. Substitution of modifiers is a productive strategy which can freely be used to expand the meaning of a Bliss-word.

6.5.1 **Semantic Modifiers**.

6.5.1.1 **Augmentation**. The character × 'group of, much, many' is positioned as the first character of the Bliss-word and can be applied as many as three times.

MUCH

lake

MUCH + WATER

ocean

MUCH + MUCH + WATER

6.5.1.2 **Intensity**. A more intense form of a word can be derived by adding one or more small exclamation marks to the end of a Bliss-word. These are positioned as the last characters of the Bliss-word and can be applied as many as three times.

$$— !$$

not, negative, no

NEGATIVE + INTENSITY

$$— ! !$$

no!, don't!

NEGATIVE + INTENSITY + INTENSITY

⌒	⌒	⌒	⌒
○	○ !	○ ! !	○ ! ! !
SPEAK	*shout*	*yell*	*scream*
	SPEAK + INTENSITY	SPEAK + INT. + INT.	SPEAK + INT. + INT. + INT.

NOTE: Formal Blissymbolics terminology allows a maximum of three intensity modifiers.

6.5.1.3 Privation. The character ⁻ 'minus, without' is positioned as the first character of the Bliss-word.

−	− ⊥	− 2
MINUS, WITHOUT	*no one*	*silence*
	WITHOUT + PERSON	WITHOUT + SOUND

6.5.1.4 Opposition. The character ↿ 'opposite meaning' is positioned as the first character of the Bliss-word.

↿	↿ ⌣	↿ ⊠
OPPOSITE	*empty*	*none*
	OPPOSITE + FULL	OPPOSITE + ALL

6.5.1.5 Generalization. The character ⚥ 'generalization' is positioned as the first character of the Bliss-word.

⚥	⚥ ✕	⚥ ⊓ ⊏
GENERALIZATION	*cutlery*	*furniture*
	GEN. + KNIFE	GEN. + CHAIR + TABLE

6.5.1.6 Constituence. The character ÷ 'part of, division' is positioned as the first character of the Bliss-word.

÷	÷ ⟩	÷ 呂
PART OF	*flame*	*province*
	PART + FIRE	PART + COUNTRY

6.5.1.7 Temporality. The words "ago", "now", and "then (future)" may be suffixed to a character denoting time.

○ ⟩	○ ⟩⟨	○ ⟨
yesterday	*today*	*tomorrow*
DAY + AGO	DAY + NOW	DAY + THEN (FUTURE)

○ 3 ⟩	⟲ ⟩⟨	D 1 ⟨
last autumn	*this year*	*next January*
SUN + 3 + AGO	YEAR + NOW	MONTH + 1 + THEN (FUTURE)

6.5.2 **Grammatical Modifiers**

6.5.2.1 **Comparatives**. The character ⌣̌ 'more' is positioned as the first character of the Bliss-word. Note the position of the evaluation indicator.

MORE	*higher*	*longer*
	MORE + HIGH	MORE + LONG
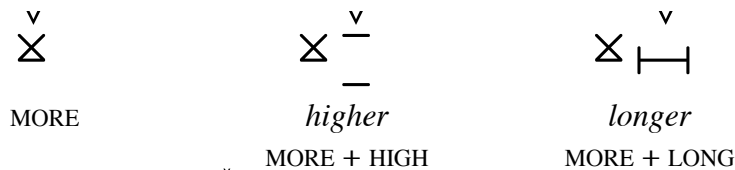
6.5.2.2 **Superlatives**. The character ⌣̌ 'most' is positioned as the first character of the Bliss-word. Note the position of the evaluation indicator.

MOST	*highest*	*longest*
	MOST + HIGH	MOST + LONG
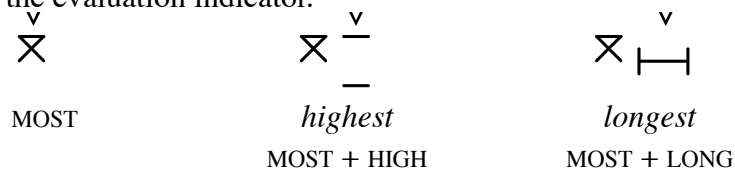
6.5.2.3 **Possession**. The possession modifier ₊ 'belongs to' is generally frequently positioned as the final character of the Bliss-word to indicate possession.

my, mine	*our, ours*	*girl's*	*girls'*
PERSON + 1 + BELONGS-TO	PERSON + 2 + BELONGS-TO	GIRL + BELONGS-TO	GIRL + PL. + BELONGS-TO

the girl's book

GIRL + BELONGS-TO BOOK
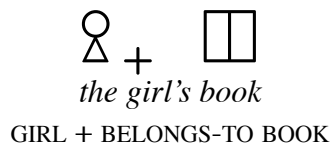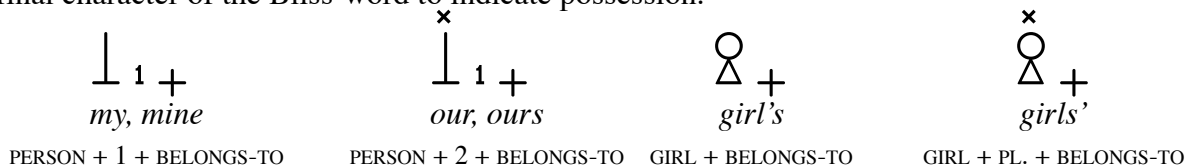
The syntax of the possession modifier can be changed to better accommodate the linguistic environment of the Bliss-user:

le livre de la fille

BOOK BELONGS-TO + GIRL

The possession modifier is also often used as a productive wordbuilding strategy; see clause 8.0.

6.5.3 **Numeric Modifiers**

6.5.3.1 **Semantic Numeric Modifiers**. A number can be *prefixed* to a word, in which case it indicates the number of items.

week (seven days)	*bicycle, "two-wheeler"*	*tricycle, "three-wheeler"*
7 + DAY	2 + WHEEL	3 + WHEEL
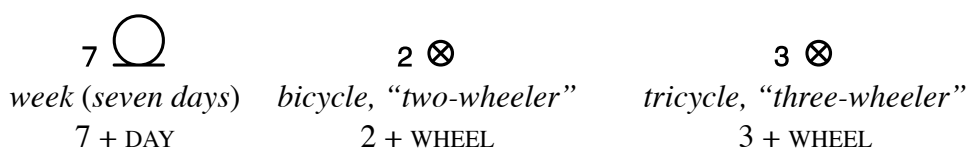
6.5.3.2 Grammatical Numeric Modifiers. A number can be *suffixed* to a word, in which case it indicates the ordinal. In some cases, as with people and animal classifiers (see clause 8.3), this functions as a pronoun.

⊥₁	⊥₂	⊥₃
I, me (*first person*)	*you* (*second person*)	*he, she* (*third person*)
PERSON + 1	PERSON + 2	PERSON + 3

D₇	○₂	○₇
July (*seventh month*)	*Monday* (*second day*)	*Saturday* (*seventh day*)
MONTH + 7	DAY + 2	DAY + 7

6.5.4 "Signalling" Modifiers indicate that the Bliss-word which follows is special or unusual in some way.

6.5.4.1 Metaphor. The character ⸙ 'metaphor' or 'flowery speech' is positioned as the first character of the Bliss-word. When applied to a phrase, the metaphor modifier stands alone as a word.

METAPHOR	*sweet, nice*	*to smell a rat, to be suspicious*
	METAPHOR + TASTE + UP	METAPHOR + SMELL ANIMAL + TEETH

NOTE: 'Sweet' would be applied thus: ⸙↑⼂ 'a sweet boy'.

6.5.4.2 Blissname. The character ⊠ 'Blissname' is positioned as the first character of the Bliss-word. Blissnames are used as a meaningful alternative to names which make use of alphabetic characters. Charles K. Bliss signed himself as "⅄ *Charles*" but a Bliss-user once called him "⊠⅄⊿" 'Mr Symbol Man'.

Spiderman	*Harry Potter*
BLISSNAME + MAN + SPIDER	BLISSNAME + BOY + LIGHTNING

6.5.4.3 Slang. The character ♡ 'slang' is used to indicate "speech with feeling" (to indicate slang or informal speech) and is positioned as the first character of the Bliss-word.

SLANG	*shove off!*	*cool*
	SLANG + IMPERATIVE + GO	SLANG + ICE

6.5.4.4 Coarse slang. The character ⌀ 'coarse slang' is used to indicate "sharp speech" (to indicate vulgar speech, coarse slang, or obscenity) and is positioned as the first character of the Bliss-word.

COARSE SLANG	*piss off!* COARSE-SLANG + IMPERATIVE + GO	*shit* COARSE-SLANG + WASTE + BUTTOCKS
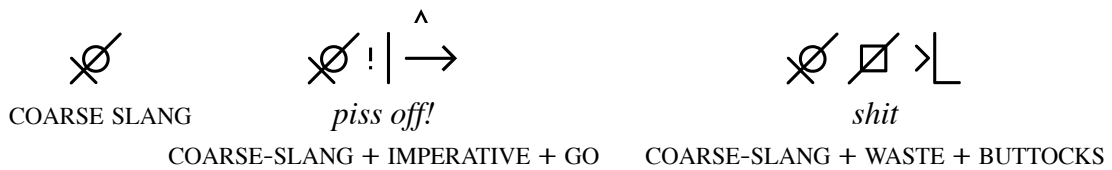
6.5.4.5 Combine modifiers may be used productively to create *neologisms* or new words. The combine modifier allows the person who communicates using Blissymbols to express a new concept or a not available Bliss-word in a quick and easy manner. This feature adheres strongly to the uniqueness of languages which include the possibility of expressing an unlimited number of concepts. Words created by a user or instructor for personal use are marked by flanking combine modifiers at the beginning and the end of the Bliss-word. This calls attention to the fact that the word is not a part of the BCI Authorized Vocabulary. Examples of the combine modifier are found in clauses 6.3.1 and 8.2.1.

> NOTE: The combine modifier was formerly called the "combine indicator", but it is not really an indicator, although it hangs from the indicator line. Indicators are combining characters, but the combine modifiers are spacing characters (see clause 3.6).

7.0 **Indicators**.

Indicators are used as grammatical and/or semantic markers. Grammatical and semantic forms of an existing word may be created by removing, adding, or substituting the indicators listed below. Indicators as grammatical markers are deleted within a compound or combined Bliss-word. For exceptions see the note at clause 4.3.3. Semantic markers such as the thing indicator remain over the character /glyph within a compound or in a combination, being part of the concept of that character.

> NOTE: In UCS encoding, indicators are combining characters which immediately follow the Bliss-character to which they are applied.

7.1 **Centring of indicators**.

An indicator is generally *centred* above a Bliss-character (see clause 4.3.3). The centre-point of the action and evaluation indicators is aimed at the centre of the character it modifies even when dots before or after are present in the indicator (clause 7.3). In some long Bliss-characters, like ⌢→, the pointer is aimed at the centre of the main constituent of the glyph.

> NOTE: In character-based encodings, an indicator immediately follows its base character in the data stream. The verb *to forgive* (shown in clause 4.3.4) is encoded FORGIVE + ACTION INDICATOR + AFTER.

7.2 **Indicators as grammatical modifiers**

7.2.1 Verbs are denoted by the use of action indicators that serve as verb tense and voice grammatical markers.

∧	˒	˓
ACTION	PAST ACTION	FUTURE ACTION
<	<˒	<˓
PRESENT PASSIVE	PAST PASSIVE	FUTURE PASSIVE
?	?˒	?˓
PRESENT CONDITIONAL	PAST CONDITIONAL	FUTURE CONDITIONAL
>		
PRESENT ACTIVE		

Examples:

∧	˒	˓
writes	*wrote*	*will write*
<	<˒	<˓
is written	*was written*	*will be written*
?	?˒	?˓
would write	*would have written*	*would write (in future)*
>		
writes (transitive)		
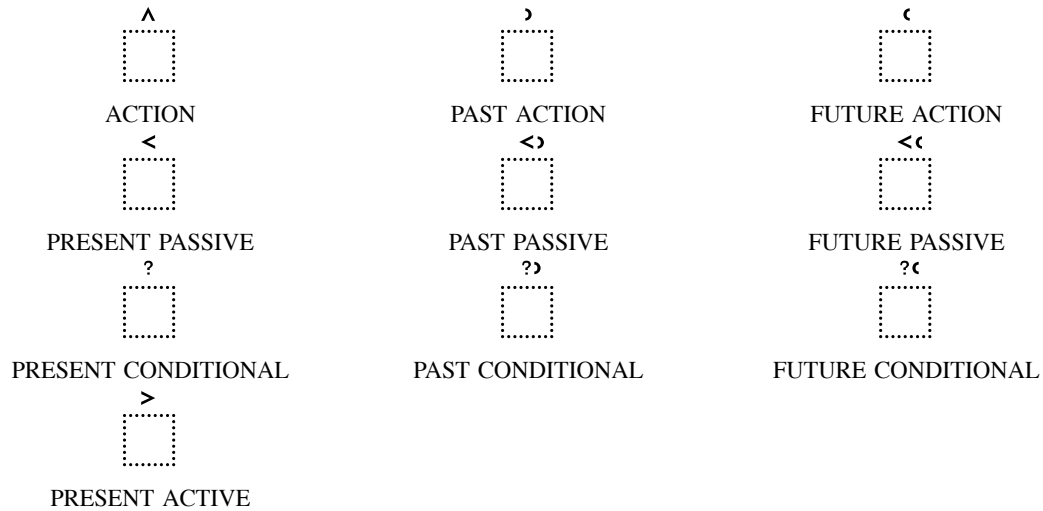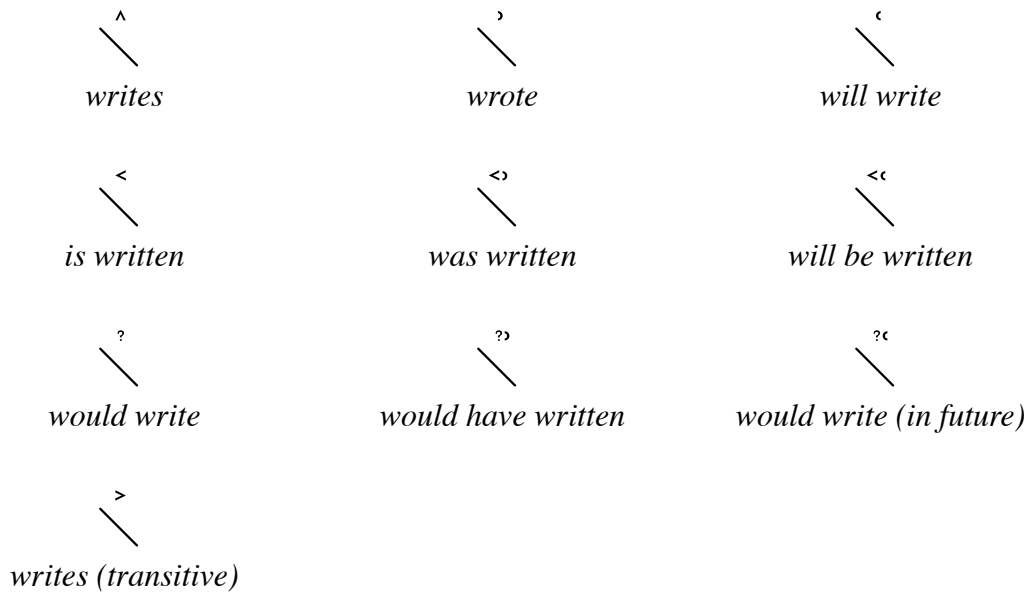
7.2.2 Adjectives and adverbs are denoted by the use of descriptive indicators that serve as descriptive grammatical markers. When translated into other languages, there is sometimes overlap between these parts of speech and verbal participles.

∨	·∨	∨·
description	*description before the fact*	*description after the fact*
∨ ! ! !	·∨ ! ! !	∨· ! ! !
exciting, excitingly	*excitable, excitably*	*excited, excitedly*
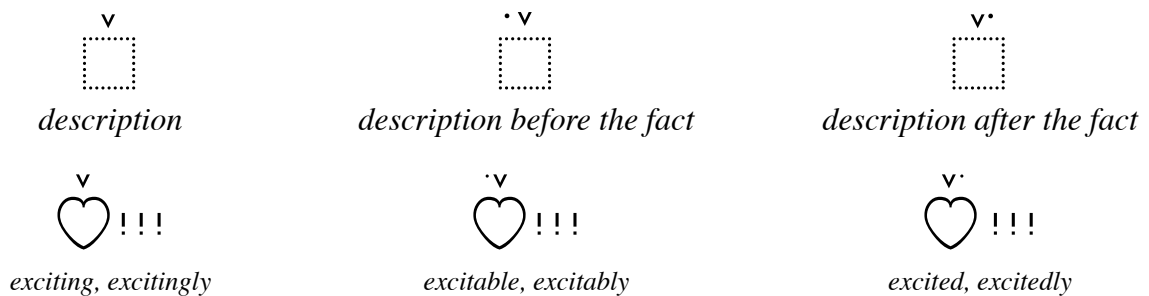
7.2.3 The **plural indicator** is used to indicate more than one of a thing.

PLURAL INDICATOR	MIND	*minds*
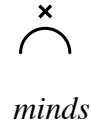
7.2.4 **Nouns** in the singular generally carry no indicator (see clause 7.3.1).

7.3 **Indicators as semantic modifiers**

7.3.1 The **thing indicator** is a semantic marker which is used, when necessary, to differentiate between abstract and concrete nouns. Its meaning is integrated into the concept itself. Examples of abstract and concrete nouns:

THING INDICATOR	MIND	*brain*

THING INDICATOR	TIME	*clock*
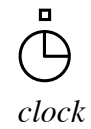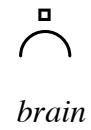
> NOTE: The thing indicator is treated in its presentation the same as all other indicators. It interacts with the plural marker as shown below in clause 7.3.2.

7.3.2 The **plural thing indicator** is used to show plural forms of concrete nouns

PLURAL OBJECT INDICATOR	*brains*

PLURAL OBJECT INDICATOR	*clocks*
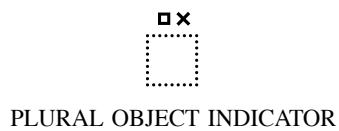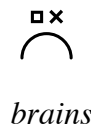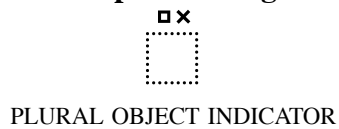
8.0 Wordbuilding strategies for vocabulary extension.

These strategies, making use of modifiers and indicators (clauses 6 and 7), can be used to arrive at a concept which is not represented in a user's vocabulary. For instance, to arrive at the concept for "stamp", the user could first indicate ₊ "belongs-with" and then indicate ⊠ "letter"; they would be written with a quarter-space between the two characters as in clause 6.5.2.3. When applying these strategies combine modifiers are not needed. These strategies can also be used to continue to build on a series of concepts. While new Blisswords created in accordance with these strategies may not be part of the published BCI Authorized Vocabulary, they may be used, for example, in children's books and educational materials. It must be noted that these strategies cannot be used for the creation of new characters or for choosing the classifier to be used in a new series, such as the new "class" and "sport" classifiers.

8.1 Substitution of classifiers.
Related characters, which represent the same concept or belong to the same superordinate category, may be substituted as classifiers within words as appropriate in order to make meanings more specific if required. For example, the characters △ 'building', ⊐ 'room', and ⊏⊐ 'public room' are all appropriate classifiers which can represent "hall" in △⅂ᵈ, ⊐⅂ᵈ, or ⊏⊐⅂ᵈ 'concert hall'; ⋏ 'man' and ⋏ 'woman' are appropriate classifiers which can replace ⊥ 'person' in ⊥⇕△ 'teacher'.

kitten	*puppy*	*calf*	*foal*

8.2 Addition of specifiers.
Specifiers are added adjectivally to build new words. A concept can be made more precise through the addition of a specifier.

tomcat	*queen*

For more examples of substitution of specifiers to create new vocabulary, see clause 6.3.1.

8.2.1 Precision of specifiers.
The specifier should be as precise as possible to avoid ambiguities. Consider the following established Bliss-word:

goose

WATER-BIRD + BIG

It could be said that WATER-BIRD + BIG might be interpreted to mean 'pelican' or 'flamingo'. Additional specifiers can easily be added to expand the vocabulary: ⋎Ⅰ○⌣ 'pelican' (WATER-BIRD + BIG + MOUTH + CONTAINER), ⋎Ⅰ⌇ 'flamingo' (WATER-BIRD + BIG + SNAKE) or ⋎Ⅰ○○⚵ 'flamingo' (WATER-BIRD + COLOUR + MOUTH + SNOW (PINK)). The combine modifier is used here to show that some of these vocabulary items have been invented by a user (see clause 6.5.4.5).

Another example of a weak word in the BCI Authorized Vocabulary:

potato
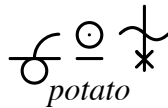
VEGETABLE UNDER GROUND + COLOUR + SNOW (= WHITE)
COMMENT: There are other white tubers (jerusalem artichoke, cassava); some users might find "snow" to be a confusing element.

8.2.2 **Substitution of specifiers**. A concept can be made more precise by substitution of a specifier. For example, when creating a specific pasta, substitute an appropriate shape for the tube. In the example below, the classifier is a compound Bliss-word, ⚬.:⁓ 'pasta' (FOOD + GRAIN + POWDER). Note the substitution of ⚮ RICE for ⁓ GRAIN in 'rice noodle'.

| *pasta* | *lasagna* | *macaroni* | *ravioli* | *spaghetti* | *rice noodle* |

| *country* | *Canada* | *Ireland* | *Israel* | *Sweden* | *U.K.* |
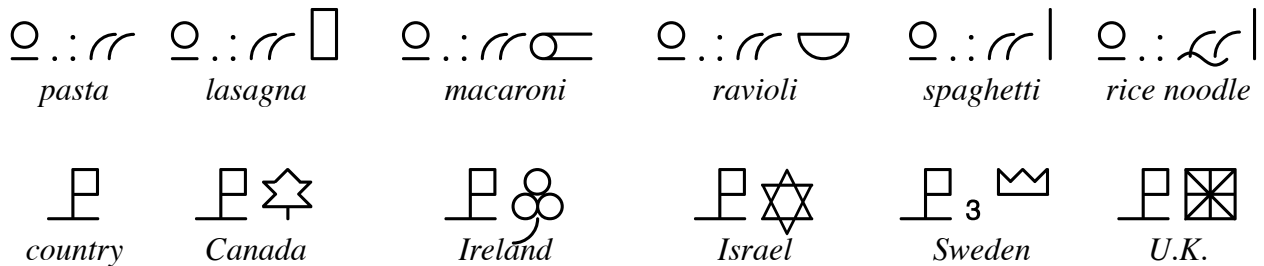
8.3 **Personalization of pronouns**. It is possible to personalize pronouns to make them more meaningful. One can substitute animal characters into pronouns, but this is a special narrative device and should not be generally used. (It is an instance of classifier substitution.)

| *you* | *you (woman)* | *you (man)* | *you (boy)* | *you (girl)* | *you (dolphin)* |

NOTE: Spellcheckers should take these possible substitutions into account.

8.4 **Personalization of the person character**. One may substitute man, woman, boy, girl, child, baby, etc. for person in any compound word.

| *doctor* | *doctor* | *doctor* | *friend* | *friend* | *friend* |

NOTE: Spellcheckers should take these possible substitutions into account.

8.5 **Personalization of the animal character** can be very useful, for instance, in children's books.

| *Papa Bear* | *Mama Bear* |
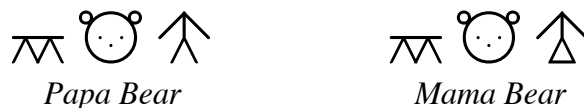
8.6 **Pointers**. It is possible to create new characters by using the pointer (see clause 4.3.7). When a pointer is added to a Bliss-character, a *new* Bliss-character is created (see clause 8.9).

8.7 **Commas**. Commas are inserted between the Bliss-characters of some compound Bliss-words. The separation of meaningful elements helps one to interpret the total meaning of the Bliss-word.
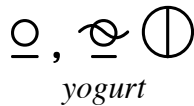
yogurt

FOOD + COMMA + DRINK + LIFE (MILK)
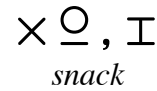
snack

MUCH + FOOD (MEAL) + LITTLE

Here, the COMMA shows the hierarchy of meaning. *Yogurt* is a FOOD made of MILK (the DRINK of LIFE), not a FOOD-DRINK of LIFE. A *snack* is a MEAL (A LOT OF FOOD) which is LITTLE, not A LOT of LITTLE FOOD.

> NOTE: When the COMMA is not used as punctuation, the ¼ space rule (clause 4.3.5) applies to it as it does to any other element in a Bliss-word. When used as punctuation, it is followed by the BTSP (see the note in clause 4.3.6). Inputting software should not automatically insert a BQSP after a COMMA, since it cannot be predicted what role the comma will play. Compare the sentence λ₃ ⌒ ⌒ , ☇① , + ⌒→ . 'he eats food, milk, and dessert' with the sentence λ₃ ⌒ ⌒,☇① , + ⌒→ . 'he eats yogurt, and dessert'.

When combine modifiers are used to create a new Blissword, commas are often helpful to separate Blisswords included in the combination (1/4 space on each side of the comma within the combination).

8.8 **Deletion of combine modifiers**. When a new Bliss-word is made by simple classifier or specifier substitution, the combine modifiers need not be used.

8.9 **Contractions of compounds**. A compound word may be contracted when used as a component in another word.
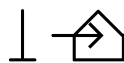
vistor
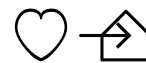
PERSON + VISIT

welcome

FEELING (+ PERSON) + VISIT

8.10 **Creation of new Bliss-characters**. When sequencing of existing Bliss-characters is not deemed adequate to express a new concept, new Bliss-characters may be devised from established BCI Template (1980) shapes provided that the need for the new character can be demonstrated to the satisfaction of the Blissymbolics Development Panel. *Such justification shall **explicitly** explain precisely why existing characters in sequence cannot describe the concept adequately*. See clause 5.0.

> NOTE: The reason for this rule is to reduce costs to users and implementors – costs in terms of the time it takes to encode new characters and the expense of updating and acquiring new software. BCI recognizes that in some cases it will be necessary to add characters from time to time, but in order to minimize costs, the creation of new Bliss-words using sequences of existing characters should *always* be preferred because there are no additional costs involved in such sequencing.

8.10.1 **Conciseness of new Bliss-words**. Whenever possible, new words devised should be concise, to provide the maximum amount of information with the smallest number of graphic components. The communication and cognitive requirements of the users, who have communication, language, and/or learning difficulties, should of course be borne in mind.

8.10.2 Graphic characteristics of new Bliss-characters. Pictographic and superimposed Bliss-characters' glyphs should use standard segments of lines and be as visually simple (uncluttered) as possible. Whenever possible, the smallest number of lines to convey the maximum amount of information. Example: ⌒ 'dolphin' is an elegant character which is both pictographic and conceptual, combining the ⌒ 'mind' and ∼ 'water' characters with a fish tail, describing both the shape and characteristics of these intelligent mammals.

9 The Blissymbolics development process

9.1. The BCI organization for the development of Blissymbolics

Blissymbolics vocabulary and grammar development is organized in stages to ensure continuity and consistency in development work. Five different levels within the BCI structure are involved in working together in the creation of new Bliss vocabulary, including Bliss-characters and Bliss-words.

9.1.1 Blissymbolics Development Secretariat

The Blissymbolics Development Secretariat (BDS) is responsible for leading the on-going development of Blissymbolics as a written language to be used for communication by persons with communication, language and learning difficulties. The BDS works in interaction with working groups and individual contributors to enlarge and refine the language of Blissymbolics. The Blissymbolics Development Secretariat is appointed by the Board of Directors on the basis of recommendations from the biennial BCI Affiliate meeting for a period of operation of two years, renewable. The BDS has one representative on the BCI Board of Directors.

- The BDS shall:
    a) coordinate and provide leadership to the development of Blissymbolics by BCI.
    b) exercise its own initiative in the development of proposals for improvement to the system, including recommendations to the Board of Directors re changes in the fundamental rules.
    c) prepare for final approval all recommendations in regard to the addition, alteration, or deletion of standard Bliss-words and other features of the Blissymbolics language.
    d) After Bliss-words have been approved by the Blissymbolics Approval Committee, the BDS will assign the code positions to the Bliss-words, Bliss-characters, grammar markers and other features in order to update the ISO/IEC 2375 registration and will send the numbered Bliss-words to The Blissymbolics Board of Directors.

9.1.2 The international **Blissymbolics Development Panel** (BDP) consists of Working Groups and Individual Contributors. The BDP engages in discussion with the BDS to achieve consensus on the developing vocabulary.

Working groups and individual contributors
- Working groups are national, cultural, language-based or topic-based groups of people working on the development of Blissymbolics. Each working group appoints one of its members to coordinate its work, and to act as correspondent with the BDS.

- Individual Contributors are persons working on the development of Blissymbolics, who are unable to meet regularly with a working group and who correspond directly with BDS.

9.1.3 Blissymbolics Approval Committee and Grammar Committee

9.1.3.1 The **Blissymbolics Approval Committee (BAC)** is an independent committee of experts appointed by the BCI Board of Directors for two years renewable. The members of BAC must not be involved in other Blissymbolics development work or be involved in any other current Blissymbol activities which might cause them to have a conflict of interest in making decisions within the final approval process. The BAC is responsible for deciding which symbols go to the Board for final approval.

9.1.3.2 The **Blissymbolics Grammar Committee (BGC)** is an advisory committee appointed by the BCI Board of Directors, with the purpose of expert advice and consultation to BAC on grammatical issues. The term of office is two years renewable.

9.1.4 The **Blissymbolics Editing and Proof-reading Committee (BEC)** is appointed by the BCI Board of Directors for a period of two years renewable. The Committee has the responsibility for:

- proof-reading and confirming the graphic accuracy of all Bliss-words, Bliss characters and features of the system before being submitted for approval by the BAC with the explanations being given.
- editing and confirming the accuracy of the gloss, the gloss synonyms, and the derivations relating to the composition and explanations, which accompanies vocabulary items before being submitted for approval by the BAC.

9.1.5 The **Blissymbolics Board of Directors** (**BBD**) gives final authorization to the new Bliss-words presented to them by the BDS with their ISO numbers having been assigned, to be included in the BCI Authorized Vocabulary and to be added to the ISO/IEC 2375 registrationof Blissymbols.

9.2 Guidelines for the development of Blissymbolics

9.2.1 Requests, suggestions and proposals
- Requests, suggestions and approvals for vocabulary are generally designated to and developed in categories covering linguistic or conceptual fields. The practice of developing new Bliss-words within the context of a linguistic or conceptual field is used to ensure that the developmental work is carried out in accordance with the logic of the system.
- Requests and suggestions for new vocabulary or grammar or features of the system can be submitted for consideration to the BDS by any Bliss user, caregiver or professional within the field.
- Those proposal Bliss-words are encouraged to include definitions and explanations of these Bliss-words using the Blissymbolics Reference Guide as a reference.

9.2.2 **Questionnaires**
- Requests, suggestions and proposals for new vocabulary and grammar can be organized in questionnaires and distributed by the BDS to working groups and individual contributors for their consideration and comments.
- New vocabulary can also be proposed, discussed and agreed on at international panel meetings.
- Blissymbolics development is an interactive process. A linguistic or conceptual field under development may require one or more successive questionnaires for refinements of the new vocabulary, grammar or features of the system.

9.2.3 **Specialist consultation**. In developing Blissymbolics within a certain conceptual field, consultations with one or more specialists are recommended in order to determine the best way of representing the group of concepts for international use and to identify the distinguishing features of the concepts being symbolized. A specialist can be a professional within a field.

9.2.4 **Meetings**
- Blissymbolics Developmental Panel Meeting: Blissymbol development meetings are normally held every second year or more often if the work so requires. The BDS prepares the program of the Blissymbolics development work for these meetings. Participants at the international meetings are representatives from working groups and individual contributors. The needs of different nations, cultures and language groups should be considered when planning the participation at the meetings.
- Informal ad-hoc meetings: Informal ad-hoc meetings (the so-called "kitchen table" meetings) are recommended on anyone's initiative, to prepare a linguistic or conceptual field to be submitted to the BDS.
- Working Group Meetings: The working groups are responsible for organizing their own meetings.

9.2.5 **Summary of Development Process**
- Proposals for new Bliss-words can be sent out in questionnaires and discussed at least one international Blissymbol development meeting in order to reach an agreement with regard to each new Bliss-word. An informal voting procedure may be used when an agreement cannot be reached. If new information about a concept is received the Bliss-word can be brought forward for renewed discussion.
- The BDS decides when new Bliss-words are ready to be brought to the Editing/Proof-reading Committee.
- The Editing/Proof Editing Committee is responsible for the accuracy of the graphic and gloss of new Bliss-words, new Bliss-characters, of the final forms of the Bliss-word and Bliss-character explanations and of the gloss in English.
- BAC rules on all aspects of the integrity of the proposed new Bliss-words and Bliss characters. Unacceptable Bliss-words and Bliss characters are returned to the BDS together with their reasons for their unacceptability.
- BDS sends the rejected Bliss-words and Bliss characters to the Panel. If neither BDS nor the Panel agree with the decision of BAC, an Appeal process can be put into place. The disputed Bliss-words and Bliss characters can be sent directly back to BAC. In cases of disagreement,

the BCI Board is the final decision maker. The BDS assigns the provisional ISO numbers (code positions) for the ISO/IEC 2375 registration.

- BAC recommends to the BCI Board of Directors new Bliss-words and new Bliss-characters for their approval and their inclusion in the authorized vocabulary.
- BCI Board of Directors has the final authority for accepting into the BCI Authorized Vocabulary the Bliss-words and Bliss-characters recommended by the BDS, in the form authorized by the Proof-reader/Editor, and approved by the BAC.
- Dissemination of new Bliss-words: The BDS sends the new Bliss-words to the BCI Affiliates and Associates Committee for dissemination to Panel members, Affiliates and Database Committee. The new Bliss-words having been authorized by the Board of Directors are transferred to BCI for publication on the web.

9.3 Criteria for the evaluation of new Bliss-words and Bliss-characters

9.3.1 Blissymbolics is used by persons with communication difficulties. This implies that the special needs of these persons are taken into consideration in the developmental work. New Bliss-words and Bliss-characters are therefore developed to respond to:

a) the needs of persons at all levels of development
b) the needs of persons with language and learning difficulties. This may require special Bliss-word synonyms for persons functioning at a lower developmental level
c) the life situations of AAC users

9.3.2 New Bliss-words and Bliss-characters are developed in accordance with the Fundamental Rules of the Blissymbolics language.

9.3.3 New Bliss-words are developed with regard to:

a) national and cultural differences
b) the maintenance of the logic of the system
c) the maintenance of Blissymbolics as a multicultural and international language
d) the maintenance of a language that can be used by persons with communication difficulties (See clause 2.0)

9.3.4 Guidelines for approval of new Bliss-words

a) The Bliss-words must accurately reflect the meaning of a concept (For conciseness, elements can be eliminated, but the remaining elements must still reflect the concept accurately.)
b) For concepts with many possible different labels or glosses the basic meaning of a concept as it is used in communication, should be represented in the Bliss-word.
c) Bliss-words must be easy to explain.
d) Bliss-words must be graphically effective
e) Bliss-words must be concise. They should be short rather than long.
f) Bliss-words must be easy to learn. The explanation should be logical enough to be easy to remember.

9.3.5 **Guidelines for approval of new Bliss-characters**. New Bliss-characters may be created only in exceptional cases. Those exceptions are:

- to represent an important often used concept not available in the present standard vocabulary
- to represent a concept used in a group of Bliss-words
- to represent a Bliss-word synonym for an important concept, which has been developed based on the needs of the users
- when proposing a new Bliss character, an explanation must be given as to why the concept cannot be represented by sequencing existing Bliss characters. This explanation must be recorded and retained by the BDS until the new character has been encoded in ISO/IEC 10646. and Unicode

10. **Bibliography**.

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11. **The history of Blissymbol standardization**.

Since the first application of Blissymbolics in 1971 with children at the Ontario Crippled Children's Centre (OCCC, now the Bloorview-MacMillan Children's Centre) in Toronto, procedures have been established to maintain the accuracy, consistency and integrity of symbols included within the BCI Authorized Vocabulary.

The first set of Blissymbols used by children was drawn by Jim Grice, OCCC draftsman, under the supervision of Margrit Beesley and monitored by Charles K. Bliss. The rules for their representation were formulated as the drafting work proceeded. These rules were integrated into the training and publications developed by the OCCC team until 1975. This practice was continued by Blissymbolics Communication International (established in 1975 as Blissymbolics Communication Foundation, re-named Blissymbolics Communication Institute, Easter Seal Communication Institute, and finally Blissymbolics Communication International), under the direction of Shirley McNaughton.

During the early 1970s, Blissymbols were drawn following the model of a rudimentary template appearing in the first edition of *Semantography* (Bliss 1965). A refined template was designed by Patricia Bailey and produced in the United Kingdom in 1976. This was made available to all national groups teaching Blissymbolics and served as the standard for the drawing of new and established Blissymbols.

In 1976, Jinny Storr was named the first Symbol Officer, and charged with the responsibility of documenting the rules of constructing Blissymbols while working with Charles K. Bliss to further develop the BCI Authorized Vocabulary. In this role Jinny Storr served in a volunteer capacity until 1983. During her watch, the BCI Authorized Vocabulary was published in *Blissymbols for Use* (Hehner 1982), containing 1,400 Blissymbol words. At the time of writing this document, Jinny Storr continues to volunteer as BCI's most knowledgeable and greatly appreciated consultant.

In 1983, the Board of Directors passed a motion presented by Dr. Richard Storr that established policies, a plan of organization and administrative practices with regard to the development of Blissymbolics (see clause 9). Resulting from this decision, a Symbol Secretariat was established with Claudia Wood hired to work as its Symbol Officer. Her first responsibility was the development of a formal set of Fundamental Rules for the Standard Blissymbolics of Blissymbolics Communication International and providing the training and support for this document. To this end, mailings and meetings of the International Symbol Panel were undertaken throughout the 1980s, culminating with the publication of the *Blissymbol Reference Guide* (Reich, Storr, and Wood 1992) containing 2,300 Blissymbol words. In this publication, the technology used to provide the standard for the printing of the Blissymbols was the Reich font (1989). In 1993, a two-byte graphic character set of the 2,304 Blissymbol words appearing in the *Blissymbol Reference Guide* was registered with the International Organization for Standardization (ISO-IR 169, 1993-01-21). Claudia Wood provided leadership as Symbol Officer until 1991 when the manuscript for the *Blissymbol Reference Guide* was completed.

In 1996, At the BCI Affiliate Meeting in Vancouver, the responsibilities of the Symbol Secretariat were formally transferred to Britt Amberntson, Margareta Jennische, and Kirsten Lörström of Sweden. They have continued the role of very capably overseeing the work of the Blissymbolics International Panel and the ongoing development of the BCI Authorized Vocabulary through to the present.

In 1998, at the BCI Affiliate Meeting in Dublin, an ad hoc group (Michael Everson, Gillian Hazell, Shirley McNaughton, Annalu Waller, Judy Wine) was charged with the task of preparing a new single document to build on the original Fundamental Rules, provide a comprehensive set of guidelines, and address the concerns of ensuring compatibility of Blissymbolics with the Universal Character Set (UCS). Discussion and work on this document continued with those present at meetings of the International Panel and of Affiliates in Capetown, South Africa; Washington, USA; Bala, Canada; Furuboda, Sweden; and Charlbury, UK. The present document is the result of the ad-hoc group's work and this further study. The Blissymbols appearing in this document were produced by the character-based TrueType font for Blissymbolics under development by Michael Everson, 2004.

Figure 1. Summary of the Blissymbolics development process

Blissymbolics Development Panel (BDP)

Working groups and individual contributors suggest to the Blissymbolics Development Secretariat vocabulary that should be added covering linguistic or conceptual fields. Working groups and individuals are encouraged to hold informal ("kitchen table") groups where possible.

Blissymbolics Development Secretariat (BDS)

Distributes questionnaires to the panel for feedback on proposed symbols, and hosts discussions of the symbols including international panel meetings. After agreement is achieved among the Panel, BDS sends the new symbols to the Blissymbolics Editing and Proofreading Committee. When received back, corrections are made based on the feedback of the BEC and the corrected symbols are forwarded to the BAC.

Blissymbolics Editing and Proof Reading Committee (BEC)

Proof reads the proposed new symbols checking for the accuracy of the graphic representation, of the English gloss, of the derivation, and of the explanation and that these are all in compliance with the Fundamental Rules for Creating Blissymbols in all respects.

Unacceptable symbols

Blissymbolics Approval Committee (BAC)

The BAC rules on all aspects of the accuracy of the proposed new symbols. They forward acceptable symbols to the BDS for ISO number assignment. The new Bliss-words are then sent to the BBD for final authorization to be included in the BCI Authorized Vocabulary. Unacceptable symbols are sent back to the BDS together with the reasons for their unacceptability.

Blissymbolics Board of Directors

Provides final ratification of proposed set of new symbols for entry into the database and for publication and world-wide distribution.
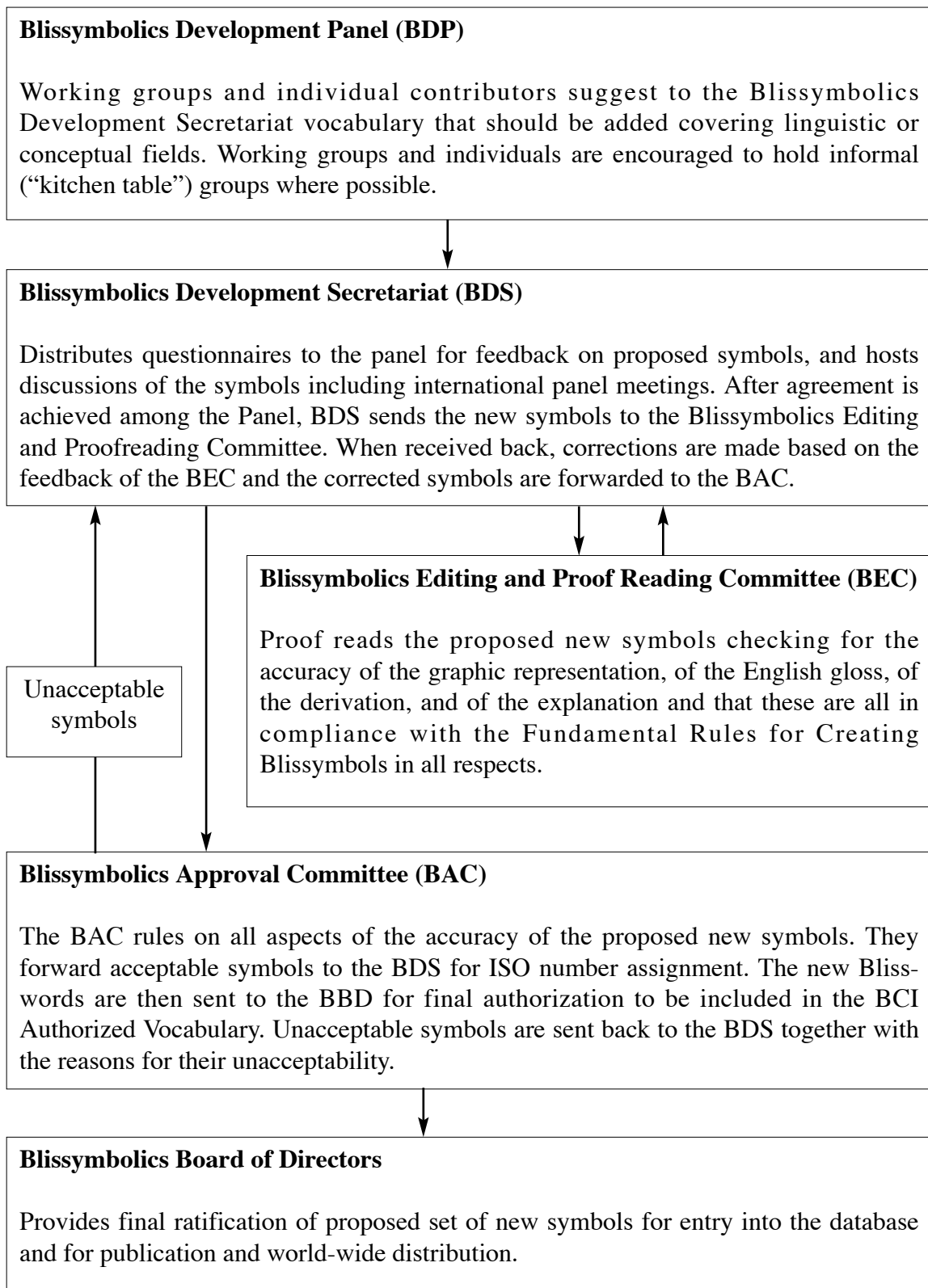
Figure 2. Flow chart of the Blissymbolics development process

BAC: Blissymbolics Approval Committee. Finalizes accepted vocabulary items.

BCI: Blissymbolics Communication International. Responsible for maintaining and extending the language.

BDP: Blissymbolics Development Panel. Develops new vocabulary items for approval.

BDS: Blissymbolics Development Secretariat. Oversees and manages vocabulary development.

BEC: Blissymbolics Editing and Proof-Reading Committee. Inspects the exact shapes used to represent the vocabulary.

BBD: BCI Board of Directors

B.1 National or Associate Contributors propose new Bliss-words to BDS.

A.1 National or Associate Contributors request terms for a conceptual field.

B.2 BDS creates questionnaire and forwards it to BDP.

A.2 BDS forwards request to BDP seking volunteers to work on the conceptual field.

B.3 BDP ballots questionnaire and returns it to BDS.

A.3 Volunteers from BDP create terms and forward them to BDS for processing.

C.1 BDP meets to discuss Disposition of Comments documents. New proposals may be introduced at the international panel meeting.

C.2 Discussion shows lack of consensus. More work needed. BDS returns terms to BDP.

D.1 Discussion leads to consensus. BDS decides terms are mature & forwards them to BEC.

D.2 BEC inspects terms for accuracy and returns them to BDS.

D.3 BDS sends terms to BAC for approval.

E.1 BAC approves terms and returns them to BDS for numbering.

D.4 BAC rejects terms as unsuitable and returns them to BDS.

D.5 BDS returns terms to BDP in new questionnaire.

E.2 BDS prepares document for publication and returns it to BBD.

E.3 BBD authorizes the new Bliss-words for publication and distribution.

F.0 BCI prepares numbered symbols for submission to ISO/IEC 2375 Registry

E.4 BCI puts final document on website.