

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

Blissymbolics Communication International (BCI)

2009-01-26

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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:



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** *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.

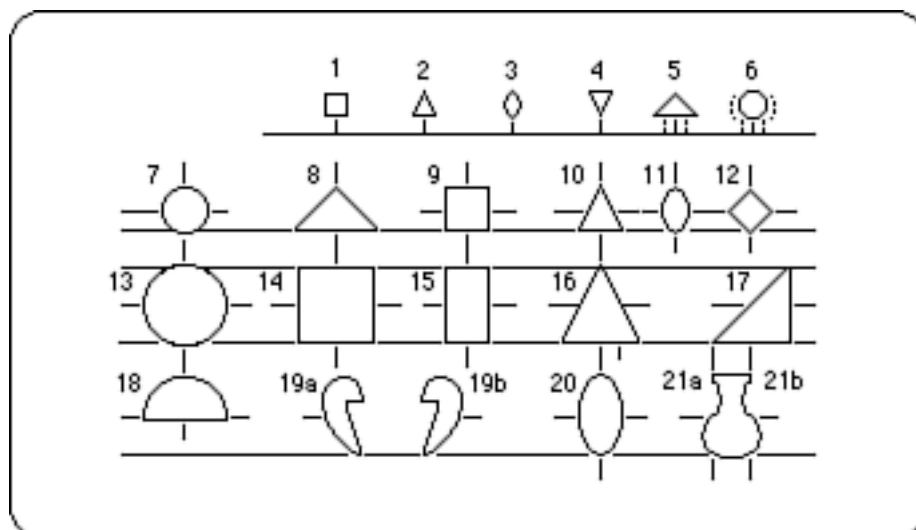
Two or more Blissymbolics words used to represent a single word in another language, or two or more words in another language used to represent a single word in Blissymbolics. See clause 6.4 for **Bliss-synonyms** and clause 5.3.2 for **gloss-synonyms**.

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).



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

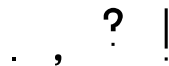


4.2 **International characters** are used in addition to geometric shapes.

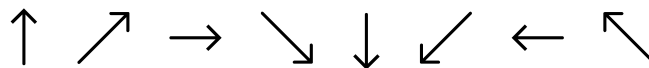
4.2.1 **Digits** are used in half size.



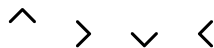
4.2.2 **Punctuation marks** are used.



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

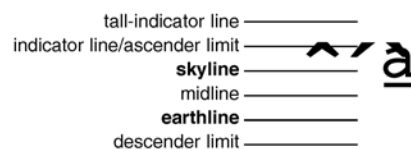


4.2.4 **Pointers** are used in four orientations. For placement of pointers, see clause 4.3.7.



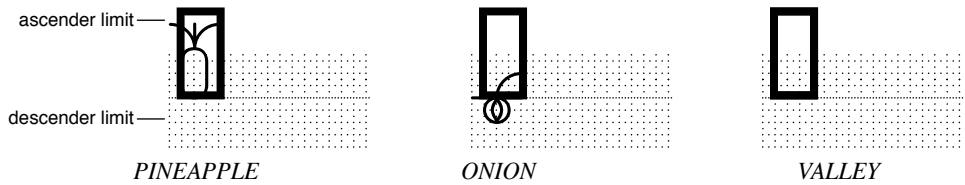
4.3 **The matrix square.**

The matrix for drawing a Blissymbol is a square.

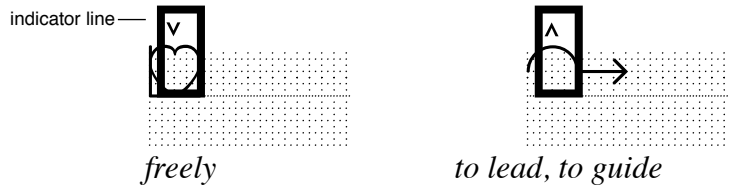


4.3.1 **Skyline, earthline, and midline.** The top of the matrix square defines the skyline. The base of the matrix square defines the earthline. The midline is midway between the two. These lines are used as the reference points for measurement when positioning Bliss-characters to form words and sentences. Most Blissymbolic 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.

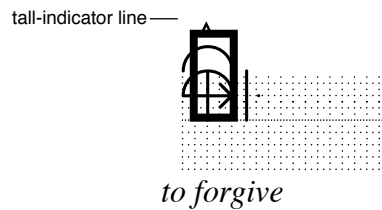


4.3.3 General placement of indicators. Indicators are located $\frac{1}{4}$ of the matrix square above the skyline (that is, hanging from the indicator line shown in clause 4.3). Indicators are usually centred above the glyph of a Bliss-character, but there are exceptions. See clause 7.1. Examples:

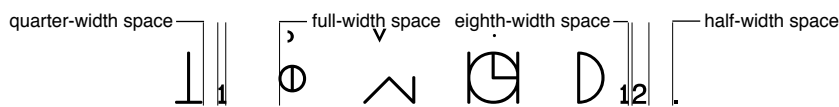


NOTE: Indicators normally appear above the first Bliss-character in a Bliss-word (see clause 7). Exceptions to this also occur: the Jewish month **ט"ו בשבט** *Tu B'Shvat* is written with a plural marker over the last element $\text{D}^{\wedge}\uparrow$ (MONTH/MOON + BIRTH + TREE + PLURAL INDICATOR).

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 $\frac{1}{4}$ of the matrix square above the ascender limit line (that is, hanging from the tall-indicator line). See also clause 7.1. Example:



4.3.5 Width of spaces. The space between characters forming a word is $\frac{1}{4}$ of a matrix square (the width is $\frac{1}{8}$ of a matrix square between two digits). The space between the last character in a word and the punctuation which follows it is $\frac{1}{2}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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

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:



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



Ideographic Bliss-characters can also represent concrete concepts.



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



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:



Examples of Bliss-characters with abstract meanings:



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:

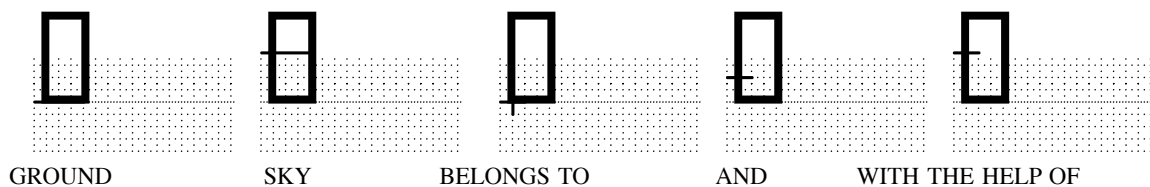
5.2.1 The **size** of a Bliss-character can be relevant to its meaning.



Often, but not always, the size difference denotes a semantic relationship:



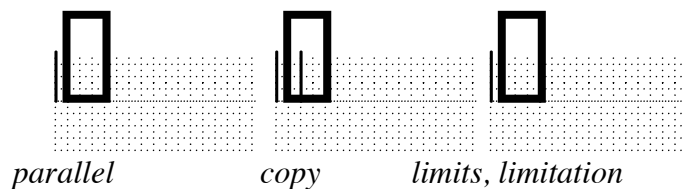
5.2.2 **Position in relation to skyline and earthline** can be relevant to a Bliss-character's meaning.



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

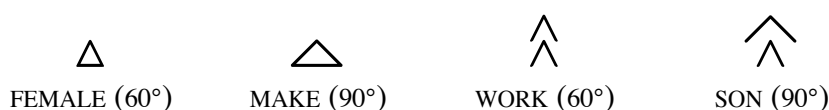


5.2.4 **Distance between graphic parts** can determine the meaning of a Bliss-character.



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.

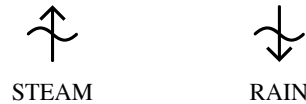
5.2.5 The **degree of angle** can differentiate between the meaning of Bliss-characters.



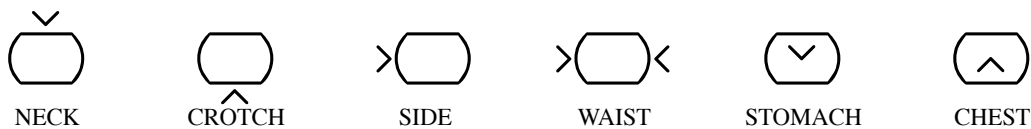
5.2.6 **Positional referents** can determine the meaning of a Bliss-character.



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



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).



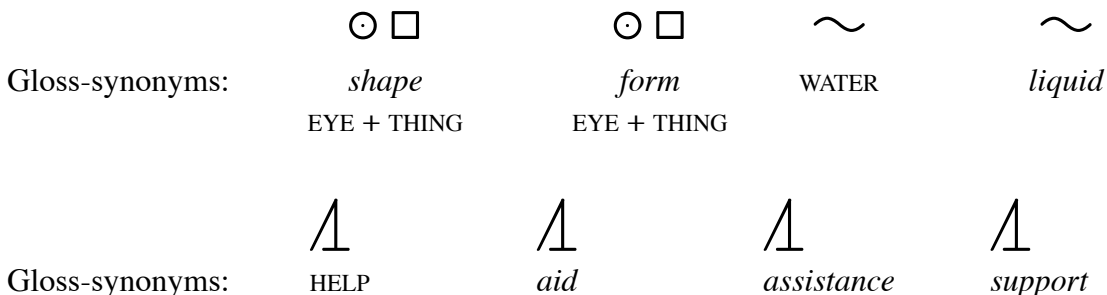
5.3 Meanings of Bliss-characters.

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.



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.



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.



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).



B. + MEDICINE



BUILDING + BOOK



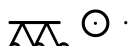
B. + GIVE + KNOWLEDGE



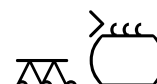
BUILDING + LETTER



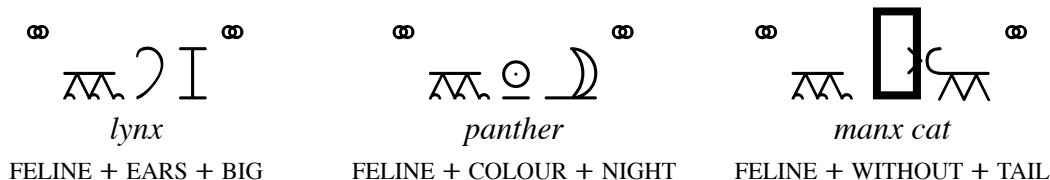
FELINE + STRIPE



FELINE + SPOT



FELINE + MANE



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:



Developmental adaptation:



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 \times 'group of, much, many' is positioned as the first character of the Bliss-word and can be applied as many as three times.



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



SPEAK



shout

SPEAK + INTENSITY



no!, don't!

NEGATIVE + INTENSITY + INTENSITY



yell

SPEAK + INT. + INT.



scream

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.



MINUS, WITHOUT



no one

WITHOUT + PERSON



silence

WITHOUT + SOUND

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



OPPOSITE



empty

OPPOSITE + FULL



none

OPPOSITE + ALL

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



GENERALIZATION



cutlery

GEN. + KNIFE



furniture

GEN. + CHAIR + TABLE

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

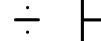


PART OF



flame

PART + FIRE



province

PART + COUNTRY

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



yesterday

DAY + AGO



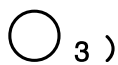
today

DAY + NOW



tomorrow

DAY + THEN (FUTURE)



last autumn

SUN + 3 + AGO



this year

YEAR + NOW

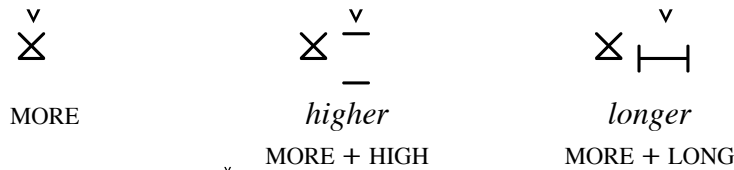


next January

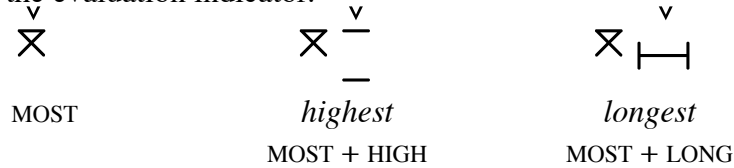
MONTH + 1 + THEN (FUTURE)

6.5.2 Grammatical Modifiers

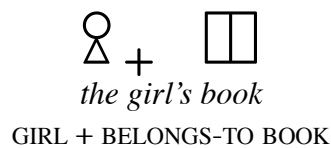
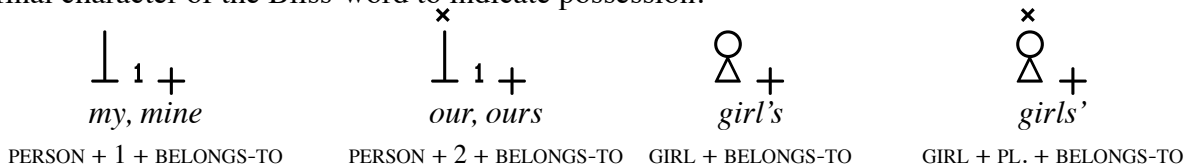
6.5.2.1 **Comparatives.** The character \times^{\vee} ‘more’ is positioned as the first character of the Bliss-word. Note the position of the evaluation indicator.



6.5.2.2 **Superlatives.** The character \times^{\vee} ‘most’ is positioned as the first character of the Bliss-word. Note the position of the evaluation indicator.



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.



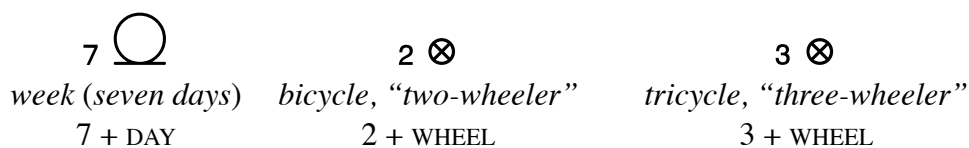
The syntax of the possession modifier can be changed to better accommodate the linguistic environment of the Bliss-user:




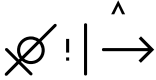

The possession modifier is also often used as a productive wordbuilding strategy; see clause 8.0.

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.



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	 <i>piss off!</i> COARSE-SLANG + IMPERATIVE + GO	 <i>shit</i> 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.

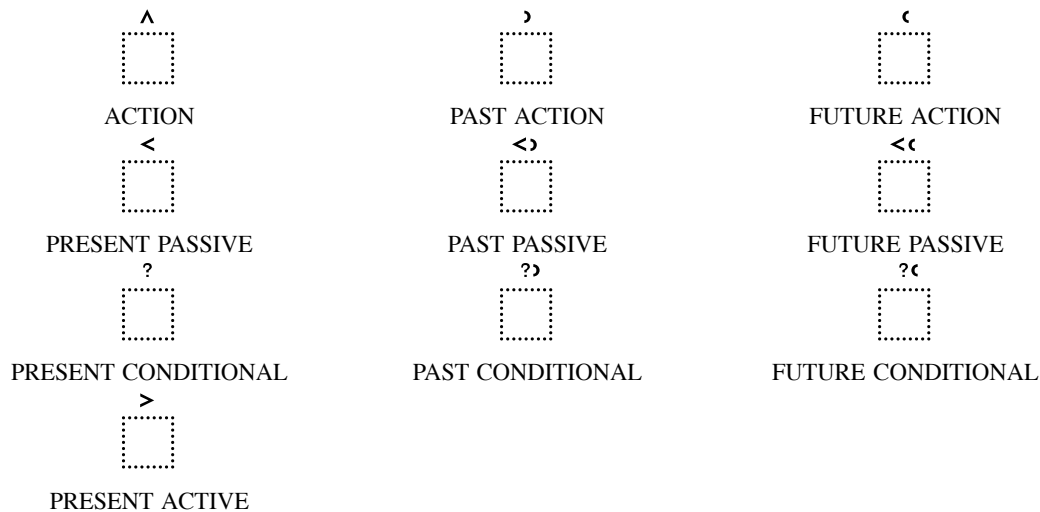
7.1 Centring of indicators.

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 $\overset{\sim}{\rightarrow}$, the pointer is aimed at the centre of the main constituent of the glyph.

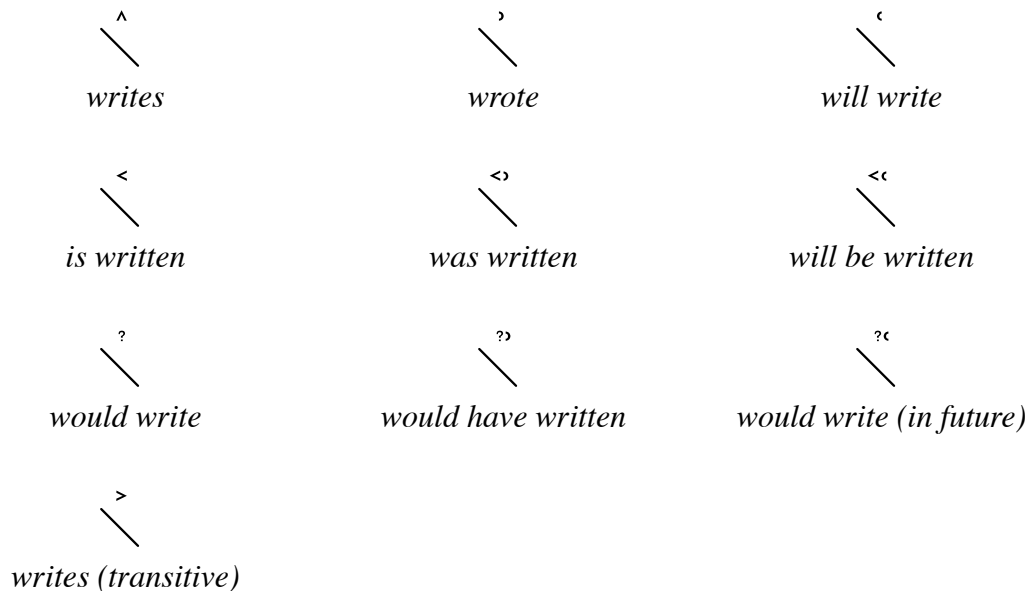
NOTE: In character-based encodings, an indicator immediately follows its base character in the data stream. The verb *to forgive* (shown in clause 4.3.4) is encoded FORGIVE + ACTION INDICATOR + AFTER.

7.2 Indicators as grammatical modifiers

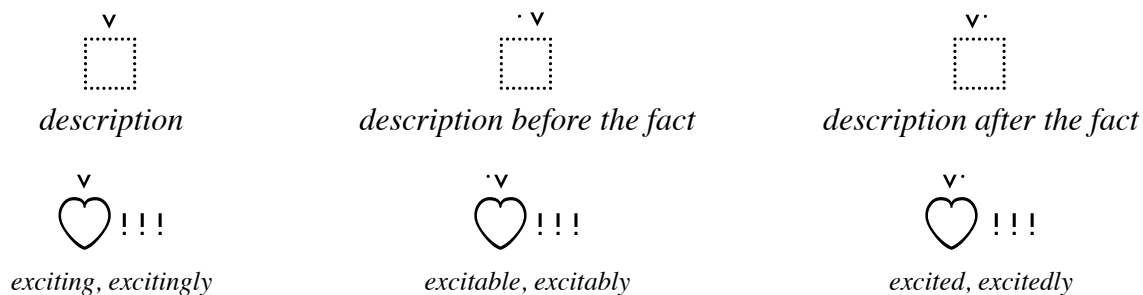
7.2.1 **Verbs** are denoted by the use of action indicators that serve as verb tense and voice grammatical markers.



Examples:



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.



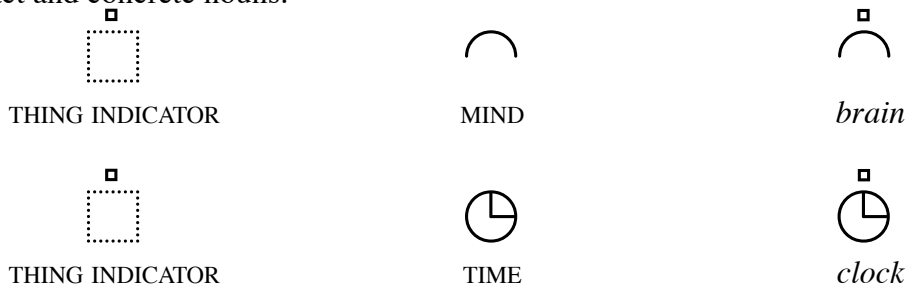
7.2.3 The **plural indicator** is used to indicate more than one of a thing.



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

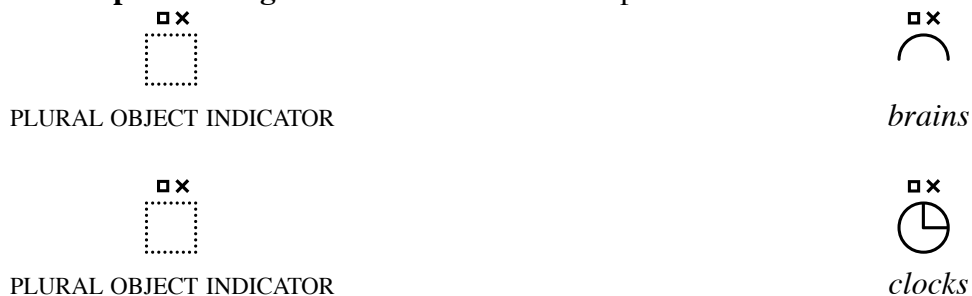
7.3 Indicators as semantic modifiers

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:



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.

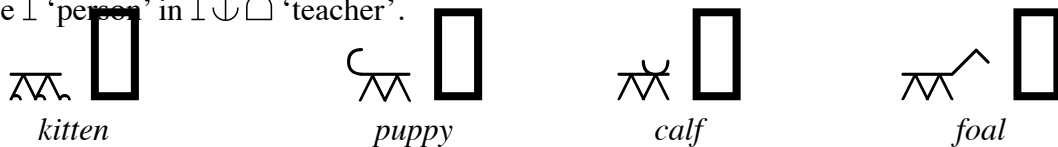
7.3.2 The **plural thing indicator** is used to show plural forms of concrete nouns



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 Bliss-words 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 ☐☐☐, ☐☐☐, or ☐☐☐ 'concert hall'; λ 'man' and Δ 'woman' are appropriate classifiers which can replace ⊥ 'person' in ⊥☐☐ 'teacher'.



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.



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

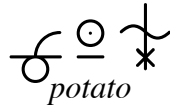
8.2.1 Precision of specifiers. The specifier should be as precise as possible to avoid ambiguities. Consider the following established Bliss-word:



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: $\overline{\sim\sim}$ I ☐ ☐ 'pelican' (WATER-BIRD + BIG + MOUTH + CONTAINER), $\overline{\sim\sim}$ I ~ 'flamingo' (WATER-BIRD + BIG + SNAKE) or $\overline{\sim\sim}$ 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).

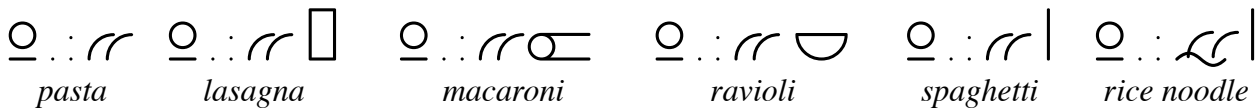
Another example of a weak word in the BCI Authorized Vocabulary:



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, $\text{O} \cdot \cdot \cdot \text{r}$ ‘pasta’ (FOOD + GRAIN + POWDER). Note the substitution of r RICE for r GRAIN in ‘rice noodle’.



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.)



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.



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.



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.

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 for a period of operation of two years, renewable. The BDS has one representative on the BCI Board of Directors. The BDS constitutes the primary and core group of the BCI language hub.

- 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) Once Bliss-words have been approved by the Blissymbolics Approval Council BAC, the BDS will forward the approved Bliss-words to the BCI Board of Directors for their ratification. Once ratified, the Board will allocate the identification numbers to be assigned to the new symbols and appoint a person who will assign those numbers to the approved Bliss-words and incorporate them into the BCI Authorized Vocabulary.

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 Council

9.1.3.1 The **Blissymbolics Approval Council (BAC)** are up to 12 experts appointed by the BCI Board of Directors for two years renewable. When the construction (spelling) of new Bliss-words is considered by BDS as making the Bliss-word eligible for entry into the BCI Authorized Vocabulary, these Bliss-words will be monitored by at least two BAC members chosen by the BDS.

The BAC team will rely on the *Fundamental Rules (2009)* and monitor the following features of the proposed new Bliss-words:

- The *Drawing* (form) of the symbols
- The *Gloss*
- The *Derivation*
- The *Description* (or *explanation*)

The members on the BAC monitoring team who have participated in the development of a Bliss-word and who could be considered because of their expertise to monitor the glosses, the derivations and descriptions will not be asked to undertake a role that might cause them to have a conflict of interest in making decisions within the final approval process. The discretion of the BDS can be used in selecting members of BAC to monitor specific aspects of the new Bliss-words if THE need arises, e.g., while an individual may have participated in the development of a new Bliss-word at a Panel meeting, they could still monitor the drawing or derivation of the Bliss-word. One of the monitors must have English as their native language.

9.1.4 The **Blissymbolics Board of Directors (BBD)** gives final authorization to the new Bliss-words presented to them by the BDS. The BCI Board allocates the BCI identification numbers and appoints a person who will assign the specified numbers to the NEWLY approved Bliss-words. They will then incorporate the numbers into the *BCI Authorized Vocabulary*.

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.
- Bliss-words developed in accordance with the *Fundamental Rules* (Word building strategies for vocabulary extension) will be sent to the International Panel by mail for acceptance or processing through questionnaires. The circulation of the questionnaire should take place within a two month time-frame. Accepted Bliss-words go directly to the **Blissymbol Approval Council** (BAC). Controversial Bliss-words are forwarded to meetings.

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. Specialists from different countries can work as advisors when dealing with grammatical issues. 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 informs working groups and individual contributors about the meetings and prepares the program of the Blissymbolics development work for these meetings.
- The meetings are open to all persons interested in the development of the language or with experience from its use in teaching or communication,
- The meetings will include at least 10 participants, a majority of the participants will have previous experience of the development work. The needs of different nations, cultures and language groups should be considered when planning the participation at the meetings, including representation from both English and Nordic language groups. BDS has the ultimate decision regarding the participants and the representation 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 during 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 members of the Blissymbolics Approval Council for monitoring.
- BDS recommends to the BCI Board of Directors new Bliss-words and new Blisscharacters for their authorization and their inclusion in the authorized vocabulary.
- The BCI Board allocates identification numbers to be assigned to the new symbols and appoints a person to assign the specified numbers to the symbols. The first 2300 symbols have been assigned numbers according to the ISO/IEC 2375 registration submission.
- 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 BAC.

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* (Hegner 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. Clause 9 (sections 9.1 to 9.3.5) was revised by the BCI Board of Directors and its amended form was approved in January 2009.

Figure 1. Summary of the Blissymbolics development process

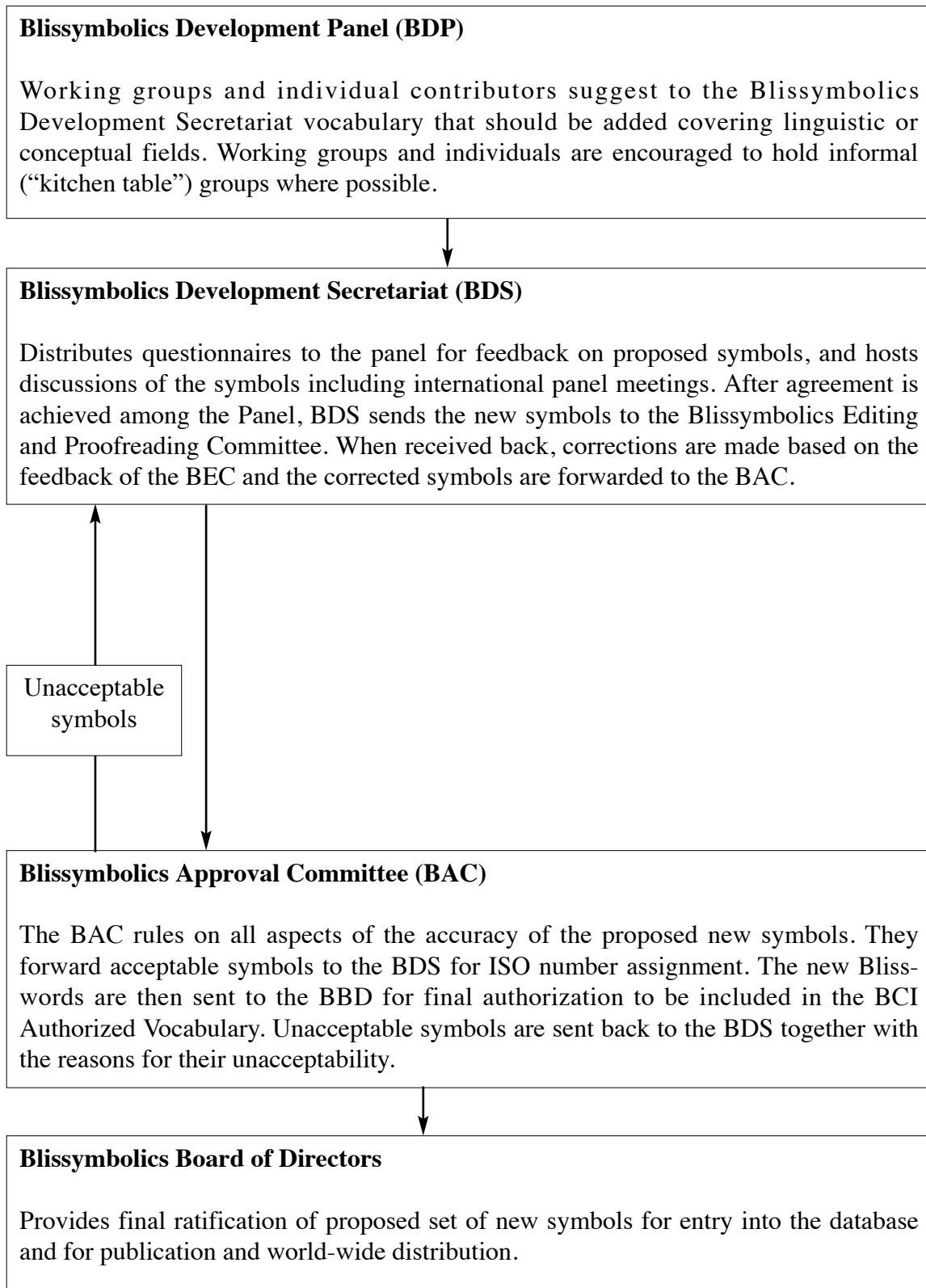


Figure 2. Flow chart of the Blissymbolics development process

- BAC: Blissymbolics Approval Council.**
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.
- BBD: BCI Board of Directors**

