

The Simplified English Lexicon

ABSTRACT: Simplified English (SE) is a controlled language currently used for writing technical documentation such as service manuals for civil aircraft. The linguistic structure of the existing SE Dictionary is described and various ways of extending and improving entries are considered. The underlying objective is to improve the consistency and completeness of the SE language specification.

1. Introduction

Controlled languages – variants of natural languages with specified lexica and constraints on grammar – are increasingly used within the corporate and military world for technical documentation. It is generally assumed that user manuals etc written in a controlled language are more readily interpretable by non-native speakers than they would be if written in uncontrolled language. It is also assumed that use of a controlled language results in a text which may be more clearly read by native speakers.

In recent years it has become apparent that the use of controlled language results in text which can be machine translated with relative success (Pym 1990). This raises the prospect that if controlled languages were specified with precision, the relevant language rules (grammars and lexica) could be embedded in the MT engine to optimise translation performance. The present paper is written with such a goal very much in mind.

The present paper focusses on Simplified English (SE) and attempts to import into the controlled language world some of the recent tools and techniques of linguistic specification in lexicography.

2. Simplified English

In the late 1970's, the Association of European Airlines (AECMA) asked airframe manufacturers to investigate readability criteria for maintenance documentation within the civilian aircraft industry. An AECMA working group studied the procedural texts in maintenance manuals; their proposals are embodied in the AECMA/AIA Simplified English Guide (AECMA 1989).

SE consists of a controlled vocabulary and a set of Writing Rules¹. The controlled vocabulary includes both functor and content words. As a general principle, a family of synonyms in English (hereafter, E) is represented by just one of its members e.g. SE **START** is used in circumstances where E might use: *begin, commence, start, initiate*. SE words have restricted senses compared to their E equivalents. For example, **FALL** refers to an earthward motion under gravity, and not a decrease in quantity. Thus *the pressure falls* is not sanctioned in SE. The governing idea of the SE vocabulary is "One concept,

One and only one word". In addition to the general SE vocabulary, the writer can also use Technical Names (i.e. nouns and noun compounds denoting specialised aircraft entities) and verbs denoting manufacturing processes (e.g. anneal, grind etc). The SE guide does not itself attempt to list or specify acceptable technical terms of this sort.

SE Writing Rules attempt to control style and some aspects of grammar. We give a brief summary:

- Break up noun compounds (clusters) which have more than three nouns. Use the hyphen to indicate word relations within compounds.
- Do not use progressive verb forms (i.e. *-ing* forms).
- Use verbs only in the active voice. The past participle is to be used only as an adjective.
- Keep sentences short.
- Write only one instruction per sentence, and present only one topic per paragraph.
- Use tabular or itemisation layouts rather than complex coordination.

Since the present paper is solely concerned with the SE lexicon, we shall not comment further on these rules. Throughout the paper, SE words are printed in upper case and E words in lower case.

3. The Simplified English Lexicon

The current SE lexicon is presented in 2 parts. The first part (referred to as the "Dictionary" in the guide) consists of alphabetically-ordered SE headwords (both contentives and functors), their syntactic category, and their definition. Verbs and adjectives are also listed with a paradigm of approved forms (Simple Present, Simple Past, Past Participle and Comparative and Superlative, respectively). The second part (the "List of Examples") consists of the same material for each entry together with an SE text example in which the headword appears. For samples of both parts see the Appendix.

Given that the List of Examples includes all the Dictionary information, the presentation of the Dictionary as an independent paper entity is presumably intended solely as a short-reference convenience for readers. We shall indiscriminately refer to both entities as "The Dictionary".

The Dictionary is clearly intended to serve two particular functions. Firstly, as a monolingual dictionary of SE, it gives definitions of SE words and indicates how they are used. Secondly, as a bilingual dictionary, it specifies what translations E words should receive in SE. Because the translation is homophonic (i.e. from E into a subset of E), these two functions can be directly interleaved. Words in E which are possible candidates for SE translation – but not actually in SE – are interpolated into the alphabetic listing of SE words in the Dictionary. SE and E entries are typographically and structurally distinguished. E headwords are in lower case; the entries consist of an example of its use in an E technical text, a list of one or more candidate SE translations for the word, and a translation of the E example into SE using one of the listed SE translations of the E word. If, for example, such an arrangement was used for a technical English to technical French dictionary, entries for English words giving their translation into French would appear in alphabetic order amongst entries providing French definitions and usages for French words. Such an arrangement only makes sense if the situation is as with E and SE: the intended user knows English well and French (SE) rather less so, and is obliged to write a technical text in technical French (SE).

4. Monolingual Definitions in the Lexicon

SE definitions are supposed to be closed i.e. definitions should themselves be written in SE. However, non-SE words are periodically used; their presence is generally marked with quote delimiters. The structure of the definition conforms to traditional lexicographic practice e.g. verb definitions are presented as infinitives:

ACCEPT [v] ACCEPTS, ACCEPTED, ACCEPTED:
To "decide" that a part or assembly is satisfactory

Such a definition is unsatisfactory. In the case of the present example it seems to suggest that something or other is prototypically or definitively accepted by a person, since *decide* – which is imported from E – normally requires an animate subject. This assumption is further reinforced by the imperative example given in the Dictionary entry:

"ACCEPT THE RELAY IF IT IS SATISFACTORY".

However, it seems that competent SE users are prepared to use **ACCEPT** with an inanimate subject² (as it is regularly used in E) where there is clearly no element of decision e.g. "THE ENGINE WILL ACCEPT AN FAE-MODULE". This state of affairs arises either because SE users feel (contrary to appearances) that the Dictionary definition licenses this usage or because they regard definitions as indicative rather than genuinely definitive. For whatever reason, this is an undesirable state of affairs.

The definitional treatment of "ergative" verb pairs – verbs like *collect*, *connect*, *divide*, *latch*, *shake*, *engage*, *increase*... is also unsatisfactory. Both transitive and intransitive forms are plausible in technical documentation contexts:

Collect together the set of replacement parts.
The oil collects in the sump.

Engage the gears.
Check that the gears are engaged.

Shake the supports.
Check that the supports do not shake.

There are numerous definitional and exemplificational inconsistencies in the Dictionary treatment of these and other alternations. What is required is an explicit specification of all and only those environments in which a given SE word can appear. Even in a well-chosen example this information is only implicit. The part of the environment for a word which interests us initially is that part which the word itself idiosyncratically controls – its arguments, rather than modifiers which can occur for all members of that class. For example, we will want to know that ergatives can appear either with or without an object; we don't particularly need to know that they can also appear with a manner adverb like *quickly* since that is true of all dynamic verbs, not just ergatives. Hence we would specify a frame pair for **SHAKE**:

sbd **SHAKE** *sth*_i
*sth*_i **SHAKE**

This says that either somebody shakes something (transitive) or something shakes. The

fact that sth_i has the same index (i) in both cases is intended to suggest that the object of the transitive form has been “moved” to the subject of the intransitive form³.

Returning to an earlier example, the verb **ACCEPT** would be assigned the following frame:

sbd/sth_i ACCEPT sth_j

where the subject position allows either a somebody or something to do the accepting (if that is what the SE specifier/lexicographer requires). The notion of frames is clearly applicable to nouns⁴

AN INSPECTION (OF *sth*) (BY *sbd*)

The noun *inspection* denotes the process of inspecting something and takes an argument headed by *of* with an optional agentive *by*-phrase. In effect, it appears to realise arguments inherited from the verb *inspect*.

In some circumstances a properly specified noun argument structure helps to distinguish noun senses. Consider, for example “**LAMINATION**”. Like most nouns in SE – **INSPECTION** is a counter-example – it is intended to denote an individual rather than a process or event, and as such it does not have any arguments at all. Hence the frame would be:

A LAMINATION

where some sort of determiner is more or less obligatory. By contrast the other sense of lamination – one that is not actually sanctioned in SE – denotes a process of laminating and takes an obligatory *of*-PP, and an optional definite determiner:

(THE) LAMINATION OF *sth* (BY *sbd*)

Two senses, two frames⁵. Note also that lamination in this sense takes either a definite or null determiner.

A major function of the noun frame is to show prepositional selection. The noun **DAMAGE** appears to be used in the SE dictionary with either an *of* or *to* headed argument PP; if such free variation really is to be sanctioned, or just one preposition, the frame is an adequate tool:

THE DAMAGE OF/TO *sth*

5. E to SE translations in the Lexicon

Having considered the use of frame information to enhance the quality of the SE lexicon, we now consider techniques for improving the translational component of an SE entry i.e. that part of an entry which helps a user to select correct SE translations given a prior knowledge of E.

5.1 Unsanctioned SE usages

As already noted, frames help to specify permissible usages of a headword. They are meant to be exhaustive: if some contemplated usage of the word is inconsistent with any of the frames then it is not a sanctioned usage. Dictionary users will tend to consider

non-sanctioned usages of a given SE word because they are not always sure what properties, senses and environments it inherits from its E cognate. Rather than leaving the user to work out for him/herself how an E usage can be reformulated into SE, we should provide translational information inside the headword entry. We take SURE as an example:

TRANS: (you) be sure to do *sth_i* ⇒ (YOU) DO *sth_i*

TRANS: a sure *sth_i* ⇒ A SAFE/CERTAIN *sth_i*

Ex: signal tracing is a sure method for finding ⇒ Ex. SIGNAL TRACING IS A SAFE/RELIABLE/CERTAIN METHOD FOR FINDING

TRANS: *sth_i/sbd* be sure to *sth_j* ⇒ *sth_i/sbd* WILL/MAY *sth_j*

Ex. the particles are sure to clog the filter ⇒ Ex. THE PARTICLES WILL CLOG THE FILTER

TRANS: *sbd* make sure of *sth_i* ⇒ SEframe *sbd* MAKE SURE THAT *sth_i*
BE CORRECT^{typically}

Ex. make sure of the results before ⇒ Ex. MAKE SURE THAT THE RESULTS ARE CORRECT BEFORE

Each TRANS: (i.e. "translate") sub-entry consists of an lhs and a rhs, separated by an arrow. The lhs is an E frame containing a usage of the E cognate to the SE headword – a usage which is disallowed in SE. The rhs is an SE frame containing a list of SE headwords which can be used for translating the E usage; these headwords may be embedded in a frame if so desired (as is in fact the case with all the SURE examples, and necessary with the last). Indices on *sth* variables may be shared between lhs and rhs⁶. Each TRANS: sub-entry may be optionally decorated with an example, which consists of an E string on the lhs and an SE string on the rhs⁷.

5.2 Thesaural Relations

Giving synonyms and antonyms helps to further specify the intended meaning of a word. It also guides the user through possible lexicalisations of a particular concept. In the case of the SE lexicon, these relations can be expressed bilingually i.e. we can give synonyms etc for an SE word in terms of other SE words, E words, or some combination of the two. There will generally be one set of thesaural relatives per frame, since each different frame for a headword generally marks a different sense. The two frames defined for SURE are used as an example:

sbd BE SURE ((THAT) *sth_i*) = *sbd* BE CERTAIN ((THAT) *sth_i*) ≠ uncertain, unsure, *sbd* BE NOT SURE ((THAT) *sth_i*)

sbd MAKE SURE (THAT) *sth* = ensure, confirm, check

Two new symbols have been introduced here: = and ≠, denoting synonym and antonym relations respectively. These relation symbols have an SE frame on the lhs and an SE frame, or a list of SE and/or E headwords, on the right. Generally the rhs of = will be a

list of E words, since SE attempts to embody a “one concept, one word” principle. The antonyms of “positive” SE words are generally captured by SE negative words (NO, NOT) rather than affixes. For example, there is no single word in SE which captures the opposite of being sure⁸. The second frame is not given an antonym because “not making sure that something” is unlikely to arise in an SE text.

5.3. Characteristic Uses

It has already been argued that frames provide a valuable way of characterising the environments of SE words. However, frames are rather minimal: they specify what is allowed, but they do not always suggest what is anticipated or characteristic. Frames are designed to specify arguments to predicative headwords, but many collocational phenomena are found in the selection of modifiers (adjuncts) to the head. Consistent with the general aim of giving directions in a lexical universe, we need to show what sort of SE words will characteristically co-occur with the head word as modifiers or operators on it. We give some usage examples for the concrete noun **LIGHT**:

USE: *sbd/sth* PUT OFF/ON A LIGHT = **illuminate/extinguish,**
switch off/on, turn off/on

Switching on and off a light is a characteristic operation on a light (something like Mel'čuk's **Real** function – Mel'čuk 1984). The usage note makes it clear that this operation is lexicalised in SE with **PUT** rather than the common E synonyms given on the right hand side⁹.

USE: A LIGHT COMES ON = **illuminate**

USE: A LIGHT GOES OFF = **extinguish**

These two use notes cover the anti-causative form of **illuminate** and **extinguish**. SE unequivocally sanctions usage with **COME** and **GO** – but this information is only given in the present Dictionary as a special note under **EXTINGUISH**¹⁰.

The next examples of USE: elements for **LIGHT** relate to characteristic properties and operations on them:

USE: A BRIGHT/DIM LIGHT

USE: MAKE A LIGHT BRIGHTER/DIMMER = **brighten, dim,**
sbd/sth adjust the brilliance/brightness of a light

Formally, USE: notes consist of an lhs and an optional rhs. Each lhs consists of an instantiated or extended SE frame containing the head word, together with an optional SE string example. The optional rhs is introduced by an operator (=, ≠ or ≈) and consists of (a) a list of E heads and/or SE heads and/or E or SE frames or extended frames and (b) an optional list of E or SE string examples.

Note that TRANS: and USE: notes have different functions. In a TRANS: expression, the lhs contains an E head which looks like the SE head in whose entry it appears but which has a different sense and/or environment to those defined for the SE word; the rhs is obligatory and will always consist of an SE head or frame. In a USE: expression, the lhs contains the SE headword in some relation to other contentives or operators.

5.4 Derivands

A head usually has related derived forms which are usually formed by some suffixation process e.g. the noun *minister* yields the adjective *ministerial* by suffixation in *-ial*. Derivands formed by pure affixation are easy to find in paper dictionaries because their entry is likely to be alphabetically adjacent to the head. However, since derivation can result in suppletion e.g. the noun *bishop* has the corresponding adjective *episcopal* rather than *bishopal*, some derived forms will not be obvious or easy to find unless cross-referenced in their source entry.

An example:

INSTALL (v)
sbd INSTALL *sth_i* (IN/ON/UNDER... *sth_j*)...
 NOM(INSTALL) INSTALLATION
 NOM(*sth_i*) INSTALLATION

These markers indicate that the verb **INSTALL** has two associated nominalisations in SE. One is the predicate nominalisation i.e. the nominalisation of the verb itself. The other is that associated with the verb object – the thing that is installed¹¹. In E the corresponding value for **NOM(sbd)** would be *installer*.

Another example for **OPERATE** gives an example of suppletion or blocking in adjective formation:

sbd/sth_i OPERATE *sth_j*

 NOM(OPERATE) OPERATION
 NOM(*sbd*) OPERATOR
 ADJ(*sth_j*) SERVICEABLE = **operational**

Where dictionary entries have some relationship to the head which is not easily expressed in terms of derivation operations, we have used a simple cross-reference marker (i.e. cf **SOMETHING**). Examples are given in the Appendix.

6. Summary and Conclusion

We have examined the existing SE Dictionary and noted a number of deficiencies. It is proposed that the addition of explicit frame information will improve the monolingual specification of SE contentives and their environments. It is further suggested that translation into SE from E can be supported by adding to SE entries E and SE thesaural relations, SE use notes and E to SE translation notes for E idioms and E senses which do not carry over directly to SE. Although the relationship has not been examined in detail, the proposals are broadly in conformity with those developed by Mel'čuk and his co-workers for monolingual dictionaries; we have simply extended their techniques to cover the special case of a combined SE and E to SE dictionary.

Examples of complete entries for SE words constructed according to the proposed principles are given in the Appendix.

Endnotes:

- 1 It should be emphasised that the present author was not involved in any way in the current design or specification of SE.
- 2 According to at least one competent informant.
- 3 Frame information of this sort, albeit without the use of indices, is commonly used in dictionaries for language learners eg. Oxford Advanced Learners' Dictionary of English, Longman's Dictionary of Contemporary English. Sometimes the information is conveyed by special frame codes to cut down on space. However, given the small size of the SE dictionary, and the relatively restricted frame patterns available, a code scheme is probably unnecessary.
- 4 And adjectives and prepositions. The former would include information about preposition selection and attributive/predicative positioning. Space precludes further discussion.
- 5 The entry for **INSTALLATION** has the following definition: The procedure which installs an object, something that is installed for a function. Hence both dynamic and individual-denoting senses of the noun are admitted; only the former would have arguments in its frame.
- 6 It is assumed throughout that the scope of indices does not extend beyond a single E-SE pair. Where scope needs to be extended over two pairs some sort of enclosing brackets convention could be used. The issue of index scope in this sort of lexicography requires further investigation.
- 7 On this scheme the **TRANS:** subentries are part of the entry for an SE word. Another possibility that might be considered is to provide a separate independent entry for each E word sense identified by a **TRANS:**.
- 8 At least this is what one infers – there are no entries for either **UNSURE** or *unsure* in the Dictionary. The use of the analytic "not sure" is consistent with general SE policy. Note also that constructing dictionary entries with thesaural relations provides a check on the completeness and consistency of the simplified language and specified translations into it.
- 9 In fact it is not clear from a careful study of the Dictionary whether this is the preferred expression.
- 10 Note that on the present proposals, the unacceptability of using **EXTINGUISH** with **LIGHT** would also be clearly stated in the **EXTINGUISH** entry with a **TRANS:** expression.
- 11 This is a rather rare case where SE permits both predicate and result nominalisations which have the same surface form.

Bibliography

- AECMA/AIA (1989): Simplified English: A Guide for the Preparation of Aircraft Maintenance Documentation in the International Aerospace Maintenance Language, AECMA Document: PSC-85-16598, Change 5, AECMA, Paris
- MEL'ČUK, I. A. et al. (1984): Dictionnaire Explicatif et Combinatoire du Français Contemporain, Recherches Lexico-Semantique I., Presses de l'Universitaire de Montreal, Montreal
- PYM, Peter (1990) "Simplified English and Machine Translation", Papers from Tecdoc '90, Consert, London

APPENDIX

A. Samples of AECMA SE (Change 5) Dictionary Entries

AECMA/AIA SIMPLIFIED ENGLISH

A	ACID
A (art): Function word: indefinite article	ACCEPT (v) ACCEPTS, ACCEPTED, ACCEPTED : To "decide" that a part or assembly is satisfactory
abandon (v) USE: STOP	acceptable (n, adj) USE: PERMITTED, SATISFACTORY, SERVICEABLE
able (adj) USE: CAN, APPROVED	acceptance (n) USE: ACCEPT, Technical Name
abnormal (adj) USE: UNUSUAL, UNSATISFACTORY, INCORRECT	ACCESS (n): The "ability" to go into or near to.
abnormality (n) USE: INCORRECT, UNSATISFACTORY, UNSERVICEABLE	accessible (adj) USE: GET ACCESS TO
ABOUT (pre): "Concerned" with, (Note: For other meanings USE: APPROXIMATELY, AROUND.)	ACCIDENT (n): An "occurrence" that causes injury or damage
ABOVE (pre): In (or to) a position higher than (Note: For other meanings, USE: MORE THAN)	ACCIDENTAL (adj), ACCIDENTALLY (adv): That does not occur "on purpose"
abrade (v) USE: MAKE ROUGH	accommodate (v) USE: LET
abraded (adj) USE: ROUGH, DAMAGED BY FRICTION, WORN	accomplish (v) USE: DO or commanding verb construction
ABRASIVE (adj): That can remove material by friction	according to (pre) USE: REFER TO
abrupt (adj) USE: SUDDEN	account for (v) USE: MAKE SURE
absolutely (adv) USE: FULLY	accumulate (v) USE: COLLECT
ABSORB (v) ABSORBS, ABSORBED, ABSORBED : To "take" up	accumulated (adj) USE: COLLECTED
absorption (n) USE: ABSORB	accumulation (n) USE: QUANTITY, COLLECT
abut (v) USE: BE (AGAINST), COME (AGAINST)	accuracy (n) USE: PRECISION
accelerate (v) USE: INCREASE THE SPEED OF, MAKE/BE FASTER	ACCURATE (adj), ACCURATELY (adv): With high precision
ACCELERATION (n): Technical Name	achieve (v) USE: GET, SHOW
	ACID (n, adj): Technical Name

AECMA/AIA SIMPLIFIED ENGLISH

Keyword (part of speech)	Assigned Meaning/ USE	APPROVED EXAMPLE	Not Acceptable
ACCEPT (v), ACCEPTS, ACCEPTED, ACCEPTED	To "decide" that a part or an assembly is satisfactory.	ACCEPT THE RELAY IF IT IS SATISFACTORY.	
acceptable (adj)	PERMITTED, SATISFACTORY, SERVICEABLE	A VALUE OF...IS PERMITTED. DO XXXX AGAIN UNTIL YOU CAN SATISFACTORILY ALIGN THE ITEMS. BEFORE INSTALLATION MAKE SURE THAT THE UNIT IS SERVICEABLE	A value of...is considered acceptable. Repeat XXXX until an acceptable alignment is obtained. Before installing, ensure that the unit is acceptable.
acceptance (n)	ACCEPT	WHEN THE CONTROL UNIT ACCEPTS THE SIGNAL....	The acceptance of the signal by the control unit....
ACCEPTANCE (n)	Technical Name	DO AN ACCEPTANCE TEST OF THE POWER CONTROL UNIT.	
ACCESS (n)	The "ability" to go into or near to	THE ACCESS TO THE ACCUMULATOR FOR THE NO. 1 HYDRAULIC SYSTEM....	
accessible (adj)	GET ACCESS TO	TURN THE XXXX UNTIL YOU CAN GET ACCESS TO THE JACKS WITH + AND - MARKS.	Rotate XXXX until jacks marked by + and - are accessible.
ACCIDENT (n)	An "occurrence" that causes injury or damage	MAKE SURE THAT THE PINS ARE INSTALLED TO PREVENT ACCIDENTS.	
ACCIDENTAL (adj)	That does not occur "on purpose"	TO PREVENT AN ACCIDENTAL OPERATION OF THE SYSTEM...	
ACCIDENTALLY (adv)		IF YOU ACCIDENTALLY MOVE THE LEVER, ...	

B. Samples of Proposed SE Entries

Definitions are NOT included in the sample entries – nor are most of the examples that would be needed.

LIGHT (v)

Technical Name

A LIGHT = **lamp**

V(LIGHT) = **light**

USE: *sb* *sth* PUT OFF/ON A LIGHT = **illuminate/extinguish, switch off/on, turn off/on**

USE: A LIGHT COMES ON = **illuminate**

USE: A LIGHT GOES OFF synonym **extinguish**

USE: A BRIGHT/DIM LIGHT

USE: MAKE A LIGHT BRIGHTER/DIMMER = = **brighten/dim**, *sb*/*sth* adjust the brilliance (brightness) of a light

SURE (adj)

(1) *sb* BE SURE ((THAT) *sth*) = *sb* BE CERTAIN ((THAT) *sth*)

≠ Ehead uncertain, unsure, SEframe *sb* BE NOT SURE ((THAT)*sth*)

Ex. IF YOU ARE SURE THAT THE BOLT IS CONNECTED, THEN

USE: *sth* MAKE *sth* SAFE ≈ *sth* SAFETY *sth*

(2) *sb* MAKE SURE (THAT) *sth* = **ensure, confirm, check**

Ex. MAKE SURE THAT THE BOLT IS SECURED

TRANS: (you) be sure to do *sth* ⇒ (YOU) DO *sth*

TRANS: a sure *sth* ⇒ ⇒ A SAFE/CERTAIN *sth*

Ex. signal tracing is a sure method for finding ⇒ Ex. SIGNAL TRACING IS A SAFE/RELIABLE/CERTAIN METHOD FOR FINDING

TRANS: *sth*/*sb* be sure to *sth* ⇒ *sth*/*sb* WILL/MAY *sth*

Ex. the particles are sure to clog the filter ⇒ Ex. THE PARTICLES WILL CLOG THE FILTER

TRANS: *sb* make sure of *sth* ⇒ *sb* MAKE SURE THAT *sth*

BE CORRECT_{typically}

Ex. make sure of the results before ⇒ Ex. MAKE SURE THAT THE RESULTS ARE CORRECT BEFORE

BEND (v)

sbd BEND *sth* ≈ *sbd* MAKE/PUT A BEND IN *sth*, kink ≠ **straighten**, **MAKE STRAIGHT**

Adj(*sth*): **BENT**

USE: *sbd* BEND *sth* UP/DOWN/FORWARD/...

USE: *sbd* BEND *sth*_i INTO/OUT OF *sth*_j

USE: *sth* BEND

USE: *sth* BEND UP/DOWN/FORWARD/...

USE: *sth* BEND INTO/OUT OF *sth*_j

TRANS: *sbd* **bend the rules** ⇒ *sbd* NOT OBEY THE INSTRUCTIONS

INSTALL (v)

sbd INSTALL *sth*_i (IN/ON/UNDER... *sth*_j) = fit ≈ ATTACH ≠ REMOVE

Nom(INSTALL): **INSTALLATION**

Nom(*sth*_i): **INSTALLATION**

TRANS: *sbd* **install self in/on..** *sth* ⇒ *sbd* GO INTO/ONTO *sth*

TRANS: *sth*_i **install in** *sth*_j ⇒ *sbd* CAN INSTALL *sth*_i IN *sth*_j

INSTALLATION (n)

(1) THE INSTALLATION (OF *sth*)

Verb(INSTALLATION): **INSTALL**

Nom(*sth*): ⇒ (2) below

USE: THE INSTALLATION PROCEDURE/STEP

(2) AN INSTALLATION ≈ **apparatus**