2015

American Freedom Speeches Parallel Corpus Design, Building, and Annotation Guidelines

Daniel Roush
Eastern Kentucky University

American Freedom Speeches Parallel Corpus
Design, Building, and Annotation Guidelines

Daniel Roush, Ph.D.

Department of American Sign Language and Interpreter Education
Eastern Kentucky University

Version: 1.0
April 15, 2015

American Freedom Speeches: Parallel Corpus Design, Building, and Annotation Guidelines

Table of contents

1. Preparing and building the parallel corpus

1.1 The preparation of the English Source Text (ST) data

Transcode the English source texts (6) into digital, machine-readable format from the printed, paper-based American Freedom Speeches Instructor's Guide (see copyright permission).

A. Use Microsoft Word software to transcode the portions of English text that were translated (this is indicated by the highlighted areas of the printed text in the Guide).
B. Create a separate .doc file for each of the six (6) English source texts.
C. Verify that the transcoded version is a verbatim copy of the original.
D. Use the file name convention: [translation number]_AFS_[Speech Title]_[Translator's last name].docx

1.2 The preparation of the ASL Target Text (TT) data

Convert and edit the ASL media files from the American Freedom Speeches DVD in a format that is compatible for use in ELAN (see copyright permission for this project from Sign Media, Inc.).

A. Use HandBrake open-source video transcoder software to convert the .vob files on the DVD to .mp4 files (http://download.cnet.com/HandBrake/3000-2140_4-43951.html)
B. Use iMovie software to edit the files into six (6) separate video clips to include the ASL translations only (it will not include Maureen Yates' introduction of each translation).
C. Use the file name convention: [translation number]_AFS_[Speech Title]_[Translator's last name].mp4

1.3 Software tools to support the coding and analysis of the data

Use ELAN to annotate the video Target Text data.

Use Microsoft Excel for a tabular representation of the correspondences between the ST and the TT (described below). Also use Microsoft Excel to support other coding procedures (described below).

1.4 Annotation guidelines for the ASL translation

Open a separate ELAN file for each of the 6 American Freedom Speeches ASL translation videos. Use the file name convention: [Translation number]_AFS_[Speech Title]_[Translator's last name].mp4

Within ELAN use the following tier hierarchical organization template (adapted from Chen Pichler et al., 2010; and Johnston, 2013)

Parent Tier ↳Child Tier	Expanded Name	Linguistic Type	Stereotype
A. ASL-TT	ASL target text utterance	default-lt	None
B. ↳ASL-individual	ASL individual gloss	BasicAnnotation	Time subdivision
C. ↳ASL-right-hand	ASL gloss for right hand	BasicTag	Included in
D. ↳ASL-left-hand	ASL gloss for left hand	BasicTag	Included in
E. English-ST	English source text	BasicAnnotation	None
F. Comments	Comments by researcher	BasicAnnotation	None
G. Feedback	Feedback from reviewers	BasicAnnotation	None

A. ASL-TT Tier

Timing annotations

This tier is an independent tier to which other sign-related tiers depend. This project follows the definition of an ASL utterance provided in Chen Pichler, et al., 2010:

"We consider an utterance to be a group of signs delimited by prosodic behavior (e.g., lowering or relaxation of the hands, a longer pause than normal or lengthening of the final sign in the group, and so on). We mark the onset of an utterance at the point when the hand begins to form the hand configuration of the first sign and/or when movement starts. The utterance ends when one or more of the following occurs: the hand changes its configuration, the arm is lowered, signing is paused, or eyegaze shifts to a different location. Utilizing prosodic behavior to delimit utterance is not guided by any specific timing measurements but rather native speaker intuition" (p. 18).

Using the above guideline, mark the beginning and end of each TT utterance.

Glossing annotations and ID-glosses

After the onset and ending annotation of each utterance is marked, the gloss for each sign within the utterance is then entered within the graphical timing annotation.

The use of ID-glosses from a standard lexical database is recommended in the annotation of signed language video data (Johnston, 2013; and others). The use of ID-glosses supports the internal consistency of glosses, serves to increase the potential trustworthiness of the researcher's annotation decisions, and provides an "audit trail" for other researchers to follow. It also serves the need to use annotations that are both machine readable and human readable.

For fully-lexical signs (Johnston, 2013):

I. Use the online ASL Linguistic Research Project (ASLLRP) Data Access Interface (http://secrets.rutgers.edu/dai/queryPages/) as the primary standard reference for unique ID-glosses;

II. or, if the ASLLRP database does not offer a gloss for a sign, reference the local Gallaudet University (GU) ASL ID-gloss database currently being developed under the direction of Dr. Hochgesang (see Fanghella, et al, 2012). Maintain a project spreadsheet of GU glosses used and reference their source;

III. or, if the local GU ASL ID-gloss database does not contain the gloss, reference the sign in a published ASL dictionary or ASL curriculum and determine a unique gloss that conforms to the glossing conventions developed below. Add the supplemental gloss in the project ID-Gloss spreadsheet and cite the origin from the published reference. Also maintain a folder of video clips from files that are named after the gloss they represent.

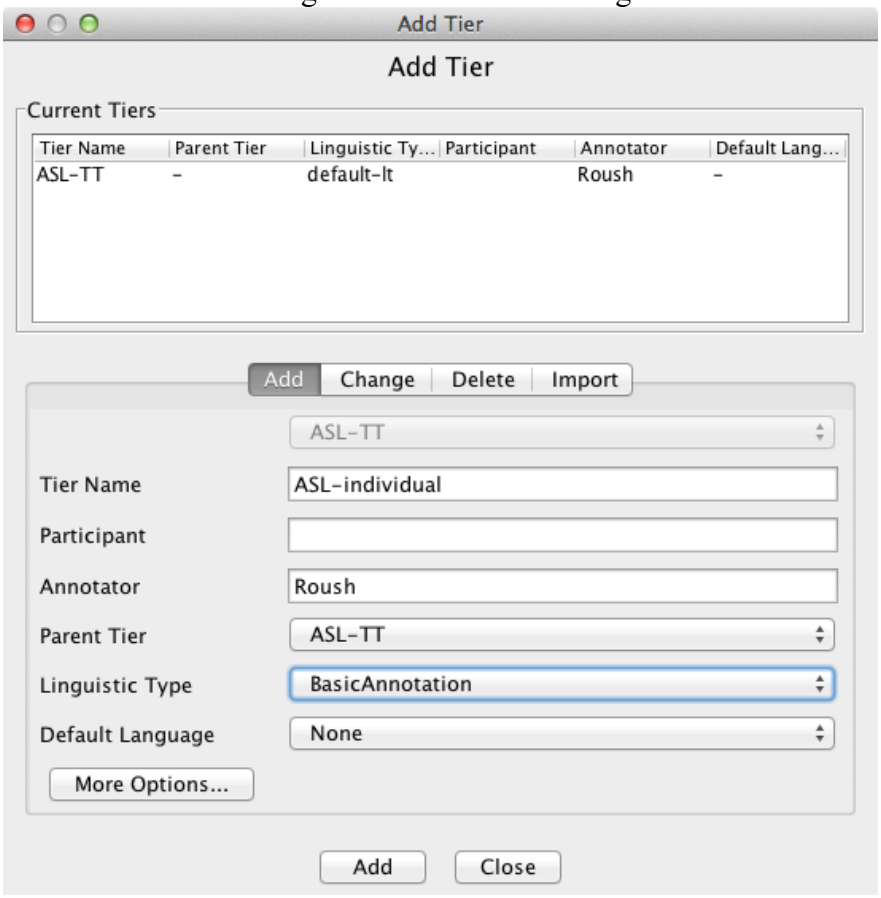
Use the following table of transcription/annotation conventions to guide the annotations in the ASL-TT Tier.

Notation	Example	Conventional use
Fully-lexical (based on Neidle, 2002; 2007; Liddell, 2003)		
GLOSS	SIGN	Nearest English equivalent used to represent an ASL sign. Gloss is in all capital letters.
GLOSS-GLOSS	THANK-YOU	"-" is used to separate words if the English translation of a single sign requires more than one.
GLOSS/GLOSS	BOLD/TOUGH WOW/AWFUL	"/" is used when one sign has two different English equivalents.
GLOSS+GLOSS	MOTHER+FATHER	"+" is used to indicate a compound of two signs.
NS(Name)	NS(Lincoln)	Used for name signs.
#GLOSS	#BACK	"#" is used for lexicalized fingerspelling.
GLOSS{BOUND MORPHEME}	{FOUR}{WEEK} TEACH{AGENT}	Curly brackets are used to indicate signed bound morphemes.
Partly-lexical (adapted from Chen Pichler, et al., 2010; Johnston, 2013)		
IX(referent)	IX(self)	Used for all signs that point with the index finger.
HONORIFIC(referent)	HONORIFIC(audience)	Used for signs that point with fingers of the "B" handshape, palm up.
POSS(referent)	POSS(self)	Used for all signs that point with the palm of "B" handshape that indicates possession.
SELF(referent)	SELF(self)	Used for all signs that point with the knuckles of the "A" handshape.
DS(description)	DS(freedom-flow-down-from-mountain)	Used for depicting signs with description of meaning in parenthesis.
VERB(referent)	GIVE(give-to-our-posterity)	Used for indicating verbs with referents in parenthesis.
BUOY(referent)	BUOY(purposes-of-the-Constitution)	Used for buoy signs with referents in parenthesis.
Non-lexical (adapted from Chen Pichler, et al., 2010; Johnston, 2013)		
FS(fingerspelling)	FS(U.S.)	Used for fingerspelled words.
g(description)	g(offer)	Used for gestures with description of meaning in parenthesis.
Other conventions (Chen Pichler, et al., 2010).		
GLOSS[+]	BORN+	Used for signs that are repeated.
GLOSS[?]	IX[?]	Used for an unclear sign.
XXX	XXX	Used for signs that are indecipherable.

B. ASL-individual Tier

Select the ASL-TT tier then click Tier>Tokenize Tier>Create New Tier

In the “Add Tier” dialog box fill in the following information:



Click Add>Close, then in the “Tokenize Tier” dialog box, click Start>Close.

Adjust the start and end times for each sign by holding the Option key and positioning the mouse arrow over the marker you want to adjust.

C. ASL-right-hand Tier

Use this tier only for additional phonological information as necessary

D. ASL-left-hand Tier

Use this tier only for additional phonological information as necessary

E. English-ST Tier

Copy and paste sentences from the Source Text speech and align the annotations with the corresponding annotations in the ASL-TT tier.

F. Comments Tier

Use this tier as needed to note any salient observations or problematic cases for further consideration.

G. Feedback Tier

This tier is reserved for any comments made by reviewers.

1.5 Dividing idea units of ST and TT corpora in preparation for alignment

In preparing to align the ST and TT corpus, divide the transcriptions of each corpus at the sentence/utterance level then at the idea unit level.

A. English ST units

English sentences
Within each of the 6 transcoded English ST files, enter a line-break after each sentence (a sentence is defined using the standard orthographic convention of the capitalization of the first word and ending with the period punctuation mark). Use the numbering feature in MS Word to number each sentence consecutively (1, 2, 3, etc.).

Copy the sentences from the .docx file to an Excel spreadsheet file. Each sentence should have its own row. Use the file name convention: [translation number]_AFS_[Speech Title]_[Translator's last name].xlsx

English idea units
What constitutes an idea unit is somewhat equivalent to grammatical clauses—those clusters of words that form the smallest unit of a complete idea (typically at the minimal level of a NP and a predicate, an ellipsis of a predicate, or is separated by a comma punctuation mark, and before a connective such as 'and').

Within the Excel spreadsheet, in a column next to the sentence column, further divide each sentence into idea units by giving each idea unit a separate row and assigning each row a number that maintains its relationship with the sentence (1.1, 1.2, 2.1, 2.2, etc.).

B. ASL TT units

ASL utterances
The ASL TT utterances are already segmented in the ELAN file. Export the ASL-TT tier utterances by clicking File>Export As>Tab-delimited Text. Import the text file into a new worksheet in the same Excel spreadsheet file created above. Number each utterance row consecutively (1, 2, 3, etc.).

ASL idea units
Follow the same definition of an idea unit given above. In a column next to the utterance column, give each idea unit a separate row and assign each row a number that maintains its relationship with the utterance (1.1, 1.2, 2.1, 2.2, etc.).

1.6 Aligning TT and ST units

Within the English worksheet, compare each TT idea units with the ST idea units. Copy and paste ST idea units that have corresponding meaning into an adjacent cell on the same row of the respective TT idea unit. Copy and paste as many idea units within the same cell until there are no unmatched concepts from the TT idea unit. If there are no corresponding idea units in the ST, leave the adjacent cell empty. If there is a ST idea unit that does not have a corresponding TT idea unit, add a new row between the relevant TT idea units and paste the ST idea unit in relevant column.

Document any problematic cases in a cell within a separate comment column and on the same respective row.

2. English Source Text (ST) metaphor identification and coding

2.1 Deciding what counts as an Event-Structure Metaphor (ESM) in the English ST

A. Operational definition of an Event-Structure Metaphor in English

A linguistic Event-Structure Metaphor in the English ST of the project corpus is an event-related term (both individual words and phrases) in which the researcher can reasonably interpret a "semantic tension" (Kimmel, 2012) that generally meets all of the following three conditions:

I. it is a term that contextually refers to event-related senses such as: states, changes, causes, causation, actions, purposes, means, difficulties, freedom, achievement, attributes, etc.;
II. and, there is a contrast between the basic meaning (see below for a definition of basic meaning) of the term and its contextual meaning, particularly if the basic meaning has topographical or physical senses related to: motion, locations, paths, containers, objects, or forces, etc.;

III. and, there is a transfer of meaning between the basic and contextual meaning of the term which may potentially be explained by cross-domain mapping (ii and iii are based on Cameron & Maslen, 2010b, and Steen et al., 2010).

B. Metaphor identification example

An example of a term from the corpus that meets this tripartite definition is the preposition "in" from the phrase "in life." This term meets the first part of the definition because it refers to the event-related concept of life as a state, or attribute. This term meets the second and third part of the definition because the basic meaning of "in" is "used for showing where someone or something is: inside a container, room, building, vehicle, etc." (first sense in the Macmillan dictionary entry) contrasts with the contextual meaning which is "used for a particular state, situation, or relationship" (seventh sense in the Macmillan dictionary entry) and there is a reasonably interpreted transfer of meaning or potential cross-domain mapping of this term.

C. Procedure for analyzing and coding ESMs in the English ST

Based on the above operational definition, the identification and coding procedure is as follows:

I. **Context.** Read the entire English source text along with the introductory commentary within the Guide to get a sense of the overall context.
II. Within the project spreadsheet, move idea unit by idea unit and identify all terms that meet the tripartite definition of a linguistic Event-Structure Metaphor in English.
    a. **Contextual meaning.** Follow the MIPVU (Metaphor Identification Procedure, Vrije Univeritiet, Steen et al., 2010) definition of a term's contextual meaning: "the meaning it has in the situation in which it is used. It may be conventionalized and attested, and will then be found in a general users' dictionary; but it may also be novel, specialized, or highly specific, in which case it cannot be found in a general users' dictionary" (p. 33).
    b. **Basic meaning.** Follow the MIPVU definition of a term's basic meaning: "a more concrete, specific, and human-oriented sense in contemporary language use" (Steen et al., 2010, p. 35).
    c. **Definitional standard.** Adopt the MIPVU practice of using the Macmillan dictionary as a standard for determining the basic and contextual meaning.
    d. **Marking convention.** "Mark" the metaphorically used term by copying and pasting it into a column adjacent to the respective ST idea unit.
    e. **Coding scheme.** Adopt the MIPVU practice of coding terms on a nominal scale of "Metaphorically-related [term event-structure metaphor]" (MRT-ESM), and "When in doubt, leave it in [event-structure]" (WIDLII-ESM, and possibly with comments). Do not code other types of metaphor or non-metaphor terms. Code each English ST idea unit within a separate column along the same row within the worksheet. If an idea unit has two ESM metaphors, create a duplicate row below.

III. Repeat this process for each of the 6 English ST speeches.

2.2 Deciding potential cross-domain mappings of identified linguistic Event-Structure Metaphors in the English ST

Compositional coding of the potential conceptual source and target domains for each case of linguistic event-structure metaphor identified in the corpus.

A. Image schema source domain annotation

For each metaphorically used term, annotate a primary and secondary image schema within separate columns along the same row of the identified ESM within the worksheet (see attached image schema coding list). For example, the "in life" term would be annotated with the image schema CONTAINER:INSIDE-OUTSIDE and OBJECT(ENTITY):IN-OUT.

B. Mapping formulas

Based on the context of the metaphorically used term and the image schema annotations, create a metaphoric mapping formula. This is usually written in sentence format. This is a bottom-up, specific level analysis that is intended to retain any richness revealed in the metaphor expression and to support a top-down, generic level analysis of established ESM submappings.

C. Code ESM systems

Tag each identified metaphor for whether it falls into one of the ESM systems:

Location-ESM
Object-ESM
Container-ESM
Other ESMs? (Lakoff & Johnson, 1999)

Code the metaphor for a primary and secondary ESM submapping.

3. ASL Target Text (TT) metaphor identification and coding

3.1 Deciding what counts as an Event-Structure Metaphor in the ASL TT

Due to the basic difference in how metaphor is exhibited in spoken and signed languages, a different procedure of metaphor identification is used in the analysis of the ASL translation data. Procedures for identifying metaphor in English assume that polysemy is the primary way that conceptual metaphors are expressed. Based on the foundational work of Taub (2001) in analyzing the expression of metaphors in ASL signs, this cannot be the assumption undergirding an identification procedure for a signed language. ASL signs tend to be metaphoric at their genesis rather than developing a metaphoric sense through a process of diachronic metaphoric

extension (Sweetser, 1990). Despite this basic difference, there are some principles that appear to cross language modalities such as the notion of "semantic tension" (Kimmel, 2012, p. 6) that may be borrowed from discussions of spoken language metaphor identification methods. There are exceptions to how ASL typically expresses metaphor; some signs do exhibit metaphoric polysemy. For example, the sign FULL can have both a literal sense and a metaphoric sense as in the ASL translation of "My heart is full of pride": POSS(self) HEART FULL PRIDE. These exceptions will be documented in the project notes.

A. Operational definition of an event-structure metaphor in ASL

A linguistic event-structure metaphor in the ASL TT of the project corpus is an event-related term (primarily individual signs) in which the researcher can reasonably interpret a "semantic tension" (Kimmel, 2012, p. 6) that generally meets the following three conditions:

I. it is a sign that conventionally and contextually refers to event-related senses such as: states, changes, causes, causation, actions, purposes, means, difficulties, freedom, achievement, attributes, etc. (Lakoff, 1993; Lakoff and Johnson, 1999);
II. and, there is a contrast between the meaning depicted by the sign's iconic form and its contextual meaning, particularly if the iconic meaning is topographical or physical and represents: motion, locations, paths, containers, objects, forces, etc.;
III. and, there is a transfer of meaning between the iconic representation and the conventional or contextual meaning of the sign which may potentially be explained by a *double mapping*—the first mapping from source to target domains, and the second mapping from iconic articulations, to the source domain (2 and 3 are based on Cameron & Maslen, 2010b, and Steen et al., 2010, and Taub, 2001).

B. Metaphor identification example

An example of a term from the translation corpus that meets this tripartite definition is the sign PRIDE from the ASL translation: POSS(self) HEART FULL PRIDE. This sign meets the first part of the definition because it refers to the event-related concept of pride as an emotional state, or an attribute of the subject. This term meets the second and third part of the definition because the sign appears to be an iconic depiction of an object or substance rising within the chest (the chest appears to iconically represent a container) but there seems to be a transfer of meaning between the iconic depiction and the conventional and contextual meaning of this sign (which is indicated by using the English gloss "pride").

C. Procedure for analyzing and coding ESMs in the ASL TT

Based on the above operational definition, the identification and coding procedure is as follows:

I. **Context.** Review the entire ASL translation along with the introductory commentary within the *Guide* to get a sense of the overall context.

II. Within the project spreadsheet, move idea unit by idea unit and identify all terms that meet the tripartite definition of a linguistic event-structure metaphor in ASL.
   a. **Contextual meaning.** For the signed language procedure, follow the MIPVU definition of a sign's contextual meaning that was quoted above.
   b. **Iconic meaning.** The iconic meaning of the sign is the meaning that is interpreted from an analogical analysis of the articulators of the sign (handshapes, location, movement, etc.). In seeking the iconic meaning of a sign, attempt to answer the question, "What are the potential analogs that are seen in the sign articulators?" Answering this question is admittedly a complex hermeneutic process (see Taub, 2001, Chapter 3 & 4). The interpretation of iconic meaning at this stage is tentative and can be further confirmed by the analysis described below. The iconic meaning of the sign is typically a more concrete, physical, or human-oriented meaning, and in this way, it parallels the MIPVU definition of the basic meaning of a spoken language term discussed above.
   c. **Definitional standards.** Despite the limited language references for ASL, continue to seek resources that may increase the validity, reliability, and trustworthiness of my interpretive work in the ASL TT data. To this end, reference signs that have already been identified as metaphoric in the linguistic literature, namely Taub (2001) and Wilcox (2000).
   d. **Marking convention.** "Mark" the metaphorically used term by copying and pasting it into a column adjacent to the respective TT idea unit.
   e. **Coding scheme.** Continue to apply the same coding scheme described for the English ST identification procedure.

III. Repeat this process for each of the 6 ASL translations.

3.2 Deciding potential cross-domain mappings of identified Event-Structure Metaphors in the ASL target text

After identifying linguistic event-structure metaphors in the ASL TT, code the potential conceptual source and target domains for each case of linguistic metaphor identified in the corpus. Generally follow the same procedure and coding schemes described above for the English ST. This includes:

A. Image schema source domain annotation
B. Mapping formulas
C. Code ESM systems and submappings

As part of this analysis, consider conducting a double-mapping analysis (Taub, 2001) for the identified ESM metaphoric signs that have not previously been analyzed. This detailed analysis can be the basis for confirming the identification of the sign as metaphoric and will support the additional coding efforts of 1 - 4. An example of a double-mapping analysis for the sign THRILL is seen in the following Table:

Double Mapping Table for THRILL (Taub, 2001, p. 134)

ICONIC MAPPINGS		METAPHORICAL MAPPINGS
ARTICULATORS	SOURCE	TARGET
Handshape: Open-8	Physical contact	Emotional experience
Location: Chest	Chest region	Locus of emotional experience
Movement direction: Upward	Top of vertical scale	Happy emotions
Movement timing (iconic [and metonymic] only): Single rapid movement	Brief experience	

The conventional double-mapping analysis uses a tabular format with three columns that represent the three aspects that are conceptually chained together. The first mapping is between the iconic linguistic forms of the sign (articulators) and the conceptual source domain. The second mapping is the source and target cross-domain mapping that is familiar to spoken language metaphor analysis. The rows linked between the columns represent the submappings that are grounded in the distinct linguistic and gestural forms of the sign's articulators including: handshapes of the dominant and non-dominant hand, the location(s) of the hands, the orientation of the hands, the movement of the sign, and the location of the signer and the addressee.

The double-mapping analysis of signs is not always a straightforward process. There are several complicating possibilities of which a researcher needs to be cognizant. As described in Taub (2001, Chapters 6 & 7), it is possible that an aspect of a sign's articulation is iconic but not metaphoric. It is also possible that a submapping between the source and target can be inferred from the overall coherent structure of all submappings even if it does not have an overt linguistic form. These inferences will be designated [null] in the articulator column following Taub (2001). It is also possible that a sign's articulators exhibit two or more different metaphors such as the compounding of HAPPY EMOTIONS ARE UP, THE LOCUS OF EMOTIONS IS THE CHEST, and FEELING IS TOUCHING in the sign THRILL (Taub, 2001, p. 125-134, and see Table above). In addition to these complexities, the iconicity in the sign articulations can vary from strongly iconic to weakly iconic. To support the deconstruction of a sign's iconicity and metaphoricity, I will refer to its historic form (depicted in photos and text descriptions) and English gloss when available in dictionaries published in the early 1900's (http://www.rochester.edu/College/slrc/projects/dictionaries.html). If the iconicity and subsequent mapping analysis of a sign has two or more possible interpretations, these will be documented in the project notes.

4. Coding how event-structure metaphors are handled

Once the ESM identification and coding within the English ST and ASL TT of each translation in the corpus is complete, code the main categories of how ESMs are handled between the ST and TT. The seven basic coding categories are summarized here:

A. The *maintenance* of Event-Structure Metaphors from ST to TT.
   I. Maintenance of the same ESM branch and same submapping.
   II. Maintenance of the same ESM branch but different submapping.
B. The *shifting* of Event-Structure Metaphor expressions from ST to TT.
   I. Shifting from one ESM branch in the ST to another ESM branch in the TT.
   II. Shifting from an ESM branch in the ST to a literal or non-ESM expression in the TT.
   III. Shifting from a literal or non-ESM expression in the ST to an ESM in the TT.
C. The *addition* of an Event-Structure Metaphor in the TT where there is no corresponding expression in the ST.
D. The *omission* of Event-Structure Metaphor expressions from the ST.

Guideline Attachment A: AFS parallel corpus spreadsheet structure and codes

Column label	**Column definition and formatting procedure**	**Codes or data**	**Code definition and procedure**
A. Record_Number	A unique, sequential number assigned to each row. The main function is to recover the original order of rows in case this is lost during sorting.	Number each row 1, 2, 3, etc.	Self-explanatory
B. ST_Sentence_Num	Source text sentence number. Each sentence in the source text is assigned a sequential number. Insert one number per row.	Number 1, 2, 3 etc.	Self-explanatory
C. ST_Sentence	Source text sentence. Each sentence is inserted in the row adjacent to the respective number.	Data/transcribed English sentence defined by project procedure.	n/a
D. ST_Idea_Unit_Num	Source text idea unit number. Each idea unit in each sentence is assigned a number that corresponds with the sentence number. Insert one number per row.	Number 1.1, 1.2, 2.1, 2.2, etc.	Self-explanatory
E. ST_Idea_Unit	Source text idea unit. Each idea unit is inserted into the row adjacent to the respective number.	Data/units divided according to the project procedure.	n/a
F. MRT_ST	Metaphorically related term in the source text. Insert only the term (word or phrase) on the appropriate row. Insert more rows as needed, one row per MRT	Data/terms are identified using the project metaphor identification procedure.	n/a

	but maintain associations with idea units by copying and pasting content in the adjacent rows.		
G. Metaphorically_Related_ESM	If there is a term identified in MRT_ST, code it on the same row for how well it appears to fit the identification procedure.	MRT, WIDLII	MRT=a clear case of a metaphorically used ESM term, WIDLII=when in doubt leave it in
H. ESM_ST	Event-structure metaphor type—source text. Code the MRT on the row adjacent to the term.	LESM, OESM, CESM	LESM = Location-ESM, OESM = Object-ESM, CESM = Container-ESM
I. Image_Schema_ Primary_Profile	The most salient image schema that appears to motivate the source domain of the ST MRT.	See image schema list in Attachment B.	n/a
J. Image_Schema_ Secondary_Profile	A secondary image schema that appears to motivate the source domain of the ST MRT	See image schema list in Attachment B.	n/a
K. ESM_Mapping	Code the ESM for a primary submapping	LESM_A, LESM_B, LESM_C, etc.	LESM_A=Location-ESM submapping A, etc.
L. ESM_Mapping_ Comment	Formulate a metaphor mapping statement incorporating the source and target domains in a sentence.	Write a unique sentence for each unique MRT.	Based on the context of the MRT and the image schema annotations, create a metaphoric mapping formula.
M. TT_Idea_Unit_Num	Target text idea unit number. Each idea unit in each utterance is assigned a number that corresponds with the utterance number. (This work is fully represented on another sheet) Insert one number per row.	Number 1.1, 1.2, 2.1, 2.2, etc.	Self-explanatory
N. TT_Idea_Unit	Source text idea unit. Each idea unit is inserted into the row adjacent to the respective number.	Data/units divided according to the project procedure.	n/a
O. MRT_TT	Metaphorically related term in the target text. Insert only the term (sign) on the appropriate row. Insert more rows as needed, one row per MRT but maintain associations with idea units by copying and pasting content in the adjacent rows. Some terms have a complex relationship with	Data/sign is identified using the project metaphor identification procedure.	n/a

	the MRT_ST. (1:2, 1:3, etc.)		
P. Metaphorically_Related_ESM	If there is a term identified in MRT-ST, code it on the same row for how well it appears to fit the identification procedure.	MRT, WIDLII	MRT=a clear case of a metaphorically used ESM term, WIDLII=when in doubt leave it in
Q. ESM_TT	Event-structure metaphor type—target text. Code the MRT on the row adjacent to the term.	LESM, OESM, CESM	LESM = Location-ESM, OESM = Object-ESM, CESM = Container-ESM
R. Image_Schema_ Primary_Profile	The most salient image schema that appears to motivate the source domain of the ST MRT.	See image schema list in Attachment B.	n/a
S. Image_Schema_ Secondary_Profile	A secondary image schema that appears to motivate the source domain of the ST MRT	See image schema list in Attachment B.	n/a
T. ESM_Primary_ Mapping	Code the ESM for a primary submapping	LESM_A, LESM_B, LESM_C, etc.	LESM_A=Location-ESM submapping A, etc.
U. ESM_Secondary_ Mapping	Code the ESM for a secondary submapping	LESM_A, LESM_B, LESM_C, etc.	LESM_A=Location-ESM submapping A, etc.
V. ESM_Mapping_ Comment	Formulate a metaphor mapping statement incorporating the source and target domains in a sentence.	Write a unique sentence for each unique MRT.	Based on the context of the MRT and the image schema annotations, create a metaphoric mapping formula.
W. Meta_Trans_Proc	Metaphor in translation procedure. This column captures the comparison of the handling of metaphor between the source and target texts.	ZTM	Zero overt content in the ST but the addition of a metaphor in TT (this does not preclude implied meaning or ellipsis)
		MTZ	Metaphor in ST but no overt content in TT (this does not preclude implied meaning or ellipsis)
		LTM	Literal or non-ESM metaphor overt expression in the ST but there is a shift to an ESM metaphor in TT
		MTL	Metaphor term in the ST but there is shift to literal or non-ESM metaphor expression in the TT

		CORM	Metaphor type in the ST is maintained by the same metaphor type in the corresponding metaphor in the TT (LESM:LESM, etc.)
		CORS	Metaphor type in the ST is shifted to a different metaphor type in the corresponding metaphor in the TT (LESM:OESM, etc.)
X. Comments	A place for project notes and general comments.	n/a	n/a

5. Bibliography

Cameron, L., & Maslen, R. (2010b). Identifying metaphors in discourse data. In L. Cameron, & R. Maslen (Eds.), *Metaphor Analysis: Research Practice in Applied Linguistics, Social Sciences and the Humanities* (pp. 97-115). London, UK: Equinox Publishing, Ltd.

Chen Pichler, D., Hochgesang, J. A., Lillo-Martin, D., & Muller de Quadros, R. (2010). Conventions for sign and speech transcription of child bimodal bilingual corpora in ELAN. *Language, Interaction and Acquisition, 1*(1), 11-40.

Fanghella, J., Geer, L., Henner, J., Hochgesang, J., Lillo-Martin, D., Mathur, G., . . . Pascual-Villanueva, P. (2012). Linking an ID-gloss database of ASL with child language corpora. *5th Workshop on the Representation and Processing of Sign Languages: Interactions between Corpus and Lexicon* (pp. 57-62). Istanbul: Language Resources and Evaluation Conference (LREC).

Johnston, T. (2013). *Auslan Corpus Annotation Guidelines.* Retrieved from https://media.auslan.org.au/attachments/AuslanCorpusAnnotationGuidelines_Johnston.pdf

Kimmel, M. (2012). Optimizing the analysis of metaphor in discourse: How to make the most of qualitative software and find a good research design. *Review of Cognitive Linguistics, 10*(1), 1-48.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought.* New York, NY: Basic Books.

Liddell, S. (2003). *Grammar, Gesture, and Meaning in American Sign Language.* Cambridge, UK: Cambridge University Press.

Neidle, C. (2007). *Signstream(tm) Annotation: Addendum to Conventions Used for the American Sign Language Linguistic Research Project.* Boston University. Boston: American Sign Language Linguistic Research Project.

Neidle, C. (2002). *SignStream(tm) Annotation: Conventions Used for the American Sign Language Linguistic Research Project.* Boston University. Boston: American Sign Language Linguistic Research Project.

Steen, G., Dorst, A., Herrmann, J. B., Kaal, A., Krennmayr, T., & Pasma, T. (2010). *A Method for Linguistic Metaphor Identification.* Amsterdam: John Benjamins.

Sweetser, E. E. (1990). *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure.* Cambridge, UK: Cambridge University Press.
Taub, S. (2001). *Language from the Body: Iconicity and Metaphor in American Sign Language.* Cambridge, UK: Cambridge University Press.
Wilcox, P. (2000). *Metaphor in American Sign Language.* Washington, DC: Gallaudet University Press