Guidelines for a hermeneutics of action

Contents

Process for investigating a text

Vanessa Juloux — vanessa.juloux@ephe.sorbonne.fr — Ecole Pratique des Hautes Etudes

⇛ **Guidelines for a hermeneutics of action**

- A. <u>XML-TEI</u>

    - A.i. Structured analytic frame

        1. *Primary data*

            a. Verb
            b. Animated entity
        2. *Objective variables*

            a. *Verbal Semantic*
            b. *Context*
            c. *Sphere*
            d. *Role*
            e. *Biological sex*
        3. *Subjective variables*

            a. Affectivity
            b. Consequence
            c. Degree of desire
            d. Vonluntary intention
            e. Fallibility
    - A.ii. Transcription

        1. *E.philology*
        2. *Data mining for a preliminary hermeneutics*

- B. <u>R</u>

    1. Statistics
    2. Vizualisation

Structured analytic frame

Three **main** categories are created for investigating texts:

1. *Primary data*
2. *Objective data*
3. *Subjective data*

These main catagories are described in the *encoding description section* to be used after:

1. in the *group text element* section for the transcription;
2. in the *intepretation element* section used for statistic purposes.

```
   <encodingDesc><classDecl>
     <taxonomy xml:id="primaryData">  <!-- Primary Data --> </taxonomy>
     <taxonomy xml:id="objectiveData">  <!-- Objective variables --> </
taxonomy>
     <taxonomy xml:id="subjectiveData">  <!-- Sujective variables --> </
taxonomy>
   </classDecl></encodingDesc>
```

Primary Data

Primary data are data faithfully extracted from text, and that are marking up with a type of attributes for R statistics — **this first step is essential for counting the actions per (animated) entity**.

📄 **Note:**

- XML-TEI elements: *TEI*|*teiHeader*|*encodingDesc*|*classDecl*|*taxonomy*|*category*
- XML-TEI attributes: *@xml:id*
- Values: primaryData|verb|entity

📄 **Note:** Preliminary step before introducing attributes values for Primary data: list of the animated entities (characters, <u>attribute's value #entity</u>) within the XML-TEI element *<listPerson>*:

- XML-TEI elements within *TEI*|*teiHeader*: *profileDesc*|*particDesc*|*listPerson*|*person*|*persName*
- XML-TEI attributes: *@type*|*@ana*|*@xml:id*
- Values: mythological|entity|ID ENTITY|ENTITY'S NAME

- Current research in the Cycle of Baʿlu and ʿAnatu by alphabtetic order: ʿAnatu (ANT), ʾAṯiratu, (ATH), ʾAṯtartu (ATT), Baʿlu (BAL), ʾIlu (ILU), Koṯaru (KOT), Baʿlu's messengers (MES_B), ʾIlu's messengers (MES_I), Yammu's messenger (MES_Y)s, Môtu (MOT), Šapsu (SAP), Yammu (YAM), unknown (UNK).
- XML-TEI example for ʿAnatu, attributes within the *elements* <profileDesc> ➡ <particDesc> ➡ <listPerson> elements before the XML-TEI attributes for xml:id *entity* and *verb*:

```
    <profileDesc><particDesc>
      <listPerson type="mythological" ana="#entity">
        <person xml:id="ANT"><persName>ʾAnatu</persName></person>
      </listPerson>
    </particDesc></profileDesc>
```

Primary data within the *elements* <encodingDesc> ➡ <classDecl>:

- Verb:

  - ⇒ Most relevant lexem in a group of words or a sentence. A verb belongs to a taxonomy or sub-category.
  - XML-TEI:

```
    <taxonomy xml:id="primaryData">
      <category xml:id="verb"/>
    </taxonomy>
```

- Animated entity:

- ⇨ who is the character acting in several ways with relevant *objective* and *subjective* variables.
- XML-TEI attribute for Primary data animated entity:

```xml
<taxonomy xml:id="primaryData">
  <category xml:id="entity"/>
</taxonomy>
```
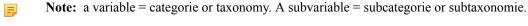
Objective variables

📝 **Note:**

- XML-TEI elements: *TEI|teiHeader|encodingDesc|classDecl|taxonomy|category*
- XML-TEI attributes: *@xml:id*
- Values: objectiveData|CATEGORIE|SUBCATEGORIE

They are several variables which provide relevant information on the character's acting (*primary data*): *verbal semantic*, *sphere*, *context*, *role*, *biological sex*, which follow the same semantic frame for marking up a type of taxonomy:

```xml
<taxonomy xml:id="objectiveData">
  <category xml:id="NAME OF A VARIABLE"/>
  <category xml:id="NAME OF A SUBVARIABLE"/>
</taxonomy>
```

📝 **Note:** a variable = categorie or taxonomy. A subvariable = subcategorie or subtaxonomie.

Verbal semantic:

- Taxonomy: action

  📝 **Note:** *The current research is on the animated entities action, but of course the same semantic markup can be apply to other semantic categories.*

- Subtaxonomies: movement, agression, confrontation,destruction, displacement, put together
- XLM-TEI example:

```xml
<category xml:id="semantic">
  <category xml:id="action">
    <category xml:id="destruction"/>
  </category>
</category>
```

1. Context

- ⇨ in which the action takes place.
- Subcategories: ritual, battle, single combat, assembly, prayer, feast, wedding, burial, seduction, meeting, complaint, lawsuit, threat, revenge, visit, unknown (unknown_C), broken context (B_ctx_C).
- XML-TEI example:

```xml
<category xml:id="context">
  <category xml:id="ritual"/>
</category>
```

2. Sphere

- ⇒ where the event takes place, inside or outside the household.
- Subcategories: inside, outside, unknown (unknown_S), broken context (B_ctx_S).
- XMT-TEI example:

```xml
<category xml:id="sphere">
  <category xml:id="inside"/>
</category>
```

3. Role:

- ⇒ of the animated entity
- Subcategories: active, passive, both Active (animated entities X and Y)
- XML-TEI example:

```xml
<category xml:id="role">
  <category xml:id="active"/>
<category/>
```

4. Biological sex:

- ⇒ traditionally known.
- Female, male
- XML-TEI example:

```xml
<category xml:id="biologicalSex">
  <category xml:id="female_Sx"/>
<category/>
```

Subjective Variables

📄 **Note:**

- XML-TEI elements: *TEI|teiHeader|encodingDesc|classDecl|taxonomy|category*
- XML-TEI attributes: *@xml:id*
- Values: subjectiveData|CATEGORIE|SUBCATEGORIE

They are several variables: consequence, affectivity, degree of desire, volontary intent, fallibility, which follow the same semantic frame for marking up a type of taxonomy:

```xml
<taxonomy xml:id="subjectiveData">
  <category xml:id="NAME OF A VARIABLE"/>
    <category xml:id="NAME OF A SUBVARIABLE"/>
</taxonomy>
```

📄 **Note:** a variable = categorie or taxonomy. A subvariable = subcategorie or subtaxonomie.

- Consequence:
  - ⇒ how is affected by the action.

- Subcategories: affects the animated entity (subject), affect the animated entity (subject) and other, affect other entity.
- XML-TEI example:

```xml
<category xml:id="consequence">
  <category xml:id="affectEntity"/>
</category>
```

- Affectivity:

  - ⇒ what kind of affectivity and its degree?
  - Subcategories: rage, anger, anxious, betrayed, discouraged, hurt, pride, satifaction.

    - Degree of affectivity: feeble, medium, normal, hight, very hight.
  - XML-TEI example:

```xml
<category xml:id="Affectivity">
  <category xml:id="rage"/>
    <category xml:id="degreeAffectivity">
      <category xml:id="medium"/>
  </category>
</category>
```

- Degree of Desire:

  - ⇒ What is the degree of desire of the action?
  - Subcategories: from one to five (number_dD), and unknown (unknown_dD), broken context (B_ctx_dD)
  - XML-TEI example:

```xml
<category xml:id="degreeDesire">
  <category xml:id="two_dD"/>
</category>
```

- Volontary Intentionality:

  - ⇒ What type of volontary intentionality, and what motivation?
  - Subcategories: to kill, to perform a rtiual, to destroy, to fight.

    - What motivation: pressure or free.
  - XML-TEI example:

```xml
<category xml:id="volontaryIntent">
  <category xml:id="toKill"/>
  <category xml:id="motivation_vI">
    <category xml:id="free"/>
  </category>
</category>
```

Transcription

For this explaining this step, I will use a section of the Cycle of Baʿlu and ʿAnatu, KTU 1.3:ii:4b-16.

E.philology

📝 **Note:** Value in capital letters: implies to select the right choice of the subcategory, ie ACTION VERB ➡ confrontation.

- XML-TEI elements: *TEI|text|div|body|head|lg|l|w|name* (I won't developped specific elements such as `<space>`, `<damage>`, `<degree>`, `<g>`, `<lb>`, `<supplied>`, `<unclear>`, `<gap>` which are not usefull for this demonstration).
- XML-TEI attributes: `@n|@ana|@facs|@type|@xml:id|@corresp`
- Values:
  - Traditionaly proposed in XML-TEI: noun|verb|adv|REF POINTER
  - from *preliminary step* before primary data: ENTITY'S NAME
  - from *primary data*: *entity|VERB*
  - from *objective variables*: *VERB|ACTION VERB*

Following transcription within the elements: TEI ➡ text ➡ group ➡ body ➡ div

```
 <l n="5b-6a" ana="#ktu1-3_ii_l5b-6a" xml:id="ktu1.3_ii_5b-6a" corresp="#ktu1-3_ii_l5b-
    <w>w</w><space/><w>hln</w><g>.</g>
    <name type="entity" ana="#ANT #entity #v-ANT-ktu1-3_ii_l5b-6a">ʿnt</
name><g>.</g>
    <w type="verb" ana="#MḪṢ01 #ANT #confrontation #verb
 #action" xml:id="ktu1-3_ii_l5b-6a_tmtḫṣ">tm<lb break="no"/>tḫṣ</w>
    <g>.</g><w>b</w><space/>
    <w type="noun" ana="#ʿMQ">ʿmq</w><g>.</g>
  </l>
```

Only *primary data* and *objective variables* are used.

- `<w>` with `@type` noun and verb, as well as `<name>` for

  1. translation
  2. statistics

  .
- `@type` 'entity': an entity could be a (1) protagonist (principal character), (2) second role, (3) third role, and (4) other. Since this is not the *interpretation* section, the `@type` choice has to remain as general as possible.

Data mining for a preliminary hermeneutics

This subsection is one of the most important for interpreting data in R, from the categories primary data, objective, and subjective variables. Text analyze from the transctiption is a first step for this data mining. From previous analyzes data, this subsection for a preliminary hermeneutics contains:

📝 **Note:** Value in capital letters: implies to select the right choice of the subcategory, ie SPHERE ➡ outside.

- Data mining within the elements `<TEI>` ➡ `<body>` ➡ `<div>` ➡ `<interpGrp>`
- XML-TEI elements:*interp|desc|castList|castItem|persName|stage|view|placeName|location|geo|span|*
- XML-TEI attributes: `@xml:id|@ana|@corresp|@type`
- Values:
  - Traditionaly proposed in XML-TEI: modifier|purpose|REF POINTER
  - from *preliminary step* before primary data: ENTITY'S NAME

- from *primary data*: *entity*
- from *objective variables*: *ROLE|ACTION VERB|SPHERE|CONTEXT*
- from *subjective variables*: *degreeDesire|AFFECTIVITY|DEGREE AFFECTIVITY|MOTIVATION|CONSEQUENCE*
- additional: protagonist

```xml
  <interp xml:id="ktu1-3_ii_l5b_6a_int" ana="#primaryData #objectiveData
#subjectiveData" corresp="#ktu1.3_ii_l5b_6a">
    <desc>
    <castList>  <!-- which entity X/Y and role -->
        <castItem>
          <persName ana="#ANT
#entity" type="protagonist">ʾAnatu<state ana="#active"/>:
          <interp>  <!-- subjective data: affectivity -->
            <desc ana="#degreeDesire"><stage type="modifier" ana="#five_dD
#rage">Rage with degree of desire<span ana="#ktu1-3_ii_l5b_6a_tmthṣ"/
>Five.</stage></desc>
            <desc type="purpose" ana="#toDestroy #free">Volontary
intentionality: to destroy.</desc>
          </interp>
         </persName>
       </castItem>
       <view>

 <placeName type="theme" ana="#battle">battle <location ana="#outside" /
> <geo>valley </geo> </placeName>
          <span type="purpose" ana="#consequence
#affectEntity_and_other">The result of action has an impact on ʾAnatu and
others </span>
        </view>
        <span ana="#entity #ANT #toDestroy #active #rage #free #outside
#affectEntity_and_other" /> <!-- For R -->
      </castList>
    </desc>
  </interp>
```

Explanation:

- Ref pointer `@xml:id`, and `@corresp` are used to navigate through the webpage.
- The last `@ana` in `<span>` is essentialy for R instructions.

R

- Packages: *XML2|XML2R*
- Fonctions: *getNodeSet|xmlTreeParse|setwd|getwd*

To manipulate XML data:

- Load the packages for XML:

```r
    dir()
    setwd(dir="FOLDER"); getwd ()
    library(xml2)
    library(XML2R)
```

- Upload XML-TEI data:

```
doc  <- xmlTreeParse("FILE_NAME.xml" , useInternalNodes=TRUE,
encoding="UTF-8")
ns =  c(ns =  "http://www.tei-c.org/ns/1.0")
namespaces = ns
getNodeSet(doc,"//* and //@*", ns)
doc
```

Statistics

Manipulate data from XML-TEI file from *preliminary hermeneutics subsection*

- Primary data
- Objective variables
- Subjective variables

Vizualisation

Glossary

Affectivity

- Affectivity:
    - ⇒ what kind of affectivity and its degree?
    - Subcategories: rage, anger, anxious, betrayed, discouraged, hurt, pride, satifaction.
        - Degree of affectivity: feeble, medium, normal, hight, very hight.
    - XML-TEI example:

```
<category xml:id="Affectivity">
  <category xml:id="rage"/>
    <category xml:id="degreeAffectivity">
      <category xml:id="medium"/>
  </category>
</category>
```

Biological sex

- Biological sex:
    - ⇒ traditionally known.
    - Female, male

- XML-TEI example:

```
<category xml:id="biologicalSex">
  <category xml:id="female_Sx"/>
<category/>
```

Consequence

- Consequence:
  - ⇒ how is affected by the action.
  - Subcategories: affects the animated entity (subject), affect the animated entity (subject) and other, affect other entity.
  - XML-TEI example:

```
<category xml:id="consequence">
  <category xml:id="affectEntity"/>
</category>
```

Context

- Context
  - ⇒ in which the action takes place.
  - Subcategories: ritual, battle, single combat, assembly, prayer, feast, wedding, burial, seduction, meeting, complaint, lawsuit, threat, revenge, visit, unknown (unknown_C), broken context (B_ctx_C).
  - XML-TEI example:

```
<category xml:id="context">
  <category xml:id="ritual"/>
</category>
```

Degree of desire

- Degree of Desire:
  - ⇒ What is the degree of desire of the action?
  - Subcategories: from one to five (number_dD), and unknown (unknown_dD), broken context (B_ctx_dD)
  - XML-TEI example:

```
<category xml:id="degreeDesire">
  <category xml:id="two_dD"/>
</category>
```

Role

- Role:

    - ⇒ of the animated entity
    - Subcategories: active, passive, both Active (animated entities X and Y)
    - XML-TEI example:

```xml
<category xml:id="role">
  <category xml:id="active"/>
<category/>
```

Sphere

- Sphere

    - ⇒ where the event takes place, inside or outside the household.
    - Subcategories: inside, outside, unknown (unknown_S), broken context (B_ctx_S).
    - XMT-TEI example:

```xml
<category xml:id="sphere">
  <category xml:id="inside"/>
</category>
```

Verbal semantic

Volontary intention

- Volontary Intentionality:

    - ⇒ What type of volontary intentionality, and what motivation?
    - Subcategories: to kill, to perform a rtiual, to destroy, to fight.

        - What motivation: pressure or free.
    - XML-TEI example:

```xml
<category xml:id="volontaryIntent">
  <category xml:id="toKill"/>
  <category xml:id="motivation_vI">
    <category xml:id="free"/>
  </category>
</category>
```