Between harmonization and peculiarities of scientific domains. Digitizing the epigraphic heritage of pre-Islamic Arabia in the project DASI

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DASI Between Harmonization and Peculiarities

EAGLE 2014 International Conference, September 29 – October 1, Paris
DASI – Digital Archive for the study of pre-Islamic Arabian Inscription

**ERC – Advanced Grant, 7th Framework Programme**
- Principal Investigator: Alessandra Avanzini (University of Pisa)
- Participants: University of Pisa – Dip. Civiltà e Forme del Sapere; Scuola Normale Superiore di Pisa

**Main objectives**
- Digitizing and publishing pre-Islamic Arabian inscriptions
- Enhancing Arabian studies and stimulating the protection of the epigraphic Arabian heritage
- Exchanging best practices of digital epigraphy
Focus

- **Description of the dual nature of inscriptions**
  - Textual
  - Physical

- **Creation of networks**
  - Need for harmonization of contents
  - Standardization of outputs and interoperability
1. Dual nature of inscriptions

Conceptual Model of DASI
1.a - Focus on text
1.a - Focus on text

Variants search: problem

Search for variants: not only as single words, but also in a specific context

**text**: $w_1 \ w_2 \ ((w_{2.1}))((w_{2.2})) \ w_3$

**variants**: $w_2, \ w_{2.1}, \ w_{2.2}$  **variants context**: $w_1, \ w_3$

Possible versions of the text:

**text1**: $w_1 \ w_2 \ w_3$

**text2**: $w_1 \ w_{2.1} \ w_3$

**text3**: $w_1 \ w_{2.2} \ w_3$
1.a - Focus on text

Variants search: example of encoding

text: \( \ldots \text{b mlk}((\text{ml}')\text{)}((\text{mr}')\text{)} \text{ hw} \ldots \)

encoded: \( \ldots \text{b}<\text{milestone unit=\"clitic\"}><\text{app}><\text{lem}>\text{mlk}</\text{lem}>
<\text{rdg}>\text{ml'}</\text{rdg}><\text{rdg}>\text{mr'}</\text{rdg}></\text{app}> \text{ hw} \ldots \)

indexed: \( \ldots<\text{w n=\"15\" norm=\"mlk\" pos=\"07733,004,002\" lv=\"0\" vid=\"158\" name=\"\"}><\text{app brk=\"1\"}><\text{lem}>\text{mlk}</\text{lem}></\text{app}></\text{w}<\text{w n=\"15\" norm=\"mla\{\" pos=\"07733,004,003\" lv=\"1\" vid=\"158\" name=\"\"}><\text{app cont=\"1\"}><\text{rdg}>\text{ml'}</\text{rdg}></\text{app}></\text{w}<\text{w n=\"15\" norm=\"mra\{\" pos=\"07733,004,004\" lv=\"2\" vid=\"158\" name=\"\"}><\text{app cont=\"2\" end=\"1\"}><\text{rdg}>\text{mr'}</\text{rdg}></\text{app}></\text{w}>\ldots \)
1.a - Focus on text

Variants search: rules

- The variants of a specific text portion compose a group (vid)
  \{mlk, ml’, mr’\} \rightarrow \text{vid}=158

- Each variant within a specific group adds a level (lv) to the text of the epigraph
  mlk \rightarrow L0 \quad ml’ \rightarrow L1 \quad mr’ \rightarrow L2

- Each word in each text level has a sequential number (n)
  b \rightarrow n=14 \quad mlk \rightarrow n=15 \quad \ldots

- The first word in each variant level has the same number
  mlk \rightarrow n=15 \quad ml’ \rightarrow n=15 \quad mr’ \rightarrow n=15

- The search combines the variants of all levels with the level 0:
  text1 \rightarrow b \ mlk \ hw
  text2 \rightarrow b \ ml’ \ hw
  text3 \rightarrow b \ mr’ \ hw
1.b – Focus on support

epigraphic objects

anepigraphic objects
1.b – Focus on support

monograms
2.a – Vocabularies

vocabularies that ensure uniformity of data:
• Language
• Writing Technique
• Textual Typology
• Support Type
• Object Material
• Decoration

CSAI
archive of text-oriented XML files

DASI
relational database & web-based data entry system
Methodology

1. Analysis of the sample collected in CSAI

2. Creation of provisional list
   since the pre-Islamic Arabian culture is a young research field among the ancient Near East studies, the classification of its several aspects is at the very beginning

3. Survey of existing terminologies in the domains of epigraphy, art and architecture

4. Comparison and attempt at mapping
<table>
<thead>
<tr>
<th>DASI ENTRY</th>
<th>DEFINITION</th>
<th>MATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction text</strong></td>
<td>text posted on public or private structures, reminding who constructed or restored them (eventually in order to indicate their possession); the text typically includes verbs meaning “build”, “found” (bny, ḥḥḏṯ)</td>
<td>Bauinschrift</td>
</tr>
<tr>
<td><strong>Dedicatory text</strong></td>
<td>dedication of an object or a person to the divinity for different purposes, the text including the verb “dedicate” (hqny, s³lʾ)</td>
<td>RT Weihinschrift</td>
</tr>
<tr>
<td><strong>Writing exercise</strong></td>
<td>text related to scribal practice (copies of sample texts, lists of grammatical forms, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Ritual text</strong></td>
<td>text reminding religious rituals</td>
<td></td>
</tr>
</tbody>
</table>

«Textual typology» vocabulary. Mapping test with EAGLE – Type of Inscription
<table>
<thead>
<tr>
<th>DASI TERM</th>
<th>SUB-TERM</th>
<th>DEFINITION</th>
<th>MATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incense burner</td>
<td>circular</td>
<td>objects used to burn aromatic substances, with circular shape</td>
<td></td>
</tr>
<tr>
<td></td>
<td>squared</td>
<td>the censer has a squared shape, sometimes placed on four angular legs</td>
<td>AAT: incense burner [ID: 300198817]</td>
</tr>
<tr>
<td></td>
<td>with truncated pyramidal base</td>
<td>characterized by a censer placed on a base of truncated pyramidal shape</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with splayed foot</td>
<td>short cylindrical censer on a splayed foot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>aniconic stela</td>
<td>typical of the Qatabanian area, they are constituted by an inscribed base supporting an upper and plain slab. The top can be either convex or concave</td>
<td>AAT: stelae [ID: 300007023]</td>
</tr>
<tr>
<td>Stela</td>
<td>with eyes or stylized face</td>
<td>particular and homogeneous group from the Jawf area and few samples from Qataban, representing eyes or a schematic facial outline</td>
<td>EAGLE: Stele [<a href="http://www.eagle-network.eu/voc/objtyp/index.php?tema=250">http://www.eagle-network.eu/voc/objtyp/index.php?tema=250</a>]</td>
</tr>
<tr>
<td></td>
<td>with figure in relief</td>
<td>isolated human or animal figures, usually realized in high relief</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with narrative scene</td>
<td>decorated by narrative scenes, usually composed by multiple elements depicted in low relief refined by a decorated framework in low-relief with abstract-figurative elements or with geometric motifs, associated in various and different combinations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with framework</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

«Support type» vocabulary. Mapping test with Getty – AAT and EAGLE – Object Type
Squared incense burner

Circular

truncated pyramidal base

splayed foot

AAT: incense burner
Aniconic stela

Stela with framework

MSM 3645

RES 3902 N° 43

with figures in relief

with stylized face

BM 405

EAGLE: stela

AAT: stelae

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Even though general and specialized vocabularies, thesauri and taxonomies are already available, they do not allow to represent the peculiarities that the materials collected in DASI show.

DASI has decided to create independent vocabularies, not to import existing ones, in order to maintain the wealth of data for specialist users.
Since the enhancement of knowledge of the ancient Arabian civilization is one of the main objectives of DASI, the future steps are intended to improve the potential interoperability:

1. harmonizing DASI vocabularies
   each term will be matched with existing concepts if possible

2. export of records in several standard formats, such as EpiDoc, and mapping to other metadata schemas, e.g. EDM
Moreover...

presently DASI vocabularies are simple lists of concepts

if the scientific community expresses interest:

- enhancement of vocabularies with a higher level of granularity by adding definitions, bibliography and examples
- publishing in formal language
- and contributing to general terminologies
Thank you for your kind attention!

DASI

dasi.humnet.unipi.it
http://www.dasiproject.eu/

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