CAEMmCom – Corpus of Ancient Egyptian Multimodal Communication: Getting Started

Rebecca E. Döhl & Silvia Kutscher
Introduction

• CAEMmCom is part of a larger enterprise:

• Establishing a Multimodality Approach for Ancient Egyptian graphic communication:
  – method and modell

• Contributing to Semiotic Theory by quest for general/cross-cultural features and techniques of multimodal graphic communication:
  – (cognitive and modality driven) universals

• Contributing to Comparative Perspective on graphic communication between disciplines:
  – typology
Why Multimodality Approach
Introduction: Why Multimodality Approach

• Why Multimodality Approach?
• 1. Contribution to Egyptology
  – specifics of Egyptian graphic communication are a long acknowledged topic in research in egyptology, but have been studied mainly from a cultural-historical perspective
  – writing and pictures have often been seen as separate and independent even in editorial work on temples, tombs, coffins,
  – analysis from a semiotically grounded and multimodal theoretical approach has gained little attention so far
  – solid knowledge about types and techniques is precondition for a systematic hermeneutical approach, which takes „anomalies“ as starting point for analysis (Angenot 2011: 258)
Introduction: Why Multimodality Approach

2. Contribution to a diachronic perspective on multimodal graphic communication
   - numerous artefacts of graphic communication in Ancient Egypt are compositions of written texts and pictorial art; for some domains they are the majority of cases
   - some of the earliest Egyptian artefacts containing writing are in fact text-picture-compositions
   - Ancient Egyptian multimodal artefacts attested for more than 4,000 years
Introduction: Why Multimodality Approach

3. Contribution to Semiotics and the Theory of Multimodal graphic communication
   - hieroglyphic writing and pictorial art follow the same design schemes (-> iconicity of graphemes)
Introduction: Why Multimodality Approach

• Common graphic schemes of pictures and hieroglyphic writing

God Anubis, tomb of Haremhab (KV 57)
Introduction: Why Multimodality Approach

3. Contribution to Semiotics and the Theory of Multimodal graphic communication
   - hieroglyphic writing and pictorial art follow the same design schemes (→ iconicity of graphemes)
   - writing and pictures are thus poles on a scale; in between there are signs, which oscillate, i.e. are graphemes and pictures simultaneously (→ „hybrids“, „ambimodality“)
Introduction: Why Multimodality Approach

Sign as grapheme and as picture of an object

Hathor chapel Thutmosis’ III., Kairo JE 38547

S34

R7

snṭr ‘incense’

’nḥ’ ‘life’
Introduction: Why Multimodality Approach

3. Contribution to Semiotics and the Theory of Multimodal graphic communication

- Hieroglyphic writing and pictorial art follow the same design schemes (→ iconicity of graphemes)
- Writing and pictures are thus poles on a scale; in between there are signs, which oscillate, i.e. are graphemes and pictures simultaneously (→ „hybrids“, „ambimodality“)
- Ancient Egyptian graphic culture exploits hybridity of signs and iconicity of graphemes in various ways, some of which are specific to writing systems of this kind (→ common graphic schemes for graphemes and pictures, e.g. Maya! Cuneiform? Chinese?)
- Testing ground for „universals“/general principles of multimodal graphic communication (e.g. layout Kress/Leuven)
Why a Corpus?
Introduction: Why a Corpus

• Why a Corpus of Ancient Egyptian Multimodal Communication?

• 1. Quantitative Analysis: Are there different multimodal genre and how are they to be identified:
   – content / function (e.g. offering table scene, opening of the mouth ceremony, ...) as a provisional first step
   – Invariants of Structure: Identifying definitional components and regularities (which sign inventory, which techniques of cohesion, which coherence/rhetorical structures
   – Variation of structural components:
     • synchronic (media, place, ...)
     • diachronic
Introduction: Why a Corpus

- Offering table scenes:
  - seal, 1st Dynasty (ca. 3000 BC)
  - slab stela, 4th Dyn.: Khufu (ca. 2570 BC)
  - libation basin, 4th Dyn.: Khafre (ca. 2560 BC)
  - lintel relief, mastaba princess Hemet-Re (4th Dyn., Khafre)
Introduction: Why a Corpus

2. Visual representation of annotation layers and analysis
   – multimodal analysis requires visual representation of data and of the analysis of the intermodal relations
   – annotation includes glossing of linguistic expressions and explanations of iconography
   – facilitates access to data for researchers from Egyptology, offers a means to establish a common terminology
   – enables access for interdisciplinary exchange
What is CAEMmCom?
Introduction: What is CAEMmCom

• CAEMmCom serves as the basis for research in *Theory and History of Multimodal Communication* at HU Institute of Archaeology

• Research focus has been established since March 2016 (joint effort by Topoi and HU), CAEMCom started Nov 2016

• Presently: devising the architecture of the corpus

• Contributors:
  – Rebecca Döhl, Silvia Kutscher, Aleksandra Lapčić, Daniel Werning
  – participants of a master’s seminar (winter term 16/17): Dora Ehrensperger, Tilmann Kunze, Antje Loka, Andrea Magliocchi, Lisa Seelau
Corpus-Workflow

Text information

Image information

Information of location

Consolidation of multimodal data

Software: HyperImage

Analysis of data

Software: BaseX et.al.
Software

• Collection and administration: **HyperImage v. 3.0. beta2**
  - [http://hyperimage.ws/de/](http://hyperimage.ws/de/)
  - Open-Source-License
  - For annotating and linking details of images
  - Publication: hypermedial online or offline
  - developed by: BMBF-Projekt HyperImage (Humboldt-Universität zu Berlin/Leuphana Universität Lüneburg)
  - Maintained and new releases: **bitGilde IT Solutions UG**
  - Further requirements: Glassfish Server, PostgreSQL, data repository
  - based on: Java and HTML5

• **Analysis:**
  - BaseXML (XML database),
  - PostgreSQL (relational database)
Data collection

Material:
• Images (scans, photos) of the object, texts, maps, plans etc.
• Attributes

Vocabulary:
• Getty Institute vocabulary
  http://www.getty.edu/research/tools/vocabularies/
  - AAT (Art & Architecture Thesaurus
  - TGN (Getty Thesaurus of Geographic Names)
• THOT controlled vocabulary:
  Thesauri & Ontology for documenting Ancient Egyptian Resources
  http://thot.philo.ulg.ac.be/index.html
• GeM (Genre and Multimodality)
  http://www.fb10.uni-bremen.de/anglistik/langpro/projects/gem/newframe.html
• Specific attributes related to the material
Text information
Accessoires
Wig, long, tripartite = woman

Person
Owner of tomb

Garment
Skin of leopard = royal/priestly

Colour
of skin: yellow = woman
of garment: yellow/black = skin of leopard

Table
Offering table

Long pointed objects, broadening base
Half loaves of bread

Döhl & Kutscher CAEMmCom: Getting Started
Information of Place


Giza Plateau

Mastaba G 1225

Die Grabplatte befand sich in der Kapelle an der Ostfassade der Mastaba G 1225. Die ursprüngliche Kapelle bestand wahrscheinlich aus Ziegeln und wurde in einem weiteren Schritt um eine monolithische Scheintür und Mauerwerk erweitert.

Beide Zustände waren jedoch 1902 zur Zeit der Ausgrabung durch Ballaß schon nicht mehr vorhanden.

Breitengrad: 29° 59’ 00” N

Längengrad: 031° 08’ 00” E

Die Grabplatte war im südlichen Teil der Ostfassade der Mastaba angebracht. Dies entspricht dem westlichen Teil der Kapelle.

Title of view

Ort Nefret-Jabet Opfertischszene
Consolidation of multimodal information

- Groups: composition, text, image, location, hybrid, layout, RST analysis, salience analysis, situation of communication
Group: Composition

Hybrid

Text

Image
Group: Layout
Group: Layout

Further Attributes:
Demarcation (explicit), Demarcation (implicit), No demarcation
Natural or artificial demarcation
Orientation direction relation

Natural demarcation
Group: RST-Analysis

Planned: Analysis of salience, situation of communication
Analysis of data

- Simple query within HyperImage

- Export of certain data from PostgreSQL, import in SQL database or as XML in other software

- Export of whole project as XML (Petal), import in e.g. XBase
Collected Data: Examples

Slab Stela, offering scene

15 slab stela

Giza cemetery 1200, 2100 and 4000

4th dynasty, reign of Khufu

Published by: P. Der Manuelian

Stela 6 c. 1225 Nefret-iabet, 4. dyn.
Funerary relief slabs, offering scene

Helwan

Early Dynastic to Old Kingdom

Published by: E.C. Köhler/J. Jones

Rock inscriptions and rock art, Wadi Berber, Aswan

- Direct connection to temple of Satet, Elephantine
Presentation

User mode

Presentation mode

CaeMmCom

Corpus of Ancient Egyptian Multimodal Communication
Prospect

Material to be included in future research:
- Book of Nut
- Amduat
- „Reden und Rufen“ in temple decorations
- Tomb decoration 20th dynasty
- Early writing (4.millenium BC to OK)

Further refinements on technical side:
- TEI
- CIDOC CRM?
- HyperImage development for data storage and analysis?

Publication:
- Online
Thank you for your attention!