DIGA (DIGITIZATION OF GANDHĀRAN ARTEFACTS) DOING ART HISTORY IN THE AGE OF DIGITAL HUMANITIES

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The project set itself two main objectives: prepare an open-access repository of Gandhāran Buddhist artefacts, and meet desiderata in the study of both Gandhāran art and Gandhāran Buddhism. The DIGA project revolves around precise scientific needs: to give more visibility to the multiplicity of Gandhāran styles, to map formal and iconographic variations, and to reassess visual material in light of "new" Buddhist manuscript sources.

Research Questions

THE IDENTIFICATION OF WORKSHOPS
• Can correlations be observed between the formal and iconographical variations and the geographical distribution?
• Can different levels of plastic expressions be identified and to which extent are these telling of the existence of workshops, production centers, stylistic zones and sub-schools?

THE INNER LOGICS OF THE SCHOOL
• Can patterns of exchange be observed between the different workshops?
• Which places are engaged in the exportation or importation of models and how is that telling of their significance as Buddhist centers?

THE HISTORY OF BUDDHISM IN GANDHĀRA
• What are the peculiarities of illustrations of events of the life of Siddhārtha Gautama and how are these distributed quantitatively and geographically?
• To what extent do these visual transcriptions relate to literary accounts and how does that inform us on the various Buddhist sects in the region?
• Is there a geographical logic in the differentiation of the iconography of Bodhisattvas and the depiction of Buddhist parades?
• If so, does this corroborate and/or complete the evidence on the emergence of Mahāyāna Buddhism in Gandhāra provided by epigraphic and literary sources?

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Materials

The DIGA project seeks to digitize a corpus of 1,444 Buddhist sculptures preserved in the Dir Museum in Chakdara (Khyber Pakhtunkhwa, Pakistan): statues of the Buddha, Bodhisattvas, tutelary deities, and donors, as well as narrative reliefs illustrating events of the Buddha's life.

The artefacts preserved in the Dir Museum stem from twelve ancient Buddhist archaeological sites located on the northern bank of the river Swat in the Dir District: Andan Dheri, Bambolai, Barchoray, Chatpat, Damkot, Jhabgen, Mando, Nasafa, Ramora, Sha Shams Khan, Shalizara, and Talash.

The DIGA database takes advantage of the semantic data model, that defines how the data are related to the real world. All the information stored in the database can be easily interpreted by machines. This means that machines are able to understand the existing relationships between data, resulting in fast searches and logical interpretations.

ARTEFACTS IDENTIFIED BY UNIQUE DOIs
Each object is identified by a Digital Object Identifier (DOI), a string of characters used to assign an "individual code" to the artefact. In fact, it is the same system used to register objects in a museum, but its application on the Internet makes the object easily recognisable even in the digital world.

HIGH-RESOLUTION IMAGES
Each artefact is documented with high-resolution photographs of all its sides. The value of this documentation is that in many cases the analysis of back and lateral faces of a relief allows reconstructing a frieze or the entire decoration of a stūpa.

SCENES DESCRIPTION
Next to the object description, the database provides an in-depth account of the scenes illustrated on artefacts. Each description takes into account iconographical and narrative features, identifying the relationships between characters, objects and spaces, and underlining the interactions between them.

IMAGE ANNOTATIONS
Closely related to scenes description, image annotation is one of the main features of the DIGA concept. Each image is provided with class- and searchable tags that identify the iconographical elements represented on it (see the image below).

LINKED OPEN DATA VOCABULARIES
To obtain a consistent database it is important to use not only a correct and structured terminology but also a linkable one. The DIGA database uses the Gemeinsame Normdatei (GND) and aims at compatibility with others vocabularies, such as The Art & Architecture Thesaurus (AAT), The Getty Thesaurus of Geographic Names (TGN), and iconclass.

TEXTS
By annotating motifs, the DIGA database provides the opportunity to compare iconographies and texts preserved in manuscript or inscriptions, in order to identify enigmatic scenes carved on reliefs and shed light on various Buddhist traditions in Gandhāra.

The archaeological site of Chatpat (Lower Dir, Pakistan). Corpus of artefacts in the Dir Museum. Location of artefacts in the Dir Museum.