Morphology of Lithic Artifacts: Experimental and Morphometric Approaches

Fact Sheet

Project Information

MORPHOLITHEX

Grant agreement ID: 751125

Project website

DOI
10.3030/751125

Project closed

EC signature date
8 March 2017

Start date
1 October 2017

End date
8 August 2021

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 239 860,80

EU contribution
€ 239 860,80

Coordinated by
MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV
Germany

Objective

MORPHOLITHEX addresses one of the major research questions in prehistoric stone tool technologies - what are the crucial variables that knappers control to determine the form of their stone artifacts? Specifically, the project investigates the effects of variables that are under the direct control of the knapper, namely various platform management strategies and the morphology of the core surface, on the size and shape of the product. The project uses a novel combination of methods: the

knapping process is simulated in an experimental setting that uses an apparatus that enables independent variables to be controlled and measured to isolate their effects on the final results; three-dimensional geometric morphometric methods are used to explore the size and shape of the blanks produced by the experiment; and advanced statistical modeling is used correlate the experimental predictors to the shape and size of the resulting blanks. The specific concentration is on platform management and core surface morphologies common in Levallois blank production, a technology that is present across the Old World during the last 300 thousand years, and is common during the rise and expansion of modern humans around 50 thousand years ago. The goal is to construct a more comprehensive model to account for morphological variation in stone tools and to validate this model using replicative and archeological collections. This quantitatively driven research integrates several of the most advanced approaches in our field and aims to significantly contribute to our understanding of the elementary principles of producing stone tools in prehistory. It further intends to make methodological advancements in controlled experiments for investigating the production of stone tools, as well as developing protocols for analyzing stone tool shape and size with geometric morphometrics.

Fields of science (EuroSciVoc)

humanities > history and archaeology > history > **prehistory**

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions MAIN PROGRAMME

H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2016 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2016

See other projects for this call

Funding Scheme

MSCA-IF-GF - Global Fellowships

Coordinator

MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV

Net EU contribution

€ 239 860,80

Total cost

€ 239 860,80

Address

HOFGARTENSTRASSE 8
80539 Munchen
Germany

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Research Organisations

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Partners (1)

PARTNER

THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA CORP

United States

Net EU contribution

€ 0,00

Address

3451 WALNUT STREET ROOM P 221
19104 Philadelphia

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Total cost

€ 160 130,40

Last update: 23 August 2022

Permalink: https://cordis.europa.eu/project/id/751125