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Foreword

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Foreword

Bernard Gratuze¹

An abundant literature covers the topic of ancient glass, but it remains focused on certain geographical areas, periods, and types of objects. Europe, the Mediterranean area, and the Middle East have received the lion's share of the research interest of glass scholars when other parts of the world have been long neglected. Glass vessels have always attracted a lot of attention as they are sometimes extremely complex and beautiful objects discussed at length in terms of technology and style, whereas despite their key place in the history of glass, beads have been unevenly studied and sometimes totally ignored. In the first chapter (Dussubieux and Walder, this volume), a brief summary of the study of glass beads reminds us that a wider interest for this type of artifact stemmed from the more general use of scientific analysis able to extract additional information about glass recipes and technology of fabrication inaccessible to the simple macroscopic observation of the object.

Although many uncertainties surround the invention of glass in the ancient world and it is not possible to say with certitude when and where this new material was first created, it is firmly established that the earliest glass objects were beads (Henderson 2013: 8, 133). Today, anthropologists are recognizing the importance of glass beads for understanding human pasts. This book begins with a concise yet comprehensive review of current anthropological questions being addressed with glass bead analyses along four different themes: technological practices, trade and economic systems, colonial encounters and social identity (Carter et al., this volume, chapter 2). Such a chapter will be a useful resource for students and serious scholars of beads alike.

Glass bead studies can be challenging, and macroscopic studies alone can encounter some serious limitations due to the small number of attributes of some beads and the wide chronological and geographical spread of some bead typologies. This is where archaeometry comes into play. Since the early 1980s, chemical analyses have brought new dimensions to studies about the manufacturing processes and the provenance of glass material. Among the different techniques developed to study archaeological materials, Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) has become established over the last twenty years as one of the main archaeological tools for nearly non-destructive multielement analysis (Dussubieux et al. 2016; Speakman and Neff 2005).

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This technique has proved to be particularly well adapted to the study of large assemblages of small monochrome or polychrome objects such as glass beads (Hawkins and Walder, this volume). It is very fast and hundreds of objects can be analyzed in a few days, only a microscopic amount of material is sampled, the different colors of a polychrome bead can be targeted, and a large database can be generated.

Although the number of articles reporting on LA-ICP-MS of glass beads has been steadily growing over the years, no book has been specifically focused on this topic. Glass publications are often written by glass specialists who do not always tie their findings to the anthropological implications they suggest. Alternatively, anthropologists and archaeologists are limited in their interpretation due to their limited knowledge of glass chemistry. The authors of this volume, through conversations and internal peer review, have concentrated on combining rigorous chemical interpretation and anthropological interpretation. The present volume is therefore filling a gap in the literature of anthropological studies of glass beads through archaeometry, although it does not pretend to comprehensively cover the topic.

The articles in this book describe projects conducted at the Elemental Analysis Facility at the Field Museum in Chicago. Because of the North American location of this laboratory, almost one third of the book is dedicated to this part of the world where glass beads have been an important indicator of contact between the European and the Native populations. These chapters cover a range of questions from archaeologists wondering where beads were produced in Europe, and how indigenous and colonial networks of exchange moved these objects across the continent, from Alaska (Fenn et al., this volume), to coastal California (Panich et al., this volume), to the Southeast (Dalton-Carriger and Blair, this volume; Blair and Dussubieux, this volume).

Bead research on Indian Ocean exchange has been particularly fruitful in recent decades and several projects presented in this book take advantage of the important dataset of compositions already available. Carter et al. (this volume) explores central Thailand whereas Wood et al. (this volume) and Sarathi et al. (this volume) focused their research on two islands part of the Swahili corridor. More unusual is the African perspective offered by Trombetta et al., Klehm and Dussubieux, and Walz and Dussubieux (this volume), who present research from inland sites, a type of site that has garnered less attention from archaeologists working in this region. Indian glass beads were exported around the Indian Ocean and these small objects are better known from the data gathered outside India as data from Indian sites are extremely rare. With their study of the drawn beads of Indor, Rajasthan (13th century CE and onward), Trivedi and Dussubieux (this

volume) rectify this imbalance. The shared use of a standard suite of elements for statistical comparisons of glass groups within m-Na-Al glass makes it possible to trace subgroups through time and space in a way that no other region has available.

In some cases, major research areas overshadow smaller regional investigations. Nepal represents another geographic location with limited prior research in glass bead compositions (Aldenderfer and Dussubieux, this volume). Even in Iraq and Israel, two important places for glass manufacturing, there is limited study of glass bead production and use (Dussubieux, this volume; Larson and Dussubieux, this volume). Archaeometry can also play an important role in better understanding legacy museum collections, gaining new data from materials collected many decades earlier (Dussubieux, this volume). Archaeologists likewise pay close attention to contexts of archaeological sites on land, but shipwreck contexts for beads, and comparisons to the other cargo of those ships, have been limited, making Craig and Dussubieux's work another contribution to areas that are particularly neglected.

There is great value in reporting such regionally and chronologically diverse studies in the same volume. By bringing together these researchers to contribute to a single volume, methods and studies from other parts of the world could be recognized as useful for scholars working in different areas and time periods. Furthermore, since all work was done at the Elemental Analysis Facility (EAF), this volume both highlights the range of work done there and the usefulness of so many different studies done in the same lab, with the same analytical methods, making all our data more comparable and creating connections across regions. To conclude, this book highlights the potential of recent research carried out on beads, in The Field Museum's EAF, by coupling archaeological and historical studies with LA-ICP-MS analyses. It emphasizes the role of bead studies for understanding and redrawing ancient spheres of cultural influence and contacts, as well as exchange networks, whatever the place and period, and the importance of these objects as social markers. The results then clearly show that LA-ICP-MS has still potential for growth and will continue to revolutionize archaeology and to open new frontiers to future generations of archaeologists.

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