STONE VESSELS IN THE NEAR EAST DURING THE IRON AGE AND THE PERSIAN PERIOD

(c. 1200-330 BCE)

Andrea Squitieri

ARCHAEOPRESS PUBLISHING LTD

Gordon House 276 Banbury Road Oxford OX2 7ED

www.archaeopress.com

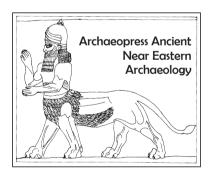
ISBN 978 1 78491 552 0 ISBN 978 1 78491 553 7 (e-Pdf)

© Archaeopress and Andrea Squitieri 2017

Cover images: top figure: sculptor David Yassur is making a basalt mortar.

Photo by Andrea Squitieri.

Other figures show stone vessels from Tell Ahmar (Syria). Photos courtesy of Guy Bunnens.



All rights reserved. No part of this book may be reproduced, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

		To My Family

Contents

Chapter 1	
Introduction	
1.1 OVERVIEW	
1.2 GOALS AND THEORETICAL PERSPECTIVES	
1.3 THE OBJECT VALUE THEORY	
1.4 SECONDARY RESEARCH QUESTIONS AND THEIR THEORETICAL BACKGROUNDS	3
1.4.1 RESEARCH QUESTIONS AND THEORY FOR STONE VESSEL PRODUCTION	3
1.4.2 RESEARCH QUESTION AND THEORY FOR STONE VESSEL EXCHANGE	∠
1.4.3 RESEARCH QUESTION AND THEORY FOR STONE VESSEL CONSUMPTION	6
Chapter 2	
Methodology and Data	8
2.1 METHODS OF ENQUIRY	8
2.1.1 METHODS ADDRESSING STONE VESSEL PRODUCTION	8
2.1.2 METHODS ADDRESSING STONE VESSEL EXCHANGE	
2.1.3 METHODS ADDRESSING STONE VESSEL CONSUMPTION	
2.2 GEOGRAPHICAL COVERAGE, DATA SOURCES AND POTENTIAL BIASES	
2.2.1 DATA SOURCES AND CRITERIA OF SELECTION AND EXCLUSION	
2.2.2 POTENTIAL BIASES IN THE DATASET	
Chapter 3	
Chronological Framework and Historical Outline	17
3.1 CHRONOLOGICAL FRAMEWORKS FOR THE LEVANT AND ASSYRIA	
3.1.1 THE CHRONOLOGICAL FRAMEWORK FOR THE NORTHERN LEVANT	
3.1.2 THE CHRONOLOGICAL FRAMEWORK FOR THE JAZIRA AND ASSYRIA	
3.1.3 THE CHRONOLOGICAL FRAMEWORK FOR THE SOUTHERN LEVANT	
3.2 THE CHRONOLOGICAL FRAMEWORK OF THIS STUDY	
3.3 HISTORICAL OUTLINE	
3.3.1 THE IRON AGE I (c. 1200 – 1000/980 BCE): COLLAPSE AND RECOVERY	
· · · · · · · · · · · · · · · · · · ·	
3.3.2 THE IRON AGE II (1000/980 – 732/701 BCE): RISE AND CRISIS OF REGIONAL KINGDOMS	
3.3.3 THE IRONA AGE III (732/701 – 550 BCE): THE ASSYRIAN AND THE BABYLONIAN EMPIRES	
3.3.4 THE UNIVERSAL EMPIRE OF THE PERSIANS (550 – 330 BCE)	27
Chapter 4	24
Raw Materials for Stone Vessels	
4.1 INTRODUCTION	
4.2 IGNEOUS ROCKS	
4.3 SEDIMENTARY ROCKS	
4.4 METAMORPHIC ROCKS	
4.5 MINERALS	34
Chapter 5	
Stone Vessel Typology	37
5.1 INTRODUCTION	_
5.2 NORTHERN LEVANTINE STONE VESSELS	40
5.2.1 SPOONS	40
5.2.2 BOXES	41
5.2.3 EVERTED BOWLS	42
5.2.4 PEDESTAL BOWLS	44
5.2.5 ZOOMORPHIC FOUR-LEGGED BASINS	44
5.2.6 GLOBULAR JARS	
5.2.7 BAGGY JARS	45
5.2.8 ALABASTRA	

5.3 ASSYRIAN STONE VESSELS	50
5.3.1 BOXES	
5.3.2 EVERTED BOWLS WITH UNDERCUT RIM	51
5.3.3 TRIPOD BOWLS	51
5.3.4 BAR-HANDLED PLATES	52
5.3.5 ZOOMORPHIC BASINS	52
5.3.6 CLOSED SAUCERS	52
5.3.7 CYLINDRICAL JARS	56
5.3.8 ALABASTRA	56
5.4 SOUTHERN LEVANTINE VESSELS	57
5.4.1 PALETTES	57
5.4.2 COSMETIC BOWLS	58
5.4.3 STEMMED PYXIDES	59
5.4.4 EVERTED BOWLS	60
5.4.5 PEDESTAL BOWLS WITH A TRUMPET FOOT	61
5.4.6 TRIPOD BOWLS WITH ELABORATED LEGS	62
5.4.7 PLATES	62
5.4.8 CLOSED SAUCERS	63
5.4.9 GLOBULAR JARS	63
5.4.10 FLASKS	63
5.4.11 BAGGY JARS WITH LUG-HANDLES	69
5.4.12 ALABASTRA	69
5.5 NEAR EASTERN VESSELS	70
5.5.1 LEDGE-RIMMED EVERTED BOWLS	70
5.5.2 EVERTED BOWLS WITH NARROW RIM	70
5.5.3 RECTANGULAR BOWLS	72
5.5.4 TRIPOD BOWLS	72
5.5.5 MORTARS	73
5.5.6 MORTAR BOWLS	74
5.5.7 BASINS	81
5.5.8 SQUAT JARS WITH LONG NECK	81
5.6 EGYPTIAN STONE VESSELS	82
5.6.1 ALABASTRA	82
5.6.2 LARGE ALABASTRA	84
5.6.3 AMPHORAE	85
5.6.4 LONG-NECKED JARS	85
5.6.5 FOOTED JARS	85
5.6.6 DROP JARS	88
5.6.7 FLASKS	88
5.6.8 JUGS	88
5.7 CYPRIOT STONE VESSELS	88
5.8 ARABIAN STONE VESSELS	89
5.8.1 SQUAT JARS	89
5.8.2 TRIPOD BOWLS	90
5.9 PERSIAN STONE VESSELS	90
5.9.1 EVERTED BOWLS	90
5.9.2 PEDESTAL BOWL	92
5.10 BRONZE AGE VESSELS SURVIVING INTO IRON AGE / PERSIAN LEVELS	92
5.10.1 EGYPTIAN STONE VESSELS	
5.10.2 NEAR EASTERN STONE VESSELS	97
Thantar C	
Chapter 6 Stone Vessel Manufacture and Related Technologies	0.0
Stone Vessel Manufacture and Related Technologies	
6.1.1 PRINCIPLES OF STONEWORKING	
6.1.2 STONEWORKING TOOLS AND TECHNIQUES IN THE NEAR EAST AND EGYPT: A BACKGROUN	
6.1.2 STONE WORKING TOOLS AND TECHNIQUES IN THE NEAR EAST AND EGYPT: A BACKGROON	99 טו 108

	6.2.1 TOOL MARKS AND WORKING TOOLS ON THE IRON AGE AND PERSIAN VESSELS: THE	
	ARCHAEOLOGICAL EVIDENCE	
	6.2.2 MAKING A BASALT PEBBLE MORTAR: AN EXPERIMENTAL APPROACH	110
	6.2.3 TECHNIQUES AND SEQUENCE FOR BASALT VESSEL MANUFACTURE	112
	6.3 MAKING LIMESTONE AND CALCITE VESSELS	113
	6.3.1 LIMESTONE VESSELS	
	6.3.2 CALCITE VESSELS	
	6.4 MAKING GYPSUM AND STEATITE VESSELS	
	6.4.1 GYPSUM VESSELS	
	6.4.2 STEATITE VESSELS	
	6.5 IDENTIFYING CRAFT PRACTICES: TECHNOLOGIES, INNOVATIONS AND THEIR DISTRIBUTION	
	6.6 EVIDENCE FOR STONE VESSEL WORKPLACES DURING THE IRON AGE AND THE PERSIAN PERIOD	
	6.7 CONCLUSIONS	122
Ch	apter 7	
	The Mechanisms of Exchange of Stone Vessels	123
	7.1 INTRODUCTION	123
	7.2 THE EXCHANGE OF BASALT VESSELS IN THE LEVANT	123
	7.2.1 IRON AGE I	125
	7.2.2 IRON AGE II	128
	7.2.3 IRON AGE III	134
	7.2.4 THE PERSIAN PERIOD	139
	7.2.5 CONCLUSION	140
	7.3 THE EXCHANGE OF EGYPTIAN STONE VESSELS	141
	7.3.1 PATTERNS OF EXCHANGE DURING THE IRON AGE AND THE PERSIAN PERIOD	141
	7.3.2 CONCLUSION	150
	7.4 STONE VESSEL EXCHANGE WITH SOUTH ARABIA	
	7.5 STONE VESSELS IN ASSYRIA EXCHANGED AS TRIBUTE AND LOOTED ITEMS	154
	7.6 CONCLUSIONS	155
Ch	apter 8	
	Stone Vessel Consumption	157
	8.1 INTRODUCTION	
	8.2 THE ROYAL CONSUMPTION OF STONE VESSELS IN ASSYRIA AND SYRIA	
	8.2.1 THE ASSYRIAN ROYAL CITADELS	
	8.3 STONE VESSELS AS PRESTIGE ITEMS AND STATUS MARKERS IN RICH HOUSES AND TOMBS OF THE LEVANT	164
	8.3.1 STONE VESSELS FROM TELL AHMAR AREA C	
	8.3.2 STONE VESSELS FROM THE RICH HOUSE OF HORBAT ROSH ZAYIT	
	8.3.3 STONE VESSELS IN THE YUNUS CEMETERY NEAR CARCHEMISH	
	8.3.4 STONE VESSELS IN THE PERSIAN TOMBS OF THE LEVANT	
	8.4 STONE VESSELS FROM A NON-ELITE CONTEXT: MEGIDDO HOUSE 00/K/10	
	8.5 STONE VESSELS AS POSSIBLE GROUP AFFILIATION MARKERS: THE COSMETIC BOWLS FROM THE SOUTHERN LEVANT	
	8.6 CONCLUSIONS	
		101
Ch	apter 9	
	General Conclusions and Future Lines of Research	
	9.1 INTRODUCTION	
	9.2 THE DEVELOPMENT OF THE STONE VESSEL INDUSTRY DURING THE IRON AGE AND THE PERSIAN PERIOD	
	9.2.1 Iron Age I	
	9.2.2 Iron Age II	
	9.2.3 Iron Age III - Persian period	
	9.3 THE THEORETICAL PROPOSITIONS REVISITED	
	9.4 FUTURE LINES OF RESEARCH	
	9.4.1 NEW AND EXPANDED CORPORA OF STONE VESSELS	
	9.4.2 ANALYTICAL SOURCING RESEARCH AND DISTRIBUTION STUDIES	
	9.4.3 TOOL MARK STUDIES AND EXPERIMENTAL RESEARCH	187
	G // NATIONAL POLICE LANGUADA INTELLINITENTAL CHIMINES	100

Appendix A	
Catalogue	
Appendix B	253
••	
Bibliography	257

Chapter 1 Introduction

1.1 OVERVIEW

This book examines the development of the stone vessel industry in the Near East during the Iron Age and the Persian period (c. 1200 - 330 BCE). During this span of time, the Near East underwent a fundamental change, that is the emergence from the late 8th century BCE of long-lasting super-national empires that put an end to the period of political and cultural fragmentation, which had lasted since the end of the Bronze Age. Such a shift from small-scale/regional states to vast and long-lasting empires caused profound transformations in the socioeconomic structures of Near Eastern societies, effects that may also be reflected on the material culture. In order to better understand how material culture was affected by these transformations, this study will explore the Levant and Assyria during the era of small scale/regional states during the Iron Age I-II periods (c. 1200 – 732/701 BCE) and the establishment of the vast empires of the Iron Age III and Persian periods (c. 732/701 – 330 BCE). The specific focus of this study will be one particular category of material culture, namely stone vessels.

Stone vessels make a useful tool for studying social and economic change. They can be investigated as craft products requiring specific production techniques, as objects showing different styles connected to specific cultural traditions, as exchange goods involved in short and long distance trade, and finally, as items used by some social groups to express their values. Therefore stone vessels can be a valuable source of information for analysing change and continuity in craft technologies, trade patterns, cultural connections and consumption habits, all aspects that constitute the socio-economic landscape and ultimately reflect the radical political changes occurring over the course of the Iron Age and the Persian period.

The originality of this book lies in the choice of studying stone vessels and in the way these are analysed. No previous study has ever offered a comprehensive overview of the Iron Age and Persian stone vessels in the Near East. Existing studies on stone vessels from the Near East have focused on the prehistoric repertoire (e.g. Eitam 2009; Rosenberg et al. 2010; van den Brink et al. 1999; Wright 1991; 1992; 1994; 2000), and on Bronze Age material (e.g. Bevan 2007; Braun 1990; Casanova 1991; Ebeling 2001; Elliot 1991; Sparks 2007), thus leaving a gap for the period covered by the present study. Other studies that have looked at the Iron Age or Persian period have only included a selection of vessels from a

few sites (e.g. Barag 1985; 1996; Ben-Dor 1945; Bissing 1940; 1942; Bombardieri 2010a; Ebeling & Rosenberg 2015; Gal 1994; Searight et al. 2008; Thompson 1972; Wolff 2007). In the recent decades, many excavation reports include a section dedicated to stone vessels (often along with groundstone tools and other stone tools); however, in most cases these sections only present the material excavated, without setting the material into a broader context. Nevertheless, the previous studies on stone vessels provided a valuable reference point when designing the present study, as they make clear the need to move beyond a limited, small-scale approach to address questions about stone vessel technology, exchange and consumption, in order to link the stone vessel industry to the broader socio-economic landscape of the region.

1.2 GOALS AND THEORETICAL PERSPECTIVES

This study aims to explore the social relationships structuring Near Eastern societies and investigate the nature of cultural contacts between groups during the course of the Iron Age and Persian periods. In order to achieve this goal, this study presents a series of research questions which follow the themes of stone vessel production, exchange and consumption (table 1.1). The following sections will present these questions in detail, along with the theoretical frameworks that will be used to explore them.

1.3 THE OBJECT VALUE THEORY

The main research question of this study focuses on social relationships and cultural contacts characterising Near Eastern societies. By social relationships, it is meant the relations among individuals, as well as between individuals and authorities, by cultural contacts the interaction of Near Eastern cultures among themselves and with foreign cultures (e.g. Egypt). The analysis of these two aspects will be conducted through time, focusing in particular on two main periods of change. The first concerns the development of the regional states, and how they affected groups within and between states; the second is when these states were absorbed within super-national empires, and how the existing social relationships and cultural contacts changed as a result.

At this point, it remains to explain how material culture, such as stone vessels, can help answer this question. It is commonly acknowledged in archaeology that objects play a crucial role in constituting and defining many human social relations, as they can represent the

TABLE 1.1. MAIN AND SECONDARY RESEARCH QUESTIONS OF THIS STUDY.

MAIN RESEARCH QUESTION	SECONDARY RESEARCH QUESTIONS
How did the formation of regional states and the takeover of super-national empires shape social relationships and cultural contacts in the Near Eastern during the Iron Age and the Persian era?	STONE VESSEL PRODUCTION: How were stone vessel manufactured, and is there any change in the techniques over time?
	STONE VESSEL EXCHANGE: How were stone vessels exchanged, and how did these patterns change over time?
	STONE VESSEL CONSUMPTION: What were the social and cultural values behind stone vessel consumption, and how did these change over time?

materialisation of these relations (Bevan 2007: 12-6; DeMarrais 2004: 11-14; DeMarrais et al. 2004; Renfrew 2004: 23). In Childe's words, ancient objects can be seen as "concrete expressions and embodiments of human thoughts and ideas" (Childe 1956: 1). Examples of this phenomenon can be numerous: objects can be exchanged to seal agreements, used to show off the owner's wealth, embody religious beliefs, mark ethnic boundaries, be symbols of power, or signal engendered divisions.

The list can go on, but what it is important to stress is that objects can be used as an effective source of information about how societies were structured and how different cultures interacted by exploring objects' intangible properties which are socially and culturally constructed. These intangible properties of objects can be considered as constituting the object value. Object value is not an easy topic to address as it possesses many nuances. For example, an object can be given a sentimental value by their owner based on their own life experiences, or a measurable commercial value (price), which, depending on supply and demand dynamics, escapes from the individual's sphere (Renfrew 2004: 26-7; Bevan 2007: 8-9). The concept of object value, seen from social rather than individualistic perspective, has been addressed not only in archaeology but in many other disciplines such as anthropology, economics and philosophy, with different approaches and focuses.

One approach derives from Marx and Engel's studies on capitalistic mode of production (Marx 1867). In their analysis, they have elaborated a theory of object value as mirroring the quantity of labour necessary to make the object (Amin 2013; Narotzky 1997: 65), thus prioritising object production and its social and political organisations as the main factor defining object values. This approach stimulated in archaeology a vast current of thought focusing on object production and technology as a privileged way to access the organisation and internal class divisions of ancient societies (see below).

Another approach was followed by G. Simmel (1978), who stressed the importance of exchange in defining

object values. According to Simmel, object value is not inherent in objects themselves and it does not depend on absolute characteristics such as utility and scarcity; rather these parameters are set during the exchange by the people taking part in it (Simmel 1978: 100). Because exchange is linked to the values and judgments people make about objects, Simmel's perspective encourages to explore those cultural, political and historical conditions under which objects are exchanged across different "regimes of values" or cultural milieus, and how these values changed crossing different regimes (Appadurai 1986: 4). As it will be shown below, this approach proved very helpful for studying the exchange of some objects such as basalt vessels.

A third approach in analysing object value stresses the consumption of objects, or demand, as the main component in the definition of object value (e.g. Miller 1995). In this perspective, demand for goods does not merely stem from human needs, but is rather a complex phenomenon which is socially regulated and deeply connected to social practices and politics (Appadurai 1986: 29; Baudrillard 1981).

These approaches tackle the issue of object value from three different perspectives, namely production, exchange and consumption, yet they have in common the notion that object value mirrors cultural, political and social relations. Hence, they have provided helpful theoretical tools for linking the evidence coming from stone vessels to the broader research question stated in table 1.1. Moreover, to avoid looking at stone vessels from one perspective only, I have chosen an all-inclusive approach which takes into account the ways stone vessels were produced, exchanged and consumed in past societies. Such a comprehensive approach has appeared to me to be more effective because of the deep relations among these three stages of the economic process (Bevan 2007: 9; Narotzky 1997; Renfrew 1986), so, for example, innovations in production technology could be caused by new emerging consumption patterns, which in turn could also affect the exchange of goods. Following this approach, I have formulated more specific research

questions about stone vessel production, exchange and consumption, which will be outlined below.

1.4 SECONDARY RESEARCH QUESTIONS AND THEIR THEORETICAL BACKGROUNDS

Underlying the primary research question about social and cultural relationships is a series of secondary questions designed to explore the nature of the stone vessel industry and the dissemination and consumption of its products. The issues of production, exchange and consumption are the tools by which the social relationships among people and between people, groups and institutions are analysed. In the sections below, these issues will be presented and connected to the main research question through an exploration of their theoretical backgrounds.

1.4.1 RESEARCH QUESTIONS AND THEORY FOR STONE VESSEL PRODUCTION

The question about stone vessel production addresses issues concerning the tools and techniques used by ancient craftsmen to make stone vessels (i.e. the technology), the degree of continuity of production techniques from the Bronze Age, possible technological innovations in the course of the Iron Age and the Persian period, and the case of production specialisation (see table 1.2). Theoretical studies of ancient technology have explored how production can be connected to society and culture. A synthesis of these approaches can be found in Miller (2007: 3-7) and Dobres (2000: 47-95).

Though with many nuances in between, these approaches could be divided into two main trends. On the one hand, there are those which highlight the extrasocial and cross-cultural aspects of technology, which is seen as an adaptive response elaborated by humans to overcome problems they encounter when relating with the environment (Nelson 1991; Binford 1965). On the other hand, there are theoretical approaches defining technology as a social practice, which implies the human knowledge, the cultural backgrounds and social relations behind choices made by people when making objects (e.g. Dobres 2000: 96-7; Dobres & Hoffman 1995; Lechtman & Steinberg 1979; Lemonnier 1992; Schiffer 2001; Sillar & Tite 2000).

In the latter approaches, the concept of *chaîne opératoire* is crucial as it implies not only the reconstruction of the manufacturing steps transforming raw materials into objects, but also the study of how these steps are susceptible to change according to local cultural perceptions and traditions, which can define cultural or social groups (e.g. social class, gender, ethnicity, tribe, family; Dobres 2000: 153-5; Cresswell 1972; 1990; Roux 2010: 4-5; Sillar & Tite 2000: 3-4). It is the *chaîne opératoire* framework to which I have mostly inspired

for this study on stone vessel manufacture, in order to highlight the cultural traditions behind it; however, when studying stone technology, the physical properties of raw materials cannot be discounted. These intrinsic properties have the potential to elicit cross-cultural and diachronic technological responses. Such physical characteristics could be considered as an ensemble of possibilities embedded in raw materials and affecting the ways these can be worked.

In the case of stones, natural characteristics such as hardness, stress resistance, texture, and inclination to breakage greatly affected the tools and techniques artisans had to choose when transforming them into vessels. Such materiality, therefore, balances cultural and period-specific technological traditions, and it can allow us to approach questions about ancient stone technology by means of archaeological experiments aimed at replicating the manufacture of ancient objects (e.g. Stocks 2003). This experimental approach will also be followed in the present study as a method to answer questions about stone vessel manufacture (see Chapter 2, section 2.1.1).

Another link between stone vessel manufacture and society implicit in this research question is the organisation of production. This can be defined as those social arrangements within which object production occurs (Miller 2007: 5). The crucial point of stone vessel production organisation is whether single households produced their own goods independently, or whether it is possible to detect production by specialised artisans, who supply these goods to consumers (Costin 1991: 3-4). Scholars have developed many definitions of specialisation and analyses of its organisation in different cultural and historical contexts (see Costin 1991: 4-11 for a résumé). For the present study, a helpful reference point has been Earle's distinction (1981) between "independent specialisation" and "attached specialisation". Attached specialisation, as defined by Earle and then developed by others (Costin 1986; Gero 1983; Hagstrum 1985; Russell 1988), refers to specialised production for elites that is controlled by them and the social and political institutions they represent.

In the attached specialisation model, artisans working for elites do not have control over the distribution and consumption of the goods they produce (Costin 1991: 7). On the other extremity of Earle's production modes is independent specialisation, which evolved to meet the utilitarian needs of a community with no or little participation of the elite (or state) sponsorship (Brumfiel & Earle 1987). Formulated as such this model is a simplification, as between these two extremities there can be much variation, depending on different historical, political and cultural factors. However, this model has represented a valuable reference point to better interpret

TABLE 1.2. RESEARCH QUESTION CONCERNING STONE VESSEL PRODUCTION AND RELATED ISSUES TO EXPLORE.

RESEARCH QUESTION ABOUT STONE VESSEL PRODUCTION	FURTHER ISSUES TO EXPLORE
How were stone vessel manufactured, and is there any change in the techniques over time?	What tools and techniques were used? Is there evidence for continuity of Bronze Age production techniques? Were innovative techniques introduced after the Bronze Age? If so, are these widespread or regional? Is there evidence for specialisation of stone vessel production?

data collected for this study regarding stone vessel workshops, as it will be shown in Chapter 6, section 6.6.

1.4.2 RESEARCH QUESTION AND THEORY FOR STONE VESSEL EXCHANGE

This section will explore the question on how stone vessels were exchanged and how the exchange patterns changed over time. Stone vessel exchange is used here in its broadest sense to include any mechanisms by which stone vessels were removed from their place of production. The methods by which the displacement of groups of stone vessels has been identified will be detailed in the following chapter. The discussion here will focus on interpretations of the ways objects were exchanged in past societies, and the role some of these play in the present study.

Scholarly debate has long been focused on issues about forms of exchange. These concern the role of private initiative in exchange *versus* state control; the pursuit of selfish gain through exchange as opposed to the establishment of reciprocal bonds between parts without aiming at materialistic profit. Overall, the positions that economists, archaeologists and anthropologists have taken when tackling these issues can be divided into two main schools, the substantivist and the formalist.

The substantivist school (Dalton 1965; Oppenheim 1970; Liverani 1979; 1990; 2001; 2006), founded by Karl Polanyi (Polanyi 1944; 1957), recognises three modes of exchange. One is *reciprocity*, whereby people exchange goods (often in ceremonial way) to form alliances and reinforce bonds, without aiming at achieving material gain from the exchange. The second is redistribution, whereby a central authority (the State) owns and controls most of the means of production (such as land) and re-distributes goods produced by these means across population. The third is commercial trade, which can take the form of administrated trade when it is regulated by the state authority who sets prices and criteria of exchange, and it is carried out by traders on behalf of the state, or market trade which is not regulated by the public sphere, and is carried out by free merchants and private enterprises with profit aims, with supply-demand dynamics determining price oscillations.

In Polanyi's view, market trade didn't take place in ancient Mediterranean and Near Eastern societies before the Classical period (roughly starting with the 4th century BCE); as a consequence, he discounted that profitoriented private initiative could stimulate exchange, and economy in general, in earlier societies. Exchange was therefore mostly regulated by social conventions rather than market dynamics. Polanyi's assumption was that economy is embedded in society, hence market economy can occur only when specific social and cultural factors arise, which was not the case in ancient societies. Similar ideas to those of Polanyi's had been elaborated also by M. Mauss (1950) and B. Malinowski (1965), who used the gift exchange model to interpret exchange of goods among populations in the Pacific. This model is close to Polanyi's reciprocity and it denotes an exchange pursuing social, political and diplomatic aims and extraneous to an individual's private gains.

The impact of Polanyi's ideas on studies about ancient economy was enormous. Gift exchange and reciprocity have been a reference point to explain, for example, the ceremonial exchange of luxury goods among Eastern Mediterranean royal courts of the Late Bronze Age; and the redistribution model was applied to explain how Bronze Age Mesopotamian economic institutions, such as the temple and the palace, operated (Liverani 2005a; Zaccagnini 1987). By far the most influential among Polanyi's successors was M. Finley, who dismissed almost completely the relevance of free trade, private enterprise and private property in the ancient Mediterranean before the Classical era (Finley 1973), and considered Near Eastern economies (and exchange) predominately state-regulated.

The substantivists' ideas have been relevant for the present stone vessel study, particularly in relation to the idea of gift exchange intended as an exchange of goods with political and diplomatic aims outside the logic of profit. However, their rigid dichotomy between administrated trade and market trade (which also represented the dichotomy between the Near Eastern and Classical worlds) cannot offer a comprehensive picture of the complexity of the economy of the Near East, especially during the Iron Age and Persian era.

One of the most relevant empirical arguments against the substantivists' models comes from the evidence from the 2nd millennium BCE Old-Assyrian trade between Assur and the city of Kanesh in Central Anatolia, which texts have revealed to be a private enterprise in the hands of family businesses pursuing private profits, with very little participation of the state (Larsen 1967; Gledhill & Larsen 1982). Further evidence for an ancient free market comes from the large collection of Babylonian texts covering most of the 1st millennium BCE, showing an increasingly monetised economy characterised by private enterprises, free-market mechanisms, and banking activities overlapping with the temple economic initiative (Jursa 2010: 6-13; 2014).

Such evidence has opened the way to the ideas of the other school of thought about the ancient economy, the so-called formalist school. Formalists look at the economy as a non-social phenomenon rooted in human nature, hence they see market as a self-evident and universal aspect of human society (Nash 1961; LeClair 1962, though with different nuances, see Schneider 1974: 9-14). Following the ideas of Classic Economics founded by A. Smith and D. Ricardo, formalists held that gain-oriented and profit-maximising forms of exchange emerging from the interaction of private initiatives, as in a free market system, occurred in all societies. Therefore, laws of market exchange (such as that of supply and demand) elaborated for contemporary capitalistic societies can be applied to ancient, pre-capitalistic societies, too.

The evidence from the Old-Assyrian trade and the Babylonian market-system seems to support the formalists' ideas concerning pre-Classical free markets (*contra* the substantivists' opinion); moreover, more in-depth analyses of the texts about gift exchange mechanisms among the Eastern Mediterranean royal houses of the Late Bronze Age have shown that profit, too, was sought in these transactions, even if masked behind ceremonial practices, so that the gift was a sort of anticipated payment not totally exempt from economic calculation (Aubet 2001: 132-8).

However, this evidence should not be used to dismiss the substantivists' ideas altogether, rather it invites us to recognise a more composite picture of Near Eastern economy, and overcome the seeming opposition between substantivist and formalist views. Indeed, such an opposition drew upon the "mental boundaries" created by many European scholars of the 19th – early 20th centuries when studying past and modern economies. This opposition can be formulated as the dichotomy between, on the one side, societies of the Classical world seen as the ancestors of modern European societies, with a free market system similar to modern Europe, and, on the other side, non-European and pre-Classical societies with a state-regulated economy and non-profit gift exchange systems (Morris & Manning 2005: 10-25).

In other words, it was an opposition between "us" (modern Europeans heirs of the ancient Greeks and Romans), and the "others" (pre-Classical, Near Eastern cultures, and non-European societies; Shennan 1999: 352-3). Overcoming this dichotomy means that we can still use substantivist and formalist ideas, but in a less dualistic way of opposing economic realities which were in fact overlapping.

Substantivists' models of reciprocity (gift exchange), redistribution and administrated trade are still crucial to explain how some Near Eastern economic institutions worked (such as the palace, temple, trade-agents), though these largely overlapped with private initiatives, the activity of free merchants (or associations of merchants) and in general a market economy, particularly attested, as seen before, in the 1st millennium BCE Babylonia. To study these ancient markets, it is possible to apply models drawn from the formalist school (e.g. Jursa 2014; Hackl & Pringruber 2014); however, as some economists have also recognised (North 1990), it should be noted that perfect markets working according universal laws have never existed in human history, as they are constantly affected by cultural and political factors, that is, they are "embedded" in societies, as the substantivists would hold (Van der Spek et al. 2014: 1-3; 528-31).

In conclusion, I agree with the substantivists that economy is embedded in society and therefore exchange is affected by political and cultural factors, such as cultural boundaries among groups. However, their models need to be re-evaluated to overcome their dichotomies in the light of more recent evidence.

A way to overcome the formalist and substantivist opposition is to look at the state's role in ancient trade without preconceptions and rigid dichotomies. This means wondering a) to what extent ancient states fostered trade by promoting, for example, the construction of infrastructures (e.g. ports), b) to what degree they were involved directly in trade (e.g. were merchants free to conduct their own business and/or were forms of controls imposed on them, such as taxes?), or finally c) to what extent states may have impeded trade, for example by favouring other means of exchange such as tribute and redistribution (Hopkins 1983: xxi-xxii; Lo Cascio 2006). The relation between state and trade is also an intriguing comparative topic between ancient and contemporary societies, which is debated in many anthropological, economic and archaeological studies. Some of these address how free, cross-cultural and globalised trade, which is characteristic of our economic system and has also occurred in some periods in the past, affects state governance (e.g. Mitchell 2006; Göksel 2012; Stiglitz 2003; Stearns 2010).

Other studies, closer to the so-called world system theory, have focused on the unbalanced relation between a strong

TABLE 1.3. RESEARCH QUESTION CONCERNING STONE VESSEL EXCHANGE AND RELATED ISSUES TO EXPLORE.

RESEARCH QUESTION ABOUT STONE VESSEL EXCHANGE	FURTHER ISSUES TO EXPLORE
How were stone vessels exchanged and how did the patterns change over time?	Is there evidence for state administrated exchange, a free market or other types of exchange? What impact, if any, did political and cultural boundaries have on stone vessel exchange? How did these mechanisms change through time? Were exchange mechanisms affected by the establishment and expansion of the Assyrian, Babylonian and Persian empires?

central state which exploits economically periphery states located in distant regions in order to attract goods from them (Algaze 1993), or which creates a more equal relation with the peripheries based on the exchange of specific products and raw materials (Stein 1998). In all these studies, it is crucial the extent to which trade affects state's politics and vice versa. Having this in mind, the study on stone vessel exchange in Chapter 7 will focus on the role of state in stone vessel trade and what may have changed with the rise of empires (for example, do we see a freer, globalised balanced trade, or something closer to an unbalanced word system?), including a brief comparison with the Bronze Age economies (see also Chapter 9). Following this approach, I will stress the role of politics and cultural factors in trade, and the degree of their involvement in all forms of exchange occurring in past societies; also including exquisitely political forms of forced exchanges, such as tribute and military booty.

Finally, when interpreting my data, free market exchange (which I will also call commercial trade or simply trade, see Chapter 7, section 7.1) and relative mechanisms will be taken in consideration for the period covered by this study; gift exchange, too, will be considered but it will be defined as a form of political and diplomatic exchange among royal houses, rather than as a purely non-profit exchange.

1.4.3 RESEARCH QUESTION AND THEORY FOR STONE VESSEL CONSUMPTION

The question about stone vessel consumption intends to explore issues related to the functions of stone vessels, the social identity of their consumers, the cultural or ideological values attributed to these objects as an expression of social relations and cultural traditions in which consumers identified themselves, and how consumption patterns changed over time. Consumption is not only the aim of the processes of production and exchange, but also a trigger for, and means of, regulating these processes (Narotzky 1997: 103). Consumption, therefore, has a fundamental role in explaining some aspects of production and exchange.

There are two main theoretical approaches that may be taken to tackle object consumption. One is favoured by economists, who explain consumption through the theoretical framework of marginal utility. Marginal utility, as expressed by A. Marshall (1964) in the 19th century, is a theory assuming that object consumption stems from the natural desires and wants of humans. Such desires can be quantified, hence consumption can also be expressed in quantifiable terms. In this view, the social and cultural context in which the consumer acts does not have much influence on their decision making, hence the factors affecting object consumption can be considered as universal and a-social (Narotzky 1997: 99-100).

Another way to approach consumption, favoured by anthropologists and sociologists, and followed in this study, is to consider it a social phenomenon, historically grounded, and ideologically and politically influenced, which cannot be satisfactorily described by means of universal mathematical relations (Fine & Leopold 1993; Narotzky 1997: 101-4). One of the main exponent of this approach is Appadurai (1986: 29-32; 2005), who, inspired by the ideas of Bourdieu and Baudrillard, holds that consumption is "eminently social, relational, and active rather than private, atomic, and passive", and object demand is "the economic expression of political logic of consumption, and thus its basis must be sought in that logic" (Appadurai 1986: 31).

Following this view, the ways consumption may be socially and politically regulated can change across societies and through time. For examples taboos, group identities, and sumptuary laws may be ways by means consumption of specific objects is regulated, restricted or even banned in ancient societies, similarly to the ways fashion and forms of taste control regulate consumption of goods in contemporary Western societies (Appadurai 1986: 32). In this perspective, consumption is not merely an activity by which people satisfy their needs, but a way for "sending social messages" (Douglas & Isherwood 1981) to other people, hence it can be source of information about social relations

This is valid for all objects consumed within society, including everyday items, such as those involved in food production activities, among which there are also some classes of stone vessels included in this catalogue.

TABLE 1.4. RESEARCH QUESTION CONCERNING STONE VESSEL CONSUMPTION AND RELATED ISSUES TO EXPLORE.

RESEARCH QUESTION ABOUT STONE VESSEL CONSUMPTION	FURTHER ISSUES TO EXPLORE
What were the social and cultural values behind stone vessel consumption, and how did	How were specific groups of stone vessels used? Who were the consumers of these products?
these change over time?	What social or ideological values were being attributed to this material? Did consumption patterns vary according to different regions or periods?

Such a common or subsistence consumption involving everyday items is generally viewed as self-explanatory because of its link to basic needs of subsistence; however, also at this level, consumption can be affected by social differentiation and conflict, for example on the basis of wealth inequality (see for example Wright 2014) and engendered divisions, or it can express cultural habits of a specific group in the way, for example, food is prepared or everyday activities are performed (Narotzky 1997: 104-6). Indeed, inasmuch as everyday objects are constantly used in social relations, their consumption can help substantiate people's group identity and sense of commonality, so they may come to obtain a value mirroring group or class affiliations (Bevan 2007: 12-6).

The reason why even everyday items can acquire such values may be that in a context of people sharing common values, traditions, cultural traits and habits, there may be a tendency to use objects with a high degree of similarity in shape, decoration and raw materials. People tend to imitate one another in making and choosing specific objects, to try to avoid exceptions that could be perceived by the group as a potential threat to their identity, though, of course, a perfect consistency can only be rarely achieved (Bevan 2007: 16). Such behaviour is similar to the conformist strategy (also called frequency-based biased transmission) elaborated by Richerson and Boyd in their theory about cultural transmission, whereby people tend to imitate the most common cultural trait within their group (Richerson & Boyd 2005: 68-71).

However, some objects can also be used by a group of people (or by an individual) to broadcast messages of distinction and differentiation, especially directed towards those outside the group or belonging to a lower social class. Some objects' characteristics can be modified to highlight the intention of the owners to distinguish themselves from others (Bevan 2007: 16). This behaviour can be compared to Richerson and Boyd's so-called guided variation (Richerson & Boyd 2005, table 3.1), whereby some people introduce a novelty or an innovation in the cultural system.

Luxury objects may be a good example of such behaviour. In Appadurai's words, luxury objects are "goods whose principle use is rhetorical and social, goods that are simply incarnated signs" (Appadurai 1986: 38). Many characteristics of luxury objects can convey their message of distinction, for example symbolic decoration linked to an elite's social and political role, use of precious raw materials that are difficult to obtain, elaborated shapes, distant origins, or the presence of royal inscriptions. Elites can keep these objects outside common consumption in many ways: by laws, by limiting their production (e.g. confining this to within palaces), by monopolising their trade or by ensuring their raw materials are not accessible to many. By manipulating luxury object consumption (also described as conspicuous consumption, see Veblen 1902), elites ensure their own special status is preserved and displayed to the rest of the population.

Therefore, both in common and elite contexts object consumption can reflect dynamics such as group affiliation, social distinction, and wealth inequality, thus constituting a precious source of information. The political, social and cultural factors behind stone vessel consumption will be analysed in Chapter 8. Table 1.4 summarises the issues relating to consumption that will be explored throughout this book.