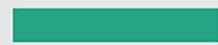# EBW

Encyclopedia of Material Culture in the Biblical World

A New *Biblisches Reallexikon*

Mohr Siebeck

Encyclopedia
of Material Culture
in the Biblical World

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Edited by

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(Main Editor)

with

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Gunnar Lehmann, born 1955; studied Near Eastern Archaeology; 1993 PhD; currently Full Professor for Archaeology at the Ben-Gurion University, Israel.

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Foreword

This volume is the result of an ambitious project and an effort to keep pace with the constant growth of archaeological material and the advancing results of research. In fact, the greatest challenge for the editors and the authors was to select the most important from the abundance of existing and constantly newly discovered material and to formulate meaningful syntheses. In a way, then, this book is a companion to the ongoing "work in progress" on realia, and by no means a final word.

During our work on this encyclopedia, we became aware of the great achievement Kurt Galling and his team in Tübingen had accomplished in 1977 when they revised the first edition of the *Biblisches Reallexikon* (1937) and had no recourse to modern technology, the internet, or image editing programs. All this was a great help to us. However, this encyclopedia has been made possible primarily through international collegial cooperation with many senior and promising young scholars who never lost their confidence that this long-lasting project would finally succeed, as well as through the assistance of many students.

There were a lot of helping hands who supported us in preparing the manuscript, assisting during the redactional processes, collecting literature and images, producing the drawings and captions, and preparing the indices. We would like to mention the research assistants Laura Gonnermann and Felix Hagemeyer as well as the students Birgit Starke, Carlo Simon Christiansen, Ole Depenbrock, and Helena Lindner in Leipzig; and the student Carolin Manzke (b. Meier) and the research assistant Jakob Kempendorf in Tübingen. Special mention should be made of Günter Müller, whose high-quality drawings provide the EBW with a lasting value and special character, and Claus-Jürgen Thornton, who copy-edited this highly complicated manuscript with expertise, precision, and patience.

Last but not least, we want to express our thanks to all the authors who contributed to this book. We are aware of the fact that it took a very long time until this ambitious project was finished; this forced some of the contributors to accept a long time span between the submission of their articles and publication. We thank all of them for their patience and hope that the final result compensates for the delay.

At the end of a long road, I would like to sincerely thank the area editors for their work and patience. Apart from the cooperation in word and deed during the many challenges that such a project entails, the production of the maps and their contents was the sole responsibility of Gunnar Lehmann. The main editor and the area editors have jointly decided on their selection of and assignment to the individual articles. The same is true for the illustrations, which were produced under the supervision of Jens Kamlah. My special thanks go to them as well as to P. M. Michèle Daviau, from whose expertise on Jordan the book could benefit.

Angelika Berlejung (Main Editor)
Leipzig, Februar 2022

Abbreviations

I. Ancient Sources

1. Biblical Literature

1.1. Hebrew Bible and Septuagint

Gen	Genesis
Ex	Exodus
Lev	Leviticus
Num	Numbers
Dt	Deuteronomy
Josh	Joshua
Judg	Judges
Ruth	Ruth
1 Sam	1 Samuel
2 Sam	2 Samuel
1 Kgs	1 Kings
2 Kgs	2 Kings
1 Chr	1 Chronicle
2 Chr	2 Chronicle
Ezra	Ezra
Neh	Nehemiah
Tob	Tobit
Jdt	Judith
Esth	Esther
1 Macc	1 Maccabees
2 Macc	2 Maccabees
Ps(s)	Psalms
Job	Job
Prov	Proverbs
Qoh	Qoheleth or Ecclesiastes
Cant	Canticles (Song of Songs)
Wis	Wisdom of Solomon
Sir	Wisdom of Jesus Ben-Sira
Isa	Isaiah
Jer	Jeremiah
Lam	Lamentations
Bar	Baruch
Ez	Ezekiel
Dan	Daniel
Hos	Hosea
Joel	Joel
Am	Amos
Ob	Obadiah
Jonah	Jonah
Mic	Micah
Nah	Nahum
Hab	Habakkuk
Zeph	Zephaniah
Hag	Haggai
Zech	Zechariah
Mal	Malachi

1.2. New Testament

Mt	Matthew
Mk	Mark
Lk	Luke
John	John
Acts	Acts
Rom	Romans
1 Cor	1 Corinthians
2 Cor	2 Corinthians
Gal	Galatians
Eph	Ephesians
Phil	Philippians
Col	Colossians
1 Thess	1 Thessalonians
2 Thess	2 Thessalonic
1 Tim	1 Timothy
2 Tim	2 Timothy
Tit	Titus
Phlm	Philemon
Heb	Epistle to the Hebrews
Jas	James
1 Pet	1 Peter
2 Pet	2 Peter
1 John	1 John
2 John	2 John
3 John	3 John
Jude	Jude
Rev	Revelation

2. Old Testament Pseudepigrapha

Let. Aris.	*Letter of Aristeas*

3. Rabbinic Literature

Mishnah

m. ʿAbod. Zar.	ʿAbodah Zarah
m. ʿEd.	ʿEduyyot
m. Kelim	Kelim
m. Meg.	Megillah
m. Menaḥ.	Menaḥot
m. Pesaḥ.	Pesaḥim

Jerusalem (Palestinian) Talmud

y. Roš Haš.	Roš Haš-Šanah
y. Sanh.	Sanhedrin

Babylonian Talmud
b. ʿAbod. Zar.	ʿAbodah Zarah
b. B. Meṣiʿa	Baba Meṣiʿa
b. Ber.	Berakot
b. Pesaḥ.	Pesaḥim
b. Sanh.	Sanhedrin
b. Šabb.	Šabbat

4. Ancient Authors

Aelian nat. an.	Aelian, De natura animalium
Apic. coq.	Apicius, De re coquinaria
Aristot. hist. an.	Aristotle, Historia animalium
Aristot. pol.	Aristotle, Politica
Athen. deipn.	Athenaios, Deipnosophistae
Aug. serm.	Augustine, Sermones
Cass. var. ep.	Cassiodorus, Variae epistolae
Cic. Att.	Cicero, Epistulae ad Atticum
Cic. sen.	Cicero, Cato maior de senectute
Clem. Alex. protr.	Clemens Alexandrinus, Protrepticus
Colum. rust.	Columella, De re rustica
Curtius hist. Alex.	Quintus Curtius Rufus, Historia Alexandri Magni
Diodorus	Diodorus Siculus, Bibliotheca historica
Euseb. hist. eccl.	Eusebius, Historia ecclesiastica
Euseb. praep. ev.	Eusebius, Praeparatio evangelica
Galenus simpl.	Galenus, De simplicium medicamentorum facultatibus
Hdt.	Herodotus, Historiae
Hes. op.	Hesiod, Opera et dies
Hom. Il.	Homer, Illiad
Hom. Od.	Homer, Odyssee
Jos. ant.Iud.	Josephus, Antiquitates
Jos. bel.Iud.	Josephus, Bellum Iudaicum
Jos. c.Ap.	Josephus, Contra Apionem
Mart. epigr.	Martial, Epigrammata
Oppian hal.	Oppian, Halieutica
Philo Flacc.	Philo, In Flaccum
Plat. soph.	Plato, Sophista
Plin. nat.	Pliny the Elder, Naturalis historia
Plut. Dem.	Plutarch, Demetrios
Tac. hist.	P. Cornelius Tacitus, Historiae
Theocr. id.	Theocritus, Idyllea
Theod. eran.	Theodoret Cyrrhus, Eranistes
Varro rust.	M. Terentius Varro, De re rustica
Virgil georg.	P. Vergilius Maro, Georgica
Vitruvius	Vitruvius, De architectura
Xen. anab.	Xenophon, Anabasis
Xen. oec.	Xenophon, Oeconomicus

II. Frequently Cited Works

Major reference works which are not listed below, and journals, periodicals, and series are abbreviated according to Siegfried Schwertner, *Internationales Abkürzungsverzeichnis für Theologie und Grenzgebiete = International Glossary of Abbreviations for Theology and Related Subjects* (Berlin: De Gruyter, ³2014) and/or *The SBL Handbook of Style: For Biblical Studies and Related Disciplines* (Atlanta: SBL Press, 2014).

ANEP	PRITCHARD, J. B. (ed.), ²1969 (1954), The Ancient Near East in Pictures Relating to the Old Testament, Princeton
ANET	PRITCHARD, J. B. (ed.), ³1969, Ancient Near Eastern Texts Relating to the Old Testament, Princeton
ARM	Archives Royales de Mari
ATTM	BEYER, K., 1984, Die aramäischen Texte vom Toten Meer, Göttingen
ATTME	BEYER, K., 1994, Die aramäischen Texte vom Toten Meer, Ergänzungsband, Göttingen
ATTM2	BEYER, K., 2004, Die aramäischen Texte vom Toten Meer, Band 2, Göttingen
CAD	The Assyrian Dictionary of the Oriental Institute of the University of Chicago
CAT	DIETRICH, M./LORETZ, O./SANMARTÍN, J. (eds.), 1976, Die keilalphabetischen Texte aus Ugarit, AOAT 24.1, Neukirchen-Vluyn, 1976. 2nd enlarged edition: DIETRICH, M./LORETZ, O./SANMARTÍN, J. (eds.), The Cuneiform Alphabetic Texts from Ugarit, Ras Ibn Hani, and Other Places, Münster, 1995. 3rd enlarged edition: Münster 2013
CSAJ	EGGLER, J./KEEL, O., 2006, Corpus der Siegel-Amulette aus Jordanien, OBO. SA 25, Fribourg/Göttingen
CSAPI/I	KEEL, O., 1995, Corpus der Stempelsiegel-Amulette aus Palästina/Israel: Einleitung [Introduction], OBO.SA 10, Fribourg/Göttingen
CSAPI/1	KEEL, O., 1997, Corpus der Stempelsiegel-Amulette aus Palästina/Israel: Katalog Band 1, OBO.SA 13, Fribourg/Göttingen
CSAPI/2	Keel, O., 2009, Corpus der Stempelsiegel-Amulette aus Palästina/Israel: Von den Anfängen bis zur Perserzeit. Katalog Band 2: Von Bahan bis Tell el-Fir, OBO.SA 29, Fribourg/Göttingen
GGG	KEEL, O./UEHLINGER, C., ⁵2001 (1992), Göttinnen, Götter und Gottessymbole, QD 134, Freiburg/Basel/Vienna

GGIG	Keel, O./Uehlinger, C., 1998, Gods, Goddesses, and Images of God in Ancient Israel, transl. T. H. Trapp, Minneapolis
HAE 1–3	Renz, J./Röllig, W. (eds.), Handbuch der althebräischen Epigraphik, 3 vols., Darmstadt; Band 1: Die althebräischen Inschriften, Teil 1: Text und Kommentar (HAE 1), 1995; Band 2.1: Die althebräischen Inschriften, Teil 2: Zusammenfassende Erörterungen, Paläographie und Glossar (HAE 2.1), 1995; Band 2.2: Materialien zur althebräischen Morphologie. Siegel und Gewichte, 2003; Band 3: Texte und Tafeln, 1995
IPIAO 1–4	Schroer, S./Keel, O,. 2005–2018, Die Ikonographie Palästinas/Israels und der Alte Orient: Eine Religionsgeschichte in Bildern, 4 vols., Fribourg/Basel
KAI	Donner, H./Röllig, W., ³1971, Kanaanäische und aramäische Inschriften, Wiesbaden
KTU	see CAT
NEAEHL 1–5	Stern, E./Lewinson-Gilboa, A./Aviram, J. (eds.), The New Encyclopedia of Archaeological Excavations in the Holy Land, Jerusalem, 5 vols.
OEANE 1–5	Meyers, E. M. (ed.), 1997, The Oxford Encyclopedia of Archaeology in the Near East, New York/Oxford, 5 vols.
TADAE 1–4	Porten, B./Yardeni, A., 1986–1999, Textbook of the Aramaic Documents from Ancient Egypt: Newly Copied, Edited and Translated into Hebrew and English, Jerusalem, 4 vols.
TUAT	Kaiser, O. (ed.), 1982ff, Texte aus der Umwelt des Alten Testaments, Gütersloh
TUAT NF	Janowski, B./Wilhelm, G. (eds.), 2004ff, Texte aus der Umwelt des Alten Testaments, Gütersloh
Wibilex.de	Das Wissenschaftliche Bibellexikon im Internet; https://www.bibelwissenschaft.de/wibilex/

III. Archaeological Periods

Paleolithic	Paleolithic
Mesolithic	Mesolithic
Natufian	Natufian

PPNA/PPNB/PPNC	Pre-Pottery Neolithic A–C
PN/PNA/PNB	Pottery Neolithic/Pottery Neolithic A–B
Chalc.	Chalcolithic
EBA	Early Bronze Age
EB I	Early Bronze I
EB II	Early Bronze II
EB III	Early Bronze III
EB IV = MB I	Early Bronze IV = Middle Bronze I
IBA	Intermediate Bronze Age
MBA	Middle Bronze Age
MB IIA	Middle Bronze IIA
MB IIB	Middle Bronze IIB
LBA	Late Bronze Age
LB I	Late Bronze I
LB IIA	Late Bronze IIA
LB IIB	Late Bronze IIB
Iron Age I	Iron Age I
Iron Age IIA	Iron Age IIA
Iron Age IIB	Iron Age IIB
Iron Age IIC	Iron Age IIC
Bab. period	Babylonian period
Pers. period	Persian period
Hell. period	Hellenistic period
Rom. period	Roman period
Byz. period	Byzantine period

IV. General and Technical Abbreviations

Akkad.	Akkadian
Anat.	Anatolian
ANE	Ancient Near East
anthropom.	anthropomorphic
Arab.	Arabic
Aram.	Aramaic
arch.	archaeological
Asiat.	Asiatic
Ass.	Assyrian
Bab.	Babylonian
b. c.e.	Before the Common Era
bibl.	biblical
Byz.	Byzantine
ca.	circa
CAL	calibrated years
CAL BP	calibrated years before present
Canaan.	Canaanite
cat.	catalogue
c. e.	Common Era
cent.	century/centuries
cf.	confer, compare
chap(s).	chapter(s)
Christ.	Christian
cm	centimeter

col.	column	Mesop.	Mesopotamian
d.	died	mg	milligram
Dem.	Demotic	mill.	millennium/millennia
dtn.	deuteronomic(al)	ml	milliliter
dtr.	deuteronomistic(al)	MT	Masoretic Text
Dyn.	Dynasty	N	North
E	East	NF	Neue Folge
ed(s).	editor(s)	Ni.	Niphal
e. g.	for example (Lat. "exempli gratia")	no(s).	number(s)
		Nab.	Nabatean
Eg.	Egyptian	nm	nanometer
Engl.	English	NT	New Testament
epigr.	epigraphical	OT	Old Testament
esp.	especially	P	Priestly Source
et al.	and others (Lat. "et alii")	p(p).	page(s)
etc.	et cetera	Palest.	Palestinian
exil.	exilic	Palm.	Palmyrene
f(f)	following page(s)	par.	and parallel(s)
fem.	feminine	pcs.	pieces
fig(s).	figure	Pers.	Persian
frgm.	fragment	Philist.	Philistine
FS	Festschrift	Phoen.	Phoenician
G	Greek	Pi.	Piel
gr	gram	pl(s).	plate(s)
h	height	plur.	plural
ha	hectare/s	polit.	political
Hasm.	Hasmonean	poss.	possibly
HB	Hebrew Bible	rabb.	rabbinical
Hebr.	Hebrew	rel.	religious
Hell.	Hellenistic	Rom.	Roman
Herod.	Herodian	S	South
Hiph.	Hiphil	scient.	scientific
hist.	historical	Seleuc.	Seleucid
Hitt.	Hittite	Sem.	Semitic
Hoph.	Hophal	sing.	singular
Hurr.	Hurrian	spp.	species (plur.)
ibid.	ibidem	ssp.	subspecies
iconogr.	iconographical	Sum.	Sumerian
i. e.	that is (Lat. "id est")	suppl.	supplement
Isr.	Israelite	symb.	symbolic
Jew.	Jewish	Syr.	Syrian
kg	Kilogram	syst.	systematic
km	Kilometer	tab.	table
L.	Linné	tav.	tavola
l	liter(s)	theol.	theological
Lat.	Latin	theriom.	theriomorphic
lit.	literature	transl.	translated by
Luw.	Luwian	Ug.	Ugaritic
LXX	Septuaginta	v(v).	verse(s)
m	meter	vol(s).	volume(s)
masc.	masculine	W	West
Medit.	Mediterranean		

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Abbreviations

²BRL   GALLING, K. (ed.), ²1977 (1937), Biblisches Reallexikon, HAT 1,1, Tübingen

GGG   KEEL, O./UEHLINGER, C., ⁵2001 (1992), Göttinnen, Götter und Gottessymbole, QD 134, Freiburg/Basel/Vienna

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Introduction to the History and Concept of the EBW
Encyclopedia of Material Culture of the Biblical World

1. Profile and Outline

The *Encyclopaedia of Material Culture in the Biblical World* (EBW) is a completely revised and updated English version of the former German "Standardwerk" *Biblisches Reallexikon* (BRL). First published in 1937 by J. C. B. Mohr (Paul Siebeck), Kurt Galling (Tübingen) prepared a second edition (²BRL) which appeared in 1977. The BRL focussed on the material culture from the Neolithic Age to the Roman period, giving attention primarily to the material from the Bronze and Iron Ages. The geographic region covered in the BRL included the modern states of Israel, the Palestinian Authority, the Hashemite Kingdom of Jordan, and parts of Lebanon and Syria. While the temporal span commences long before the cultures directly associated with the Bible – beginning in the late prehistoric periods, more or less at the time of the appearance of permanent settlements and domesticated agriculture – this provides a comprehensive background and starting point for the study of the cultures from this region. Thus, its aim was not to be a Bible dictionary but rather to document and present systematically the archaeological material from the Southern Levant. Its goal was to enlighten the everyday-culture by using the available lexical, epigraphical, iconographical, and archaeological evidence.

In past decades, the BRL has been a reference work for biblical scholars and archaeologists. Since its first publication, the material finds for the entries have increased and many methods have changed. Therefore a new edition became a necessary task. In the year 2007, the publishing house Mohr Siebeck entrusted Angelika Berlejung (University of Leipzig, Germany) as main editor, and P. M. Michèle Daviau (Wilfried Laurier University, Waterloo, Ontario, Canada), Jens Kamlah (University of Tübingen, Germany), and Gunnar Lehmann (University of Beersheva, Israel) as area editors with this English edition titled "Encyclopedia of Material Culture in the Biblical World." In order to stress the continuity to the previous work**,** this is accompanied by the subtitle "*A new Biblisches Reallexikon*". Following the trails of the former BRL**,** the EBW maintains the geographical and chronological framework as well as the main objectives:

First, the EBW presents primarily the records of Palestine (= the Southern Levant) limited by (excluding) the southern fringe of Lebanon and Hermon (north), the Wadi al-Ariš, the Sinai peninsula, and North-Arabia (south), the Mediterranean Sea (west), and the Transjordanian desert (east). If necessary and fitting to the entry, the neighboring evidence from Syria, Lebanon, Egypt, and Mesopotamia is included.

Second, the EBW presents the material from the very first attestation onwards (it therefore differs depending on each entry), yet its focus is the Bronze and Iron Ages including the Persian period. If necessary and fitting to the entry, the Hellenistic and Roman periods are included.

Third, the EBW entries do not only list or mention the material data but try to synthesize and interpret it within the horizon of a history of the Southern Levantine culture, economy, technical development, art, and religion.

Fourth, the EBW presents and documents the material culture based on the archaeological, epigraphical, and iconographical data in historical order.

Fifth, the EBW presents and documents the state of actual research.

Compared to the first and second editions of the BRL, there are some basic changes:

A. The EBW has a main section with about 120 articles a = nd an introductory part pertaining to I. Chronological Problems and the Chronology of the Encyclopedia of Material Culture of the Biblical World, II. Archaeology and Cultural History, III. Epigraphy, and IV. Iconography.

B. Compared to the ²BRL, the EBW is not so much a *biblical* handbook. Therefore the biblical evidence is not its main concern. It is a new lexicon on the material culture *in the biblical world*. Accordingly, it is a reference book for biblical scholars as well as for archaeologists.

C. The EBW has no entries on persons or place names, animals or plants as living beings.

D. The EBW is an international project. Its articles were written by a team of specialists from 15 different countries.

2. Structure of the Articles

The articles are arranged according to the following structure:

1. General introduction. This first paragraph outlines problems, gives definitions, defines criteria of identification, sketches functions, and/or mentions the Hebrew term(s).
2. Basic types, major and typical elements, phenomenology. This paragraph also includes information about the geographical distribution, and/or local products/imports.
3. Material (with place of origin)
4. Diachronical description of the finds. At the beginning the very first and the very last attestation are mentioned.
   4.1. Detailed description, starting in the Late Bronze Age
   4.2. Iron Ages
   4.3. Babylonian-Persian periods
   4.4. Hellenistic period (short outline)
5. Short synthesis. Origin (of the type, motif, etc.), outline of the history of the development, major changes, and main geographical (distribution) area.
6. Biblical correlation/attestation (if available)
7. Literature

It is clear, however, that this structure does not fit all articles. In these cases, subheadings or italics of the key word in the first sentence indicate what the numbering and paragraph refer to.

I. Chronological Problems and the Chronology of the
Encyclopedia of Material Culture of the Biblical World

1. Introduction

Any thorough analysis of the human past or its explanation requires in the first place a temporal sequence of the data. In this sense chronology is not just the study of time as the notion suggests, but rather the dating of the data and, thus, the question "When did it happen?" Chronology, thus, addresses the temporal sequence of events, of human activity and interaction, and eventually the question of when the material evidence of human activity, the archaeological artifacts, were produced and deposited. In a strict sense all chronologies are relative, but for practical reasons in historiography and archaeology there is a distinction of relative and absolute chronology.

A chronology of the human past obviously starts with the early beginnings of human beings. Since the EBW is mainly concerned with the biblical world, it focuses on the LBA through the Hellenistic period ending with Pompey and his campaign in the Levant in 63 B.C.E.

The earliest times of human development before the invention of writing are called prehistory and almost all evidence of human activity in prehistory is archaeological. Thus, archaeological chronologies reach further back in time than historical ones. Written texts did not appear before the end of the 4th mill. B.C.E. in Mesopotamia during the Uruk culture, soon followed by the first Egyptian writing. Historical periods and historical chronologies begin with these early texts at the end of the 4th mill.

2. Relative Chronology

Relative chronology distinguishes a chronological sequence of relevant artifacts, that is, objects of human creation, independent of its age expressed in years. In principle, a relative chronological sequence can be created by sorting units of relevant data in relation to each other into earlier units and later ones. Such units may include historical events and individuals or archaeological artifacts.

A sequence established may reflect the deposition of archaeological finds in the stratigraphy of an archaeological site. Stratigraphy is a basic concept in archaeology and follows the Law of Superposition. This law determines that in the case of archaeological sites with several layers of soil and debris sedimentation the lower layers and their context were deposited earlier than the layers and their context deposited directly on top of them. This simple law creates chronological sequences of archaeological contexts, layers with architecture and artifacts for example. Thus, a relative chronology is established with archaeological data that is in a relative chronological sequence.

Relative chronology can also reflect the sequence of artifacts as established with the help of a typological analysis, such as a seriation statistic. A basic assumption in typological analysis is that similar artifacts are considered as being contemporary. These operations result in chronological sequences of assemblages of material culture that are the main elements in the construction of periodizations. The terminology of periodization often seems to reflect technological or historical change. There are "Bronze Ages" and "Iron Ages," a "Persian period" and a "Byzantine period." Such a terminology blurs the fact that the names of these periods do not reflect the reality of technological change (WEIPPERT 1991). There was, for example, no true bronze (copper and tin alloy) during the "EBA" and iron appeared first during the "MBA."

Political change is also not necessarily reflected in the material culture. Alexander's conquest of the Levant in 333/332 B.C.E. did not cause an immediate change in the material culture in the conquered territories. Despite this, archaeologists labeled the time after Alexander's conquest the Hellenistic period.

Generally, there are artifacts more sensitive to chronological change than others. Seals and coins are an excellent dating tool reflecting political change (MÜNGER 2005), especially seals and coins with inscriptions which provide a link between relative and absolute historical chronology. The dates of the production of objects such as seals and coins provide a *datum post quem* for the archaeological context in which they were found. Seals and coins are relatively rare finds, however, and often remained in use for generations as heirlooms. Thus, they are often found in contexts which date long after the time of their original production.

Ancient ceramics, in contrast, provide excellent data for ancient relative chronologies in the Bronze and Iron Ages. Pottery was first in-

vented during the Late Neolithic periods and became a ubiquitous set of artifacts appearing in large numbers and being sensitive to chronological change. Since pottery breaks easily, ceramic assemblages had to be replaced swiftly and can often – as a general rule – be dated within one or two human generations.

An additional problem arises from the nature of the sources, ancient texts, and material culture. While ancient texts such as royal inscriptions often relate to extraordinary events that were worthy of being recorded, material culture reflects in most cases mundane everyday actions. Except for economic texts such as delivery lists or receipts, ancient texts and their events are thus barely reflected in material culture. Archaeology usually does not provide direct information on human individuals or events that we know from an ancient text, but reflects processes that took place in a day-to-day routine.

3. Absolute Chronology (Table 1)

Absolute dating of historical and archaeological data in calendar dates is certainly the goal of any chronological analysis. Linking relative archaeological sequences with absolute historical calendar dates requires a dialogue between archaeology and historiographic sciences. Creating an interface for these different approaches proved to be difficult. The distinction of varying temporal dimensions of change in the human past established by the French historian Fernand Braudel provides a methodological foundation for this dialogue. He distinguished between long, medium, and short-term changes in the human interaction with her/his world. Long-term changes are so slow that humans as a rule do not even realize this kind of change. Long-term changes, often called *la longue durée* (Braudel), include geomorphological processes, or genetic developments of the human body that occur over centuries or millennia.

Braudel's "*histoire conjoncturelle*" studies the medium term developments which include processes of change in social and economic history; economic, agrarian, and demographic systems; the structural history of eras, regions, and societies. These developments take decades or centuries to develop in a slow but somewhat perceptible rhythm for contemporary societies. In antiquity, the settlement of ancient Israel in the central highlands of Palestine or the development of Mediterranean maritime trade relations of Greeks and Phoenicians would have been medium-term processes. In modern times, examples could be the development of capitalism or western democracy.

Short-term processes of the "*histoire événementielle*" are changes measured in days, weeks, months or a few years. Such events occupy the mind of contemporary humans and they often appear to them to be the most important changes that occurred. Thus, ancient texts are preoccupied with the history of events concentrating on single individuals and events such as a war or a short-term economic crisis.

As a result, historiographic research often focusses on histories of events, while archaeology concentrates on long- and medium-term developments. This difference is to a large extent inherent to the nature of the sources that these sciences analyze, texts and material culture respectively. Texts were created by contemporary humans preoccupied with the events of their lives. The material record studied by archaeologists was created unconsciously over long- and medium-term periods of development. Attempts at cooperation between historiographic sciences and archaeology are often failed dialogues in which each side misses the essential interests and chronological scope of the other.

Methods for absolute dating include historical studies evaluating textual sources and scientific techniques analyzing material culture or objects as main sources. Until the development of scientific techniques such as Willard Libby's radiocarbon dating in 1949, dating in archaeology depended almost entirely on historical methods. Archaeologists relied on the correlation of archaeological evidence with chronologies and calendars that people in ancient times had established themselves. These chronologies and calendars were passed on in historical documents. The two ancient chronologies that are of most importance for the biblical world are the Egyptian and the Mesopotamian historical tradition that go back in time as far as the 3rd mill. B.C.E. (Table 1).

Historical events mentioned in texts of ancient Syria and Palestine during the 3rd through 1st mill. B.C.E. must be connected to either of these traditions and any attempt at absolute dating in ancient Syria-Palestine requires synchronization with Mesopotamia or Egypt, where more secure chronologies have been established. Unfortunately, there is still no secure synchronization between the Mesopotamian calendar and the Egyptian.

3.1. Absolute Historical Dates: The Egyptian Chronology

The Egyptian chronology for the years between 945–330 B.C.E. is reliably dated on the basis of astronomical observations, synchronisms, and the

historically well dated reigns of certain pharaohs. After 664 B.C.E., Greek historiography provides increasingly safe dates. Before 945 there is no coherent framework of secure dates and no fixed points to relate the well known relatively dated sequence. Most relevant original records of this period are lost or are badly damaged such as the papyrus in Turin at the Museo Egizio. This fragmentary list of Egyptian priests of the Ramesside period (ca. 1300 B.C.E.) copied the names and reigns of the first kings from Menes down to the present from the annals. Another important source is Manetho's history of Egypt and king's list in Greek originally written for Ptolemy II Philadelphos that survived only in fragments with many changes and copy errors.

For the years between ca. 1550–1050 B.C.E. the chronology of the Egyptian texts depends on observed astronomical events such as the eclipses of the sun and the moon, the rise of Sothis (Sirius), and the "moon-days" that are based on certain days identified in Egyptian sources as "exactly new moon."

In ancient Egypt two different calendars were in use. The civil one was based on 365 days and a number of extra days to correct the difference the civil calendar gained on the solar year. The Sothic calendar was based on the heliacal rising of the Sothis (Greek for "Dog Star" or Sirius, Egyptian *Sopdet*). Because of differences between the civil calendar and the rise of the Sirius, the Egyptian New Year's Day and the rising of Sothis coincided only every 1,460 years, the so-called Sothis cycle.

Although it is possible to calculate the time of the rise of the Sirius, it is important to take into account the position of the observer who reports his observations. Scientists do not agree on where the Sothis-rise was observed and at least three different observation points are discussed with different dates of the Sirius's rise. Thus, there are three chronologies, a "high" one depending on Heliopolis as point of observation, a "short" one which depends on Thebes, and an "ultra short" one relying on observations at Elephantine.

Among the documented Sothis rises is one during the 7th year of a pharaoh who was either Sesostris II or III and another one recorded during the 9th year of Amenhotep I. The different dates for Amenhotep I would be:

High Chronology   = 1544–1523 B.C.E.
Short Chronology   = 1525–1504 B.C.E.
Ultra Short Chronology = 1515–1494 B.C.E.

The margin of error is thus a matter of 10–30 years. The chronology recommended in this encyclopedia is the one based on the research of HORNUNG/KRAUSS/WARBURTON (2006; see also KITCHEN 1992) (Table 2).

3.2. Historical Dates: The Mesopotamian Chronology and Calendar

In Babylonia, lists of the kings and year names, called "year lists" or "date lists," constitute the foundation of the chronology. The Assyrian chronology is based on eponym lists (list of state officials). Lists of rulers and other officials as well as dated astronomical texts provide a safe chronology up to the year 910 B.C.E. Due to the lack of historical sources from the beginning of the 1st mill. and the transition from the 2nd mill. B.C.E. the absolute chronology for this period is uncertain. There is a relatively dated sequence for the approximately 800 years between the end of the 1st dynasty of Babylon and the Akkadian dynasty of Sargon I. The absolute chronology of this sequence depends on very few baseline observations that provide several options for possible absolute dates.

The absolute dates of the 3rd and 2nd mill. are essentially contingent on *one* Old Babylonian text. This text mentions the rise and the setting of Venus observed during the 8th year of the Babylonian king Ammiṣaduqa. This text is preserved only in a garbled Neo-Assyrian tradition of the 7th cent. B.C.E. and provides four or five possible dates for the astronomical event and thus for the 8th year of Ammiṣaduqa. For chronological and historical reasons only three possible options are relevant for the Mesopotamian chronology. These options provide the following dates for the most prominent Old Babylonian king, Hammurabi, with a margin of error as high as 120 years:

Long Chronology   = 1848–1806 B.C.E.
Middle Chronology   = 1792–1750 B.C.E.
Short Chronology   = 1728–1686 B.C.E.

Today the Middle Chronology is probably most widely accepted and supported by dendrochronological studies (MANNING et al. 2016). There is also an alternative and controversial ultra-low chronology (GASCHE et al. 1998) dating Hammurabi to 1696–1654 B.C.E. In general, there is considerable unease among the experts concerning the reliability of the Venus dates observed during the 8th year of the king Ammiṣaduqa. A comprehensive international research project called "Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B. C." concluded that the Short Mesopotamian Chronology provides a better fit with the currently available dates in the Levant and ancient Egypt (BIETAK/CZERNY 2007).

Dates	Egypt	Southern Levant/Jordan	Syria/Lebanon	Mesopotamia
10,200–5000	Neolithic	Neolithic 10,200–5000 Natufian (12,500–9500) Pre-Pottery Neolithic (9500–6500) Pottery Neolithic (6500–5000)	Neolithic	Neolithic (Late Zarzian-Ubaid 3)
5000–3700	Badarian Culture Naqada I	Chalcolithic 5000–3800/3700	Ubaid 4 Late Chalcolithic	Ubaid 4 Early Uruk
3600–3000	Naqada II–III	Early Bronze Age I 3800/3700–3050	Early Bronze Age I 3700–2900	Middle-Late Uruk Jemdet Nasr
3000–2400	Archaic period 1st–2nd Dyn. / Old Kingdom 3rd–6th Dyn.	Early Bronze Age II 3050–2850	Early Bronze Age II 2900–2400	Early Dynastic I–III
2400–2200	7th–8th Dyn.	Early Bronze Age III 2850–2500/2400	Early Bronze Age III 2400–2250	Akkadian period 2276–2095
2200–1900	1st Intermediate Period 9th–10th Dyn. / Middle Kingdom 11th Dyn.	Intermediate Bronze Age 2500/2400–2000 (= Early Bronze Age IV or Middle Bronze Age I)	Early Bronze Age IV 2250–1900	Ur III period 2047–1939
1900–1700	12th Dyn. / 2nd Intermediate Period	Middle Bronze Age I 2000–1700 (= Middle Bronze Age IIA)	Middle Bronze Age I 1900–1700	Isin-Larsa period 1939–1728
1700–1600	13th–14th Dyn.	Middle Bronze Age II 1700–1590 (= Middle Bronze Age IIB)	Middle Bronze Age II 1700–1590	Old Babylonian period 1728–1530
1600–1530	15th–16th Dyn. (Hyksos) 17th Dyn.	Middle Bronze Age III 1590–1500 (= Middle Bronze Age IIC)	Middle Bronze Age III 1590–1530	
1530–1400	New Kingdom	Late Bronze Age I 1500–1400	Late Bronze Age I 1530–1400	Kassites 1530–1155 Middle-Assyrian period 1365–911

1400–1300	18th Dyn.	Late Bronze Age IIA 1400–1300 (Late Bronze Age II)	Late Bronze Age II 1400–1300	
1300–1200	19th Dyn.	Late Bronze Age IIB 1300–1190 (= Late Bronze Age III)	Late Bronze Age II 1300–1200	
1200–1150	20th Dyn.	Late Bronze Age III (= Iron Age IA or Late Bronze– Iron Age I Transition) 1190–1130	Iron Age IA 1190–1150/1125	
1150–950	3rd Intermediate Period 21st Dyn.	Iron Age I 1130–975/925	Iron Age IB 1150/1125–950	
950–850		Iron Age IIA Early 975/925–900/880	Iron Age IC 950–850	
850–800	22nd Dyn. 23rd Dyn.	Iron Age IIA Late 900/880–830/800	Iron Age IIA 850–800	Neo-Assyrian Empire 911–612
800–720		Iron Age IIB 830/800–700/650	Iron Age IIB 800–740/720	
720–605	24th Dyn. 25th Dyn.	Iron Age IIC 700/650–600	Iron Age III 740/20–538	
605–538	Saite-Persian period 26th Dyn.	Babylonian period (= Iron Age IID) 600–538	Babylonian period	Babylonian Empire 612–538
538–332	27th Dyn. 28th Dyn. 29th Dyn. 30th Dyn. 31st Dyn.	Persian period 538–332	Persian period 538–332	Persian period 538–332
332–63	Hellenistic period Ptolemaic Empire 323–30	Hellenistic period Ptolemaic Empire 323–30 Seleucid Empire 312–63	Hellenistic period Seleucid Empire 312–63	Hellenistic period Seleucid Empire 320–129 Parthian Empire after 129

Table 1: General Chronology of the Biblical World
Egyptian chronology after HORNUNG/KRAUSS/WARBURTON 2006; Syria and Lebanon after LEHMANN 1996; MAZZONI 2000; FAUST/KATZ 2019–2020.
In parentheses are alternative notions.

ARCHAIC PERIOD
   1st Dyn. (2900–2730 B.C.E.)
   2nd Dyn. (ca. 2730–2590 B.C.E.)
OLD KINGDOM
   3rd Dyn. (ca. 2592–2544 B.C.E.)
   4th Dyn. (ca. 2543–2436 B.C.E.)
   5th Dyn. (ca. 2435–2306 B.C.E.)
   6th Dyn. (ca. 2305–2118 B.C.E.)
   8th Dyn. (ca. 2150–2118 B.C.E.)
1ST INTERMEDIATE PERIOD
   9th–10th Dyn. (ca. 2118–1980 B.C.E.)
MIDDLE KINGDOM
   11th Dyn. (ca. 2080–1940 B.C.E.)
2ND INTERMEDIATE PERIOD
   12th Dyn. (ca. 1939–1760 B.C.E.)
   13th Dyn. (ca. 1759–1630 B.C.E.)
   14th Dyn. (?)
   15th Dyn. (Hyksos) (ca. ?–1530 B.C.E.)
   16th–17th Dyn. (ca. ?–1540 B.C.E.)
NEW KINGDOM
   18th Dyn. (ca. 1539–1292 B.C.E.)
   19th Dyn. (ca. 1292–1191 B.C.E.)
   20th Dyn. (ca. 1190–1077 B.C.E.)
3rd INTERMEDIATE PERIOD
   21st Dyn. (ca. 1076–944 B.C.E.)
   22nd Dyn. (ca. 943–746 B.C.E.)
   23rd Dyn. (ca. 845–730 B.C.E.)
   24th Dyn. (ca. 736–723 B.C.E.)
   25th Dyn. (ca. 722–655 B.C.E.)
SAITE-PERSIAN PERIOD
   26th Dyn. (ca. 664–525 B.C.E.)
   27th Dyn. (ca. 525–404 B.C.E.)
   28th Dyn. (ca. 404–399 B.C.E.)
   29th Dyn. (ca. 399–380 B.C.E.)
   30th Dyn. (ca. 380–343 B.C.E.)
   31st Dyn. (ca. 343–332 B.C.E.)
HELLENISTIC PERIOD (332–30)

Table 2: Egyptian Dynasties
based on HORNUNG/KRAUSS/WARBURTON 2006

3.3. Historical Dates:
The Biblical Chronology (Table 3)

The biblical texts provide a relatively dated sequence for persons and events that occur in the different books of the canon. Due to the heterogeneous nature of these texts some of these dates are completely fictitious (e. g., the sequence and relative chronology between creation, the genealogies of the primeval narrative or the patriarchs, Exodus, and Solomon's Temple building or the arrangement of some selected local rulers in the Book of Judges), while others – starting with the state formation – are generally believed to be based on ancient royal chronicles and considered reliable historical data (Books of Kings). Starting with Saul, David, and Solomon, the bib-

lical tradition provides problematic dates. The 40 years of David and Solomon appear to be standard numbers (one generation) and there were apparently no reliable dates available for the earlier traditions. There is a relatively dated sequence of rulers of Israel and Judah that provides reasonable dates back in history until King Rehoboam. Several problems of the relative chronology in the Books of Kings remain. Was the accession-year counted as the first regnal year of a king or not? The accession-year is the period from the king's taking the throne until the start of the New Year. Were rulers with the same name confused? How was coregency of two individuals – usually the king and the crown-prince – dealt with? Were there special calendar practices for regnal years?

Although these and other questions cause some discussion about the relatively dated sequence of rulers of Israel and Judah, the various reconstructions of the biblical chronology between the 10th and the 6th cent. B.C.E. differ only within a margin of error of a few years. The absolute dates for this sequence are contingent on the Assyrian and the Egyptian chronologies. Absolute dates provided by events recorded in Mesopotamia or Egypt include, for example, Ahab's participation in the Battle of Qarqar against Shalmaneser III in 853, Jehu's tribute to the same Assyrian king in 841, the fall of Samaria in the fifth year of Shalmaneser V (722), or Sennacherib's campaign against Judah in 701 (GERTZ et al. 2010:608).

3.4. Methods of Exact Sciences

The technical aspects of the various scientific methods to establish absolute dates for archaeological contexts are outlined in the handbook of RENFREW and BAHN (2004) and do not have to be repeated here. The most important methods for the biblical periods are the radiocarbon method and dendrochronology (tree-ring chronology). For certain research designs it might be useful to employ also thermoluminiscence or archaeo-magnetism.

Calibrated radiocarbon dates have played a key-role in recent chronology debates concerning the ANE. These dates do not provide a single undisputed calendar date for samples taken from archaeological contexts. Radiocarbon dates are accompanied by an estimate of the probable error and thus given with the range of a plus/minus term of up to several decades. This range of uncertainty depends on archaeological sampling procedures, counting errors, background cosmic radiation, calibration curves, and other factors involved. Obviously, this uncertainty allows a vivid debate on the matter. To reduce such uncertain-

Archaeological Periods	Kings of Israel	Kings of Judah	Ancient Near East
Iron Age IB	Saul 10th cent.		
	Ish-Bosheth 10th cent.		
Iron Age IIA Early	David 10th cent.		
	Solomon 10th cent.		Shishak/Sheshonq
	Jeroboam I (?)–907	Rehoboam (?)–910	
	Nadab 907–906	Abijam 910–908(?)	
	Baasha 906–883	Asa 908–868 (?)	
	Elah 883–882		
	Zimri 882/878		
Iron Age IIA Late	Omri 882/878–871/870		
	Ahab 871/870–852/851	Jehoshaphat 868–852/847*	Shalmaneser III 858–824
	Ahaziah 852/851–851/850	Jehoram 852/847–843/842*	
	Joram 851/850–843/842	Ahaziah 843/842	
	Jehu 843/842–816	Athaliah 843/842–838/837	Hazael
		Joash 838/837–799	Bar-Hadad
	Jehoahaz 816–800		Adad-narari III 810–783
Iron Age IIB	Jehoash 800–785	Amaziah 799–771	
	Jeroboam II 785–745	Azariah (Uzziah) 785/771–734*	
	Zechariah 745	Jotham 757–742*	
	Shallum 745		
	Menahem 745–738/737	Ahaz 742/734–723*	
	Pekahiah 738/737–736		Tiglath-pilesar III 744–727
	Pekah 735–732		
	Hoshea 731–724/723		Sargon II 721–705
		Hezekiah 723–695	Sennacherib 704–681
Iron Age IIC		Manasseh 694–640	Esarhaddon 680–669
		Amon 640/639–638	Ashurbanipal 668–612
		Josiah 638–609/608	Nabopolassar 626–605
		Jehoahaz 609/608	
		Jehoiakim 609/608–598/597	Nebuchadnezzar 605–562
		Jehoiachin 598/597	
		Zedekiah 598/597–587/586	

* Includes years as coregent (dates: GERTZ et al. 2010:608)

Table 3: Kings of Israel and Judah

ties radiocarbon dates should be based on short lived samples such as grain that was carbonized within a short period after its harvest. Using samples from wooden beams that were continuously re-used and recycled over a long period will provide a date for the cutting of the beam, but not for the construction of the layer in which such a beam was re-used. This is a potential source of error that has been labeled the "old wood effect."

Dendrochronology or tree-ring dating is an increasingly important dating technique for the ANE. It is dependent on a master sequence of wood species that provide continuous chronological data for a particular region. Such sequences are available, for example, in Anatolia, whereas there is a certain lack of adequate samples for the Southern Levant (Manning et al. 2016).

4. Chronology Debates and the Chronology of the EBW

The chronology of the ANE and of the Southern Levant in particular is under constant debate. In recent years the chronology of the Chalc., the Bronze Ages, and the Iron Age were modified in accordance with new scientific dates and correlations with the historical record. Comparing the current chronology of the Southern Levant with the chronologies published before 1996 reveals major changes that have not yet been fully published in standard handbooks.

The *New Encyclopedia of Archaeological Excavations in the Holy Land* (NEAEHL) provides a list of historical and archaeological periods which is largely obsolete today (1993/NEAEHL 4:1529). Recently, a new handbook available only in Hebrew offers an updated comprehensive summary of the chronology of the Southern Levant (Faust/ Katz 2019–2020).

Many of the dates presented here are now modified since the 1993 edition of the NEAEHL: the end of the Chalc. and the beginning of EB I are now dated around ca. 3,800 B.C.E. The multi-disciplinary "Associated Regional Chronologies for the Ancient Near East and the Eastern Mediterranean" and the "Synchronisation of Civilisations in the Eastern Mediterranean in the 2nd Millennium B. C." suggested a revision of the chronologies of the Bronze Ages.

As for the end of the LBA there is increasing evidence that this period lasted into the early 12th cent. B.C.E., the traditional date of 1200 B.C.E. as provided, for example, by the NEAEHL should be revised. LB III (or Iron Age IA) of the 12th cent. B.C.E. is characterized by innovations and continuations. Local LBA material culture such as ce-

ramics continues in Iron Age IA, while Cypriot and Mycenaean pottery imports ceased. Among the innovations are the Philistine material culture that appeared in the southern coastal plain and the intensive new settlement in the Central Hill Country. At the same time small Bronze Age city-states continued to exist in the Jezreel valley and the Shephelah that resemble in almost all aspects the material culture of the LBA. Another continuation is the Egyptian domination of at least the southwestern part of the Southern Levant during most of the 12th cent. B.C.E.

Unfortunately, there are a number of alternative names for the ancient periods in the Southern Levant. The Intermediate Bronze Age (IBA) is also called "Early Bronze Age IV" (EB IV) or "Middle Bronze Age I" (MB I). The Middle Bronze Ages I–III can be labeled "Middle Bronze Age IIA, IIB, and IIC." The "Late Bronze Age III" (LBA III) in the terminology of Tel Aviv University is known as "Iron Age IA" at the Hebrew University of Jerusalem.

There has been an especially vigorous debate on the Iron Age chronology of the Southern Levant. Before 1996, the traditional chronology of the 11th through 9th cent. B.C.E. was constructed mainly by correlating archaeological phenomena with biblical narratives and with a Bible-derived chronology. In 1996 Israel Finkelstein proposed to lower the traditional dates of the Iron Age (Finkelstein 1996; 2005). One of Finkelstein's key points was the date of Megiddo Stratum VA/ IVB and the construction of the Iron Age palace in Jezreel. Both sites were excavated during the early 1990s and it soon became clear that the pottery in Megiddo Stratum VA/IVB that was considered to be from the Solomonic period was identical with that of the palace construction at Jezreel that was dated to the times of Ahab. Could it be that the assumed time difference of some 80 years did not find any expression in the development of pottery? Finkelstein concluded that Megiddo Stratum VA/IVB should be dated to the time of King Ahab. Thus, the architecture and artifacts dated previously to the period of King Solomon were now assigned to the Omride period by Finkelstein. This triggered an intensive discussion on the chronology of this period (Ben-Tor 2001; Kletter 2004; Mazar 2005; 1997).

The debate shifted soon into an archaeological stalemate that archaeologists have tried to resolve with radiocarbon dating. A comprehensive radiocarbon program was initiated by Ayelet Gilboa, Ilan Sharon, and Elisabetta Boaretto that involved several hundreds of measurements from 21 sites in Israel. This project created the extensive databases necessary for the resolution of the tight chronological problems typical of histori-

cal periods involved in this debate. The results of the first phase of this comprehensive dating analysis favored a new, lower chronology (SHARON et al. 2007). After initial refusal, Amihai Mazar also modified the traditional chronology (MAZAR 2005).

Although emphasizing their differences, the leading protagonists thus find themselves now within a margin of difference so small that one can talk now about *one* chronological system. Finkelstein and Mazar still disagree about some 50 years for the transition from Iron Age IB to Iron Age IIA. Mazar dates this transition into the first half of the 10th cent. B.C.E., while Finkelstein dates it to the second half of that century. Given the lack of precise resolution in ceramic chronology, the difference of 50 years between Mazar and Finkelstein can be integrated into one new scheme. In other regions and periods archaeologists would probably not argue so fiercely about 50 years and one may assume that they do in this case only because these 50 years are considered to be the time of David and Solomon, a topic loaded with ideologies, religious beliefs, and politics.

The controversy is essentially over a transitional phase around 950 B.C.E. This transition from Iron Age I to Iron Age IIA may have occurred at some sites somewhat earlier and at others a few years later. Thus, the transition may have been a process of several decades before and after ca. 950 B.C.E. and it is impossible to achieve a more precise resolution with the techniques available today such as pottery chronology and radiocarbon dating (SHARON et al. 2007).

Most archaeologists agree today on a new subdivision of Iron Age IIA into two phases during the 10th and 9th cent. B.C.E. into the sub-phases Iron Age IIA Early and Late (HERZOG/SINGER-AVITZ 2004; 2006).

The radiocarbon dates oust somewhat the Shishak (Sheshonq I) campaign of its prominent role in past chronology debates. Although the list found in Karnak, Egypt, which names at least 154 towns that Shishak claimed to have dominated is mentioned in the Bible for the fifth year of king Rehoboam (1 Kgs 14:25–28; 2 Chr 12:2–12) there are a number of problems using this campaign as a chronological anchor. Shishak's rule was dated to ca. 945–924 B.C.E., his campaign to the Southern Levant is assumed to have taken place in 926/925 B.C.E. (KITCHEN 1973:72–76). It is often overlooked, however, that these dates cannot help dating the chronology of ancient Israel, because Kitchen dated Shishak primarily by references to biblical dates. In the past, archaeologists assumed that destructions found at various sites can be associated with Shishak's campaign. It is now debat-

ed whether the sites in Shishak's list were indeed destroyed by this pharaoh.

Yet, there seems to be a correlation between the list of Shishak and the archaeological record of the Southern Levant. In his records the pharaoh made reference to sites in the Negev that were only founded in Early Iron Age IIA. This means that Iron Age IIA had already begun by the time Shishak arrived in the Southern Levant. Moreover, the pharaoh mentioned a flourishing settlement in the Negev, which must have already existed for some time. Thus, the beginning of Early Iron Age IIA must have been before ca. 940–920 B.C.E.

Since we are still lacking sufficient radiocarbon dates for Iron Age IIA Late, the current discussions correlate this phase mainly with the historical biblical narratives. Thus, Iron Age IIA Late could begin with the developments of Iron Age in the Southern Levant under the Omrides after 880 B.C.E. The phase also includes the later Aramean supremacy installed by Hazael and may have ended with the rise of a new powerful Israelite government under Jehoash and Jeroboam II between 800 and 780 B.C.E.

While the beginning of Iron Age IIA is now dated by radiocarbon dates (SHARON et al. 2007), the transition from Iron Age IIA Early to Late and the end of Iron Age IIA Late are still uncertain. At present it is only an assumption to identify the rise of the Omride Dynasty in 882 B.C.E. as one of the major factors in the transition from Iron Age IIA Early to Late. We also do not know precisely the historical impact of Hazael regarding the end of this period. Archaeologists presently only begin to differentiate the developments in the north and the south of the Southern Levant during this period (HERZOG/SINGER-AVITZ 2004; 2006).

Another major question is the end of Iron Age IIB. It is increasingly realized that the material culture of the 8th cent. B.C.E. was not entirely replaced with the Assyrian conquest by assemblages of Iron Age IIC. In fact, most ceramic types of Iron Age IIB continued at sites dated after 700 B.C.E. and the major pottery types of Iron Age IIC were introduced only around 650 B.C.E. This debate is expressed in our chronological table below with dating the transition from Iron Age IIB to Iron Age IIC at "700/650 B.C.E."

Later phases of the Iron Age, the Persian period, and the Hellenistic-Roman chronology are currently not under debate and the relationship between material culture and its archaeological phases with the historical calendar dates remain as outlined in the current standard literature.

The relative chronologies of Jordan, Syria, and Lebanon are based on local pottery styles and regional developments in the material culture

which are to some extent interconnected. Relative correlations between these regions are established with the help of imported artifacts. During the LBA these imports are mainly Cypriot and Mycenaean ceramics. During the Iron Age correlations are established especially with the help of Cypriot ceramics. Absolute dates are difficult to establish for the LBA, during the Iron Age the Assyrian and Babylonian records provide chronological benchmarks (LEHMANN 1996; MAZZONI 2000).

For Syria and Lebanon, a distinct chronological terminology was developed that closely follows the internal developments in the region (AKKERMANS/SCHWARTZ 2003; HEINZ 2002; MAZZONI 2000). The Jordanian chronology relates closely to the one established for the Southern Levant. Although Jordan developed a distinct material culture during the Bronze and Iron Ages, the social and economic processes in the country run similar to the ones in the Southern Levant and the absolute chronology of Jordan is currently still dependent on the one developed for the Southern Levant (MACDONALD/ADAMS/BIENKOWSKI 2001; STAGER 2000; HOMÈS-FRÉDÉRICQ/HENNESSY 1986–1989).

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Gunnar Lehmann

II. Archaeology and Cultural History

1. Objectives and Methods

Archaeology can be defined as the study of the human past, based on the discovery, analysis, and interpretation of various kinds of physical evidence. Broadly speaking, archaeology aims to understand the evolution of the human species, and the development and change in culture, society, and daily life of ancient humans from all periods.

The evidence on which archaeology is based is the material remains of, and related to, human activity. This can include: objects created by the humans themselves (such as stone → tools, → pottery, coins [→ finance], architecture, etc.); biological remains of humans (such as skeletons, feces, etc.); ecofacts – evidence on the ecological and biological surroundings of ancient humans; and environmental information – on the physical environment and surroundings of ancient humans.

Archaeological evidence is attained in various ways. This can be done through excavations of archaeological sites (on land or underwater), through surface survey (collecting archaeological finds from the surface of sites without excavation), from various types of remote sensing (such as aerial photography, ground penetrating radar, magnetometry, LiDAR scanning, etc.), as well as various ecofacts and geofacts which can be collected from the archaeological sites and their surroundings.

It is important to remember that the preservation of the human past is very partial, at best. Some materials (particularly organic) most often do not survive, and added to that, the long time since the periods of use, and various destructive activities and processes (such as corrosion, erosion, later building activities, etc.) can destroy the remains as well. Due to this, archaeologists attempt to recover evidence of the past from a wide range of types of evidence, utilizing a broad range of scientific disciplines and perspectives – whether from the human and social sciences, and to the biological and exact sciences. In fact, archaeology is one of the most inter- and multi-disciplinary fields of research that exists, due to its utilization of such a broad range of scientific perspectives for the study of the very diverse archaeological remains.

Archaeology is a relatively young field of enquiry. While the interest in the past and its physical remains existed even in the ANE and classical antiquity, the beginning of modern archaeology, and its development out of "antiquarianism," is seen only in the late 18th and early 19th cent. C. E. At this time, the techniques of archaeological excavation and the understanding of archaeological sites went through important developments, and in particular, the understanding of the principles of stratigraphy and object typology. In the last few decades, archaeology has developed substantially as well, with the incorporation of a broad range of analytic perspectives regularly used in the archaeologist's "toolkit."

2. History of Research

The archaeology of Palestine has often been embroiled in ideological and political issues. For many years, the study of the periods from the late Prehistoric periods (ca. 10,000 B.C.E.) and up to and including the Roman and Byzantine periods (ca. 1st cent. B.C.E.–4th cent. C. E.) was subsumed under the title of "Biblical Archaeology."

There are those who claim that the term – "Biblical Archaeology" – should not be used, as it shows preference to a specific written source, which carried a lot of religious and ideological baggage. Accordingly, some would prefer the terms, "Archaeology of Palestine" (as used in the present review), "the Archaeology of the Southern Levant," or "the Archaeology of the Bronze and Iron Age Eastern Mediterranean."

A second issue around which there is much controversy in and relating to "Biblical Archaeology" is whether or not this field is used – and misused – in the context of modern political and religious ideologies. In the past, and in some cases, even today, discoveries, or in some cases, lack of discoveries, have been used to buttress ideological views – claims that this or that find proves that the Land of Israel 'belongs' to the Jews, or that it doesn't; or claims that this or that find corroborates and disproves a specific biblical story – and thus strengthening, or weakening, religious beliefs.

The scientific discipline of the archaeology of Palestine – and "Biblical Archaeology" – began in the mid-19th cent. C. E., when scholars from various western (mainly colonial) countries (Edward
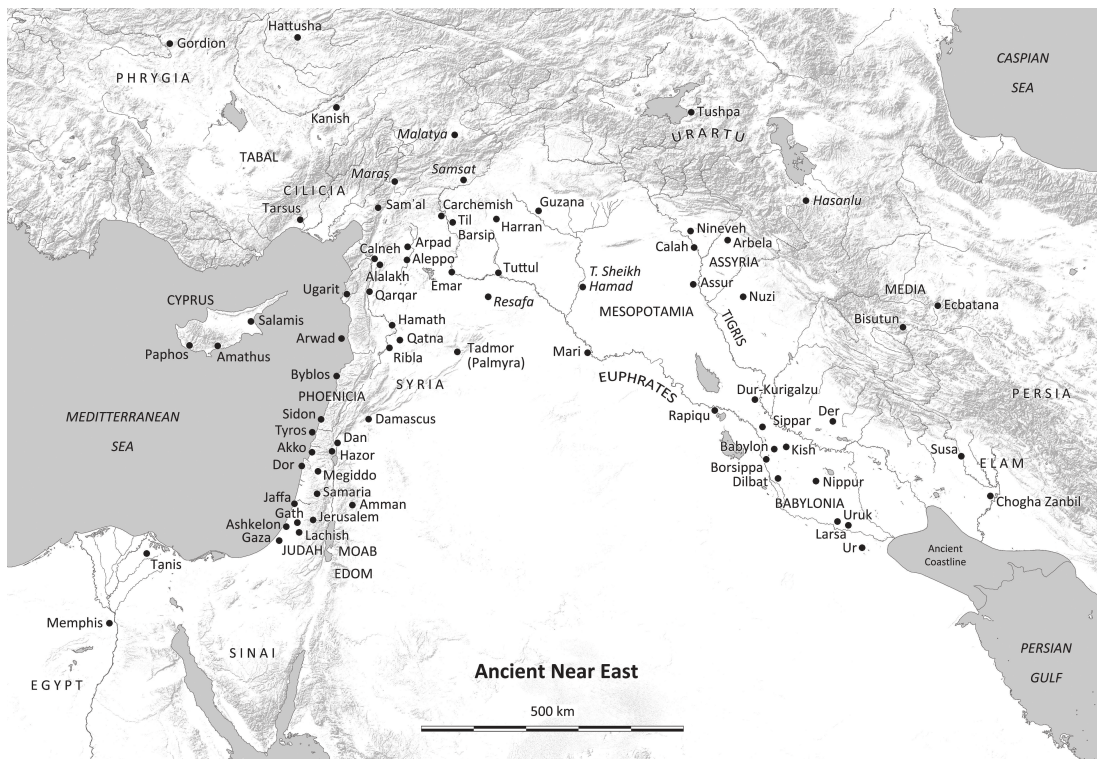
Introduction map #1: Ancient Near East

Robinson [USA]; Charles Warren/Charles Wilson [UK], Charles Clermont-Ganneau [France]) commenced the study of the history, cultures, and archaeological remains of the "Biblical Lands" – the ANE (→ map Introduction #1). The impetus behind these early researchers was both to clarify the cultural background of the Bible in the context of Judeo-Christian traditions and culture, but also, to enable the various western powers to stake political claims in the region. The British Palestine Exploration Fund (PEF) was the leading institution in the first few decades, but French, German, American, and even Russian societies were involved in early archaeological exploration of the region. Towards the end of the 19th and the early 20th cent., excavations commenced in the region, both in Israel/Palestine, but also in adjacent regions. Prominent archaeologists of this stage were figures such as William M. F. Petrie, Frederick Jones Bliss, R. A. Stewart Macalister, Gottlieb Schumacher, and Louis-Hugues Vincent, with early excavations conducted at urban sites such as Jerusalem, Gezer, Gath (Tell es-Safi), Tell el-Farah (S), Jericho, and Megiddo. At the same time, exploration and excavations in Egypt and Mesopotamia, and the decipherment of ancient Egyptian and Akkadian, added substantial sources. That

said, most of these early excavations were conducted in a rather haphazard manner, both in the excavations themselves and in their subsequent publications.

After the First World War, during the time of the British Mandate in Palestine (1922–1948), archaeological research in Israel/Palestine and neighboring lands increased considerably, and large-scale excavations were conducted at many sites. After World War II, the archaeology of the region in general and of Palestine in particular, went through a substantial development. Western scholars and institutions continued to work in the region, and archaeology in Israel, conducted extensively by Israeli scholars, developed, with excavations and surveys conducted at many sites and regions in Israel. While excavation methods substantially improved during this period, a major stumbling block was the lack of comprehensive publications of many of these excavations.

More recently, in the last two decades or so, extensive excavations, with extensive remains, continued to be carried out in Israel and surrounding countries (→ map Introduction #2). Of particular importance are the substantial methodological and theoretical developments that have occurred in the archaeology of Palestine in the last few dec-

Historical and Archaeological Sites

MEDITERRANEAN

SEA

DEAD

SEA

Tyros
T. er-Rashidiyeh
Ras el-'Ain
Qana
Kedesh
Achzib
Kh. Shema
Akko
Tell Keisan
Rosh Zayit
Shiqmona
T. Abu Hawam
'Atlit
Beth-Shearim
Tel Nami
Yoqneam
Dor
Megiddo
Caesarea
Taanach
Tel Zeror
Dothan
Bull Site
Samaria
Shechem
Apollonia-Arsuf
Tell Qasile
Aphek
Shiloh
Jaffa
Azor
Lod
Bethel
T. en-Nasbeh
Ai
Jericho
Gezer
Gibeon
Ekron
T. Batash
Jerusalem
Ashdod
Beth-Shemesh
Qumran
Gath
Abu et-Twein
Mar Saba
Ashkelon
T. Zippor
Herodium
Beth-Gubrin
Beth-Zur
Gaza
Lachish
Maresha
Mamre
T. el-'Ajjul
T. el-Hesi
Tell 'Etun
Hebron
Deir el-Balah
Tel Nagila
T. Beit Mirsim
'Ein Gedi
Abu Hureira
Tel Sera'
Kh. Rabud
Kh. Susiya
T. Jemmeh
T. Halif
Qubur al-Walaydah
Arad
Masada
Tell el-Farah (South)
Tel Beer-Sheba
T. 'Ira
T. Malhata
Beer-Sheba
T. Masos
H. 'Uza
H. Qitmit
'Ein Boqeq
Elusa
Aroer
Rehovoth
Kurnub

Dan
Tel Anafa
Hazor
Qasrin
Beth-Saida
Kinneret
Gamla
Kursi
Tiberias
Hippos
Sepphoris
Nazareth
Hammath Gader
Beth-Yerah
Gadara
Abila
Zeraqon
Beth-Shean
Ramoth-Gilead
Rehov
Pella
Tell el-Husn
T. Abu al-Kharaz
T. el-Farah (N)
Tell es-Sa'idiyeh
Tell el-Mazar
Jarash
Tulul edh-Dhahab
Sartaba
Tell Deir 'Alla
Alexandrium
Amman
'Iraq el-Emir
Tell el-'Umeiri
T. el-Ghassul
Tall Jawa
Heshbon
Mount Nebo
Jalul
Madaba
Ataroth
Kh. al-Mudayna (Thamad)
Dibon
Aroer
Balu'a
Bab edh-Dhra

40 km

Ancient Placenames

Modern Placenames

Introduction map #2: Archaeological and historical sites in the Southern Levant.

ades, which previously was not always a strong point of archaeological research in this region. In addition, the early focus on urban sites has been complemented by a closer view on rural sites and landscape archaeology. At most sites, meticulous excavation methods are employed, along with an expanding utilization of inter- and multi-disciplinary research designs, and a heightened awareness of theoretical perspectives in the planning, carrying out, and interpretation of archaeological excavations and research. Similarly, a substantial improvement in the amount of excavations that are published (including online) is seen in recent years, while the relationship between direct, and 'naïve' connections between the finds and the Hebrew Bible are much less common among contemporary practitioners in the field. By and large, modern archaeology in this region has become a highly sophisticated branch of archaeology, many times being at the very forefront of archaeological research in the world.

3. Diachronic Cultural History

For the chronological scheme used, see above, section I on chronology; for the settlement history please consult (→ map City#1–10, col. 134–159).

3.1. Neolithic Period (ca. 10,200–5000 B.C.E.)

The Neolithic period in Palestine, and in the ANE in general, is a period of cardinal importance in human global history. During this period the processes of "Neolithization" (also known as the "Neolithic Revolution") took place, in which a gradual process of the appearance of domesticated → agriculture and sedentary, village-based lifestyles appeared. These processes began towards the end of the previous Epipaleolithic period (and in particular in the Natufian culture), developed in a non-linear manner during the Neolithic, and some aspects even continued to develop later, but overall, major components of this major change in human subsistence and culture can be placed within the Neolithic period. During this period, many important 'firsts' and developments occurred, including the appearance of various technologies (such as the management of fire, water, plastic materials such as → pottery), social hierarchy, extensive amplification of ritual (particularly communal), and long-range connectivity. All these processes were part of the shift from the multi-millennial traditions of hunter-gather subsistence patterns, to a growing emphasis on cultivation, domesticated agriculture, agropastoralism, side by side with population growth, and the

concomitant development of related socio-economic structures. The rise of the Neolithic cultures is often connected to environmental conditions, in particular the end of the "Younger Dryas" – the final cold and dry spell of the last glacial period, ca. 10,000 B.C.E., along with the intensification of practices that began to occur in the late Epipaleolithic period, such as incipient sedentism, gathering of wild grains, and the first evidence of plant domestication. All these set the stage for the process of Neolithization, even if this was a very non-linear process.

Pre-Pottery Neolithic A (PPNA)
The PPNA, while showing some continuity with the Natufian culture, displays a major change in settlement patterns and types. A concentration of settlements of varying sizes emerges, many of which are situated in the Jordan Valley. The large site of Jericho stands out with its spectacular and unique wall and → tower, most likely of ceremonial nature.

Most of the architecture, particularly domestic, was oval in plan, with the beginning of use of sundried mudbrick. PPNA subsistence integrated cultivation, foraging, and → hunting, with limited domesticated species such as fig, lentils, and broad bean. Hunting of small and medium size animals is seen, even if less than in previous periods. The only domesticated animal in this period is the dog, which was present in the Natufian as well.

Chipped and → ground stone objects display changes in this period, among which the appearance of specific types of arrowheads, sickle blades, and axes, along with shallow lower grinding stones, seemingly related to the proliferation of cereal consumption. While poorly preserved, there is evidence of a sophisticated → basketry production tradition. Burial is usually within settlements, at times within → houses, including post-mortem skull removal, a practice originating in the Natufian culture. Ritual objects, including anthropomorphic and zoomorphic figurines are found. Evidence of long-range connectivity is seen as well, exemplified by the distribution of marine mollusks (Mediterranean and Red Sea), and stones of distant origins (obsidian and greenstone), with certain sites perhaps serving as hubs for this → trade. The reasons for the demise of the PPNA are not clear, perhaps related to climatic changes.

Pre-Pottery Neolithic B (PPNB)
The PPNB represents the floruit of the Neolithic. While in the early PPNB there are relatively few sites, during later phases of this period there was extensive settlement in sites of varying sizes –

from small to "mega-sites," in various parts of the region. The ongoing improvement in climate conditions enabled the expansion and development of settlement and →agriculture.

Domestic architecture in the PPNB shifted to large roomed rectangular structures, most probably the abodes of nuclear families. Houses were built of mudbrick with extensive use of lime plaster on the floors and walls (→construction technique). Throughout the PPNB there is a lot of evidence of cultic and ritual activities. This includes defined ritual areas, at times with →standing stones. Some sites have cultic buildings (e. g., ʿAin Ghazal), while at others (e. g., Kfar Hahoresh) there is a combination of ritual and burial activities. Similarly, the cave of Nahal Hemar in the Judean Desert was a repository for →cultic equipment, related to an as yet unknown ritual site. Ritual paraphernalia includes baked clay and stone figurines (mainly in the north), stone →masks (in the Cisjordanian central hills), and lime plaster →sculptures (Jericho, ʿAin Ghazal).

Burials were usually located within settlements, but at times at separate sites, with burial customs continuing older customs such as post-mortem removal of skulls, which at times were even modeled with plaster or tar. At the same time, other types of →tombs were known, such as in pits, cists, and hearths.

Subsistence became more diverse, combining farming, foraging, hunting, herding, and →fishing. Non-fired pottery vessels ("white ware") appear as harbingers of the pottery in the next period. Finds from the Nahal Hemar cave provide evidence of →basketry, matting, and →weaving (the latter using flax), as well as long-range exchange of exotic items from a broad range of regions, covering the entire ANE. The floruit of the PPNB came to an end quite suddenly, perhaps relating to the rapid climate deterioration that occurred ca. 6,200 B.C.E. (the "8,200 yr. B. P. event").

Pottery Neolithic A (PNA)
While the new appearance of →pottery is indicated in this period's name, in fact the early parts of this period show much continuity with the PPNB. Two main cultures are known in the Mediterranean regions in this period, the Yarmoukian and the Lodian/Jericho IX. It is debated whether they are regional or chronological differentiations, perhaps in fact a bit of both. At various sites in the Jordan Valley and the coastal plain, as well as in the Transjordanian highlands, there is evidence of full-scale domesticated agriculture, with farming of wheat, barley, and legumes, along with sheep, goats, cattle, and pigs. Shaʿar ha-Golan, the largest of the Yarmoukian sites, has indications of site

planning, and perhaps even hints to later urban concepts as well. A hallmark of the Yarmoukian culture are the various stone and clay human figurines, with the unique pointed heads, coffee bean eyes, and accentuated female thighs (→idol). Very few burials have been found, most likely indicating that the dead were disposed in a manner which did not survive in the archaeological record.

Pottery Neolithic B (PNB)
The final stage of the Neolithic period, PNB, or the Wadi Rabah Culture, is a much debated period, with some suggesting (because there is no evidence of a break) that it should be characterized as the "Early Chalcolithic." Some aspects show continuity with the PNA, while others are harbingers of Chalc. cultural traits. This period is characterized by small settlements in the Mediterranean zone and small-scale seasonal sites in the arid zones. The shift to full-scale agropastoral subsistence occurred in this period, with a broad spectrum of domestic plants and animals, with hunting representing a small component. The handmade ceramic repertoire have several distinctive features, such as "bow rims" and black and red burnished wares. In the lithic repertoire, sickle blades are common, and stone and clay sling shots, and →weaving implements are known as well.

3.2. Chalcolithic Period
(Chalc., ca. 5,000–3,800/3,700 B.C.E.)

The Chalc. represents the next stage of socio-political complexity and technological development, bridging the appearance of →village life in the Neolithic period, and the appearance of urbanism and related aspects in the EBA. While there is continuity between the PNB and the Chalc., crucial differences in settlement types and patterns, technology, burial, and subsistence occurred during the Chalc. This period was first identified at Tuleilat el-Ghassul in the Jordan Valley (therefore also the "Ghassulian" period). While in earlier research it was thought that the appearance of the Chalc. culture represents the influx of immigrants into the region, this is less accepted today. A dominant aspect in the Chalc. is regionalism. Subsistence patterns in the Chalc. indicate an intensification in comparison to the previous period. The majority of the population was sedentary, with widespread cereal and legume cultivation, at times with rudimentary irrigation (→water management). The use of a broad range of domesticated animals (sheep, goat; →animal husbandry) appears to have been intensified in this period, with the appearance of specialized pastoralism, focused on milk and/or wool production. Excava-

tions and surveys indicate a complex matrix of settlements from this period, from small to very large sites, possibly indicating incipient polities (perhaps "chiefdoms"). The typical dwelling, of varying sizes, is a broad room structure often with a → courtyard. At sites in the Northern Negev, the above ground construction is supplemented with extensive subterranean complexes.

A dramatic change seen in the Chalc. is in technology and craft production. Common types include the "V"-shaped bowl, chalices (often with fenestrated stands), large bowls and basins, various types of jars and cooking pots, and large storage pithoi, and the well-known ceramic "churn" – one of the hallmarks of this period, perhaps connected to the production of milk-related products (→ dairy products).

Specialized metal production and → metal working was an innovation of this period (see the finds from the Nahal Mishmar and Nahal Qanah caves). Copper-based objects of two types are known: utilitarian objects, made in open molds usually from oxide rich copper ores; and ritual/prestige items made usually of arsenical (or antimony or nickel rich) copper using the complex "lost-wax" technique. The ores used were both from nearby sources, as well as distant ones, and long range trade is also seen in other materials. The complex metallurgical technology corresponds to the rise in socio-political complexity at the time.

Burial practices in the Chalc. represent continuity of Neolithic traditions, and with new practices. Along with intra site burials, a range of new traditions are seen. This includes burial in clay and stone "ossuaries" of various types, often elaborately decorated with faces, noses, horns, breasts, etc. These are seen in cave or other types of burials (→ tombs). The "Cave of the Warrior" from the Judean Desert is a burial of a single male, with exceptionally well-preserved organic objects, including a shroud, a bow and arrows, sandals, and a wooden bowl. The lack of blatant socio-economic differentiations in burials, may perhaps indicate that despite the complexities noted above, Chalc. society was not overly hierarchical. Cult and religion during the Chalc. are extensive. The → sanctuaries ('Ein Gedi, Gilat) include several structures of various sizes and shapes along with a wide range of installations. Of particular note are the symbolically laden → mural paintings from Tuleilat el-Ghassul and at Abu Hamid in Transjordan.

3.3. Early Bronze Age
(EBA, ca. 3,800/3,700–2,500/2,400 B.C.E.)

The EBA is a period of immense importance in the cultural history of Palestine, the first period in which "urban" entities appeared. The process, definition, and the appearance of urban sites and related structures is a complex, drawn out, and highly debated issue. For the first several centuries of the EBA, rural life was the norm, and only in the transition between the late EB I and EB II substantial evidence appears of urban entities. Urbanism continues during EB II and EB III, to disappear in the next period, the Intermediate Bronze Age. During the EBA, we witness the appearance of new and previously unseen types of settlements, social hierarchy, public construction/projects, technologies and connectivity, setting the stage for much of the social and political structures seen in Palestine in pre-classical times.

Early Bronze Age I (EB I)
In previous research a break was seen between the Chalc. and EB I, but recent research demonstrates an extended cultural continuity between the periods. That said, regions that had been previously extensively settled were abandoned, and the village culture that developed had quite different socio-economic structures. The basis for these changes was a focus on the production of agricultural staple goods. Many of the central aspects of the Chalc. world order disappear, such as the importance of agro-pastoralism, the production of copper and → ivory objects, and the complex ritual. The villages of EB IA were dispersed throughout all the Mediterranean zones of Palestine. The typical house of this period was an oval, broad room structure, with perhaps the earliest appearance of very simplified → fortifications. EB I metallurgy seems to have focused on utilitarian copper objects, with evidence of small-scale production at sites. Copper ores were from the Arabah Valley, from Feinan and Timna. Burials during the EB IA reflect the changes in society and ideology during this period. The enormous cemeteries found on the southeastern side of the Dead Sea Plain are comprised of shaft burials with several chambers, used by families over an extended time. Minimal evidence of social, economic, and gender differentiation, indicate the relatively non-complex social structure, seemingly family oriented with little larger communal social structures. The dispersed and socially non-complex nature of the EB IA villages, with limited resources, community cohesion, and economic connections came to an end in a gradual manner.

These patterns changed in the EB IB. While village life continued to be at the center of the socio-economic structures in Palestine, one sees an impressive growth in numbers, size, and complexity. Thus, during the later EB IB there is extensive evidence of sprawling mega-villages and various

signs of socio-economic centralization. The size of some of these sites is quite impressive, at times reaching ca. 20 ha. While at some sites the houses are multi-roomed rectilinear structures, other sites have structures of mixed plans, including ovoid and rectilinear side by side. In most villages there appear to be house compounds with multi-rooms and various domestic installations.

The most impressive architecture of this period was found at Megiddo. In the lowest levels of the area with cultic precinct throughout the entire Bronze Age, three → sanctuaries dating to the EB IB were revealed. The two earliest are courtyard temples with broad rooms at the back. Noteworthy are the incised decorations of ritual nature that were found on the courtyard paving. There is extensive evidence of regional burial customs from this period: In the Mediterranean regions, the common burial is in a communal cave tomb, in Lebanon the tradition of pithos burials from the previous period continues, while in Transjordan, dolmens and other megalithic burials are common.

Connectivity between Egypt and Canaan is paramount in the EB IB. Although some contact existed in the early EB IB, in the later phase of the EB IB, parallel to the unification of Egypt (traditionally ascribed to King Narmer), the character of the contacts with Egypt changed. Throughout Southwestern Canaan, sites with evidence of Egyptian and Egyptianizing material culture are found. At first understood as evidence of an Egyptian conquest and colonization, this could be the result of a system of trade emporia/diasporas, collecting Canaanite agricultural produce, whether peacefully or forcefully, for transshipment to Egypt. The large fortified site of Tell es-Sakan, near Gaza, served as the apparent royal center of the Egyptian activity in the region, with various sites serving different functions in this network. A glyptic tradition is evident as well, displaying influence, though very distant, of Mesopotamian motifs. This is seen in some jars that are decorated with cylinder seal impressions (most often using the *tête-bêche* motif), as well as a few stamp seals with animal motifs.

Late in the 4th mill. B.C.E., the EB IB "world order" comes to an end. Throughout the entire region most of the village sites are abandoned, and in the following period, new and different sites are occupied. In the south, the Egyptian presence ends. It appears that weaknesses in the socio-economic structure of the EB IB village society brought about its collapse.

Early Bronze Age II (EB II)
The flourit of urbanism in Palestine occurs during the EB II. This includes a mosaic of fortified settlements, various signs of societal integration, supra-regional production and distribution, reflecting a common cultural ethos, and the disappearance of cemeteries. Recent radiometric dating of the EBA has shown that this period is quite brief (100–150 years), as opposed to several centuries in earlier literature.

The shift in the settlement pattern during the EB II is dramatic. Not only were many settlements abandoned, or destroyed and later resettled, many new sites in different regions were settled. A dense mosaic of fortified sites are found in all the Mediterranean regions. The fortified sites of the EB II are of various sizes. Urban planning was closely integrated with the fortifications, with houses and neighborhoods built in relation to them. At times, internal divisions can be seen in the settlements, whether through actual walls dividing different neighborhoods, or clusters of buildings in specific parts of the site. At several sites there is evidence of a gradual development of urbanism. The expansive excavations at several sites enable glimpses of the general urban fabric of these cities.

There are several types of houses in the EB II cities. At Arad and other related southern sites, the iconic "Arad house" with a broad room structure set in a courtyard is common. In central Palestine, variations on this house are seen, while in northern regions there are courtyard compounds. Larger scale architecture has been identified at several sites. An outstanding characteristic of the EB II is the standardization of → pottery production. In Northern Palestine, a unique metallic ware (South Levantine Metallic ware; SLMW) is found at scores of sites, most likely produced at sites in the Northern Jordan Valley and the Beqaʾa. This ware is not only used extensively in the northern regions, but it is exported to the south, as well as to Egypt, where it is found in the royal tombs at Abydos (and known as "Abydos Ware"). Similarly, pottery produced at Arad has been identified at sites in the Negev and Sinai. Very few cemeteries of this period have been identified, and in fact not many tombs are known. This appears to mirror the changes in kinship relations during this period, from a clan-based structure, to larger, site-oriented socio-political structures.

The economic structure and trade patterns of the EB II stand out in comparison to the periods before and after it. The character of the → trade between Canaan and Egypt changed to that of trading partners, probably centered, from the Palestinian side, at a small number of nodal centers, such as Tel Arad and Tel Beth-Yerah. As opposed to the Egyptians who were present in Palestine and procured agricultural produce and natural resources from the locals in the EB I, these EB II centers collected the traded products and transshipped them,

overland, in specific types of locally produced ceramic vessels, to Egypt. More so, the procurement of specific resources in areas far from these centers, such as copper and turquoise from Sinai, and bitumen and copper from the Dead Sea and the Arabah, were conducted under the auspices of these trading centers. Perhaps, the best example of this are the EB II settlements in Southern Sinai, near the ore locations, which have clear connections with Arad. Evidence of this trade is seen in contemporaneous Egypt, particularly in high status tombs. The reciprocal trade from Egypt is reflected in Egyptian pottery, stone palettes, and other objects, found at various sites in Palestine.

Towards the end of the EB II – perhaps because of internal social processes within the urban elites or due to external reasons – many sites were abandoned, others were destroyed and subsequently rebuilt, and regions that were in the EB II settlement system were almost completely abandoned.

Early Bronze Age III (EB III)

While the urban character of the settlement in Palestine continues, significant changes occur in relation to the preceding period: there is a change in the character and dispersal of settlements. Almost all excavated sites from this period are on mounds, many of which are reoccupied during this period. Trade connections between Egypt and most of Palestine declined because the Egyptian trade with the Levant shifted north, centering on Byblos and other regions to the north. Quite a few sites in Palestine provide a continuous, and dense, stratigraphic sequence for this period. Massive, well planned and well built → fortifications at numerous sites are of a completely different character from the previous period. Large-scale public buildings, whether → palaces, temples, or for other functions, are found. These public projects, and the communal efforts required for them, indicate a change in the socio-political structure in the EB III, and the appearance of social differentiation, between elites and "commoners" in the urban entities during this period. The very fact that such impressive fortifications were needed is evidence of tension between – and perhaps even within – these EB III polities.

Interestingly, the mortuary landscape did not substantially change between the EB II and EB III, despite the many changes seen in other facets of life. Few new cemeteries are seen, and few show continuity between the two periods. An interesting mortuary tradition developed at Bab edh-Dhra, where above ground burial structures (so-called "charnel houses") were built, in which multiple burials were placed, perhaps each structure representing the dead of a certain family line-

age. Despite the social differentiation seen in the EB III settlements, there is no evidence of exceptional tombs of local elites. Production technology, crafts, pottery, and trade during the EB III reflect both continuity and change. While often EB III pottery is coarser and less finely produced then in the EB II, large serving and storage vessels are typical of the EB III, perhaps reflecting the social needs of the EB III elites, such as for feasting events. A noteworthy development during this period is the appearance of the "Khirbet Kerak Ware" (KKW) pottery. This pottery (first found at Tel Beth-Yerah), reflecting pottery production and use of the Kura-Araxes cultures (originating in Northwestern Iran and Eastern Turkey, but spreading from there to the Levant), display production methods, forms, and decorations completely foreign to Palestine. The KKW pottery assemblage, along with other unique facets appearing with it, clearly reflect the arrival in Palestine, during the early EB III, of populations from regions northeast of Palestine. These newcomers settled at sites mainly in Northern Palestine, and at least in beginning, remained in well-defined "communities of practice." With time, in later phases of the EB III, these migrant communities were integrated into the local populations.

The end of EB III was a long, drawn out affair. Some of the urban sites were abandoned at an early stage, others around 2500 B.C.E., while a few continued until ca. 2400. This indicates that the demise of the EB III urban culture was not the result of monolithic causes (whether external or internal), but rather due to a complex set of processes, occurring over an extended period. Aspects of societal tensions between various elite groups on the one hand, and between elites and non-elite elements might be one set of causes. Another influential aspect might have been the rise in political and economic complexity in contemporaneous central and Northern Syria. There is evidence of Egyptian military expeditions to Palestine during the Old Kingdom (during the 5th–6th Dyn.), and they may have been one of the factors behind the collapse of the urban EBA culture. That said, seeing these military actions as having a primary role in the demise of the urban EBA is unlikely, as many urban sites were abandoned prior to these campaigns. No less important is the process of transition from the urban to the non-urban lifestyles characteristic of the next period, the IBA.

3.4. Intermediate Bronze Age
(IBA, 2,500/2,400–2,000 B.C.E.)

The IBA presents a very different set of lifestyles and subsistence patterns, combining a mainly

rural, along with semi-nomadic/nomadic life-styles, the former primarily, but not only, in the Mediterranean zones, the latter particularly, but not only, in the arid zones. Current research indicates that grosso modo, the IBA can be divided into two phases, which seem to be reflected both in aspects of the material culture (as discussed below), but also in a transition to a drier climate (the so-called "4.2K event") in the late 3rd mill. B.C.E. As opposed to earlier research narratives, which suggested that the majority of the IBA population was of semi-nomadic/nomadic character, excavations in the last few decades have demonstrated that, by and large, sedentary rural life was the norm, in most parts of Palestine, both Mediterranean and arid. While many of the mounds that were settled during the EB III were abandoned, some continued with smaller-scale settlements. Very few settlements continued into this period as urban sites, save for a few on the Lebanese coast, perhaps to be explained in light of their connections with Syria and trade with Egypt and Mesopotamia. The extensive settlement in the Negev Highlands has been dated by radiocarbon almost exclusively to the early phase of the IBA, in fact overlapping with the end of the EB III in northern areas of Palestine. These settlements served as way stations for the trade of copper between the Arabah and Egypt, commencing yet at the end of the EB III, and continuing into the first part of the IBA. While in the past these settlements were seen as reflecting semi-nomadic populations, the architectural, botanical, and faunal data does not support this. Most importantly, the dating of this settlement phenomenon to the early IBA, before the drier period following the "4.2K event," explains how such a dense settlement pattern developed in this arid region.

On the other hand, settlement sites in the northern Jordan Valley and Transjordan have been dated to the second half of the IBA, both based on radiometric dates and pottery parallels from Syrian sites. This perhaps can be seen as evidence of connections (possibly trade in pastoral products) with the highly developed urban culture that existed in central and Northern Syria at this time. In fact, the vibrant continuation of developed urban life and complex socio-political structures in Syria (and in particular, at Ebla), enables us to see IBA Palestine as a peripheral zone of the Syrian urban core. Hints to this are seen in imports and imitations of Syrian-style pottery, the first appearance of small amounts of tin-bronze objects, limited luxury items of possible northern origins (such as the silver goblet from ʿEin Samiye), and the apparent appropriation of Syrian drinking vessels and habits during this period.

In IBA village sites in the north, rectilinear architecture is the norm, with groups of loosely planned courtyard complexes with multiple rooms. On the other hand, in the arid zones, the common architectural plan is of irregular clusters of rounded, simply built stone structures, often with a pillar supporting the →roof (which in some cases was made of stone as well). At times, these structures are grouped together, perhaps reflecting the abode of an extended family. Some of these sites have hundreds of such structures, probably indicative of extended occupation of the site.

During the IBA there is extensive evidence of cemeteries in most regions in Palestine, often associated with nearby settlements. A broad range of →tombs are known, which can be broadly divided into shaft cave tombs and built tombs, dolmens and other megalithic structures in basaltic regions, and tumuli in the arid zones. The cemeteries most probably reflect the clan and territorial ideology of IBA rural society, strikingly different from the urban landscape of the preceding EB II–III.

Craft and production demonstrate the village-oriented economic base of the period, and some ceramic connections with Syria. Agricultural practice, as seen through the archaeobotanical and zooarchaeological evidence in the Mediterranean regions, indicates small-scale →animal husbandry (caprines, cattle, pigs). In arid zone sites there is some evidence of caprine herding practices, and less evidence of agricultural practices, strengthening the case for a copper →trade-related function of many of the Negev Highland sites. Similarly, while some imported objects are known, they are quite limited, particularly if one takes into account the long duration of the IBA. It is clear that this period is more than just a brief interlude between the urban EBA and the urban MBA. Rather, it represents a long period in which rural lifestyle was the norm, socio-economic complexity was minimal, and Palestine was on the periphery of the vibrant urban cultures of central and Northern Syria.

3.5. Middle Bronze Age
(MBA, 2000–1500 B.C.E.)

During the 20th cent. B.C.E., the ANE seems to have gone through what might be seen as an awakening of connectivity, perhaps related to climate improvement at this time, and to socio-political developments in various regions. In Egypt we see the rise of the Middle Kingdom with the 12th Dyn., in Anatolia the period of the Old Assyrian caravan *karum*s (trading centers), and in Mes-

opotamia, the 1st Babylonian Dyn. (in the early 19th cent.), preceded by the Isin-Larsa period (late 21st/20th cent.). Due to these supra-regional socio-economic developments, some gradual, some more abrupt, changes are seen in Palestine, from the beginning of the MBA and onward. This includes new patterns of settlement, particularly the appearance, development, and spread of urbanism, changes in social structure and economy, evidence of connectivity with other regions in the ANE, new technologies, and most importantly, the first evidence of writing systems used in Palestine, as well as several written references to the region, in Egyptian and Mesopotamian sources. These processes begin in Palestine in the mid/ late 20th cent., and continue for an extended period. In fact, in the interior of Palestine, the full effects of this are seen only in the 18th cent. By and large, this period can be seen as the second urban period in Palestine, and the first time that this region plays a full-scale role in long-range and international webs of connectivity. While some new populations (e.g., "Amorites") may have arrived in Palestine at the beginning of and throughout the MBA, much evidence of population and cultural continuity with the preceding IBA can be seen.

In the MB I, with the rise of urbanism in Palestine and the regeneration of intense international trade in the ANE, polities, mostly small →city states, begin to form, at first along the international routes (→map Trade #1, col. 1045) and later, in MB II, in inland regions as well. It is clear that a major engine behind this process of regeneration was the beginning of participation in supra-regional trade. Towards the end of the Middle Kingdom, in Egypt there is evidence of a significant Western Asiatic presence, particularly in the eastern Nile Delta, which, during the subsequent 2nd Intermediate Period in Egypt (14th–17th Dyn., ca. parallel to MB II) leads to the formation of the "Hyksos" Dynasty in Upper Egypt, with strong connections with the Levant, and in particular, the meteoric rise of Avaris (Tell ed-Dabʿa), the Hyksos capital. Evidence of connectivity between Egypt and Palestine, and Palestine and regions to the north are seen at the time. With the rise of the Old Babylonian period in the latter part of MB I, the Syro-Mesopotamian sphere is a mosaic of large city states/kingdoms. Northern Palestine becomes part of this system, with Hazor serving as the southernmost link in the chain of these kingdoms. Evidence of this is clearly seen in the Akkadian letters found in Mari, with reference to trade and diplomatic relations, and with corresponding Akkadian documents found at Hazor as well.

Middle Bronze Age I (MB I)

Finds in the coastal plain, from Lebanon southwards, nicely illustrate the early stage of the MBA. Perhaps the most important site of the MB I is Tel Aphek, where a dense stratigraphy commencing from very early in the period was found. A sequence of palaces at the site, spanning the MBA, give a glimpse of the emerging political order – that of small polities situated on mounds, with a surrounding web of villages. A similar picture seems to emerge from the northern valleys, and further east in the Beth-Shean Valley, such as at Tell el-Hayyat and Tel Kitan. Both are village sites with a long MBA sequence, with →sanctuaries that are first built in the early MB I.

Middle Bronze Age II (MB II)

During this period, the settlement in Palestine, in just about all the Mediterranean ecological zones, and some marginal zones as well, reaches a peak rarely seen in other periods. A closely woven matrix of settlements dots the land, covering the full range of settlement types. It has been estimated that more than 700 urban and rural sites existed in Palestine during MB II, and the overall population assessed at ca. 140,000 people. All these sites in the various ecozones were closely connected in a socio-political settlement hierarchy. Most likely, the dominant polities were micro-regional, small-sized city states, each ruled by a charismatic local leader and family. It can be assumed that in some cases, several of these were integrated or dependent on a large polity, forming a larger and more powerful polity. In the northeast, Hazor at ca. 100 ha in size, with massive →fortifications, temples, and at least one if not two →palaces, and with its strong connection with the Syro-Mesopotamian world (seen in the correspondence with Mari and in material culture) represents a kingdom which controlled major parts of Northeastern Palestine (and probably portions of Southern Syria as well). Its influence may have been felt as south as the Jezreel Valley, where other polities take over. Fortified sites probably controlled small kingdoms in these fertile areas, representing a much smaller scale type of polity, which was common in other parts of Palestine to the south. Regional differences in material culture indicate that from the Jezreel Valley and to the south, a southern oriented influence, towards Egypt (and during MB II, probably connected to the Hyksos in Egypt), was more common. On the north coast, Kabri is of note. The palace at Kabri, with its outstanding Aegean floor and →mural painting is particularly important. Whoever ruled from this palace managed, at a relatively early stage of MB II, to bring Aegean craftsmen to Kabri to produce ar-

chitectural decorations typical of Crete and the Aegean. Most probably, the ruler(s) of Kabri controlled Northwestern Palestine, extending their rule to the west, to the Mediterranean Sea, and to the east to somewhere in the Upper Galilee, perhaps bordering with the Kingdom of Hazor. In the southern coastal plain and the Northwestern Negev, the sites of Ashkelon (on the coast) and Tel Haror (more inland), represent two important polities. A very different picture is seen in the central hills. While a chain of fortified sites are found in MB II, the scale of these cities, the polities they represent, and the regional settlement patterns around them, are much smaller. A case in point is Jerusalem. While fortified with massive stone walls (particularly surrounding the water source), over all, the MBA remains are somewhat limited (probably both due to size but also to preservation due to later activities). Around Jerusalem there is a network of villages, mainly to the west and southwest, but much less dense than in many other parts of the country.

Middle Bronze Age Material Culture
While first appearing sporadically in the MB I, large scale →fortifications are one of the most characteristic aspects of MB II Palestine. In lowland areas the main feature of these fortifications are impressive earthen ramparts, comprised of well-planned layers of sediments, often with a built core (of brick or stone) and rarely with evidence of a wall on top. →Gates, and occasionally →towers are built into the ramparts. In hilly regions, there are more stone-built fortifications, often constructed with large so-called "Cyclopean" masonry. Both these types of fortifications at times also have a built glaçis (revetment), and at times a moat. Based on analyses of settlement in some of the sites, only a portion of the area enclosed by these fortifications was in fact occupied. Thus, perhaps these fortifications may have served as an attempt by the ruling elites to force "domestication" – to an urban oriented ideology – and compliance – on the population of Palestine. Domestic structures, both in cities and in smaller settlements are usually courtyard →houses, of differing sizes. A variety of →sanctuary types (the most common being the Syrian inspired "Migdol" temple) are known from MBA sites. In the cities, larger examples are found, while in the rural sites, smaller versions of these temples exist.

Technology during the MBA goes through several impressive developments, reflecting the socio-economic complexity and connectivity of MBA Palestine: Large scale and quite impressive →water management systems are seen at several sites, including Gezer and Jerusalem, indicat-

ing an understanding of water tables and related issues, and demonstrating both impressive engineering abilities and comprehension of the strategic need for protecting and accessing water in times of insecurity. Extensive use of the potter's wheel, well-levigated and very well-fired wares, finely-made and decorated vessels, and massive production, demonstrate the impressive leap in the potter's craft during this period. A broad range of →pottery types are known during the period, many demonstrating highly skilled potters' craft, with a wide dispersal of types both in Palestine and beyond. Certain pottery families of Palestinian origin are traded far and wide, and in some cases imitated in other regions (e. g., the "Tell el-Yahudiyeh Ware"); they are evidence of the role that Palestine played in the international trade of this period. Similar developments can be seen in other technologies as well. Bronze (tin alloyed copper) becomes common in Palestine. New types of weapons along with various tools appear, produced using sophisticated bronze casting techniques. Of note is the use of sophisticated production techniques in →jewelry production, including fine examples of granulation and cloisonné decorations. These methods, along with the production of metal objects and the finely fired ceramics, indicate a significant rise in the pyro-technological abilities during this period.

Literacy, and writing technology, appear in Palestine during the MBA (see section III on Epigraphy). The earliest alphabetic writing during the MBA is the so-called "Proto-Sinaitic writing." Attested in Egypt and in particular at the copper and turquoise mines at Serabit el-Khadim in Sinai, it was probably formed by speakers of Canaanite who interacted with Egyptians, as the early alphabetic signs clearly show influence from Egyptian hieroglyphs.

Mortuary customs are an important part of MBA society. In the earlier phases of the MBA, single burials, often so-called "warrior burials," were common, perhaps hinting both to connections with the IBA traditions, and also to the slow transition to an urban culture. As the MBA develops, more and more multiple interment, multi-generational "family" →tombs are found that were used for extended periods. These are often in the form of shaft tombs, a clear continuation of IBA mortuary architecture, but also in other types, such as built tombs made of stone or mudbrick. Tombs of upper echelon parts of society are known as well. At Hazor (and similarily in Megiddo), empty cavities under the apparent →palace in the lower city have been interpreted as a royal hypogeum (burial), similar to royal burials found in Syria.

The processes leading to the end of the MBA can be connected to the end of the "Hyksos" rule in upper Egypt. It is now clear that the transition between the MBA and the LBA was not due to a monolithic event (such as the destruction of Avaris and the "expulsion" of the Hyksos from Egypt), but rather was a drawn-out multipronged and multi-causal process. Internal competition between the various MBA polities, along with growing external pressure from early New Kingdom Egypt, and perhaps the arrival of new ethnic elements (Hurrians?), may have contributed to this.

3.6. Late Bronze Age (LBA, 1500–1130 B.C.E.)

The LBA represents the first period in which Palestine fully enters the historical stage. Due to the written sources it is clear that the region of Palestine, during the LBA, can be referred to as Canaan and the overarching culture as Canaanite. The historical framework for the LBA is based, first and foremost on Egyptian history, from the end of the 2nd Intermediate Period and the rise of the New Kingdom with the beginning of the 18th Dyn., while the 20th Dyn., dating to the 12th cent., is seen by some as being parallel to the last phase of the LBA.

Throughout the early 18th Dyn., various Egyptian kings record military campaigns and the retrieval of taxes from Palestine, indicating that Canaan was under Egyptian control. During the reign of Thutmose III, there are extensive campaigns to Palestine, including the well-known battle of Megiddo, against a coalition of Canaanite cities. Subsequently, the Egyptian control of Canaan was solidified. The Battle of Kadesh in central Syria (1274 B.C.E.), between the Egyptians and the Hittites and their allies reinsured the Egyptian presence in Canaan, at least until the late 13th cent. In the late 19th and early 20th Dyn. there is extensive evidence of Egyptian activities in Palestine, particularly in the region of the Northwestern Negev and Gaza. During the reign of Ramses III incursions of the so-called Sea Peoples into this region are seen, and attempts by the Egyptians to counter this. While some see the early 12th cent. as the final stages of the LBA, others relate to this as the early phases of Iron Age I.

Some caveats are required: While it is tempting to connect the many historically attested Egyptian military campaigns to specific destruction levels at various sites of Palestine, there were other events during this period, which might have contributed to some of these destruction levels. The character of the Egyptian empire in Canaan needs to be carefully assessed. While it is agreed that throughout the LBA there was a continuous, if fluctuating, Egyptian rule, a matrix of ca. 20–30 mostly small scale polities existed throughout Palestine. It is clear that the Egyptian involvement, control, and even imperial rule in Canaan changed throughout the LBA and attempts to see this as a simplistic imperial, colonial framework is inaccurate. Egyptian control seems to have been manifested at various central sites, with minimal intervention beyond. There were Egyptians at some sites, most likely representatives of the Egyptian rule in Canaan. And, there clearly was an entanglement of Egyptian and local customs in the interaction between Egyptians and local Canaanites, most probably creating hybrid cultural manifestations, "third spaces" and "contact zones," with transcultural material assemblages that might challenge simplistic identifications of this or that group. It is only during the very end of the LBA and the beginning of Iron Age I that a more intensive Egyptian presence is felt in Canaan, primarily in the southwest, where there is evidence of Egyptian activity, including "Governors' Residences," substantial amount of Egyptian pottery and other material culture, and hieratic inscriptions often relating to taxation. It has been suggested that this represents a last Egyptian attempt to hold on to territories in Canaan, as a response to the changes – and new identity groups – appearing in the LBA/Iron Age transition.

Late Bronze Age Material Culture
A fascinating and oft-noted aspect of the LBA in Palestine is the dialectic between the material characteristics of this period – that of a period with evidence of connectivity and prosperity, but at the same time decline and abandonment. On the one hand, the LBA is an international period with extensive evidence of international → trade (including in exotica) and diplomatic relations, urban → sanctuaries, → palaces, and → tombs with rich remains. Opposing this is the evidence such as the lack of → fortifications (perhaps due to Egyptian pressure), public architecture, substantial shifts in settlement patterns and a decline of population, a technological decline in → pottery production, and the overall trend in the settlement pattern to fewer sites.

A major reason for these dichotomies could be the over-exploitation of Palestine by the Egyptian New Kingdom Empire, which nevertheless enabled a small elite to have access to the international connectivity of this period. Perhaps the elites, at a limited amount of sites, practiced a conspicuous consumption of elite and exotic goods to legitimize their social standing – particularly in light of the Egyptian domination existing throughout this

period. The social need to do this – and the burden this placed on the non-elite parts of society –, may have caused the decline in other aspects of material life – and perhaps – a trend towards nomadization of settled populations. Society in Palestine was comprised of elites, sub-elites, and nonelites in urban and rural sites, along with various marginal groups, often of nomadic nature, in peripheral regions. Thus, a complex socio-economic structure, with various urban, rural, and nomadic elements, contributed to the decline.

Pottery goes through a major change in the LBA, in what appears to be a substantial technological decline. As opposed to the high quality wheel made wares of the MBA, in the LBA, there is much less use of the wheel and more handmade vessel types. In addition, in the local pottery there is a rather limited set of vessel types. Provenience studies of LBA pottery shows that much of the daily, plain pottery was produced in small-scale local workshops, quite different from the centralized pottery production of the MBA. Interestingly, despite the localized production, there is a surprising homogeneity in the shapes and decoration in the local LBA pottery, perhaps indicating shared values and symbolism in LBA Canaan.

Imported pottery (from Egypt, Crete, Cyprus) embodied an important facet of LBA material culture, the international connectivity of this period, as well as the social dichotomies noted above. While representing only a small overall percentage of the pottery from this period, examples are found in just about any site (settlements or tombs) throughout LBA Palestine.

Various crafts and technologies are known in the LBA. Bronze remains the most common metal in use, with Cyprus being the major source of copper throughout most of the period. The local Palestinian copper sources in the Arabah were not utilized during most of the LBA, save for the 13th cent., when the Egyptians mined copper there (→ mining). Tin, the other major component of bronze, was imported from far away, with isotope analyses indicating possible sources as far as Cornwall in the west and Afghanistan in the east. Well-made metal and → ivory prestige objects found in temple and elite contexts were part of the "international style" of this period and the lifestyle of the elites. → Seals include Egyptian made and locally produced scarabs of various types, along with cylinder seals of either local or imported types. Among the latter, Mitannian style cylinder seals from Mesopotamia are quite common.

Egyptian hieroglyphic writing (both formal and hieratic) is seen at various sites. For the most part, they represent writing of Egyptian scribes stationed in Palestine, but most probably, there were also local scribes with knowledge of Egyptian writing. In addition, there is extensive evidence of scribes writing in Akkadian, particularly as reflected in the mid-14th cent. Akkadian Tell el-Amarna letters, in which kings/mayors of sites in Canaan, wrote to the king of Egypt (cf. the Tell el-Amarna → archive). Two types of Levantine alphabetic writing systems are known: The archaic Canaanite alphabetic writing (from the MBA) continues to be used, and three examples of the Ugaritic cuneiform alphabet (see below, section III on epigraphy) have been found at sites in LBA Palestine.

The few domestic → houses and → palaces in LBA Palestine are usually the "courtyard type" (e. g., Hazor). LBA temples can be divided into several types: 1) So-called "Syrian" temples, monumental symmetrical structures, that continue traditions seen already in the MBA. 2) Temples with a raised cella ("holy of holies"), perhaps reflecting Egyptian influences. 3) Irregular temples which have indirect entrances and a symmetric plans. → Cultic equipment is diverse, among which *maṣṣebot*, ceramic stands and chalices, metal and ceramic → idols of gods and goddesses, and → votives, objects of various materials, often imported from afar, are very common.

A diverse set of burial customs are known in the LBA, with both temporal and regional differentiations in types and popularity, perhaps reflecting various cultural and identity influences. Extra-mural cave burials of various types, with multiple interments, are quite frequent in the LBA, but mostly in the hill regions, seen by some to reflect the customs of the regions further away from Egyptian control and presence. Some of these burials show continuity between the MBA and LBA or between the LBA and early Iron Age. Pit burials, most often with a single interment, but usually grouped together in formal cemeteries, are also common in the LBA. These burials appear primarily in the coastal and inland valley areas, areas with a more emphatic Egyptian presence, reflecting the appropriation of Egyptian mortuary worldviews by local populations. Several other types of burials can be noted, such as: intra-mural, stone built burials placed under structures in contemporaneous use, at times found in association with palaces; pithos burials, burials in clay coffins.

Hazor remains the largest and most impressive site in Palestine, continuing its role in the MBA and its commonality with Syro-Mesopotamian culture. The lofty political status of Hazor is evidenced in the Tell el-Amarna texts, where only the king of Hazor is referred to using the Akkadian term for king – *šarru* – while other rulers in Palestine are

termed mayors. The archaeological remains at Hazor reflect a similar picture. Several temples in the upper and lower city can be noted. Many of these temples are built with unique, monumental architectural elements, noteworthy among them being the basalt "orthostats" that line the temple walls, at time in the forms of lions, an architectural embellishment with Syrian and Hittite connections. Large remains of an apparent palace in the upper city, several →gates, and other public and private constructions can be added to this. In addition, evidence of cuneiform and Egyptian texts and objects, all indicate the close and intense involvement that Hazor had in LBA international connectivity. Finally, an interesting and highly debated aspect is the final destruction of Hazor. The destruction occurs in the mid-13th cent., much earlier than other destructions and abandonments at the end of the LBA (see below). Various suggestions have been raised to identify the agents of this destruction, whether local (an internal revolt), or external (Egyptians? Israelites? Sea Peoples?), and this appears to still be an open question. Other important sites of the LBA are Beth-Shean (turning during the 13th and early 12th cent. into a regional Egyptian center), Megiddo (continuing as a Canaanite city state until the Iron Age I, sometime in the late 11th cent.), and Lachish (during the LBA/Iron Age I transition, in the early 20th Dyn., under direct Egyptian control).

Late Bronze/Iron Age Transition
Starting from the mid/late 13th cent. B.C.E., and well into the mid/late 12th cent., the eastern Mediterranean in general, and the Levant in particular, witnessed major changes in the social, political, and economic makeup, with many of the basic building blocks of the LBA world order disappearing. The Hittite Empire collapses, the Egyptian Empire loses its control in Canaan by the mid-to-late 12th cent., the Mycenaean palace polities break down, the volume of international trade is significantly reduced, many of the Canaanite cities are abandoned or destroyed, and new cultural and ethnic groups appear throughout the region. This includes the so-called Sea Peoples, the Israelites, the Arameans, and various other groups. While during the LBA there are diverse written sources from throughout the ANE, from the early 12th cent. onwards, until well into the late 11th and early 10th cent., there are few contemporaneous written sources relating to the historical situation in the Southern Levant. Due to this, this period is very much a "Dark Age." The Hebrew Bible, while seemingly relating to this period, is really of tangential utility as a historical source when dealing with this period, as the various

narratives regarding the formation of Israel and related issues appear to be based on later understandings, and constructed memories. As opposed to earlier views that claimed that the cities of LBA Canaan were destroyed or abandoned around 1200 B.C.E., they in fact go through a much more extended and complex process. While some LBA cities are destroyed during the 13th cent., others are destroyed sometime in the 12th cent., or at the very end of the 11th cent. Also the Egyptian presence varies regionally. No less importantly, there are distinct cultural continuities between the LBA and Iron Age, along with hints to the societal changes that are often connected to the appearance of the various cultural groups of the early Iron Age (e. g., Israelites, Philistines), which seem to begin already in the late 13th cent. Thus, this transition period cannot be seen through the lens of monocausal processes, but rather a matrix of varied processes and influences, environmental (climate changes) and cultural, that brought about slow, but very substantial changes in the next period, the Iron Age.

3.7. Iron Age I (1130–975/925 B.C.E.)

The Iron Age brought about a drastic turn from the LBA world order, with regional territorial and/or ethnic kingdoms in the Levant in general and Palestine in particular, with identity groups that were partly new to the region, and until later phases of the Iron Age, were not under the domination of larger imperial powers.

The fragmented identity groups of the Iron Age begin to appear in Iron Age I. One must be aware that these various identity groups (Israelites, Judeans, Philistines, etc.) may represent, more than anything else, later ideological fabrications, only partially, if at all, representing the actual identity groups, and their shifting character, that existed during Iron Age I.

The Israelites and the Central Hills/Upper Galilee
For many years, research on the appearance of the Israelites was divided into several distinct schools of thought: 1) that archaeological evidence of the Israelite conquest could be found (e. g., Albright and Yadin); 2) a process of gradual settlement by peoples coming from outside of Canaan (e. g., Alt and Aharoni); and 3) those who believed that the appearance of the early Israelites should be explained primarily as an internal phenomenon, mostly made up of peoples originating in Canaan, who during the early Iron Age realigned their identity (e. g., Mendenhall and Gottwald).

Recent research has negated the "conquest view" because there is no evidence of large scale

destructions at sites that are mentioned in the biblical texts regarding the supposed conquest, and for the most part, there is a lot of similarity between the material culture of the new rural settlements in the central hills and the previous Canaanite culture. And beyond this, there is virtually no evidence of substantial related changes – and the appearance of cultural markers that could be identified as "Israelite" in other regions of Palestine, particularly on the coast and in the valley regions.

The dominant view nowadays is that the early Israelites who gradually appeared in peripheral regions in the central hills and Upper Galilee from the late 13th cent. and onwards, were comprised of a substantial amount of local Canaanite elements (most of whom were rural and nomadic elements who previously were in the central hills region), some people deriving from the lowlands Canaanite urban matrix, along with some groups who may have entered the region in a gradual manner, perhaps from areas to the east and northeast of Canaan (seen in the early Iron Age sites in Eastern Samaria). In other words, it appears that all three processes mentioned above, and others, occurred at varying degrees (even if "conquest" was minimal), in this time of change.

During the early Iron Age (perhaps even starting in the late 13th cent.), there is substantial archaeological evidence of the appearance of many new sites in the central hills region (several hundred according to surveys), in particular in the region between Jerusalem in the south and the Jezreel Valley in the north. Additional sites are known on the western foothills of Samaria, in the hills in the eastern fringes of Samaria, and in the Northern Galilee. Very few of these sites are found in the region of Judah, from around Jerusalem and southwards. Further south, in the Northeastern Negev, in the Beer-Sheba and Arad valleys, several sites were founded in Iron Age I.

Most of these "Israelite settlement" sites are built at new locations, previously unsettled, but in some cases they are built on sites that were occupied in earlier periods. Most of these sites can be characterized as small, enclosed →villages with very simple, mainly domestic, architecture, in some cases with structures seeming to be early appearances of the common "four-room house" (→house 2.3.). The finds at these sites are primarily utilitarian pottery (storage jars [such as the well-known "Collared-Rim Jars", →pottery 4.2.] and cooking vessels), with few prestige and/or imported items.

Several small sized cultic sites from this period have been identified. At Shiloh, a site which appears to have a cultic function in the MBA and LBA as well, evidence of apparent mid/late Iron Age I cultic activity was found, but its character is not clear. On the northeastern side of Mt. Ebal, just to the north of Shechem/Nablus, there is an early Iron Age cultic enclosure with a large structure (possibly an altar) within (as well as other smaller structures) dating to the late 13th and early 12th cent. A small-scale cultic site was found in northeastern Samaria, at the so-called "Bull Site." These three sites are most likely representative of the fragmented social groups in central hills during Iron Age I, with localized cultic centers and most probably complex kinship interrelations.

Even if there is much continuity and similarity with cultures in LBA Canaan (pottery types, ritual objects, subsistence patterns), the overall material culture assemblage seen in these "settlement sites" in the hill country indicates the formation of new cultural identities in rather defined geographic zones. No less significant is that many aspects in the early Iron Age "Israelite" sites do continue into Iron Ages II–III Israelite and Judean cultures. This includes: the so-called "four-room house" – which becomes very common in Iron Age II Israel and Judah; and an apparent lack of consumption of pig – at least in Judah, but not necessarily in Israel (but it should be stressed that both aspects cannot be used, per se, as a *sine qua non* identification of an Israelite/Judean site).

Very few burials dating to Iron Age I have been found in the regions associated with the Israelite culture in the central hills and the Galilee. Perhaps there was a change in burial customs – to methods which leave less archaeological remains – reflecting ideological changes between the LBA and Iron Age, in the populations in these regions, including, perhaps, changes in kinship relations and structures.

The processes that occurred in the central hills and Galilee regions during the Iron Age point to a complex interplay of local and non-local groups resulting in the formation of new identity groups during the Iron Age I period. Nevertheless, during the transition between Iron Ages I and II (somewhere in the 10th cent.), many of the peoples in the various regions noted above, coalesced into larger groups that served the basis for the peoples, ideologies, and group identities of the Kingdoms of Israel and Judah (see below).

Philistines and Sea Peoples
and the Southern Coastal Plain
During the LBA/Iron Age transition, there is substantial evidence of movements of peoples, originating from diverse regions in the Eastern, Central, and Northern Mediterranean, who reach the Southern Levant. Some of these are termed as the

"Sea Peoples." The Philistines, a sub-group of the Sea Peoples, were one of the dominant cultural groups in Palestine during Iron Age I and were located in the southern coastal plain of modern day Israel/Palestine, more or less between the Yarkon River in the north and Gaza in the south, and from the Mediterranean Sea in the west to the Shephelah (Judean Foothills) in the east. The archaeological evidence of the early Iron Age Philistine culture is extensive (see, e. g., Ashdod, Ashkelon, Tel Miqne/Ekron, Tell es-Safi/Gath, Tel Qasile). The Philistine material culture includes an impressive pottery tradition, including unique decorated vessels, cultic and other objects, a very unique diet (eating pigs and dogs), and differences in → food preparation (appearance of → ovens and hearths), new agronomic traditions, specific cult practices, and many other aspects. Current research suggests that the Philistine culture of the early Iron Age does not derive from one non-local region, but rather consists of various groups of diverse non-local origins. These groups were of varied socio-economic character, and may have included groups who were originally of pirate-like nature. These non-locals settled side-by-side with Canaanites who continued living in these sites. Together, they formed what has been termed a "transcultural" or "entangled" culture.

The Iron Age I socio-economic and political structure of the Philistines appears much more developed than that of the Iron Age I highland settlements. The Philistine culture was an urban-oriented, relatively complex culture; the contemporaneous cultures in the highlands to the east were much less hierarchical, complex, and technologically advanced. Based on the archaeological remains it seems very likely that the Philistines were socially, economically, and perhaps militarily, dominant throughout the Iron Age I (and perhaps well into Iron Age IIA as well). During the late Iron Age I and the transition to Iron Age II, the Philistine culture becomes more and more similar to the surrounding cultures, but still retains – in fact until the end of the Iron Age – unique identifying material traits. The settlement pattern in early Iron Age Philistia is quite different from that of the previous period. The urban sites in Iron Age I Philistia, built on previously settled LBA sites, show fortifications, temples, and other public buildings, as well as domestic structures exhibiting combinations between foreign and local building traditions, daily life, and other aspects. The pottery of Iron Age I Philistia is considered among the most characteristic aspects of the Philistine culture. During the early Iron Age I, with the appearance of various facets of the early Philistine culture, a distinct pottery

group appears, which has been classified as a locally made version of the Late Helladic IIIC pottery. This well-made, monochrome decorated pottery, in shapes deriving from the Aegean cultures, which is called Myc IIIC, Monochrome or Philistine 1, represents the initial stage of the Philistine culture. During the late 12th and 11th cent., the Philistine pottery goes through further development, changing to bichrome or Philistine 2, and later the poorly executed monochrome Philistine 3. In the late Iron Age I/early Iron Age IIA, a new group of decorated pottery appears, the Late Philistine Decorated Ware, with white and black decorations on red burnished vessels, seemingly a combination of the original Philistine decorative traditions, mixed in with Phoenician inspired shapes and finish, common in this period and also seen in other regions in Palestine. In addition, genetic studies have shown that pigs of Southeastern European origin were brought to the region in the early Iron Age, most probably by foreign groups who were part of the Philistines.

A few formal cemeteries have been located at sites in Philistia (Tell es-Safi/Gath, Ashkelon, Azor, Tel ʿErani). The burial types include multi-generational cave burials, in natural or manmade cavities, burial in pithoi, cremation, and pit burials with or without built structures. While in the past it was assumed that the "anthropoid" burial coffins found at various sites in Palestine are associated with the Philistines, this appears to be related to the Egyptian presence in Palestine in the LBA/Iron Age I transition. Recent bioarchaeological study of human remains from these Iron Age I cemeteries supports views that see a complex makeup of the Philistine population.

Phoenicians and Canaanites
in the Northern Coast and Valleys
The Phoenicians are the continuation of the LBA Canaanite culture and population along the coastal regions of the central and Northern Levant, from the Carmel coast in Israel until the southern part of the Syrian coast. While many sites were abandoned or destroyed at the end of the LBA or the beginning of Iron Age I, some sites show continuity between the LBA and Iron Age I, with the "Canaanite" traditions continuing (Megiddo, Beth-Shean, and Tel Rehov). In the second stage of the Iron Age I, sites on the northern coast show intense commercial connections with Cyprus and Egypt, and some connections with even further locations, such as silver from the west and ceramics from the Aegean. This indicates some continuity of LBA trade patterns, but more so points to the beginning of the Phoenician → trade networks, well-known in Iron Age II.

Arameans

Early evidence of the Arameans in Northern Syria are documented in the Assyrian texts from the 11th cent. and onwards. Archaeological finds from several sites in the area of present-day northeastern Israel, southeastern Lebanon, and Southern Syria indicate that already in Iron Age I, groups that may have later identified with the various Aramean groups in this region during Iron Ages II–III (such as the Geshurites), were likely forming in this region. Several of these sites show well-organized → villages, while at late Iron Age I Tel Hadar, a well-built → fortification, and a large grain storage facility were found, perhaps indicating this site served as a center of an early Aramean polity in this region. Whether one can identify the occupants of these sites specifically as "Arameans" at this stage is questionable and one should take into account the possibility that they represent other local groups in various stages of societal development during this formative stage in Canaan.

Transjordanian Cultures

The Iron Age I finds from Transjordan represent the early stages of the formation of the cultures and polities known in the region during Iron Ages II–III – for instance, Ammon, Moab, and Edom. The early Iron Age is evidenced throughout Transjordan, but it appears to be quite different from the areas to the west of the Jordan (e. g., less Philistine but more Aramean influences; more evidence of → tombs, little evidence of literacy). During the early Iron Age, sites in the Eastern Jordan Valley seem to be more connected to the west. In central Jordan, there is evidence of several fortified sites during the early Iron Age. In semi-arid regions of central Jordan, in Moab, small to medium sized village sites, some with rudimentary fortifications, appear during this period. In Southern Jordan, in the area later defined as Edom, there is evidence of nomadic groups (e. g., the cemetery near Feinan), most likely evidence of the *Shasu* nomads mentioned in Egyptian sources, who were probably involved in the → mining activities during Iron Age I (Feinan and Timna), and in asserting control over the trade routes (→ map Trade#1) that traverse the Arabah Valley. In fact, these may be central reasons for the Edomite ethnogenesis at this time.

3.8. Iron Age II (ca. 975/925–600/586 B.C.E.)

Four sources of information can be used for reconstructing the history of Palestine in Iron Age II: the archaeological finds, the Hebrew Bible, various Ancient Near Eastern texts (Assyrian, Babylonian, Egyptian, Aramaic, etc.), and inscriptions found in Palestine. The archaeological finds make up the primary source for the cultural and historical reconstruction of this period due to the relative lack of inscriptions and the debated historicity of the relevant biblical texts. The latter went through a long and multifaceted process of formation, redaction, and editing, and thus, must be used extremely judiciously when attempting to correlate with the archaeological remains.

The Iron Age II in Palestine, while representing complex and diverse processes, can be generally summarized as a period in which at first, local, regional polities (of various types and scale) are formed, based on real or constructed group identities, which develop within the context of the broader socio-economic processes occurring in the Iron Age Eastern Mediterranean region. Later in the Iron Age, the influence and presence of the Assyrian Empire becomes dominant, with the various local polities slowly swallowed by, or under the shadow of, the Assyrian conquests and domination. This imperial domination continues until the end of the Iron Age, even if replaced briefly by the Egyptians and then finally by the Babylonians. The rich archaeological remains from Iron Age II Palestine, in conjunction with various written sources (including the Hebrew Bible) that relate to this period, enable a robust, if at times highly debated understanding of this period.

Early extrabiblical texts relating to this region – such as Pharaoh Shishak/Sheshonq's list, the Tel Dan Inscription, and the Mesha Stela – indicate the existence of the Judean and Israelite Kingdoms in the 10th–9th cent. In addition, from the late 9th cent. onward, Assyrian texts (e. g., Shalmaneser III's Black Obelisk) provide a good comparative background for the chronology and historical framework of these kingdoms and other polities in Palestine.

Iron Age IIA (Early 10th Cent.–830 B.C.E.)

Iron Age IIA is both a continuation of patterns and processes that commenced in Iron Age I, as well as various new characteristics, though the stages in these developments are not similar in all regions.

Along the Lebanese coast, from the early 10th cent. onward, the Phoenician culture develops impressively. Along the northern coast of Israel, similar developments can be seen, clearly a southern extension of the Phoenician core region. In the mid-9th cent., the port at Dor seems to have gone out of use, possibly as the site was taken over by the Israelite Kingdom, during the reign of King Ahab of the Omride Dynasty, reflecting a change in the political influences.

The Northern Jordan Valley sees important developments in settlement during the 10th and 9th

cent. The cultic precinct and → fortifications at Tel Dan are built and expanded during Iron Age IIA, most probably already in the 10th cent. and continuing to develop in the 9th cent. While the affiliation of this site during the 10th cent. is debated, it is clear that in the 9th cent. the site was controlled by the Israelite Kingdom until its destruction, apparently by Hazael of Aram (Tel Dan inscription). Likewise, the Iron Age IIA levels at Hazor are debated, although it appears that already in the 10th cent. there was substantial activity, continuing into the 9th cent. The fortifications at Hazor are of particular importance, with a six chamber → gate and a casemate wall in the first stage, both of which were cancelled out in later when the fortifications expanded to include the entire upper tell, most likely during the Omride Dyn., in the mid-9th cent.

On the eastern side of the Sea of Galilee, evidence of large fortified sites with Aramean material culture indicates that this region was under Aramean control during Iron Age IIA, perhaps at first the Aramean Kingdom of Geshur, and later under Aram Damascus.

Further south in the Jordan and Jezreel Valleys, Iron Age IIA is well represented. During the mid-9th cent., many sites in the region and beyond show impressive development, indication of the Kingdom of Israel during the reign of Ahab, reflected as well in the biblical narratives and Ahab's role in the battle of Qarqar (853 B.C.E.) as depicted in the Kurkh stela of Shalmaneser III of Assyria.

Excavations at Tel Rehov revealed a thriving, though unfortified, 25 ha → city, with a dense Iron Age IIA sequence, with three destruction layers dating between ca. 980 and 830 B.C.E., among which might be the Shishak (ca. 925 B.C.E.) and Hazael (ca. 830 B.C.E.) destructions. Noteworthy as well are the → houses at Tel Rehov whose plans are different from the typical "four-room houses" at other sites in the region (and built with wood foundations, also an unusual characteristic for this period), a unique apiary, a small → sanctuary, and the largest collection of inscriptions from any site in Iron Age IIA Palestine. It has been suggested that this site had a central role in the transportation of copper (→ mining) from the Arabah, to Phoenicia and beyond.

In the Northern Central Hills, being the core region of the Kingdom of Israel, which appears in this period (most probably not earlier than the late 10th cent.), various sites are newly founded in this period. Some are built on earlier occupations such as Samaria, that was founded in the early 9th cent., as the royal capital, until its final destruction in 722 B.C.E. Gezer, located on the southwestern edge of the Samaria hills is extensively settled and fortified during the Iron Age IIA. The clear 10th cent. dating of the Gezer fortifications, perhaps reflects activities of the Judean Kingdom (Solomon?) or of the early Israelite Kingdom. During the 9th cent. Gezer was destroyed in the campaign of Hazael of Aram, ca. 830 B.C.E., as seen at Gath, Tell Zayit, and other sites.

In the southern central hills (Judah) there are fewer Iron Age IIA sites than in Samaria, continuing trends seen in Iron Age I. There is evidence of settlement activity in late Iron Age I and early Iron Age IIA Jerusalem. While a possible Iron Age IIA palace (on the summit of the "City of David") and fortifications (in the "Ophel") have been suggested, this is highly debated. Ceramic and stratigraphic remains from the "City of David" indicate that there was a settlement during early Iron Age IIA. During late Iron Age IIA, in the 9th cent., there is more evidence of the urban development of Jerusalem. This includes (re)building fortifications (including reuse of MBA fortifications) and expansion of the access to the Gihon spring. Among the finds are imported pottery from Philistia (and local imitations) and Mediterranean fish (→ fishing), and hundreds of Phoenician-style an-epigraphic bullae, all of which indicate that Jerusalem was involved in inter-regional trade at the time. This appears to indicate that during Iron Age IIA, Jerusalem was the center of a small polity, but not the capital of a large kingdom during the reign of Solomon, as portrayed in the Hebrew Bible. That there was some cultic diversity in Judah is indicated by the temple (in "Syrian temple" plan) excavated to the west of Jerusalem, at Mozah. Various locally made → cultic equipment and → votives or → idols were found, and objects deriving from Philistia as well. Further to the south a small number of Iron Age IIA sites are known in the region (e. g., Hebron).

The Iron Age IIA settlement pattern in the Judean Shephelah is of much interest. During Iron Age I, there were a few sites in this region, which some have suggested to identify as Canaanite This pattern goes through a gradual change during Iron Age IIA. Early in the period (and perhaps even in late Iron Age I, ca. 1000 B.C.E.), the fortified sites of Khirbet Qeiyafa and Khirbet er-Rai are constructed, the latter on the remains of an earlier Iron Age I site. The cultural affiliation of these sites, Judean, Canaanite, Philistine, or Israelite, has been discussed. While their affiliation with the early Kingdom of Judah should be seen as a possibility, it should be noted that the Iron Age IIA phases at both sites are short lived, probably destroyed by the neighboring Kingdom of

Gath, by far the largest polity in the region in late Iron Age I and early Iron Age IIA. Slightly later, during Iron Age IIA, other sites are newly settled. The dating and significance of sites in the Shephelah have been debated. Is there evidence of the expansion of Judah into the Shephelah at this time, or did this occur only in late Iron Age IIA and early Iron Age IIB (late 9th/early 8th cent.), after the destruction of Gath by Hazael (ca. 830 B.C.E.)? Further south, in the Northern Negev, changes are seen as well. While the Iron Age I sites in the Beer-Sheba and Arad Valleys are abandoned, several new sites appear. This includes the founding of the small village site at Tel Sheba, which towards the end of Iron Age IIA is apparently fortified. Similarly, early in Iron Age IIA a small village is founded at Arad, and later in the period the first of a series of fortresses (continuing into Iron Age II; see below) is founded. In the Negev Highlands more than 30 fortresses (of varying size and shape) were constructed, along with small rural sites of various kinds. A popular explanation of these sites are that they are evidence, during the mid-10th cent., of the United Monarchy's expansion into, and control of, this region. More so, the many sites in the region noted in the Shishak/Sheshonq's list, depicting a military campaign ca. 925 B.C.E., is to be seen as evidence of an attempt by the Egyptians to take over this region – and the control of the trade routes – just after the division of the United Monarchy into two separate kingdoms. Radiometric dating of several of the fortress sites indicates that at least some of them date to after the Shishak raid. Furthermore, analyses of the ceramics from some of these sites (and in particular the handmade "Negebite ware"), indicate a close connection between these sites and the copper producing sites in the Arabah Valley, which were active at this time. Accordingly, the Negev Highland sites might reflect not the Judean, but the Edomite control of both the copper mining and related desert routes for its transportation, throughout the Iron Age IIA, part and parcel of the process of development, and amplification of Edomite socio-economic complexity and connectivity, during this period.

The settlement pattern of the central and southern coastal plain (Philistia) during Iron Age IIA develops as well. The city of Tell es-Safi/Gath reaches its maximum size (ca. 50 ha), most probably the largest and most powerful city state in Palestine in general. At the time, the site includes a fortified upper and lower city, with extensive remains of public and private architecture. Evidence of trade connections with various regions (including Phoenicia, Greece, and Cyprus) and copper from the Arabah, appear to indicate its supra-re-

gional role, both politically and economically. At the same time, Tel Miqne-Ekron, the Philistine city just to the north of Gath becomes much smaller, perhaps under the influence of Gath. Along the coast, Ashdod is large and fortified in Iron Age IIA, and it appears that Ashkelon, while fortified, is less intensively settled during this period. In addition to the large cities, the Iron Age IIA rural sector in Philistia is active as well. While some of the rural sites of late Iron Age I are abandoned, quite a few rural sites are known from this period. Of particular interest is the cultic repository found at Yavneh, evidence of a yet undiscovered sanctuary dating to early Iron Age IIA and a similarly dated rural temple at Nahal Patish in the northeastern Negev.

Iron Age IIA develops differently in the various regions in Transjordan. In the northernmost region, the Gilead, an independent polity did not form during the Iron Age. Rather, throughout Iron Age II, starting from the mid/late Iron Age IIA, the region seems to have changed hands several times, between the Israelites and the Arameans.

Further south, in the region of the Ammonite Kingdom, more extensive evidence exists, both in the Northern Jordan Valley and the highlands. The citadel of Amman may have been fortified already in the 10th cent., as well as minimal evidence from Tall Jawa and Tell el-ʿUmeiri, primarily dating to the 9th cent. Tombs and the Amman Citadel Inscription (Iron Age IIA or early Iron Age IIB), in which Milkom is mentioned, may be seen as additional evidence of the rise of the Ammonite polity.

The adjacent region of Moab also witnesses in Iron Age IIA the emergence of the Moabite polity. Several sites in this region are founded or continued during Iron Age IIA, particularly in its second half (9th cent.). At Khirbet ʿAtarus, biblical Ataroth, evidence of a late Iron Age I/early Iron Age IIA site, with a temple, was discovered. This level was destroyed in the mid/late 9th cent., and the site and temple were rebuilt. These two phases may possibly reflect events mentioned in the Mesha Inscription in which the king of Moab claims to have captured and destroyed the Israelite city of Ataroth and its temple (ca. 850–830 B.C.E.), a supposition strengthened by the recently published inscribed altar from the ʿAtarus temple. Evidence of the second half of Iron Age IIA was found as well at Dhiban, capital of the Moabite Kingdom, where the monumental Mesha Inscription was discovered. This inscription along with other finds from Iron Age IIA sites in the region, as well as a few tombs dated to this stage, are indicative of the early stages of the development of the Moabite Kingdom.

Recent exploration in Edom has transformed our understanding of the role of this region during Iron Age IIA. Excavations at Feinan and at Timna in the Arabah Valley, along with radiometric dating of the finds, have conclusively demonstrated that both sites were extensively used for copper extraction. A massive fortress at Khirbet en-Nahas in Feinan, next to copper processing areas, and a camp ("Slaves Hill") with evidence of imported objects, (even purple dyed) textiles (→ clothes; → fabric and textiles) and foodstuffs at Timna, indicate that those involved in this copper production – most probably non-sedentary elements of the early Edomite polity – played a major role in Iron Age IIA trade and economy. Not only did they control the copper production, but the → trade routes in the region and long-distance trade as well. Metal objects from Greece and Egypt, made from Arabah copper, are indicative of this. It appears that one of the objectives of Shishak's campaign ca. 925 B.C.E., and likewise of Hazael of Aram ca. 830 B.C.E., may have been to take control of the copper production and trade. We must conclude that the Edom polity seems to have commenced in the Arabah, and only later, in Iron Age IIB/C, settled at sites in the southern Transjordanian highlands.

Iron Age IIB (830–700/650 B.C.E.)
Aram Damascus retains its dominance in the region, up until the early 8th cent., but this soon changed with Adad-narari III's campaigns to Syria in 796 B.C.E. and the tribute received from various kings in the region, including Bar-Hadad, the son of Hazael, and Joash of Israel. But it is not until the military campaigns (from 734 B.C.E. onwards) of Tiglath-pilesar III, that the Assyrian involvement returns, and changes the region successively from north to south with a peak in the reign of Sargon II (722 B.C.E. destruction of Samaria) and Sennacherib (campaign to the Levant 701 B.C.E.). However, during this interim of ca. 60 years, the various kingdoms in Palestine thrived, including the reign of Jeroboam II of Israel and Amaziah of Judah. In the 9th/8th cent., the success of the Aramaic language and its alphabet script can be observed. This seems to be indebted to the political expansion of the Kingdom of Damascus and to the rise, administration, and finally the mass deportations by the Neo-Assyrian Empire. Aramaic subsequently became the *lingua franca* of the Neo-Assyrian, the Neo-Babylonian, and the Persian Empires (then as Achaemenid Official Aramaic).

Iron Age IIB is a well-known phase due to several issues. To start with, it is a period of relative prosperity, intensive settlement, and development of socio-economic complexity, which are reflected in the archaeological remains. From ca. 733 B.C.E. onward, there are many destructions at sites throughout the region that left well-preserved archaeological assemblages, which enable scholars to define the material culture of this period. For example, the destruction level of Lachish, Level III, representing Sennacherib's conquest of the site, serves as the *fossile directeur* of late 8th cent. material culture of Southern Palestine.

The Phoenician coast, while often mentioned in written sources, is insufficiently known archaeologically. Despite this, evidence of the 8th cent. is known at various sites, foremost at Tyros which was the dominant Phoenician city in this period as well. Further south, on the coast of the Western Galilee, sites as Akhziv, Tell Keisan, and Tell Abu Hawam, probably represent the regional dominance of Tyros during this period.

The Galilee, and the Northern and Central Jordan Valley are extensively settled during Iron Age IIB, undoubtedly reflecting the floruit of the Kingdom of Israel in the first half of the period. At Dan, apparently the northernmost city of the Kingdom of Israel, extensive fortifications and the expansion of the cultic precinct are seen. At Hazor, which probably served as the regional administrative city of the Israelite Kingdom, the upper city continues to be occupied and its fortifications, water system (→ water management/works), and other elements bolstered and expanded. All of these sites witness major destructions, and often subsequent abandonment, in the campaign of Tiglath-pilesar III in 733 B.C.E.

In the Jezreel Valley, a similar pattern is seen. Megiddo is a major center of the Israelite Kingdom, heavily fortified, with public buildings, a complex water system, and other elements. According to some views, it is during the reign of Jeroboam II that Megiddo reaches its zenith in the Iron Age, manifested inter alia in two complexes of → horse stables.

The core region of the Israelite Kingdom, the Northern Central Hills, represents a full spectrum of settlement hierarchy, from urban sites of various sizes and hundreds of rural sites of varying scales. The capital, Samaria, stands out as the primary city with an estimated size of ca. 50–60 ha, making it one of the largest sites in Iron Age Palestine. The acropolis was comprised of a fortified enclosure with various elaborate structures, poorly preserved due to later construction. Three large, well-built structures in the citadel are worth noting: 1) a poorly preserved but impressively built structure on the southern side of the citadel, most likely remains of the → palace of the Israelite kings. 2) The "House of Ivories," on the northern side of the citadel, where a large collec-

tion (> 500 items) of well-made →ivory inlays was found (though mainly in later contexts). 3) The "Ostraca House" on the southwestern side of the citadel, in which 100 sherds inscribed with ink inscriptions ("ostraca") were found. These ostraca, most probably dating to the reign of Jeroboam II, record shipments of fine wine (→viticulture) and →oil, sent from various locations that can be identified in the region around Samaria, to the palace. They reflect the political structure of the kingdom, and may very well be seen as evidence of the complex client–patron relationships between the king and various local elites living in surrounding regions. Recent reanalysis of the finds from the site appear to indicate that the city continued to exist after the Assyrian conquest in 722 B.C.E., serving as the capital of the Assyrian province Samaria.

The southern central hills, the core region of the Kingdom of Judah, was likewise intensively settled during Iron Age IIB. As opposed to the settlement pattern in the north, in the Kingdom of Judah, the distribution of various types of settlements was less even. At the top of settlement hierarchy was Jerusalem, which grew in the second half of the 8th cent. to around 50–60 ha, similar to the size of Samaria. But, there were fewer sites of medium to large size, both in Judah and in other regions under Judean control. By far, a much higher percentage of sites in Judah was of smaller scale, most of which were rural sites. Jerusalem during the 8th cent. expands way beyond earlier periods, to include, in addition to the Temple Mount and the City of David, extensive settlement on the "Western Hill," as well as extra-mural settlement to the north. The city was surrounded on all sides by cemeteries. In the latter part of the 8th cent., most likely in preparation for the Assyrian campaign in 701 B.C.E., the city's fortifications are substantially expanded northwards, and the city's water system substantially expanded with the carving out of "Hezekiah's Tunnel" (with an inscription hewn into the tunnel walls), which moved the waters of the Gihon Spring (on the eastern slopes of the City of David), underground, to within the fortifications of the city, to the west of the City of David (to the "Pool of Siloam," →water works 4.2.–4.3.). The preparations for the Assyrian campaign, prior to 701 B.C.E., are manifested in other aspects throughout Judah (e. g., fortifications). The *lmlk* jars (→seal 4.5.) represent royal sanctioned provisions for the kingdom. The circumstances leading to the expansion of Jerusalem during the Iron Age IIB are explained by some as reflecting a slow and steady rise in the socio-economic complexity of Judah during this century, by others as a result of the fall of the Kingdom of Israel in 722 B.C.E. Just to the south of Jerusalem

the palace at Ramat Rahel may have been founded in the late 8th cent. (or in the early 7th cent.). Whether this palace was a Judean palace, or an Assyrian administrative center for tax collection is debated. Various other sites can be noted in the Judean Mountains. At Mozah, the sanctuary that was founded in Iron Age IIA continues to function throughout Iron Age IIB. In addition, the site becomes a redistribution site for agricultural products, with grain storage facilities and an apparent public building. The change in the function of the site, and its apparent transition into a royal administrative site associated with Jerusalem, may reflect a pattern of centralization. An assortment of rural sites is known in the Judean Hills, many of them located around Jerusalem. The latter represent the beginning of an agricultural settlement pattern that will intensify during Iron Age IIC. →Tombs from this period, found throughout the Southern Judean Hills, are additional evidence of the settlement activities in this region.

During Iron Age IIB, most likely due to the destruction of Philistine Gath in late Iron Age IIA, the Judean Kingdom expands into the entire Shephelah, resulting in an increase of settlements. This includes enlargement of sites that were already Judean, sites that had not been settled previously, and numerous other sites in the region, of various sizes and classes – some of them fortified. Lachish III, the southern *fossile directeur*, is of particular importance for the study of the region. It is the second most important site in Iron Age IIB Judah, the administrative center of the southwest of the kingdom. It was heavily fortified, with fortifications and a massive city gate. In its center there was a large administrative fortress/palace surrounded by a fortified enclosure with storage rooms, possible stables, and the fortress/palace itself placed on a raised podium. The impressive archaeological remains of the battle over the city and its destruction in 701 B.C.E., along with Assyrian texts and the monumental carved reliefs (→sculpture) depicting the →siege found in Sennacherib's palace in Nineveh, provide the general background for the end of the extensive settlement of this region by the Kingdom of Judah.

The Northern Negev sees a rise in settlement intensity during Iron Age IIB, representing the southern portion of the Judean Kingdom. The site of Tel Sheba most probably served as the administrative center of the Kingdom of Judah in this region. Several phases of late Iron Ages IIA and IIB were discovered at the site (Strata V–II), but it is Stratum II, the final Iron Age IIB phase of the city, destroyed in 701 B.C.E., that is of particular note, often referred to as the type site for understanding urban planning in Iron Age Judah. The site (ca. 1.2

ha) was enclosed by a casemate wall, with a massive →gate with an external and internal gate. A peripheral road ran parallel to the city wall, with domestic structures of the "four-room house" type (→house 2.3.) built in between (with the broad room at the back of the houses incorporated into the casemate wall). Various public buildings and constructions were incorporated into the Stratum II site. This includes an elaborately hewn water system (which collected water from flashfloods in the nearby wadi; →water management; →water works), storage buildings, and a large administrative structure ("governor's palace"). The possible evidence of a temple includes the scant remains of a dismantled building with deep foundations, and a dismantled stone horned →altar, parts of which were reused in Stratum II structures. It has been suggested that these cultic remains may serve as evidence of the cultic reform of Hezekiah (2 Kgs 18:4; 2 Chr 31:1; 32:12), and the temple was dismantled, right before the final destruction of the site in 701 B.C.E. The finds from Tel Sheba (from Arabia, Mesopotamia, and Egypt) indicate that the site participated in international trade during this period. Of similar importance is the fortress at Arad. Built already during Iron Age IIA, it was thoroughly rebuilt in the 8th cent. The massive, solid fortification wall replaced the earlier casemate wall, a large water system was hewn in the bedrock in the center of the fortress. A temple was built in the northwestern corner of the fortress which consisted of a →courtyard with a large altar, leading to the main broad room, with a small cella (holy of holies) accessed by three steps at the back wall of the main room. In the first stage of the temple, the cella has a →standing stone at its back and two incense altars on the steps leading up to it (recent analyses show that cannabis was included in the incense →drugs). The temple was used in two stages of Iron Age IIB. It was dismantled, perhaps also related to the cultic reform of Hezekiah. This level was destroyed in the late 8th cent., apparently during Sennacherib's campaign.

Further south, in the Negev Highlands and beyond, there was less activity than in Iron Age IIA (above) and in Iron Age IIC (below). A small number of desert fortresses were occupied, most probably guarding the trade routes in the region. In the Arabah, two large fortresses from Iron Age IIB can be noted, at ʿEin Hazeva, and at Tell el-Kheleifeh.

An additional noteworthy site in this region is Kuntillet ʿAjrud, situated in the Eastern Sinai, ca. 50 km south of Kadesh-Barnea. Here, on a small hill a fortified structure was found. In the entrance and adjacent rooms of the building, →mural paintings and decorated vessels where found, which in addition to rich iconographic depictions, included texts, written mostly in Northern Israelite Hebrew and Phoenician. These inscriptions mention "YHWH of Teman," "YHWH of Samaria," and "Asherah." The building also contained storage vessels, a communal cooking area, and due to the arid conditions, a broad range of well-preserved organic remains (→clothes, →basketry, plants, →spices). The pottery from the site is predominantly Israelite (very little Judean) and no local "Negebite" pottery was reported. Based on the finds and the radiometric dating, most date the site to the early 8th cent., connected to the Israelite Kingdom, serving as a caravanserai on the trade route traversing Eastern Sinai from north to south.

Following the destruction of Gath in late Iron Age IIA, the geopolitical situation in Philistia shifted. Tel Miqne-Ekron replaces Gath as the main inland Philistine city, while it appears that Ashdod, Ashkelon, and Gaza continue to flourish. The incorporation of Philistia within the Assyrian Empire, and the continuing pressure of the Assyrians in the direction of Egypt, play a major role in Philistia during Iron Age IIB.

Iron Age IIB is a period of uneven growth and settlement in Transjordan; some regions prospered and developed, others less. In Gilead, there are relatively few sites from this period, and apparently, after the Assyrian conquest in 732 B.C.E., the region is quite abandoned. In Ammon, numerous sites are known (the capital Amman, Tall Jawa, and Jalul). Tell Deir ʿAlla is of particular interest in light of the so-called "Balaam Text," an ink inscription written on the wall plaster of an apparent cultic structure (found in fragments on the floor of the building). The fragmentary inscription (first half of the 8th cent.) is written in a dialect whose identity is debated (Aramaic? Ammonite? Gileadite?) and mentions Balaam, son of Beor, who is reminiscent of the prophet of the same name in Num 22–24. Another unique aspect of Ammonite material culture is a group of stone statues with an Egyptian-style "Atef" crown (→insignia), perhaps symbolizing Ammonite kings or deities (→idol).

The remains from Ammon and Moab (capital Dhiban) seem to indicate that the settlement in this region developed throughout the 8th cent. While the region was conquered by the Assyrians in 732 B.C.E., and these two kingdoms became Assyrian vassals who had to pay tribute, by and large, the socio-economic picture did not change much.

In Edom, Iron Age IIB brings changes in settlement pattern, with the highlands of Edom settled

substantially for the first time during the Iron Age. The capital at Buseira is settled and fortified at this time. While in the past, Iron Age IIB settlement in Edom was connected to a supposed Assyrian interest in the Feinan copper mines, recent excavations at Feinan have demonstrated that the mines were not active in the 8th cent. It would appear that other factors were behind this new settlement pattern, perhaps related to trade routes from Arabia.

Iron Age IIC (ca. 700/650–600/586 B.C.E.)
In this period the Assyrian imperial rule in the region was strongly felt. In regions that the Assyrians had annexed (e. g., Samaria, Phoenicia, and Philistia), various sites with Assyrian palaces and fortresses are found, with clear evidence of the presence of Assyrian officials and soldiers. In other regions, where local vassal kingdoms continued to exist (e. g., Judah, Ammon, Moab, and Edom), a strong Assyrian influence is seen, manifested in various aspects of the material culture (such as Assyrian and Assyrian-style pottery, dress codes [→ clothes]) – and reflected in the textual sources as well.

In the 7th cent., the Judean Kingdom flourished, even if its expansion to the west had been curtailed by the Assyrians at the end of the 8th cent. Both in the heartland of Judah, in and around Jerusalem, in the eastern part of the Shephelah, and in the Northern Negev and the Judean Desert, extensive settlement activities can be seen. Large-scale building in and around Jerusalem (including the palace at Ramat Rahel), along with that at many rural sites, are indicative of this prosperity, mirroring the Assyrian evidence that the Judean Kingdom and its king Manasseh were loyal Assyrian vassals. This evidence of a flourishing 7th cent. Judah fits in well with the commonly held view of this period, and in particular, the second half of this century, as a period of cultural "renaissance" – a time to which some scholars would date various biblical texts (in particular, the "Deuteronomistic texts"). Only towards the end of the 7th cent., when the Assyrian control of the Levant waned, and the Babylonians and Egyptians vied for control of this region, this period of growth and flourishing ended. What followed, was a time of political instability in the Judean Kingdom, up until the final destruction of Jerusalem, and the Judean Kingdom, in 586 B.C.E.

There is rather extensive evidence of writing and literacy in the Judean Kingdom in Iron Age IIC, with well-known examples such as the Arad letters (found in the fortress), the Lachish letters (found in the city gate, dated to right before the Babylonian destruction in 586 B.C.E.),

and numerous inscribed bullae (→ seal). Most importantly, according to most scholars, the Hebrew language used in these texts is virtually identical to the "classical Biblical Hebrew" seen in those biblical texts that are dated to the late Iron Age – providing circumstantial evidence for their dating. Burial in Iron Age IIC is known from various regions. In Judah, the common burial, continuing from Iron Age IIB, is the cave burial with benches, multi-generational → tombs that seem to imitate the form of the common "four-room house."

The region of Philistia played an important role during this period. On the one hand, it was jumping board for the repeated attempts by the Assyrians to invade Egypt, and numerous sites with evidence of the Assyrian army are seen, particularly in Southern Philistia and the Northwestern Negev. In addition, the Philistine cities, including Gaza, Ashkelon, and Ekron, flourished at the time. Ashkelon became a large international port, while Ekron became one of the largest producers of olive → oil in the Eastern Mediterranean. At Ekron, of particular note is the large temple with its → votives – and the building inscription of king Ikausu/Achish with a list of his ancestors, and a deity – read by most as "Patgaia" – perhaps evidence that an Aegean originating goddess continued to be worshipped in Philistia until the end of the Iron Age. The fate of the Philistine cities was sealed in 604 B.C.E., and there is ample archaeological evidence of the campaign of Nebuchadnezzar of Babylon which destroyed the remaining Philistine cities (Ashkelon, Ashdod, Ekron, and Gaza), and exiled the surviving population to Babylonia.

3.9. Babylonian and Persian Periods
(600/586–332 B.C.E.)

Babylonian Period
The Babylonian period is a poorly known and highly debated period, due to both a lack of certainty in the archaeological definition of the material culture of this short time span, and in light of few written sources. In Northern and Central Palestine, the Babylonians may have continued Assyrian imperial control, with possible evidence of this at Hazor and Samaria. In Judah, the picture is somewhat different. While most of the region of the former Kingdom was devastated in the Babylonian conquests at the end of Iron Age IIC, and most of the inhabitants were killed or exiled, in the area north of Jerusalem (Benjamin) there is evidence of continuity of settlement. In particular, Tell en-Nasbeh becomes the major site in the region. In addition, the palace at Ramat Rahel continues to serve as a center for imperial control. In Transjordan there is a serious lowering in the in-

tensity of settlement in almost all regions, with few sites with a clear sequence from this period. The Babylonian policy in Palestine was quite different from that of the preceding Assyrian Empire. Save for minimal interest as a source of plunder, the scorched earth policy, particularly after rebellions, left Palestine in a state of degradation, and accordingly, with relatively few archaeological remains from this phase.

Persian Period

The beginning of the Persian period is marked by the conquest of Babylon by Cyrus the Great in 539 B.C.E. From this point, the Achaemenid Empire rules the Levant – as part of their much larger empire – which ends with the conquests of Alexander in 332 B.C.E. The effects on the material culture of Palestine did not appear at the beginning of the period, rather, they become more obvious after a few decades. In general, in the Persian period there is a rise in the intensity of the settlement in many regions, which is particularly dominant in light of the situation in the previous Babylonian period. While differentiation between the early and later Persian period is not always easy, it appears that more activity occurred in the region in the latter half, particularly in the 4th cent., when the Persians lost control of Egypt (in 399 B.C.E.), and Palestine became the southwestern border of the Persian Empire.

Palestine, which was within the Persian Satrapy of Eber Nari, was divided in regional provinces (*Pahwa*), ruled by a governor, including Yehud (Judah), Samarina (Samaria), Idumea (Southern Judah), and several others. These subdivisions, may not only have been bureaucratic, but might reflect the ethnic identity of the majority of the population in each area. Many regions of Palestine are densely settled during the period, although most of those that are archaeologically known are of non-urban character, even at sites which in previous periods had urban settlements. While Jerusalem itself is quite minimal in size, at nearby Ramat Rahel, an impressive palace, continuing the palaces of earlier periods was found, most likely the seat of the local governor for the Persian Empire. To the north of Judah, in Samaria, early evidence of the Samaritans is seen, including the early phase of the temple at Mt. Gerizim, and as seen in the cache of papyri from Wadi ed-Daliyeh in Southern Samaria. Throughout Palestine there are many small sites connected to the Persian control, including numerous forts and administrative structures. Farmsteads are known as well, perhaps reflecting elites controlling rural agricultural zones. Along the Phoenician and Philistine coast, various cities (Akko, Dor, Ashkelon,

and Gaza) were settled and go through a revival during the Persian period.

In Transjordan, there appears to be some continuity between the Babylonian and Persian periods, and evidence of settlement in several regions.

Overall, the material culture of the Persian period is quite uniform in character. The local pottery is quite similar all over Palestine, and in the 5th and 4th cent. there is a lot of imported Cypriot and Greek pottery of various types. While few cities of the period have been excavated, evidence of well-built fortifications, city plans (some with grid [Hippodamian] plans), and impressive ashlar masonry is known. The typical house of this period is a courtyard structure, and the ubiquitous "four-room house" of the Iron Age disappears. Sanctuaries and favissae are known at several sites, both within cities and on isolated mountain tops (Mizpe Yamim). Large, well-built structures that are found at various sites and at strategic locations are interpreted as fortresses or administrative structures. Coinage (→ finance) begins to substantially appear during this period, both imported coins from various Mediterranean regions, as well as local mints, such as in Yehud, Samaria, and the Gaza region. Clay and bronze figurines of various types (also of Egyptian deities) are quite common during this period (→ idol) – save for in Yehud, the latter perhaps for religious reasons. In figurines, iconographic motifs (→ seal), and clothing (→ clothes), the Greek cultural influence is felt, something that will become more pronounced in the Hellenistic period. The tombs in the period are varied, whether in large cemeteries with single pit or cist burials and family cave burials. The archaeological evidence from Persian period Palestine shows a region on the periphery of the extensive Persian Empire, with intensive contacts with other regions in the Eastern Mediterranean, Egypt, and the west. The regional subdivision of Palestine during the period seemingly reflects ethnic and religious divisions, some of which continue in later periods as well.

3.10. Hellenistic Period (332–63 B.C.E.)

The Hellenistic period is divided by several historical events, which are not always easy to discern in the archaeological evidence. The period commences with the conquest of the ANE, including Palestine, by Alexander the Great (332 B.C.E.) and ends with the Roman conquest in 63 B.C.E. Following Alexander's death in 323 B.C.E., and two decades of conflict by his successors (the Diadochi wars), most of his empire was divided between Seleucus I and the Seleucid Empire that followed (based in Turkey and Syria), and Ptole-

my I and the Ptolemaic Empire that followed (based in Egypt). These two kingdoms vied for control of Palestine, with the Ptolemies ruling Palestine during the 3rd cent., and the Seleucids during the 2nd cent. Towards the end of the 2nd cent. and the first half of the 1st cent., large parts of Palestine came under the rule of the local (non-Davidic) Hasmonean Dynasty.

To a large extent, the early Greek rule in Palestine continued that of the Persian Empire, and at most sites in Palestine continuity can be seen in the archaeological levels. During the 3rd cent., under Ptolemaic rule, Idumea and the coastal regions appear to have prospered. Most of the internal regions, including Judea, Samaria, and Transjordan, while settled, had few urban sites. Jerusalem was a small city, as was Samaria and Shechem, and though a Samaritan temple existed in Mount Gerizim, it was of small-scale.

While in many aspects there is much continuity during the Seleucid rule (2nd cent.), various sites seem to have gone through a process of development (Straton's Tower [later Caesarea]; Ashdod [Azotus], Mareshah). Jerusalem's fortifications are extended during this period, the temple of Mt. Gerizim becomes a religious center. Larger quantities of imported pottery (wine amphoras from Rhodes, imported Eastern Terra Sigillata fine ware) found in the region in the 3rd cent. point to international → trade.

In 164 B.C.E., the Hasmoneans revolt against the Seleucids, starting a confrontation lasting some six decades, until the Hasmonean rule was fully established under Alexander Jannaeus in 103 B.C.E., who founded the impressive palaces at Jericho, and built, and in some cases expanded, a series of fortresses and fortifications, mainly along the eastern borders of Judea. Evidence of the development of Jerusalem at this time can be seen in the archaeological remains, both within the city and various impressive tombs surrounding the city (in the Kidron Valley next to Jerusalem, and the Tomb of Jason further to the west). During these decades, repeated military campaigns, as well as evidence of various military related construction can be seen in the region. In general, this is a period in which an ongoing tension between local traditional lifestyles and the influence of Hellenistic civilization and the slow weakening of Seleucid rule is seen, under the shadow of growing Roman power in the Eastern Mediterranean. A case in point can be seen in various facets of Hasmonean culture. Hasmonean coinage, symbolizing their political independence (as with other Hellenistic polities), was unique in that it didn't depict human figures, adhering to Jewish religious norms. And while the Hasmoneans, particularly the elites, were very much connected to the opulence of the Hellenistic world and lifestyle, the symbolic ties to their past could be seen in their adoption (along with the Samaritans) of an archaic style script, reminiscent of the scripts of Iron Age Hebrew.

4. Bibliography

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III. Epigraphy

1. Introduction

Epigraphy is the study of ancient inscriptions and usually refers to words, symbols, or designs made, carved, engraved, or otherwise inscribed on some (usually non-porous) object, such as wood, metal, stone, or bone. In recent times, however, clay, papyrus, parchment, and other writing media have also been included among inscriptional materials. Paleography is a sub-field of epigraphy which intends to augment, refine, and revise script typologies. Its premise is that scripts develop through time and that this development can be discerned in an empirical fashion, described, and used as the basis for script typologies and dating. This chapter focuses upon the study of the inscriptions of ancient Israel and its environs and the scripts that appear in such inscriptions (cf. for LBA–Iron Age IIA inscriptions from the Southern Levant → map Introduction #3, p. LV). The utilized scripts' principle (system of signifying; see below) and form, the → writing materials, the languages, the typology of the texts, the determination of absolute chronology, the archaeological context, all play a role in epigraphy (on the epigraphic and paleographic methods see ROLLSTON 2010:4–7). The picture of the history of ancient Israel, drawn retrospectively by the Hebrew Bible, does not agree with the current results of the archaeology and epigraphy of Palestine. Thus, only the combination of biblical exegesis with the archaeology and epigraphy of Palestine may yield a more coherent and complete picture of the political and religious history of ancient Israel.

2. The Origins of Writing

Many early scripts began as pictography. Apart from the highly archaic hieroglyphs (used on monuments until the 3rd cent. B.C.E.), most early scripts simplified quickly to abstract sign forms of a linear script. Meanwhile, they branched out geographically and often diverged into a conservative lapidary "print"-script with unconnected letters and a more progressive cursive script. The letter form ranges from little works of art (archaic hieroglyphs), symmetrical constructions (Old South Arabic, classic Greek), more complicated cuneiform constructions (Sumerian, Akkadian, etc.; Ugaritic), simple compositions of round and straight lines (most scripts), to primitive scribbling. Originally all four possible directions of writing were used, but later on the scripts' directions were mostly right-left (in many Asian scripts and in Etruscian) or left-right (in Greek and Latin).

Throughout much of the 2nd mill. B.C.E. there was a Northwest Semitic script tradition ("early alphabetic") but it was not standardized. Until the 12th cent. B.C.E., the letters could rotate around their center or their axis, when writing directions changed. During the 2nd mill., several developments occurred: (1) The stance of the letters became more standardized; (2) the direction of writing was consistently sinistrograde; and, (3) the number of consonants was reduced to twenty-two. Because of these developments, the convention is to refer to this stage of the script as Phoenician rather than early alphabetic. However, these changes did not occur simultaneously, but all were completed by about the mid-11th cent. B.C.E. There are a number of Phoenician inscriptions from the Phoenician homeland that provide substantial data about the Phoenician script of the late 11th, 10th, and early 9th cent. (ROLLSTON 2010:19–35). In addition, there are a number of important Phoenician inscriptions that were produced outside of the borders of Phoenicia, for instance, in Syria or Israel (Kefar Veradim bowl, Gezer Calendar, Tell Zayit abecedary), during this early period as well. There is data to state that the Old Hebrew (or Moabite Hebrew) script became a distinct script during the 9th cent. B.C.E. (Mesha inscription). Among the most important of the distinctive features of the fledgling Old Hebrew script is the curvature of the terminal portions of the downstrokes of several letters (Kap, Mem, Nun; ROLLSTON 2010:42). In the 8th cent., the Aramaic script started to separate from the Phoenician script. There are several major features of the Aramaic script that distinguish it from the Phoenician script. For example, the heads of Bet, Dalet, and Resh had opened in the Aramaic script and these open-headed forms are regnant from the late 8th cent. onward.

Despite all those changes certain majuscules of the Latin script exist that reflect the remnants of the original picture 4,000 years later. These would include, for instance: A – a bull's head with

West Semitic Alphabetic Inscriptions

- ● **Late Bronze Age**
- ■ **Late Iron I / Early Iron IIA**
- ▲ **Late Iron IIA**

Areas with dense distribution of epigraphic evidence during Iron IIA

Introduction map #3: Distribution of early West Semitic alphabetic inscriptions.

horns (rotated 180˚), C – a stick, H – a fence (rotated 90˚), K – a hand with spread fingers, M – the water surface, N – a snake, O – an eye, Q – a loop, R – a head, T – a cross. Initially texts were written in a *scriptio continua* even disrespecting the ends of lines. Since the 10th cent. B.C.E., however, words could be separated by vertical lines or dots; since the 7th cent. B.C.E., they could be separated by spaces. From the 4th cent. B.C.E. on, certain Aramaic letters developed a special word internal form, which created final letters from the old letter forms. D and R also merged. Like other Aramaic alphabets (except the Samaritan Old Hebrew script), the "Hebrew square script" evolved from the imperial Aramaic script, in the 3rd cent. B.C.E. (about 100 years after the demise of Hebrew as a spoken language; ATTM:55–58; ATTME:34–36, 67–70), into which the Hebrew Bible was transcribed from Old Hebrew script into the Hebrew square script. The cursive form of the Hebrew square script was used until ca. 135 C.E. (YARDENI 2000). The Nabatean cursive continues in the Arabic script (GRUENDLER 1993), the Arsacid cursive in the middle Persian Pahlavi and Avesta scripts, the Syriac cursive in the Jacobite Serṭo (HEALEY 2000).

Numbers are mostly written out in literary texts; exceptions to this rule are the imperial Aramaic translations of the Ancient Persian, Elamite, Babylonian Behistun-inscription of Darius I (TADAE 3: fig. C.2; 5th cent. B.C.E.) and 4Q554 a new/heavenly Jerusalem from Qumran (about Christ's birth). In contrast, numbers (in combination with →scales, measures, or weights) had been in use in economical texts for a long time. In Ugaritic texts, a vertical wedge is used for "1" and "60," a "*Winkelhaken*" for "10," which are combined in various arrangements to create numbers. In Hebrew and Aramaic texts, Egyptian hieratic signs are used (HAE 2.2:48–51; ROSENTHAL 1964:pl. 5): A vertical stroke = "1,"four vertical strokes = "4," exceptionally, nine vertical strokes = "9," individual signs for "5," "10," "20" to "9,000" also exist. In Phoenician, horizontal dashes on top of or next to each other could be used for "10"; in the Samaria-ostraca a "t-like" sign was apparently used for "4." The so-called Arabic numerals are actually Indian. Measures and weights are often written in abbreviated form. In the 2nd cent. B.C.E., one began to use the letters in the order of the alphabet as numerals following the Greek archetype (still like this in Old Arabic; KAI 52–53; ATTM:329–330). Looking at this phenomenon from the other side, this suggests the calculation of a word's or name's code. The only biblical examples for this so-called "Gematria" are Gen 15:2 Abraham's servant "Eliezer" = Gen 14:14 his

"318" people and Rev 13:18 "Emperor Nero(n)" (= ‏קסר נרו[ן]‏ 616/666).

3. Scripts

An appreciation of the original documents of the biblical environment first presupposes knowledge of the scripts used within those documents. If the common sense is indicated by pictures or signs alone, without being tied to a certain wording (e. g., traffic signs), it is not yet considered as script. Script only exists where non-spoken instruments (i. e., signs that do not equal, clearly on their face, whole concepts) mark units of speech sound and, therefore, texts can be rendered graphically with such instruments. For each specific country, the creation of script is the step from prehistory to history. Basically, paleography (the study of ancient writing systems and the deciphering and dating of ancient manuscripts) distinguishes between four different types of scripts. A) Word scripts, that is, independent, original creations with many one-consonant words of their own language, as necessary basic units that are agglutinative (have morphological affixes that may be attached to a base word). These include: Sumerian cuneiform script since ca. 3200 B.C.E. and, apparently, not fully independent from it; Egyptian hieroglyphs since ca. 2700 B.C.E., which contains hundreds of word signs, syllable signs, and word class signs; and the Cretan picture and Linear A scripts with at least 100 signs. B) Syllabic scripts, that is, dependent, later creations with many one-consonant words of a foreign donor language as basic syllables. These include the Akkadian cuneiform script, which is still more complete than any nonpointed Semitic alphabet (meaning a Semitic language alphabet with only consonants and no vowels; see C below). Without the Akkadian cuneiform script many important facts about the Canaanite and Aramaic of the 3rd and 2nd mill. B.C.E. would still remain unknown. The syllabic scripts also include Luwian picture script and Cretan Linear B script. C) Consonantal scripts, that is, syllables consisting of the first consonant and a following short or long vowel (basically any syllables sounding roughly alike) are built acrophonically (which is the use of a symbol to represent phonetically the initial sound of the sound object) using the 29 multi-consonant Canaanite letter names. This was a new concept because no acronyms existed in the inflected Semitic languages for objects easily representable by other systems. Consonant scripts include the various Semitic alphabets. D) Sound scripts, that is, all consonants and vowels are recognized as basic elements of the language and,

therefore, each is written with a single letter or sign: the Greek alphabet and, under its influence since the 5th cent. C. E., the Hebrew, Aramaic, and Arabic sacred texts, which were subsequently vocalized by pointing. Actually, this category includes any script dependent on or arising from the Greek script, particularly the Latin script.

Isolated word scripts that are without syllable scripts derived from them, or that lack comprehensible parallel texts, cannot be deciphered (e. g., Proto-Elamite, Proto-Byblic, and other scripts of the 3rd to 2nd mill. B.C.E.). A script, therefore, is significantly improved, only if it is taken over and adapted by a different speech community, which is not biased by tradition and familiarization with the original script and, consequently does not dread radical interventions. For someone phonetically untrained, it is impossible to dissect a syllable into individual sounds, as modern experiments have shown (SCHMITT 1951; 1952). The Akkadian cuneiform script, whose sign inventory had been significantly reduced to a smaller number of signs of the types Consonant-Vowel and Vowel-Consonant by about 1900 B.C.E. through the Amorite (Canaanite) Hammurabi (some consonants, thereby, were not distinguished as in non-pointed Aramaic or Arabic) and was the most complete of all scripts until 850 B.C.E., when Greek unintentionally discovered the vowels as individual sounds while trying to read Phoenician guttural letters like ʾAlp or He (which the Greek language lacked), reading them, therefore, as /a/ or /e/. The same thing had already happened about 1400 B.C.E. involving the Hurrians of Ugarit and the Ugaritic letter /ʾ/, ʾalpu = ʾa/i/u. They dissected the Ugaritic letter into the three syllables/signs a, I, u (Ugaritic: ʾa, ʾi, ʾu). It seems, however, that the Hurrians did not notice that they had therewith isolated the vowels and had created freely usable vowel letters from syllables. Similar processes can also be observed at the transfer of the alphabet from the Phoenicians to the Arameans in the 11th cent. B.C.E., when similarly written forms with Waw were pronounced /w/ in Phoenician and /u/ in Aramaic, and forms with Yod were pronounced /y/ in Phoenician and /i/ in Aramaic (e. g., אבי Phoenician ʾabiya, Aramaic ʾabi "my father's"). This resulted for the Arameans (and through them also for their Canaanite and Arab followers) in a dual function of the so-called vowel letters Waw and Yod (and since the 9th cent. B.C.E. also He and ʾAleph) as (1) either short or long consonants (like it always had been for any consonant) or (2) as irregular writings for long medial and final vowels (in classic Syriac, classic Arabic, and Mandaic, where those writings were regular expressions). Therefore, those

letters are frequently written twice in early Jewish Aramaic when used as consonants. Since the 3rd cent. B.C.E., they could also represent short vowels. Before Greek or Latin influence, the writing of Bet and Waw was understood as a syllable; for instance, a Bet would indicate that the syllable ba/e/i/o/u had to be read as bo/u. Later (with Greek or Latin influence), it was understood as a phonetic transcription of equitable consonant and vowel letters. Only Phoenician, Old South Arabic, and Early North Arabic withstood the Aramaic influence and retained their consonant script. The number of ambivalent letters was even larger for the Arameans and their Canaanite (including Hebrew) and Arab heirs, because the Phoenicians had discarded seven of the original 29 Canaanite letters, which they did not need anymore through consonant assimilation. This ambivalence increased after the 1st cent. B.C.E. because of the dual pronunciation of the letters b, g, d, k, p, and t. Unfortunately, most Canaaneans and the Arabs still had need of those letters because of their unreduced inventory of consonant sounds. However, because only Non-Semites invented additional letters (usually attached to the end of the alphabet after the letter Taw – for instance, the Hurrians in Ugarit, or the Greeks), the Semites assigned multiple readings to individual letters, for instance, for Šin: /š/, /ś/, or /t̠/ (following the Phoenician *Canaanite* sound shift). Due to those limitations in any Semitic alphabet, other texts are necessary to determine the pronunciation of the Semitic languages. Such texts would include cuneiform (e. g., the incantations from Uruk; 2nd cent. B.C.E.), Demotic (e. g., Papyrus Amherst 63; 4th cent. B.C.E.), Greek (e. g., the Secunda of Origen; 3rd cent. C. E.), or Latin writings of Semitic texts.

Because the inventor of the Semitic alphabet script (about 2000 B.C.E.) had only denoted consonants and did not perceive this as a limitation, he most likely did not know cuneiform script but, rather, was under the influence of a vowel-less script, which only expressed consonants (probably the Egyptian hieroglyphs which some of his letters seem to resemble). The sites where the earliest exemplars of alphabetic script have been discovered (Luxor, Sinai, Gezer; since the 19th cent.) and some of the letter names (Dag, Waw) suggest a Canaanite from the Palestinian-Egyptian border region as inventor. Due to its (at first) completely missing or (later) incomplete rendering of vowels, the alphabet was generally usable only within the same speech community, although it prevailed within the Egyptian sphere of influence, probably because of the straightforwardness of script and writing materials. In the 14th cent., this

script reached Ugarit and, therefore, the Babylonian sphere of influence. Later Aramaic advanced in the direction opposite to Southern Palestinian, after it had been used for international correspondence from the 8th cent. B.C.E. on (ATTM:28; ATTM2:16; GZELLA 2015). It is uncertain, which of the two traditional letter orders (attested in cuneiform alphabet script since the 14th–13th cent.) is the original one: our Phoenician, Greek, Old Arabic order or the Egyptian South Arabic Ethiopian order, beginning with *hlḥm*. The modern Arabic alphabet was subsequently arranged by a similar appearance of letters.

4. Writing Materials and Text Genres

Besides its storage (→ stock and storage) place (e. g., stable parts of buildings, caves, desert sand), the lifespan of documents depends primarily on the durability of the → writing materials in use. The main writing materials were usually the cheapest ones available. The oldest transportable writing material that was widely used were tablets made of soft clay inscribed with texts in cuneiform script (4th mill. B.C.E. until the beginning of the 1st mill. C. E.) and the cuneiform alphabet (14th–10th cent. B.C.E.; a Ugaritic-Hurrite reproduction of the alphabet letters). Cuneiform documents were often additionally sealed and enclosed in an equally inscribed clay "envelope." The clay was hardened by drying or (even harder) by burning (either in a special → oven or accidentally in a fire). Many such tablets, therefore, have been preserved until today. The clay bullae of the 1st mill. B.C.E. often only contained a → seal impression and mostly outlived the documents made of wood, → leather, or papyrus to which they were attached (PEDERSÉN 1998:248). Various other materials were inscribed in alphabet script with ink: the large Aramaic square ostraca like the Assur-letter (HUG 1993: 19–21; ca. 650 B.C.E.); smaller triangular or square ostraca – partly copies of attached leather or papyrus documents; glosses on Assyrian and Babylonian clay tablets (OELSNER 2006; 7th–4th cent. B.C.E.); inscribed pot sherds like the Hebrew petition of Yavneh-Yam (westnorthwest of Gezer; KAI 200; about 625 B.C.E.); the spirally inscribed East Aramaic magic bowls (MÜLLER-KESSLER 2005; NAVEH/SHAKED 1993; 4th–7th cent. C. E.); sometimes even interior walls like those South Canaanite Aramaic inscriptions on plaster in Sukkoth/ Tell Deir ʿAlla (ATTM:14; ca. 800 B.C.E.; cf. the → mural painting of a sphinx above the inscription, → fig. Mural Painting#1:3, col. 673). Texts meant for public display and eternity were engraved in stone; matters of a more private nature were often only carved primitively. Those texts were either written or rather engraved on natural rocks, which were at most smoothed out beforehand. These include, for instance, the only monumental Hebrew rock inscription (KAI 189) in the Siloam canal of Jerusalem (about 700 B.C.E.; → water works 4.2.– 4.3.); the inscription from a → tomb in Khirbet el-Kom including the formula of "blessing through YHWH and his Asherah" which is important for the study of religious history (JAROŠ 1982:32; DIETRICH/LORETZ 1992; 8th cent.; three similar inscriptions can be found in Kuntillet ʿAjrud/Northeastern Sinai; AḤITUV/ESHEL/MESHEL 2012; HAE 1:47–64); the oldest known alphabetical graffiti from Egypt (from 1900 B.C.E. on; ATTM2:44); and thousands of early North Arabic (MÜLLER 1982: 17–29) and Nabatean graffiti (6th cent. B.C.E.– 3rd cent. C. E.), along the routes of the caravans) or ready-made stone pillars, boundary stones, statues, tablets, → altars, coffins, ossuaries and commodities of basalt, granite, marble, limestone, or bricks. Inscriptions on basalt stelae are well known from the Moabite 34-line inscription of the king Mesha (about 830 B.C.E.) from Dibon, east of the Dead Sea (KAI 181); the much-discussed fragmentary Aramaic inscription from Dan/Hermon, which includes the house of "David" and does not record the short imperfect consecutivum (ATHAS 2003; 2006; ATTM2:15; ca. 800 B.C.E.); and the Aramaic royal inscriptions from Northern Syria (KAI 201–202, 216–221; 9th–8th cent. B.C.E.), including the treaties from Sefire (KAI 222–224; earlier than 740 B.C.E.). Stelae, however, were known prior to this: Sumerian royal inscriptions (3rd mill. B.C.E.); Phoenicia (KAI 1.4–7; Byblos, 10th cent. B.C.E.; about the same age as the limestone tablet of the Phoenician[!] Gezer → Calendar [KAI 182; HAE 1:30–37, cf. an → amulet from the 7th cent. B.C.E., KAI 27]); Northern Syria (in Aramaic and Yaʾudic/Samʾalian language; 9th and 8th cent. B.C.E.; KAI 201–202, 214–221; Aramaic Assyrian: ABOU-ASSAF et al. 1982). Since ca. 300 C. E., floor mosaics in → synagogues could contain texts with as many as 29 long lines (ATTM:378– 382), which concerned mostly building history. Inscribed bronze objects are attested from 2000 B.C.E. (Proto-Byblic), such as Phoenician arrow- and spearheads with their owners' names (KAI 20– 22; 12th–11th cent. B.C.E.), bowls (Kefar Veradim, 10th cent. B.C.E.; ROLLSTON 2010:27–28; KAI 31; 8th cent. B.C.E.), and an Ammonite bottle (AUFRECHT 1989:203–211; 7th cent. B.C.E.). Gold and silver as writing materials were first attested in Assyria. Besides the Phoenician gold medallion of the 8th cent. B.C.E. (KAI 73) and the two Hebrew silver amulets of the 5th cent. B.C.E. from Ketef Hinnom (BERLEJUNG 2008; 2011; cf. Num 6:23–26), many

Aramaic amulets of the 4th–7th cent. C. E. also exist (BERLEJUNG 2015). They are made primarily of silver, but also of copper, bronze, lead, or gold and generally found coiled up in a casing (ATTM: 336; ATTM2:311; ATTME:235ff; NAVEH/SHAKED 1993; Mandaic lead: ATTM:61, n. 1; ATTM2:38; like Neo-Assyrian, PEDERSÉN 1998:248). A unique artifact is the Hebrew account of hidden treasure, found on a 240 × 30 cm copper scroll from Qumran (ATTM2:290–299; BROOKE/DAVIES 2002; shortly before 70 C. E.). An Aramaic → ivory tablet was found which was originally from Damascus (KAI 232; 9th cent. B.C.E.). A letter from Simon ben Kosiba to his lower-rank leaders was written on a wooden tablet (ATTM2:284; 134/135 C. E.). Folding writing tablets made of wood or ivory and covered with wax were used in Assyria and Sam'al in the 2nd to 1st mill. B.C.E. (PEDERSÉN 1998:248, 250), and are similar to the hinged writing boards found in the Ulu Burun shipwreck (PAYTON 1991). While leather ("parchment" if specially treated) and papyrus had been known as writing materials in Egypt since the 3rd or 2nd mill. B.C.E., both materials became prevalent from the middle of the 1st mill. B.C.E. For example, the Imperial Aramaic correspondence of the Persian Satrap Arsames (TADAE 1:fig. A6.3–16; end of the 5th cent. B.C.E.) was written on leather, as well as most Hebrew and Aramaic biblical or apocryphal manuscripts from Qumran (ranging from the 7.34 m long Isaiah scroll made of 17 leather scraps to the phylacteries [*tefillin*; small leather scrolls inscribed with biblical quotations; 1st–2nd cent. C. E.]). Papyrus, on the other hand, was the material of choice for almost any letter (ever since a Hebrew letter from the Dead Sea [ATTM:283–285; 1st half of the 7th cent. B.C.E.], the Aramaic Adon letter [TADAE 1:fig. A1.1; 604/603 B.C.E.], and a Phoenician letter [KAI 50, 6th cent. B.C.E.]) or private contract (since the 7th cent. B.C.E.; the oldest dated Aramaic papyrus is a leasing contract from 515 B.C.E. [TADAE 2:fig. B1.1]), but especially the many Imperial Aramaic letters and contracts from the Jewish syncretistic military colony of Elephantine at the southern border of Egypt (PORTEN 1968; TADAE 1–4; 5th–4th cent. B.C.E.). A few Hebrew and Aramaic, biblical or apocryphal manuscripts from Caves 6 and 7 of Qumran were also written on papyrus. Outside of Egypt wood, leather, and papyrus were threatened by rapid decay. Eventually, the Christians replaced scrolls with codices.

5. Semitic Languages

The Semitic languages are about as similar to each other as are the Romance or Slavic languages. Sur-

rounded by the East Semitic Akkadian (attested since 2600 B.C.E.), the North Semitic Eblaite (since 2500 B.C.E.; its Old Semitic variations from Akkadian ['ana "I," suwa "he," et al.] have to be taken into consideration), including the substrate of Ugaritic and Ya̓udic/Sam'alian, the Early Ancient Aramaic (but note that no distinct consecutive short imperfect exists at Tell Afis; 9th cent. B.C.E.; DEGEN 1969: 114–116), the South Semitic Arabic – including Ethiopian (since 853 B.C.E.), and the Hamitic Egyptian Demotic Coptic (since 2700 B.C.E.), the West Semitic Canaanite (since 2200 B.C.E.) and Aramaic (since 1100 B.C.E.; already a distinct language group: ś > ḡ, ꝗ instead of > ṣ/ḍ like in rḡi/rṣi/rḍi "to have pleasure") are found in Syria-Palestine. Often, it is advisable to merge the West Semitic branch of the Semitic languages with North Arabic into a central Semitic branch. Canaanite is broken down into North Canaanite (Ugaritic names and Ugaritic literary language with North Semitic influences [14th–12th cent. B.C.E.]), East Canaanite (Amorite, the oldest known Canaanite language; with very few exceptions, it is only attested in personal names and was spoken by people, who had – by their own reference – migrated from the area north of Palmyra to the Jazira and Babylonia [22nd–15th cent. B.C.E.]), West Canaanite (Phoenician-Punic including cuneiform, Greek and Latin transcriptions [14th cent. B.C.E.–5th cent. C. E.], and the related Canaanisms in Egyptian texts [since the 20th cent. B.C.E.] and Akkadian letters from Phoenicia in the Amarna → archives [14th cent. B.C.E.]), Central Canaanite (Canaanisms in Akkadian letters from Palestine including Jerusalem [14th cent. B.C.E.] and Emar [13th cent. B.C.E.] in the Amarna archives, Northern Hebrew – the official language of the Northern Kingdom of Israel, which perished in 721/720 B.C.E. [only attested in about 100 short ostraca from Samaria in the middle of the 8th cent. B.C.E. concerning deliveries (HAE 1:79–110); and the original words of Hosea], its rabbinic New Hebrew successor from Northern Judea after the time of the kings [since Qoh and Cant], Gileadite [according to Judg 12:6 already with s > š], and Ammonite [9th–5th cent. B.C.E.]), and South Canaanite (the oldest known alphabet inscriptions from Egypt [early 2nd mill. B.C.E.], Southern Hebrew – from the 10th–7th cent. B.C.E., the official language of the Southern Kingdom of Judah, including Jerusalem [2 Kgs 18:26, etc., "Judean"; FINKELSTEIN 2020], the dependent biblical Hebrew, Moabite [9th cent. B.C.E.], and Edomite [7th–6th cent. B.C.E.]). Except for Arabic and Ethiopian, any Semitic language that had survived until the 1st mill. B.C.E. was replaced by Aramaic between the 4th–1st cent. B.C.E. (Akka-

dian, Hebrew, Phoenician). Thus, Aramaic was a universal language for about 1,000 years (like Akkadian had been before) until it was pushed to remote areas by Arabic between the 7th–10th cent. C.E. Rabbinic Hebrew was, however, revived in the 19th cent. C.E. By the 9th cent. (at the latest; ATTM: 97–98; ATTM2: 50), Aramaic breaks down into the progressive East Aramaic (plur. emphatic masc. -ē) and the more conservative West Aramaic (plur. emphatic masc. -ayyā) the borderline between those two running from Aleppo to Palmyra. East Aramaic is additionally divided into Northeast Aramaic (the Jazira) and Southeast Aramaic (Babylonia) because of its dimension and inconsistency. Initially those dialects of Aramaic were overshadowed by the early (still relatively uniform; DEGEN 1969; TROPPER 1993; ABOU-ASSAF et al. 1982; 10th–8th cent. B.C.E.) and late (already quite polymorphic; HUG 1993; 7th–6th cent. B.C.E.) Old Aramaic literary languages (Early/Late Ancient Aramaic). It was dominated most, though, by the very distinct and different uniform Achaemenid Imperial Aramaic (5th–3rd cent. B.C.E.), which was prevalent throughout the entire ANE and was the official language of the western half of the Persian Empire (Darius I). Meanwhile, the Post-Achaemenid Imperial Aramaic (ignoring the advancement of Greek and Iranian for now) branched out into various languages. These include: Nabatean, Palmyrenic, Arsacid (as long as it was not ideographic Persian), biblical Aramaic, Hasmonean, Targum, and Babylonian literary Aramaic. Those dialects were then superseded by the New East and West Aramaic literary languages: in the northeast by Syriac and East Mesopotamian, in the southeast by Jewish Babylonian and Mandaic, in the west by Jewish-Palestinian (Jesus and his followers spoke Old Galilean, the early Christian community in Jerusalem spoke Old Judean; Mt 26:73) including the synagogue of Dura-Europos/Euphrates, Samaritan, and Christian-Palestinian. Knowledge of the extensive vocabulary of those dialects is indispensable in understanding the antecedent and incomplete language phases that were passed down. The transition from Old Aramaic (including Early and Late Ancient Aramaic, Achaemenid and Post-Achaemenid Imperial Aramaic, Old East and Old West Aramaic [e. g., Old Syriac]), to East and West Middle Aramaic (e. g., Middle Syriac) coincides with the most radical Aramaic sound law: the loss of the unstressed short vowels in open syllables (ATTM: 128–136; ATTM2: 57–60), which has made the Aramaic (and Tiberian Hebrew) morphologically much more complicated. The Chaldeans from Southern Babylonia probably were Amorites by origin (thus, Canaanites). Later, they spoke Ara-

maic, but the expression "Chaldean" for "Jewish Aramaic" (Dan 2) should not be used anymore. All Middle Aramaic languages (except Christian-Palestinian) remained as literary languages in their respective areas but were replaced by Arabic (or at least pushed away to remote areas) as the common language. The still spoken New Aramaic dialects (e. g., Modern Syriac) are essential for the understanding of the earlier Aramaic dialects. Literary languages can be highly standardized, if protected by a political or religious authority.

6. Dating Ancient Texts

The oldest written texts appear in cuneiform script (PEDERSÉN 1998:270–271) or cuneiform alphabet (WATSON/WYATT 1999:140–439). The alphabetical tradition, in contrast, is rather fragmentary, because of its perishable writing materials: wood, leather, and papyrus. Best preserved were texts engraved in stone, or carved or embossed in →metal: royal inscriptions, treaties, laws, tariffs, records, dedications, consecrations, redemption of vows, prayers, wishes, warnings, threats, memorial inscriptions, signs of life, building inscriptions denoting client and executor, nominations of the owner, the pictured or the deceased, calendars, amulets, →jewelry, rings, and coins. Cheap and easy to use writing materials, such as ostraca, sherds, wood, leather, and papyrus, made a universal literate culture possible within the range of alphabetical script. One can see this in originals and duplicates of political or private correspondence, administrative issues, private documents of all kinds, religious, profane, magic, and political propaganda literature.

The oldest manuscripts of the Hebrew Bible (mostly fragments) come from Qumran on the Dead Sea (3rd cent. B.C.E.–1st cent. C.E.). The next great discovery is from the Cairo Genizah (9th cent. C.E.) and is composed solely of fragments. In between, there are Bible quotes in synagogue inscriptions and in Jewish amulets and magic bowls (4th–7th cent. C.E.). The canonical form of the Hebrew Bible's consonantal text (1st cent. C.E.; surely connected with an updated pronunciation, following the development of Aramaic) is known. Therefore, we also know of the Jewish view on Israel's history in the 1st cent. C.E. However, a definitive answer on what precisely happened, and when, is only possible through the connection of biblical accounts with datable inscriptions. This is done most easily with documents that contain a specific date, like, for instance, the oldest Aramaic papyrus from Egypt, which is a leasing contract dated to the 3rd of June in 515 B.C.E. (the

6th of Meḥir in the 7th year of Darius I; TADAE 2:fig. B1.1). Many other Aramaic papyri from Elephantine (5th cent. B.C.E.; TADAE 1–4), as well as many ostraca from Idumea (4th cent. B.C.E.; new material published since 1996) are also dated via the Persian kings, while the archive of Babata from the Dead Sea is dated via the Nabatean kings or Emperor Hadrian (93–122 C.E.; ATTM2: 204–225). In Assyria, documents were dated to a certain month by year-eponyms already in the 2nd mill. B.C.E. Another possibility for a reliable dating is an accurate description of the political circumstances, as in the Aramaic Adon letter (604/603 B.C.E.; TADAE 1:fig. A1.1) or the Hebrew ostraca from Arad (about 600 B.C.E., before the advancement of Nebuchadnezzar; HAE 3:347–403) and Lachish (589/588 B.C.E., shortly before the destruction by Nebuchadnezzar; HAE 3:405–440). A third possibility are coins (since the 5th cent. B.C.E.; ATTM:329–330; ATTM2:266). Dated and localized documents show the development and branching of signs (NAVEH 1987; YARDENI 2000) and, thus, make a dating of otherwise undated documents possible via paleography (ZUCKERMAN 2003). It has to be taken into consideration though – after elimination of forgeries (ROLLSTON 2003) – that some types of texts could be written in a considerably older script (e. g., the Aramaic royal inscriptions from Tell Halaf on the upper Habur [ABOU-ASSAF et al. 1982; about 850 B.C.E.; script: 11th cent. B.C.E.] or the two Hebrew amulets from Ketef Hinnom [HAE 3:447–456; suffix יֹ ”his”; since 3rd cent. B.C.E.: ATTM: 89, note 1; Old Hebrew script: 6th cent. B.C.E., see also BERLEJUNG 2008]). Aramaic sound shifts can be identified from the spellings, but with a delay of up to 200 years: 9th cent. B.C.E. ttd > ttd (דטת > זצש), about 600 B.C.E. ḡ > g (ק > ע) and in the 2nd cent. B.C.E. ś > s (שׂ > ס) (ATTM:100–103; ATTM2: 51–52). Since the 6th cent. B.C.E. short medial vowels and open ō are more and more expressed with א ו י (ATTM: 410–411, 414, 417; ATTM2: 316, 318), while about 200 B.C.E. ḥ > ḫ (ח) and g > ʿ (ע) remain invisible. The Canaanite sound shifts occurred in the 13th cent. B.C.E., at the latest, because, from this time on, the shortened 22 letter alphabet was used (starting with the cuneiform alphabet). Additional factors, including writing materials, C14 analysis, the archaeological stratum (if known), and forensic examinations are helpful in dating (FAIGENBAUM-GOLOVIN et al. 2021).

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IV. Iconography

1. Sources

Like all archaeological realia, iconographic sources are accidental finds. For studies on the "Biblical World," they are of extreme importance because, among other reasons, they are often attested in epochs without written sources and because they are quite often made from materials less perishable than the → writing materials – ostraca, papyrus, or leather – used in Palestine. Contrary to the opinion that, because of the OT's ban against images, there were no pictorial representations in ancient "Israel," – a once common view still held in some circles – there is an abundance of iconographic source material in the region going back to the earliest periods and extending without a break (even in the monarchic period) up into the Islamic period, and this abundance of material is growing steadily thanks to ongoing excavations.

For quite some time now, the iconographic material from Palestine (the coastland and west and east of the Jordan river) and its neighboring regions (Egypt, Syria, Cyprus, Anatolia, Mesopotamia, Iran, etc.) has been collected and studied within the framework of individual scientific disciplines like Pre-historical Studies, Art History, Classical and Ancient Near Eastern Archaeology, Egyptology, etc. (e. g., BRUNNER-TRAUT 1992; ASSMANN 1990; BACHMANN 1996) and has been analyzed and interpreted more with respect to individual aspects and facets, than in terms of an overall view. This material provides valuable information about the life and ideas of a specific region, epoch, and culture, as well as about prominent inter-cultural contacts, styles, techniques, and sometimes even fashion trends in a given period. Such inter-cultural contacts are reflected, for instance, in the inclusion of Egyptian hieroglyphics in Syrian and Southern Levantine seal-iconography. It is only since the works of OTHMAR KEEL and his school that biblical iconography has come to be established as a distinctive discipline. It is dedicated predominantly to the study of pictorial material from or about Israel/Palestine (e. g., the Assyrian reliefs of Lachish). Initially, it was mainly devoted to Assyrian and Egyptian reliefs and paintings, then to seals, scarabs and figurative amulets (KEEL 1977; 1992; 1997a; 1997b; KEEL/ SCHROER 2004; KEEL/STAUBLI 2001; GGG; EGGLER/KEEL 2006; WINTER 1983; SCHROER 1987;

HERRMANN 1994; 2002; 2006; UEHLINGER 1997; 2001), whereas now ivories, bone work, cult stands and terracottas, and other pictorial media from Israel/Palestine are increasingly coming into focus. The most important material objects on which pictures have been preserved are: rock reliefs and murals, orthostate reliefs, stelae, wall paintings, graffiti, stamp or cylinder seals (rather less often in Israel/Palestine) and stamps or seal imprints, scarabs, full- or half-round statues or figurines of different materials (mostly metal, clay, stone, rarely wood) and sizes, decorations on furniture (ivory), tools, weapons, inventory (of temples, palaces, or graves), jewelry and decorations (rings, pendants, breastplates, etc.) and, from the Persian period on, coins.

2. The Research Subject

"Biblical Iconography," "Iconography of Palestine," or "Iconography of the Biblical World" is dedicated to its subject of research, the pictorial material from or about Palestine as its main sources to be evaluated in all tangible time periods. In spite of the term biblical iconography, the analysis is not at all limited in scope to the short time span related in the Hebrew Bible (mid-2nd mill. until 2nd cent. B.C.E.) but extends deep into the other periods as well (see IPIAO). This is particularly promising because it allows structures and themes of a *longue durée* to be traced back even to pre-scriptural periods. The material provides valuable information about the life and ideas of a specific region, epoch, and culture, as well as about prominent inter-cultural contacts and sometimes even fashion trends in a given period.

For a specific *biblical* iconography the point is made that it has to be understood as part of the methodological study of the religion of ancient Israel and Judah in connection with historical and religious-historical work on and with the OT and NT. Biblical iconography, or rather the iconography of the biblical world, has the task of researching the visual sign system of the ancient Israelite/ Judean religion and its historical development. Its task is by no means to prove, embellish, or illustrate OT or NT texts by iconographic material. To the same degree that biblical iconography deals with images as part of the world of the OT (and

NT), it also enters into a constructive dialogue with text-oriented biblical studies and exegesis. It can contribute substantially to the understanding of biblical texts and needs to be viewed as an additional and corrective tool to traditional text-oriented historical-critical biblical studies (see below).

In short (on the method see below), biblical iconography is a matter of collecting, documenting, describing (picture carrier, picture theme, picture organization, individual motifs), analyzing, contextualizing, and synthetically exploiting the existing pictorial material in terms of style, motif, culture, event, and religious history, which can be chronologically classified either by the archaeological context of finds, accompanying writings, or datable comparative pieces (rarely C14 method). It goes without saying that only objects from regular excavation contexts are of scholarly value, whereas objects from the antiquities trade contribute little. In order to avoid misunderstandings, the character of the iconographic material must be taken into account:

– Palestine, Israel and Judah were part of the ANE: Thus the ANE is the horizon of understanding of the textual and of the pictorial sources (BERLEJUNG 2017a). This is evidenced in the MT among other things, by numerous loanwords from languages related to Hebrew (e. g., Aramaic, Akkadian, Arabic), and in the iconography inter alia by the integration and reception of pictorial motifs from the neighboring cultures.
– What is true for images in general, is true for the ANE (including the Southern Levantine) images: they present complex contents to the viewer simultaneously (more correctly in terms of perception psychology: in a very short time; SCHOLZ 2004:109): the relationship of several single elements to each other and to the whole is fixed in the picture and recognizable at one glance. Therefore proportions of the human body, complex social connections, hierarchies or spatial relationships are easier and faster to comprehend through a pictorial representation than through a textual description.
– The pictorial representation can have a 'natural' similarity to the thing to be depicted (EGGLER et al. 2006), which seems to allow recognition on the basis of assigning similarities between image and depicted object without the need for prior training or instruction. Nevertheless, the competence to recognize and understand images and to produce comprehensible images had to be acquired by ancient people as well (on pictorial competence see below).

– Much of the art was commissioned by the elite upper class. Especially, depictions that were made for displaying prestige, or the rulership of the depicted king or deity needed to conform with the political or theological programs (BERLEJUNG 2017b).
– Nature, landscapes, plants, animals, realia, and objects of daily use (such as bowls, altars, or weapons) or even non-elitist people in practical activities (such as hunting, praying, or singing) are usually depicted (even if sometimes schematic) in naturalistic proportions (IPIAO 4:fig. 1684, Kuntillet ʿAjrud, Iron Age IIB). However, these pictures are not to be understood as verisimilar depictions or copies of a reality (BAHRANI 2003:87–93), but rather as its interpretation. They are not intended to mimic but to change the world and the view of the onlooker. This means that depictions of beasts, nature, landscapes, or persons are idealized/stylized and do not correspond to the natural setting, actual geographical features, or the actual age or physical condition of the human beings. Any indications of deviations from the ideal, destruction, or decay are always attributed to the "other," enemy or foreign country.
– Representations of humans, especially members of the elites and kings, and deities were idealized/stylized. They were not conceived as portraits; instead, persons and gods are shown as representatives of a certain role or function (on the gods see BERLEJUNG 1998). Thus, for example, the Israelite King Jehu on the Black Obelisk of the Assyrian King Shalmaneser III (858–824 B.C.E.) is depicted in the same manner and attitude of humility as the subdued King Sua of Gilzanu (an area in modern Azerbaijan) on the same side of the stela. Little or no attention was paid to individual features, either of human beings or of deities. Hierarchic scaling can play a role for indicating hierarchies and high rank, however more significant seems to be the clothing (→ clothes), decoration, headdresses, gesture, the objects held in the hands, and the arrangement of accompanying pictorial elements. Perhaps the coloring has to be added which is lost in most cases.
– Particularly typical is the form of depiction of anthropomorphically designed figures (humans and gods) in flat reliefs or in paintings. Here (as in Egypt) the head is depicted in profile from the side, an eye, shoulders and chest from the front, the hips and legs from the side (IPIAO 4:fig. 1440, Beth-Zur, Iron Age IIB). This striking stylistic element is called "aspective" (after Emma Brunner-Traut; e. g., IPIAO

4:fig. 1669, Kuntillet ʿAjrud painting, Iron Age IIB). Frontality is possible ("woman at the window," e. g., IPIAO 4:fig. 1556, Samaria, Iron Age IIB; for some pictorial groups even characteristic as, e. g., plaques, cult stands, or masks, cf. BERLEJUNG/KOHLHAAS/STEIN 2018) but uncommon especially for paintings, bas-reliefs, ivories (with the aforementioned exception), and on seals.

– The depth of the space is usually not depicted. Homogeneous groups (e. g., breads, animals, people) are geometrically precisely ordered upwards or backwards so that the number can be counted from the top view (IPIAO 4:fig. 1671, cylinder seal, Tell es-Saʿidiyeh, Iron Age IIB [breads]).

– Events that followed one after the other in time, are displayed right beside each other (cf. relief of Lachish, southwestern Palace at Nineveh, reign of Sennacherib).

– *Horror vacui.* Empty spaces are usually filled in. It is not always clear how the filling relates to the main motif.

– No distinction was made between craftsman and artist, signatures by name are uncommon.

– The aforementioned characteristics are partly also true for Egyptian, Syrian, and Mesopotamian art. Artifacts found or made in the Southern Levant are characterized by a certain mixed or hybrid style that mirrors the internationalization of society and the setting of Palestine within the multicultural sphere influenced by Egypt (see the iconography of the ruler in Kuntillet ʿAjrud, IPIAO 4:fig. 1669, Iron Age IIB), Syria, Phoenicia, Mesopotamia (see the iconography of the ruler on the sherd from Ramat Rahel, cf. IPIAO 4:fig. 1943, Iron Age IIC), Asia Minor, Persia, Cyprus, and (with increasing influence in the Achaemenid period) Greece.

3. Pictures and Images

Although "biblical iconography" is concerned with the analytical study and synthetic historical interpretation of Ancient Near Eastern pictorial sources, the terms "image" and "picture" and the processes of their cognition are mostly underdetermined (see now BONFIGLIO 2016:171–194 referring to Thomas W. J. Mitchell, David Freedberg, and Alfred Gell) or adopted from neighboring sciences. This is not very surprising considering the heterogeneous discussions of "image science" in the last 30 years (see the topic "pictorial/visual turn"). A terminological problem has to be mentioned as well: Untranslatable into German is the English differentiation between a pic-

ture and an image, with the picture being the material object (including a mental picture bound to a living human body) while the image is what appears in a picture and can be transferred from one medium to another (MITCHELL 2015:16–17). Thus terms as image science, picture theory, theory of pictorial concepts, theory of visual culture, and theories of visual/pictorial representations converge in the German term *Bildwissenschaft.* In the following we deal with pictures, or material images as part of the visual culture of the ANE (and its imagery).

CHRISTOPH UEHLINGER (2001:39) suggests a pragmatic approach that focuses on picture production. According to him, (material) images are artifacts that were produced on certain objects with certain instruments according to certain procedures, which followed a system of conventions and rules that can be (re)constructed empirically on the basis of preserved pictorial evidence. But this does not really answer the central questions "what is a picture?," "how and what do people perceive?," "how does meaning come to the picture?," and "what factors determine picture history, picture use, or picture competence?" OLIVER R. SCHOLZ (2009:13) correctly formulated that the question "Was ist ein Bild?" (Engl.: "What is an image/picture") belongs to the oldest, but also to the least clarified questions of the entire history of ideas (German original: "zu den ältesten, aber auch den am wenigsten geklärten Fragen der gesamten Geistesgeschichte"). He also stressed that the question of "picture competence" is also largely under-researched (SCHOLZ 2004: 105). KLAUS SACHS-HOMBACH repeatedly stated (2013:16–31), that there is no general image theory ("*Bildtheorie*") and no clearly defined image science that could systematically investigate and clearly answer the basic questions of image concept, image perception, image recognition, image production, image history, image competence, or image use.

Different disciplines start from different theoretical premises, apply different methods, and emphasize different aspects of the image and the picture, so that the concept of the image/picture oscillates strongly. Among these are the approaches of art history (e. g., FREEDBERG 1989; GOMBRICH 2004; MITCHELL 1994; 2015), anthropology (e. g., JONAS 1961 [2010a; 2010b, on the publication history see also 2010c:606]; SACHS-HOMBACH/SCHIRRA 2013b; BELTING 2011; GELL 1998), psychology (e. g., SCHUSTER 2007), media and communication science (e. g., KNIEPER/ MÜLLER 2001; MÜLLER 2003; SACHS-HOMBACH 2010; LOBINGER 2012), sociology (BOURDIEU 1996), semiotics (PEIRCE 1983; 1991; ECO 1976;

NÖTH 2005; 2009; 2014; SONESSON 1989; 1993; SCHOLZ 2009), various schools within philosophy (e. g., HUSSERL 1980; WIESING 2000; 2005), and constructivism (VON DEN HOFF/SCHMIDT 2001a; 2001b; VON GLASERSFELD 1987; 2013; WEIBEL 2001; WEBER 1999), whereby combinations are possible (e. g., semiotics with constructivism, cf. HÄNDLER 2015, semiotics with analytic philosophy, cf. BLANKE 2003). Semiotic approaches proved to be very influential when material images were considered as signs (including Charles Sanders Peirce's three categories of signs: icon, index, and symbol) and carriers of meaning. Less established is the phenomenological-perceptual-theoretical approach (WIESING 2000; 2005; 2016), which considers pictures as "artificial presences," whose necessary key-characteristic is the "mere visibility" for visual perception, which (in contrast to the anthropological theory of images) can also arise without any human intervention.

Currently, the most discussed forms of image theory are phenomenology or perception theory, semiotics and anthropology, with phenomenological and anthropological viewpoints being quite close in terms of argumentation when it comes to rejecting the theory of "signs" and describing the inner structures of images. There is fundamental agreement that images are media that can be divided into three parts:

1. what the picture refers to (the depicted object or denotation; in semiotics: extension),
2. the picture-bearing object (material expression; in semiotics: carrier of signs), and
3. the pictorial object's characteristics (content, meaning, significance, connotation, iconic type or depiction; in semiotics: attributes referenced by the sign/intension).

A picture is the unity of this three-part difference and is involved in various processes of perception, memory, communication, and distribution. Images are always responsible for two basic types of relations, the intersubjective between sender and receiver and the interobjective one, establishing a representational bond among objects, the image, and the object they represent as virtual presence.

The sign status as a conceptual criterion of a pictorial theory is especially controversial: Either every picture is regarded as a sign, carrier of meanings, and involved in a triadic mode (sign – object – interpretant) of determination (so in semiotics cf. SONESSON 1993; LOBINGER 2012) or not (so in phenomenological, perception-based, and anthropological picture theory, cf. WIESING 2005; BELTING 2005). The positioning in this question results from the epistemological premises and the

semiotic school from which one derives the rather narrower or broader concept of sign (HÄNDLER 2015:536). It is indisputable that picture carriers affect the viewer, whereby the processes of perception and recognition – depending on the cognition model – are evaluated differently. Models of passive perception are increasingly replaced under semiotic-constructivist insights by active processes that link the viewer's picture cognition with processes of abstraction, memory, and reasoning that motivate behavior and possibilities for action.

Constructivism in combination with neuroscience is dedicated to the investigation of the perception and memory processes of the individual, and argues on an individual psychological level. Then it is repeatedly pointed out that perceiving images is always a self-referential process linked to memories and experiences. Perception is interpretation and the assignment of meaning with the aim of appropriating what is seen/heard/read and adapting it to prior experiences, which are thereby expanded and stabilized (ROTH 1987:240–249). The mentioned factors "experience" or "memory," which determine the self-referential process and which are hardly conceivable without social partners, indicate that the investigation of the cognitive construction achievements of the individual must be supplemented by an understanding of their sociality. This is the point where models of constructivism and brain research need to be complemented by a theory of social systems, so that the embedding of cognitive construction processes in social and cultural processes that influence and condition them has to be included. Thus, perception is a cognitive construct (SCHELSKE 1997:84–104), while the aspect of social and cultural construction has to be taken into account (WEIBEL 2001:194–199, 204–205). In constructivist picture theory in combination with social studies, pictures are considered as cultural constructs (HÖLSCHER 2000:149–150; WEISSENRIEDER/WENDT 2005:38–48): The past sponsors, producers, and audiences as well as the present viewers and interpreters are all influenced by their respective social and historical contexts. Here, PIERRE BOURDIEU correctly speaks of the "social genesis of the eye" (BOURDIEU 1996:295–306, 309–315). The complex totality of habits of seeing, concepts of perception, cultural values, inner attitudes, memories, imaginations, institutions, pictorial techniques and conventions of one's own culture is taken for granted by the ancient artist, client, and viewer and applied by them quasi "automatically" in the production and reception of their contemporary visual media.

Consequently, pictures are media whose specific characteristic is to stimulate the self-referential multiple categorization with the components of perception, abstraction, memory, and conclusion. The object's characteristics (or the content of a sign) are actively constructed by the onlooker, whereby the similarity between the pictorial object's characteristics and the depicted object is less central than the memory-based mental reference of the viewer to his own or inculturated concepts. Picture reception is the unconscious establishment of a relation of similarity between the material qualities of the image carrier (i. e., the expression side) to an experience- and memory-based iconic type (i. e., the content side), and thus a highly individual but also culture-bound matter. Especially the latter introduces the aspect of collective memory and conventionality shared by all members of a culture, which play a major role both in the reception of an image but also in its production. In this process, a more or less conventional production technology is used to produce the image carrier, which has the characteristics of "materiality," "spatially limited," "artificial," "relatively permanent," and is provided with corresponding configurations (outlines, colors, etc.) so that the pictorial object's characteristics can be categorized, that is, recognized, by the viewer with certain contents.

Thus, the image becomes a functional unit in the form of an iconic, that is, perceptual sign. In any case, it has to be learned what a picture is, and this is necessarily related to a sign process, which cannot be determined only via the communicative, but already via the cognitive level (HÄNDLER 2015).

Apart from the investigation of cognitive processes, further research approaches focus on the fact that images are media and means of communication (SACHS-HOMBACH 2013; UEHLINGER 2000; FREVEL 2005), whose targeted production, use, distribution, effect, and function are to be investigated. They are a special form of social communication and as such must also be embedded in a theory of social systems. Thus, they are also co-determined by "image-external" determinants such as the environment, application, use, and function. Within their cultural system, images are always part of the socially active and interactive construction of the social actors, and their social practice. They therefore have very active roles to play: they perform, establish, reproduce, and "convey existing ideas and concepts within a cultural system but also participate in constructing such concepts, … they are at the same time the reception and production of culturally and temporally determined complexes of ideas and collective mentalities" (BERLEJUNG 2021a:270), of collective memories and experiences. They contribute to the construction and stabilization of hierarchies, social networks, they pass on "existing cultural codes and cues, and construct individual, group, and social identity. Images thus play a major role in the formation and transmission of knowledge, in propaganda, and in establishing, maintaining and controlling social norms" (BERLEJUNG 2021b:364–365).

Pictures make visible the reciprocity of memory and new identity construction of a cultural system in the course of history and make it traceable for the historical researcher. They archive the knowledge of a culture, and stand for the memory of this culture, which relies on this knowledge, reproduces it, and passes it on. In these contexts, the permanent changes and flexibilizations of individual as well as social memory processes have to be considered (SCHMIDT 1992). Remembering has a dynamic aspect and meanings can be transformed at any time (on the sociality of the memory of visual culture see SCHELSKE 2004:66–67). In a successful cognitive process, a construction of common perspectives of meaning is carried out between the pictorial object's characteristics and the viewer, and (in the viewer) recognition, understanding (for a systematics of levels of understanding see SCHOLZ 2004:108–116), and behavior are generated.

Here the capital theory of PIERRE BOURDIEU can be applied (BOURDIEU 1977:178–182; 1990:112–134; 1995:31–34). Economic capital must be invested for the production of images, which is then transformed into symbolic capital through the picture medium, material, and its motifs. The images serve the representational-demonstrative level and make the desired messages visible to the addressees, for instance, prestige, tradition-connectedness, or trust potential. Furthermore, images are always part of the objectified cultural capital. This is true to the extent that they include cultural capital, for instance, elements of collective memory, traditions, "image canon," or even professional skills and techniques. As part of material culture, images, artworks, or buildings belong to cultural capitals, which, moreover, have been converted again from economic capitals (and which express symbolic capitals). Images are thus firmly involved in the social transfer of capital.

Bourdieu's approach contributes to further differentiation with regard to the historical interpretation of images. In fact, one can conclude that material images store economic, social, cultural, and symbolic capital on certain topics and communicate them to their viewers continuously and in the long term without any time limit (or as long

as they exist). In historical research, however, it must be taken into account that images can be transmitted visually unchanged over generations, but that the attributions of meaning change. They always look the same, but mean different things. It is often pointed out that pictures overcome educational barriers, since it is not necessary to be able to read in order to understand the basic message. However, this has to be put into perspective insofar as one needs culture-bound social knowledge for image production, cognition, and reception, since without a basic equipment of pictorial competence the participation in social practice is impossible (SCHOLZ 2004:106). Admittedly, the educational effort required for pictures seems to be lower than for literacy, whereby the spontaneous emotionalizing power of pictures should also be mentioned as a surplus.

Last but not least the anthropological theory has to be mentioned. With the search for an essentialist definition, an anthropology can aim at the production or identification of an unambiguous distinction – a *differentia specifica* – which is to guarantee the identity of being human. HANS JONAS gave a clear answer to this with his essay "Homo pictor und die Differentia des Menschen," first published in 1961. With "man as image creator" JONAS (2010a) describes the *differentia specifica* of humans compared to animals, because only *homo sapiens* has the ability to create a picture which represents the presence of absence. The pictorial competence of the human being – who is therefore described as *homo pictor* – is decisive for him or her and justifies to speak of a picture-anthropology. This anthropology wants to formulate an anthropological constant and to examine the making and recognizing of pictures as an exclusively human ability. While in the course of the heterogeneous research in image science or picture theory (German: "*Bildwissenschaft*") of the last 30 years (keyword: "visual/pictorial turn") a consensus on what is to be understood by an image and picture can hardly be found anymore, Jonas was still sure that one could quickly agree on a definition of picture/image. He himself got by with the minimal condition that similarity is a constitutive characteristic of pictoriality, and that a picture (and the similarity) must have been produced intentionally. What makes *homo pictor* human, is therefore the ability of intentional image production, and above all the condition underlying this ability: freedom. Each making of a picture presupposes a decision process, which concerns material, scale, style, color, motif choice, and much more.

Because for Jonas this making of a picture always implies the making of a reference to reality,

in the choice of the way of this reference already lie degrees of freedom. For Jonas, the degrees of freedom increase from the image-immanent compulsion of incomplete similarity, to the possibility of one's own artistic style, up to the creation of never seen, thus freely invented forms. Thus, the freedom of *homo pictor* consists above all in the possibility of appropriating the world and reality (which serve as a template for the pictorial realization) in a picture. This freedom of forming corresponds to the freedom of seeing (JONAS 2010b).

Since JONAS's (1961) essentialist definition of being human (in contrast to being animal) as *homo pictor* ("man as creator of pictures") and his understanding of pictures as a form of appropriation of reality (with incomplete similarity), the anthropological picture theory has developed further (understood as anthropology in the sense of historical and cultural anthropology); it rightly refers to the fact that pictures are produced as a cultural process, as a specific cultural strategy by people for people. Pictures are perceived by people and, in the case of a successful cognition and communication process, recognized and understood, disseminated and passed on (or destroyed) by people. They motivate people to positioning (agreement or disagreement) or actions.

ALFRED GELL is worth mentioning here. He sketched an anthropological theory of visual arts that focused (less on art production as the *differentia specifia* of humankind as Jonas did, but) on the social context of art production, circulation, and reception. As a theory of the nexus of social relations involving works of art, Gell suggests that art objects should not be seen as signs, bearers of meaning or aesthetic values, but as forms mediating social action. Thus in certain contexts, "art objects are the equivalent of persons, or more precisely, social agents" (GELL 1998:7), whose immediate interactive fields of action in social processes are central.

HANS BELTING (2011) has devoted himself to the origins of pictorial art and claimed a "close and fundamental interrelation (and interaction) of image, body and medium as components in every attempt at picture-making" (BELTING 2011:3). In terms of image anthropology, he considers the living human body as the locus of images, since it is the body that perceives, identifies/recognizes, and generates images – materially and mentally. Images, especially mental ones, that is, imagination and fantasy, cannot be separated from the body (BELTING 2011:37–61). Anthropological image theory emphasizes the coordinates of body, time, and space, the performativity of images, involves memory (individual as well as collective)

and imagination, and interprets image seeing as action (SCHUHMACHER-CHILLA 2018).

If one tries to bundle these mentioned aspects, it can be cautiously formulated that the research object "image and picture" is only possible in the combination of the moments materiality, sign, perception, reception, memory, identity construction, performativity, medium/mediality, cultural strategy, social practices (including the transfer of capitals), social agency, and anthropological (including neurosciencific) parameters. This undoubtedly requires an interdisciplinary approach (MITCHELL 2015) tying together empirical and historical issues with meta-reflexive systematic considerations (SACHS-HOMBACH/SCHIRRA 2013a). Picturehood is a way of being in relation and to change the world, not a way of being in itself.

4. Methods

When examining ancient pictorial sources, it is not only a matter of analyzing the image "per se," but also of the necessary classification in the historical context, whereby it must be taken into account that the time of origin of a picture and the time depicted (e. g., in the case of battle depictions and the like) cannot be identical. Just as in the interpretation of texts and archaeological findings, it is the interpreter who makes the material speak, so that the clarification of one's own premises stands in the first place of every interpretation.

"Biblical Iconography," or the "Iconography of Palestine," or the "Iconography of the Biblical World," founded by OTHMAR KEEL in the 1970s emerged from biblical scholarship and currently proceeds mostly in such a way that image-bearing objects, techniques, choices of material, peculiarities in style, and motifs are all arranged into meaningful groups distinguishing what is primary and constant from secondary details that vary; their variations and innovations are sorted either synchronically to trace regional developments or diachronically to show chronological developments. By considering the respective genres of the image-bearing objects (as, e. g., →seals, reliefs, →sculptures, →ivory inlays, etc.), the researcher investigates the iconographic evidence, the motifs, the underlying "constellations" of meaning (complexes of ideas and stories reduced to the icon; cf. GGG:§ 6), and their diachronic development in connection and correlation with processes of society, religion (with focus on the biblical texts), and history (KEEL 1997a). In this context, the scientific literature often speaks of iconology, a term which was coined and introduced by the art his-

torian ERWIN PANOFSKY (1932; 1939; 1994a; 1994b) and accepted and used by OTHMAR KEEL (1992) and his followers. In a combination of Panofsky and standard archaeological methods, the archaeological methods for dating and contextualising the material image-bearing objects are used (as, e. g., stratigraphy, the use of datable parallels, less often C14), and a three-step method is applied, beginning with the phenomenological description of the pictorial elements, followed by the iconographic-analytical allocation of pictorial representations to specific themes, and ending in iconological interpretation of the actual meaning of a representation in its intellectual-historical context. The basic assumption is that pictorial repertoires and their associated meanings are not arbitrary, but have been standardized by a system of norms, models, tradition, conventions, and technical competence. Because there is a high degree of system conformity of the artifacts, the pictures can be interpreted (in the third step) as an indicator of their period, culture, and society.

CHRISTOPH UEHLINGER (2001) has further pointed out that aspects of "conscious communication pragmatics" also play an important role with many artifacts. For this reason, the pragmatic context of the images, that is, the living and communication situation in which they appear, are used and distributed, needs to be considered for their interpretation.

Other or complementary methods of the interpretation of pictures depart from other picture theories. Thus, the semiotic approach to the interpretation of images considers them as signs and bearers of meaning and operates on the levels of visual syntax, semantics, and pragmatics in order to work out the sign relations (HÖLSCHER 1987; 1992; 2000:160–164; SCHELSKE 1997). Other or complementary methods of image interpretation are proposed, for instance, by MARLIES HEINZ (2002) and DOMINIK BONATZ (2002a; 2002b), whose communication-theoretical orientation is related to overarching cultural-anthropological studies, so that they emphasize in their work the aspects of communication, performance, and action relevance of Ancient Near Eastern material images, or by ALFRED GELL who claimed that works of art, images, pictures, icons, "and the like have to be treated … as person-like; that is, sources of, and targets for, social agency" (GELL 1998:96). Since images are treated as living persons in the context of worship and cult (on this in the ANE BERLEJUNG 1998), he offered a general theory of (mainly Greek) idolatry and artifacts as interaction partners. This fits into his definition of "art as a system of action, intended to change the world rather than encode sym-