JOACHIM SCHAPER

Media and Monotheism

Orientalische Religionen
in der Antike

Mohr Siebeck

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Presence, Representation, and Abstraction in Ancient Judah

Mohr Siebeck

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For Marie-Luise and Friederike

In memory of

Peter Damerow
Martin Hengel
Friedrich Kittler

Preface

It feels good to be able to commit this study to the public after a good number of years of intensive work in a number of fields. In doing that work, I have endeavoured to establish a truly interdisciplinary approach to one of the most complex problems of the history of religion: the emergence of the first lasting form of monotheism in world history. The complexity of the problem has required me to come up with a complex set of tools to solve it. Whether I have succeeded is for the reader to decide.

In the process of writing a book like the present one, the author encounters, is challenged by, and receives support and inspiration from many contemporaries. First and foremost, I should like to thank my wife, Marie-Luise, and our daughter, Friederike, for their love, unfailing support, and endurance. Without them, I would not have been able to write this book. Amongst my colleagues in Biblical Studies, the History of Sciences, and Media History, I am especially indebted to Martin Hengel, Peter Damerow, and Friedrich Kittler. The initial inspiration for this book came from Martin Hengel who drew my attention to the rise of the concept of scriptural exegesis in the early post-exilic period. My work on this problem became the nucleus of the present study. Peter Damerow introduced me to new ways of exploring the correlation between intellectual and manual labour. Friedrich Kittler's example taught me to appreciate what his 'media materialism' can contribute to the interpretation of ancient texts and artefacts.

There are quite a few friends and colleagues who kindly engaged with my ideas over the years. They are too numerous to mention them all here, so I shall name some of them to represent all the others. I am grateful to William Horbury for reading and commenting on the first complete draft of this study (and for general encouragement), to Carlo Ginzburg for a long conversation about the heart of the argument the present book makes, to Isabella Wiegand for discussing the representation of the gods in ancient Greece, and to colleagues in the Collaborative Research Centre 933 'Material Text Cultures', as well as to Oliver Schlaudt, who discussed some of my work with me in Heidelberg in 2015.

My thanks go to Angelika Berlejung, Annette Zgoll, and Joachim Friedrich Quack for accepting my study into their series, to Katharina Gutekunst for her interest in my project, to an anonymous reader for his or her comments, to Claus-Jürgen Thornton for his work on the manuscript, and to Juan Cruz for producing the indices.

Entrusting this study to the public, I hope that it will illuminate the unique historical constellation that triggered the transition from monolatry to monotheism: a process that has resulted in untold pain as well as immeasurable blessings.

Aberdeen, February 2019 Joachim Schaper

Acknowledgments

Material from the following essays previously published by the author has been used in parts of chapters 2 and 3 of the present book: 'A Theology of Writing'; 'The Death of the Prophet'; 'Geld und Kult im Deuteronomium'; 'The Written Word Engraved in Stone'; 'On Writing and Reciting in Jeremiah 36'; 'Divine Images, Iconophobia and Monotheism in Isaiah 40–66'; 'Anthropologie des Schreibens als Theologie des Schreibens'.

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Abbreviations

ABG	Arbeiten zur Bibel und ihrer Geschichte
ABRL	The Anchor Bible Reference Library
ADPV	Abhandlungen des Deutschen Palästina-Vereins
AnBib	Analecta Biblica
AOAT	Alter Orient und Altes Testament
ARM	Archives royales de Mari
ASOR	American Schools of Oriental Research
ATANT	Abhandlungen zur Theologie des Alten und Neuen Testaments
ATD	Das Alte Testament Deutsch
BAR	*Biblical Archaeology Review*
BASOR	*Bulletin of the American Schools of Oriental Research*
BBB	Bonner biblische Beiträge
BETL	Bibliotheca ephemeridum theologicarum lovaniensium
Bib	*Biblica*
BibInt	*Biblical Interpretation*
BJS	Brown Judaic Studies
BKAT	Biblischer Kommentar. Altes Testament
BWANT	Beiträge zur Wissenschaft vom Alten und Neuen Testament
BZAW	Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft
CAD	*The Assyrian Dictionary of the Oriental Institute of the University of Chicago*
CAH	*Cambridge Ancient History*
CBET	Contributions to Biblical Exegesis and Theology
CBQ	*Catholic Biblical Quarterly*
ConBOT	Coniectanea biblica: Old Testament Series
CT	*Cuneiform Texts from Babylonian Tablets in the British Museum*, London: Trustees of the British Museum, 1.1896ff.
DJD	Discoveries in the Judaean Desert
DK	H. Diels and W. Kranz (eds.), *Die Fragmente der Vorsokratiker: Griechisch und Deutsch*, 3 vols., Berlin: Weidmannsche Verlagsbuchhandlung, 6th edn., 1951–1952
ET	English translation
FAT	Forschungen zum Alten Testament
FOTL	Forms of the Old Testament Literature
FRLANT	Forschungen zur Religion und Literatur des Alten und Neuen Testaments
HBS	Herders biblische Studien
HCOT	Historical Commentary on the Old Testament
HKAT	Handkommentar zum Alten Testament
HRwG	*Handbuch religionswissenschaftlicher Grundbegriffe*
HSM	Harvard Semitic Monographs
HTKAT	Herders theologischer Kommentar zum Alten Testament
HUT	Hermeneutische Untersuchungen zur Theologie

ICC	The International Critical Commentary on the Holy Scriptures of the Old and New Testaments
JANER	*Journal of Ancient Near Eastern Religions*
JANESCU	*Journal of the Ancient Near Eastern Society of Columbia University*
JAOS	*Journal of the American Oriental Society*
JBL	*Journal of Biblical Literature*
JBT	*Jahrbuch für Biblische Theologie*
JNES	*Journal of Near Eastern Studies*
JPS	Jewish Publication Society
JQR	*Jewish Quarterly Review*
JSJSup	Journal for the Study of Judaism in the Persian, Hellenistic, and Roman Periods: Supplement Series
JSOTSup	Journal for the Study of the Old Testament: Supplement Series
JSQ	*Jewish Studies Quarterly*
JTS	*Journal of Theological Studies*
KJV	King James Version
LCL	The Loeb Classical Library
LEC	Library of Early Christianity
LHB/OTS	Library of Hebrew Bible/Old Testament Studies
LSS	Leipziger semitistische Studien
MEW	Marx Engels Werke
NRSV	New Revised Standard Version
NTOA	Novum Testamentum et Orbis antiquus
OBO	Orbis biblicus et orientalis
OBT	Overtures to Biblical Theology
OIP	Oriental Institute Publications
OIS	Oriental Institute Seminars
OLA	Orientalia lovaniensia analecta
OTL	Old Testament Library
PhB	Philosophische Bibliothek
QD	Quaestiones disputatae
RelSRev	*Religious Studies Review*
RGG^4	*Religion in Geschichte und Gegenwart*, 4th edn.
RSR	*Recherches de science religieuse*
RSV	Revised Standard Version
SAA	State Archives of Assyria
SAAS	State Archives of Assyria Studies
SBAB	Stuttgarter biblische Aufsatzbände
SBLSymS	SBL Symposium Series
SC	Sources chrétiennes
SemeiaSt	Semeia Studies
SJOT	*Scandinavian Journal of the Old Testament*
ST	*Studia theologica*
STDJ	Studies on the Texts of the Desert of Judah
stw	suhrkamp taschenbuch wissenschaft
SUNT	Studien zur Umwelt des Neuen Testaments
TCS	Texts from Cuneiform Sources
TGl	*Theologie und Glaube*
THAT	*Theologisches Handwörterbuch zum Alten Testament*
TRE	*Theologische Realenzyklopädie*

TynBul	*Tyndale Bulletin*
UAÄG	Untersuchungen zur Geschichte und Altertumskunde Ägyptens
UBL	Ugaritisch-biblische Literatur
UF	*Ugarit-Forschungen*
UTB	Uni-Taschenbücher
VT	*Vetus Testamentum*
VTSup	Supplements to *Vetus Testamentum*
VWGT	Veröffentlichungen der Wissenschaftlichen Gesellschaft für Theologie
WUNT	Wissenschaftliche Untersuchungen zum Neuen Testament
ZABR	*Zeitschrift für altorientalische und biblische Rechtsgeschichte*
ZAW	*Zeitschrift für die alttestamentliche Wissenschaft*
ZBKAT	Zürcher Bibelkommentare. Altes Testament
ZDPV	*Zeitschrift des Deutschen Palästina-Vereins*
ZNW	*Zeitschrift für die neutestamentliche Wissenschaft*
ZPE	*Zeitschrift für Papyrologie und Epigraphik*
ZRGG	*Zeitschrift für Religions- und Geistesgeschichte*
ZTK	*Zeitschrift für Theologie und Kirche*

Introduction

An old stone carving at my university shows the hand of God reaching down from heaven, offering the viewer – not the stone tablets with the Ten Commandments, or maybe a scroll, but an open *codex*. This touching anachronism tells us that human beings *qua* users of media are often, indeed typically, blind to those media's characteristics, development, and significance, as was the artist who produced the carving: it did not occur to the sculptor to depict what would have been the 'right' medium in the context of the biblical tradition which he or she was invoking. Most of the time, the significance of understanding the uses of media is ignored, both in everyday life and in cultural production.

By contrast, this book attempts to explain the origins of Israelite monotheism by exploring the function, significance, and effects of the media that were used in the society that gave rise to it. It aims to identify the underlying impulses that triggered a monotheistic reinterpretation of the (hitherto monolatrous) Yahweh religion in Judah from the late seventh century B.C.E. onwards. Many attempts to reconstruct the history of Israelite monotheism have been made, not least in the previous few decades.[1] In this respect, the present book is not unusual. It is, however, quite unusual in assuming that the origins of monotheism can be uncovered by focusing on the material culture of Judahite society and its intellectual reflections and consequences, and especially on the *media* that were in use in that society.

It is of paramount importance to differentiate between the *fons et origo* and the later history of monotheism. The 'primitive history' (in the sense of *Urgeschichte* or *Entstehungsgeschichte*) of, say, a religious movement is not simply part of its history, as Overbeck, under Schelling's influence, rightly stressed.[2] The origins are different from the developments

[1] Amongst the works devoted to reconstructing the origins of Israelite monotheism in the last four decades, the following studies are of special interest: M. Smith, *Palestinian Parties and Politics*; Lang (ed.), *Der einzige Gott*; Haag (ed.), *Gott, der Einzige*; de Moor (ed.), *The Rise of Yahwism*; W. Dietrich and Klopfenstein (eds.), *Ein Gott allein?*; Weippert, 'Synkretismus und Monotheismus'; Gnuse, *No Other Gods*; Zevit, *Religions of Ancient Israel*; J. Assmann, *Mosaische Unterscheidung* (ET: *The Price of Monotheism*); Oeming and Schmid (eds.), *Der eine Gott und die Götter*; M.S. Smith, *Origins of Biblical Monotheism*; idem, *God in Translation*; Pongratz-Leisten (ed.), *Reconsidering the Concept of Revolutionary Monotheism*; J. Assmann and Strohm (eds.), *Echnaton und Zarathustra*; Römer, *Invention of God*. There have also been attempts to reconstruct the emergence of monotheism in academic fields other than theology, religious studies, and immediately related fields; cf. de Kerckhove, *Civilisation*; Debray, *God: An Itinerary*; and Rotman, *Becoming beside Ourselves*.

[2] This foundational insight was first expressed in Overbeck, 'Über die Anfänge der patristischen Literatur'. Overbeck uses it with regard to the chasm between what he refers to as *Urchristentum* ('primitive Christianity') on the one hand, and the early Church, on the other. However, his insight applies to the respective developments of a huge variety of religions, ideologies, and institutions and even more generally, as he states in his notes on 'Urgeschichte (Allgemeines)' in: idem, *Kirchenlexicon Texte: Ausgewählte Artikel J–Z*, 619: 'Urgesch[ichte] ist in der That bedeutsamere, entscheidendere Gesch[ichte] als alle sonst[ige] Gesch[ichte], und zwar durchaus nicht nur in der K[irchen-]G[eschichte], sondern Entsteh[un]gsgesch[ichte]

for which they created the basis, and – while there is no need to accept the ideological baggage that goes with it – historians ignore Overbeck's insight at their own peril. As we shall see, the origins and development of Israelite and Jewish monotheism are a case in point: the latter allows us very few insights into the former. The key question is: how can we come to understand those origins in depth? How can the *triggers* of the shift towards monotheism be identified?

Attempts to understand the *reasons* for the rise of monotheism have typically been inspired by some form of historicism, i.e., by a view of history that, one way or another, is imbued with the assumptions of nineteenth-century idealist philosophy. Such attempts tend to disregard the social being and the material culture of the society the transformation of whose religion they attempt to explain.

The present work offers a new view of the origins of Israelite monotheism because it approaches the problem from a perspective that is different from the historicist one. Our approach is informed by the (re)new(ed) interest in material culture,[3] a consequence of the 'cultural turn',[4] and driven by the quest for the relation between social being and its cultural expression, a quest that found its classic formulation in W. Benjamin's essay 'On the Work of Art in the Age of Mechanical Reproduction'.[5] Our investigation focuses on the function of key media – spoken and written language, glyptic and pictorial images, and money[6] – in a pre-capitalist social formation, the society of late pre-exilic Judah. Media are means of (re)presentation, and (re)presentation underwent a significant transformation that was due to a reconfiguration of the interplay between the written and the spoken word, with the concomitant rise of iconophobia, and to the unfolding of an intricate system of value-equivalents, leading to the monetisation of the Judahite economy. Put differently, we posit that Judahite society experienced a *crisis of its signification systems*,[7] out of which arose a new, more 'abstract' conceptualisation of the human and divine 'spheres' and their mutual interaction, a new way of 'producing' divine 'presence'.[8] The key to understanding this intellectual revolution lies in the development of the media that drove it – and thus, ultimately, in the social being of Judahite society.

This may seem counter-intuitive. Yet we shall see that only a 'media archaeology' of Israelite monotheism provides the key to a fuller understanding of its origin and central

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ist in der Gesch[ichte] alles Lebendigen, im Leben überh[aupt] unvergleichlich.' Cf. J.E. Wilson, *Der christliche Overbeck*, esp. 164–165.

[3] Cf. Boivin, *Material Cultures, Material Minds*.

[4] Cf. Reckwitz, *Transformation der Kulturtheorien*, 15–57.

[5] For the original text, see Benjamin, 'Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit'. For a contemporary analysis of the problem, cf. esp. Mészáros, *Social Structure and Forms of Consciousness*.

[6] On money as a medium, cf. esp. Shell, *Money, Language, and Thought*, and Hörisch, *Geschichte der Medien*, 220–221.

[7] We use the term 'signification' in its most general sense; cf. Eco, *Theory of Semiotics*, 8–9. – Our use of the concept of a crisis of signification systems is, of course, ultimately inspired by M. Foucault's thesis of a crisis of representation in early modern European culture, laid down in his foundational *Les mots et les choses*. The theorem is here modified and used heuristically, and we shall see whether it is capable of illuminating the developments in Judahite society that triggered the monotheistic transformation of the Yahweh religion.

[8] Cf. Gumbrecht, *Production of Presence*.

characteristics.[9] We thus apply insights and methods to the exploration of the history of the Yahweh religion in Israel and Judah that have so far been used virtually exclusively with regard to ancient Greece and to European modernity.[10] Let us see how they can help us to understand the origins of monotheism in ancient Judah.[11] In order to prepare the ground, though, we first need to situate the rise of writing in the media history of ancient Western Asia.

[9] On the concept of media archaeology, cf. Kittler, *Musik und Mathematik*, vol. I, pt. 1.

[10] To name just one author, cf. Kittler, *Musik und Mathematik*, vol. I, pt. 1; idem, *Musik und Mathematik*, vol. I, pt. 2, and his programmatic essay, 'Towards an Ontology of the Media'.

[11] In this study, care is taken to differentiate between the societies and states of Israel and Judah respectively and to refer to their inhabitants as 'Israelites' and 'Judahites', in order to ensure historical precision and to exclude anachronistic terminology.

Chapter 1: Images, Writing and Money: Three Media and the Rise of Monotheism

1.1 The Visual, the Textual, and the Numerical in the Earliest Notation-Systems

It is from images that writing sprang, in both its forms, i.e., as script and number. In Mesopotamia, in the latter half of the fourth millennium B.C.E., viz. the Late Uruk period (3,400–3,100 B.C.E.), clay tokens, used as counting devices,[1] and objects of glyptic art provided the material basis from which numerical signs and ideograms were developed, when 'the inventors of the script borrowed long-established pictographic and iconographic elements from the visual arts of the proto-literate period',[2] of which the Inana symbol is a particularly clear and interesting example.[3]

When accounting techniques in economic institutions of the southern Mesopotamian city of Uruk, on the lower Euphrates, gave rise to one of the most momentous innovations in human history, the 'inventors' of writing thus drew not just from accounting devices but also from the repertoire of the visual culture of Mesopotamia. The proto-cuneiform notation system which was evolving during that period was employed not to notate language but to represent quantities of goods (cattle, fish, barley and the like) by using ideographic and numerical signs. It exclusively served the purposes of economic administration, and it was not used for the notation of spoken language.[4] The latter only began much later, once proto-cuneiform, inspired both by the 'numerical notation' carried by the tokens and by the 'pictorial and symbolic representation known especially from glyptic art',[5] had become complex enough adequately to notate spoken language, i.e., to operate phonetically. Only around 2,800 B.C.E., roughly four hundred years after its inception,[6] did cuneiform first notate the affixes so characteristic of the Sumerian language.[7] The

[1] As Woods, 'Earliest Mesopotamian Writing', 46–49, has demonstrated, Schmandt-Besserat, *Before Writing*, vol. 1, is overly confident in tracing numerical as well as logographic cuneiform signs back to the clay tokens used for administrative purposes. Rather, 'all we can say with any degree of certainty […] is that there is a relationship between the impressions on the envelopes [that contain the clay tokens; J.S.] and the numerical graphs of the cuneiform systems and that these two systems, and only these two, appear to be related' (49).

[2] Woods, 'Earliest Mesopotamian Writing', 49.

[3] See Woods, 'Earliest Mesopotamian Writing', 49.

[4] Nissen, Damerow, and Englund, *Informationsverarbeitung vor 5000 Jahren*, 57.

[5] Cooper, 'Babylonian Beginnings', 77.

[6] Proto-cuneiform was first used towards the end of the Late Uruk period, i.e., from roughly 3,200 B.C.E. onwards; cf. Nissen, Damerow, and Englund, *Informationsverarbeitung vor 5000 Jahren*, 55.

[7] Cooper, 'Babylonian Beginnings', 80.

phoneticisation of cuneiform writing thus is a later development; phonetic notation was not originally a component of the proto-cuneiform notation system. Once phoneticisation had become possible, it underwent a steady development. From the time period of 2,600–2,500 B.C.E., we have lexical and literary texts from Fara and Tell Abū Salābīkh;[8] 'the Fara and Abū Salābīkh tablets seem to represent the first great flowering of Sumerian literature and the culmination of the archaic Sumerian tradition of scholarship'.[9] And not long after that, in the 23rd century, the first-ever named author in world history was at work, the high priestess and poetess En-ḫedu-Ana.[10]

While the study of early writing-systems, due to the contingencies of their decipherment over the last two centuries, has understandably been dominated 'by what can be called a philological perspective',[11] we must dissociate ourselves from this perspective in order fully to understand the significance of writing. Once we move beyond that perspective, we realise that proto-cuneiform gave birth both to arithmetic (through the numerical signs it devised) and to phoneticized writing,[12] i.e., the recording of spoken language (through the growing diversification of its logosyllabic signs). While '[t]he structures of proto-cuneiform are far from matching the syntax of a language',[13] the later development of the cuneiform notation system enabled it to record actual spoken language. As we just saw, the first clear examples of phoneticized writing in Mesopotamia date back to around 2,800 B.C.E.

Phonetic writing and its ability to 'store' speech and assist its 'revivification' must have exercised an irresistible attraction. We shall see later that phonetic writing continued to exercise a great fascination across many centuries and diverse cultures. Ancient Israel and Judah were no exceptions, and it was in the context of the society of ancient Judah that the use of phonetic, alphabetic writing, accompanied by the suppression of images and the rise of money,[14] led to the transformation of monolatry into monotheism which the present study sets out to explore and reconstruct.

But before we can even attempt to start out on that exploration and reconstruction, we have to return to proto-cuneiform and its immediate successor, early cuneiform, in order further to examine their uses. It will become clear that proto-cuneiform contained, like a nucleus, the full potential of writing: to serve as a notation system for both numerical and language data, thus giving rise both to arithmetic notation and to phonetic writing.

Proto-cuneiform was thus rooted in Mesopotamian visual culture, and fully developed cuneiform later engaged with Mesopotamian glyptic art in a fascinating interplay that will command our attention in this study.[15] The interdependence between visual culture and writing is another important phenomenon which we shall encounter in our analysis of

[8] Biggs and Hansen (eds.), *Inscriptions from Tell Abū Salābīkh*.
[9] Biggs and Hansen (eds.), *Inscriptions from Tell Abū Salābīkh*, 28.
[10] See Zgoll, *Rechtsfall der En-ḫedu-Ana*, and eadem, 'Geburt des Autors'.
[11] Damerow, 'Origins of Writing as a Problem of Historical Epistemology', 2.
[12] Damerow, 'Origins of Writing and Arithmetic'.
[13] Damerow, 'Origins of Writing as a Problem of Historical Epistemology', 6.
[14] The three developments are intertwined and interdependent; their nexus will be discussed in chapters 2 and 3.
[15] Cf. below, chapter 2.1: 'Conceptualisations of Divine Presence in Mesopotamia and in Greece'.

the Israelite evidence. For the time being, though, it is the mathematical implications of writing which we shall have to explore.

Now that the crucial early, proto-cuneiform documents have been deciphered,[16] it is possible to trace how the early administrative uses of proto-cuneiform gave rise to arithmetic and geometry. These texts were generated by the temple economy of Uruk in the late fourth millennium B.C.E.; they are proto-cuneiform metrological documents. While it is difficult to determine when mathematics can be said to have developed a specific 'self-identity' which made it distinct from accounting,[17] it is clear that the main concern of practitioners before 2,400 B.C.E. was the clarification of 'the intersections between the most important metrological systems: grain capacities and discretely counted objects such as people and beer jugs on the one hand, and lengths and areas on the other'.[18] Before the mid-third millennium, there are the first indications of a 'nascent mathematical genre'[19] in the metrological lists of the Late Uruk period and in the length-area tables of the early dynastic period.[20] And with regard to geometrical exercises of the Old Babylonian period it has been noted that much of their terminology is rooted in early Mesopotamian art[21] and that they use geometric forms that go back as far as the seventh millennium B.C.E.:[22] the terminology used in the mathematical exercises is thus grounded in the forms of early Mesopotamian visual culture.

The earliest history of Mesopotamian mathematics thus makes us aware of another crucially important fact of the earliest history of writing: the function of Mesopotamian *visual* culture in the rise and development of mathematics.[23] Visual culture was not just the basis for cuneiform logograms and the signs that were developed from them, but also for the numerical signs that made the rise of arithmetic possible, while its age-old decorative designs became the foundation of geometry.

We can conclude that understanding the 'interrelationship between the visual, the textual and the numerical'[24] is crucial to understanding the earliest history of writing. However, this interrelationship is crucial not just to the development of cuneiform culture, but also to that of the alphabetic writing-systems (both the linear and the cuneiform varieties) of ancient Western Asia. This interrelationship is less easily detectable, given the nature of alphabetic writing and the absence of a distinctly mathematical genre – as opposed to mere accounting techniques – in Western Asia outside Mesopotamia. Nevertheless, the visual, the textual and the numerical were interwoven in alphabetical cultures just as much as they were in cuneiform culture, only less obviously. The earliest alphabetic script,

[16] Cf. Nissen, Damerow, and Englund, *Informationsverarbeitung vor 5000 Jahren*, 197–201, and the comment in Robson, *Mathematics in Ancient Iraq*, 7–8 (which refers to Nissen, Damerow, and Englund, *Archaic Bookkeeping*, the English translation of an earlier version of Nissen, Damerow, and Englund, *Informationsverarbeitung vor 5000 Jahren*).

[17] Robson, *Mathematics in Ancient Iraq*, 51.

[18] Robson, *Mathematics in Ancient Iraq*, 52.

[19] Robson, *Mathematics in Ancient Iraq*, 52.

[20] Robson, *Mathematics in Ancient Iraq*, 52; cf. *ibid*., 37–38.

[21] Kilmer, 'Sumerian and Akkadian Names for Designs and Geometric Shapes'.

[22] Cf. Robson, *Mathematics in Ancient Iraq*, 45–51, and Schmandt-Besserat, *When Writing Met Art*, 15–25.

[23] Cf. Robson, *Mathematics in Ancient Iraq*, 45–51.

[24] Robson, *Mathematics in Ancient Iraq*, 46.

Pictographic Canaanite,[25] was derived from both the hieroglyphic and the hieratic scripts of Egypt, scripts that employed pictograms and cursive notation, respectively, to notate the Egyptian language. The earliest examples of Egyptian writing seem to contain, both on the tags and on the jars that have been preserved, royal names. The very earliest instances go back to the Naqada II period, but they are just a small number of signs found on pottery.[26]

Hieroglyphic writing (and thus also the hieratic script, which is derived from hieroglyphic) is rooted in the artistic production of ancient Egypt, as becomes obvious from some of the earliest examples of Egyptian writing on bone and ivory tags and ceramic jars.[27] They were found in funerary contexts, viz. the royal tomb U-j of the Naqada IIIa period (not long after 3,200 B.C.E.), and Egyptian writing emerged independently of its Mesopotamian counterpart; diffusionist theories about the earliest history of writing have been discarded.[28]

The development of the Egyptian notation-systems thus shares many features with that of cuneiform. This also extends to the correlation between visual culture, writing and accountancy/early mathematics: on the tags just mentioned, one finds numerical signs 'which include single digits in groups of up to 12 (written either horizontally or vertically), the sign for 100, and 100 + 1', a pattern which 'suggests […] that the digits encode a complex form of numeration'.[29] The earliest hieroglyphic signs and the numerals seem to have developed side by side.[30]

While early cuneiform was in the service of a complex, efficient administrative system, developed hand in hand with it, and further contributed to its efficiency,[31] the early Egyptian notation-system of the type documented in the Naqada IIIa U-j tomb at Abydos 'was more clearly an ultra-restricted form. Nothing points to its having spread far beyond ceremoniously tinged royal administration and central artistic forms'.[32] Yet it was this notation-system from which the hieroglyphic script was developed in all its complexity and efficiency. When the earliest Egyptian script was devised, an underlying strategy seems to have informed the 'selection of models for signs', a strategy 'whose prime aims are not likely to have been quick legibility, for which general criteria were presumably not available, or simple differentiation'.[33] In Baines's view, the aim was 'something like modeling distinctions of meaning in terms of suitable domains (whether those distinctions were in the entities that the signs recorded or were phonemic)'.[34] The earliest Egyptian script thus demonstrates to what degree writing was anchored in the daily experience especially of the natural world and a number of centrally important man-made elements,[35]

[25] We follow the terminology of Millard, 'The Ugaritic and Canaanite Alphabets', 615. The use of the term 'proto-Sinaitic' to denote this alphabet seems ill-advised; cf. L.D. Morenz, *Schriftentwicklung*, 27–28.
[26] Cf. Kahl, *System der ägyptischen Hieroglyphenschrift*, 156–162.
[27] Cf. Baines, 'Earliest Egyptian Writing', 157.
[28] Cf. Baines, 'Earliest Egyptian Writing', 154.
[29] Baines, 'Earliest Egyptian Writing', 157, drawing on Dreyer, *Umm el-Qaab*, pt. I, 113–118.
[30] Cf. Baines, 'Earliest Egyptian Writing', 154–155.
[31] Cf. Nissen, Damerow, and Englund, *Informationsverarbeitung vor 5000 Jahren*.
[32] Baines, 'Earliest Egyptian Writing', 184.
[33] Baines, 'Earliest Egyptian Writing', 158.
[34] Baines, 'Earliest Egyptian Writing', 158.
[35] Baines, 'Earliest Egyptian Writing', 157: 'The hieroglyphic signs represent armed human figures, mammals and an emblematic oxhead or bucranium, birds, reptiles, a scorpion, fish, plant elements,

thus indicating 'that the script exploited a well-formed visual culture that had much in common with that of later times, and that was associated with similar political institutions, notably kingship'.[36]

The same finds from Naqada IIIa display numerical signs although, on the tags found in the U-j grave, they were not inscribed together with the others: rather, some tags carry exclusively hieroglyphic, logosyllabic signs, while others only display numerals. It seems that the latter carry those numerals for book-keeping purposes. It is important to see that the visual culture of the pre-dynastic period concurrently gave rise to hieroglyphic logosyllabic writing and a numerical notation system, a development which closely parallels, but was completely independent of, the rise of the earliest variety of cuneiform.

Here again it becomes obvious that, and how, both the textual and the numerical were rooted in the visual and continued to exist side by side.[37] In the scribal cultures of both Mesopotamia and Egypt, the education and practice of the scribes entailed both language-based writing and arithmetic. It has been said of Egypt, and it is equally true of Mesopotamia, that it was through the medium of the extant writing-system that arithmetic was practised, and through that system exclusively.[38] Only in alphabetic scripts did the lifelines between the visual, on the one hand, and the textual and numerical, on the other, become severed. But before we shall be able to devote ourselves to the analysis of this phenomenon and its momentuous consequences, we have to trace the development that led from the Egyptian notation systems to the North-West Semitic alphabets.

1.2 The Earliest Alphabets and the Changing Constellation of the Visual, the Textual, and the Numerical

Recent research has lent further support to the theory that the world's first alphabet was derived from both the hieroglyphic and the hieratic scripts of Egypt.[39] Roughly 30 inscriptions found in the south-west of the Sinai peninsula, near Serabit el-Khadim, an area of manifold cultural contacts between Egyptians and Canaanite Bedouins, on the Gebel Nasb and at Wadi Maghara, date back to the early second millennium B.C.E. The signs of

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geographical features and temporal concepts such as "night" and some man-made elements, notably a schematized "palace façade", and a shrine.' For a detailed overview of both the hieroglyphs and the numerals cf. Dreyer, *Umm el-Qaab*, pt. I, 138–140.

[36] Baines, 'Earliest Egyptian Writing', 157.

[37] This phenomenon is approached from a different angle in Herrenschmidt, *Les trois écritures*. Herrenschmidt sees the history of human notation-systems as a sequence of three 'révolution[s] graphique[s]' producing 'writing-systems' (*écritures*): the *écriture* of *langue* (starting in Sumer; including, of course, the notation of numbers), that of *nombre* (also called the 'écriture monétaire arithméthique', 221; commencing with the rise of coined money), and that of *code* (also named the 'écriture informatique et réticulaire', 387; beginning with Alan Turing's pioneering work).

[38] Cf. Damerow, 'Origins of Writing and Arithmetic', *passim*.

[39] On the hieratic and demotic scripts in relation to hieroglyphic writing, see Quack, 'Difficult Hieroglyphs and Unreadable Demotic?'. On the debate concerning the relation between the first alphabet and Egyptian scripts, see L.D. Morenz, *Genese der Alphabetschrift*; idem, *Schriftentwicklung*, 24–52. Cf. idem, *Schriftentwicklung*, 34–35, on the first alphabet's roots in both the hieroglyphic and the hieratic notation systems.

their 'pictographic Canaanite' alphabetic notation system,[40] having been developed from *both* scripts used in ancient Egypt, took over two aspects of notation from those Egyptian scripts: from hieroglyphic writing, the 'iconic potential';[41] from the cursive Hieratic, the phonetic possibilities.[42]

A comparison of pictographic Canaanite with both Egyptian scripts clarifies the precise nature of the decisive innovation offered by the former: its radical reduction of complexity (letters, developed from hieroglyphic and hierocratic signs, instead of a multitude of signs) and, more specifically, its radical focus on the phonetic aspects of writing,[43] as opposed to its iconic/pictographic ones. While the pictographic origins can still be detected, these traces are insignificant in comparison with the phonetic possibilities which the new script opened up. Its focus on the phonetic side was probably inspired by the Egyptian practice of rendering foreign-language terms by means of combining one-consonant signs, a practice followed especially in the case of proper names.[44]

The desire to express names in writing seems to be central to the development of notation-systems and may even have triggered – in more than one ancient culture – the increasing use of the phonetic potential of writing.

It is significant that, in Egypt, inscriptions of names in funerary contexts are among the earliest known texts.[45] These name inscriptions, together with the graves themselves, are at the root of Egyptian 'autobiography',[46] which is why J. Assmann can speak of 'the grave as the preparatory school of literature'[47] in ancient Egypt. With regard to the evolution of the script that was used for those name inscriptions, there was a development from what was probably non-phonetic writing (in the case of the very earliest examples; e.g., the U-j graves),[48] to a phonetic representation of names from the First Dynasty onwards – '[t]he earliest names that are unquestionably written with phonograms date to the 1st dynasty, after the system's first reform'.[49] Central to the matter is indeed 'the question of how names are notated, a problem that is one motor in the elaboration of phonemic writing and more broadly of writing in general'.[50]

It is this tendency towards ever greater refinement of the phonetic potential of notation-systems which, in the long run, led to what I should like to call the *regrouping* of the visual, the textual and the numerical aspects of notation that is so characteristic especially of alphabetic scripts. Alphabetic writing thus focused on the *textual*, effectively excluding – or

[40] On the designation 'pictographic Canaanite', cf. above, at n. 25.
[41] L.D. Morenz, *Schriftentwicklung*, 35, 143: 'das bildhafte Potential der Zeichen'.
[42] L.D. Morenz, *Schriftentwicklung*, 35, 143.
[43] L.D. Morenz, *Schriftentwicklung*, 33: 'Das medienarchäologische Spezifikum der kanaanäischen Alphabetschrift war die drastische Reduktion der Relevanz des ikonischen Potentials der Zeichen im Schriftgebrauch. Damit wurde das Schriftsystem radikal phonetisiert und im Sinne der Sprachnotation deutlich vereinfacht.'
[44] L.D. Morenz, *Schriftentwicklung*, 33.
[45] Cf. Schott, 'Die Biographie des Ka-em-tenenet', 454–455.
[46] Cf. J. Assmann, 'Schrift, Tod und Identität'.
[47] Cf. the preceding footnote.
[48] Cf. Baines, 'The Earliest Egyptian Writing', 165.
[49] Baines, 'The Earliest Egyptian Writing', 165.
[50] Baines, 'The Earliest Egyptian Writing', 165.

at least marginalising – the visual and the numerical and privileging the *glottographic* aspect of writing, i.e., its power to represent spoken language.[51]

Writing is here deemed to be 'the communication of relatively specific ideas in a conventional manner by means of permanent visible marks'.[52] 'This sort of definition acknowledges that writing need not aim at the transcription of spoken language. Nor must all (or even most) pictures be considered writing.'[53] A close examination of the characteristics of 'glottographic' and other types of writing has rightly led M.D. Hyman to conclude 'that the typological model of pure glottographic and non-glottographic systems is unhelpful'.[54] It is not supported by the earliest available evidence, that of proto-cuneiform. The neat distinction between two 'systems' does not work, not even with regard to modern alphabets.[55] It is therefore advisable to

> conceive of writing as a *system of systems*. Among the subsystems commonly are a numeric subsystem and a glottographic (lexical/morphosyntactic) subsystem. Interspersed with these are other subsystems, such as punctuation and indexical marks. Additional subsystems are present in texts that deal with specialized domains.[56]

It therefore seems to be a precise account of the characteristics of the 'pictographic' Canaanite script, the world's first alphabet, and of the later alphabets derived from it, to state that alphabetic writing, while being a 'system of systems' like all other types of writing, is characterised by the *prominence of its glottographic subsystem*: it hypertrophies, so to speak, while the other subsystems are, and remain, underdeveloped.

What do we know to be the main characteristic of glottography? The answer is 'that the symbols are a cause (*Verursachung*) of the words we utter in *reading*'.[57] This makes the glottographic subsystem different both from images and from, say, the numerical subsystem of writing.[58] The latter does not 'represent […] a natural language utterance' – we have to '*translate* [it] into spoken language – in a word, verbalize it'.[59] To sum up, '[w]e *read* glottographic writing, but *verbalize* non-glottographic writing'.[60]

Alphabetic writing, with its strong focus on glottography, has the key quality of both representing spoken language and causing the utterance, through reading, of the spoken language thus represented. It is this link between writing and spoken language (and thus, ultimately, the human voice) to which we shall soon devote our attention. Before we do so, however, we shall turn for a moment to the consequences of the prevalence of the glottographic subsystem of alphabetic writing in the North-West Semitic tradition.

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[51] Cf. Hyman, 'Of Glyphs and Glottography', 233. The term thus equals what Gelb, *Study of Writing*, calls 'phonographic'; cf. Hyman, 'Of Glyphs and Glottography', 231 and 233, n. 11. – The definition of 'glottography' as *representing* spoken language is taken over from Hyman, *ibid.*, 233, n. 9, and assumes, as he does (*ibid.*), 'by "*x* represents *y*" that *y* is descriptively prior to *x*; representation is not symmetric'.

[52] Boone, 'Beyond Writing', 313; Hyman, 'Of Glyphs and Glottography', 233, n. 8.

[53] Hyman, 'Of Glyphs and Glottography', 233, n. 8.

[54] Hyman, 'Of Glyphs and Glottography', 245.

[55] Cf. Hyman, 'Of Glyphs and Glottography', 241–243.

[56] Hyman, 'Of Glyphs and Glottography', 245.

[57] Hyman, 'Of Glyphs and Glottography', 243, based on Wittgenstein, *Philosophical Investigations*, § 169.

[58] Cf. Hyman, 'Of Glyphs and Glottography', 243–244.

[59] Hyman, 'Of Glyphs and Glottography', 244.

[60] Hyman, 'Of Glyphs and Glottography', 244.

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