McDONALD INSTITUTE CONVERSATIONS

Fierce lions, angry mice and fat-tailed sheep

Animal encounters in the ancient Near East

Edited by Laerke Recht & Christina Tsouparopoulou

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with contributions from
Francesca Alhaique, Troels Pank Arbøll, Laura Battini, Malwina Brachmańska, Franco D'Agostino, Anne Devillers, Hekmat Dirbas, Neil Erskine, Marina Fadum, Jill Goulder, Haskel J. Greenfield, Tina L. Greenfield, Ben Greet, Carina Gruber, Tuna Kalaycı, Michael Kozuh, Aren M. Maeir, Timothy Matney, Alice Mouton, Seraina Nett, Olga V. Popova, Louise Quillien, Laerke Recht, Licia Romano, Jon Ross, Szilvia Sövegjártó, Christina Tsouparopoulou, Lorenzo Verderame, Andréa Vilela, John Wainwright & Chikako E. Watanabe

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Abbreviations and sigla

ABL Harper, R.F., 1892–1914. *Assyrian and Babylonian Letters Belonging to the Kouyunjik Collection of the British Museum*, 14 volumes. Chicago: University of Chicago Press.

AHw von Soden, W., 1959-1981. *Akkadisches Handwörterbuch*. Wiesbaden.

AKA I Wallis Budge, E.A. & L.W. King, 1902. *Annals of the Kings of Assyria: The Cuneiform Texts with Translations and Transliterations from the Original Documents in the British Museum*. Vol. I. London: The Trustees of the British Museum.

AMT Campbell Thompson, R., 1923. *Assyrian Medical Texts.* Milford, Oxford: Oxford University Press.

AnOr 8 Pohl, A., 1933. *Neubabylonische Rechtsurkunden aus den Berliner staatlichen Museen.* (Analecta Orientalia 8.) Rome: Pontificium Institutum Biblicum.

AO Siglum of objects in the Louvre Museum, Paris (Archéologie Orientale).

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BAM Köcher, F., 1963–1980. *Die babylonisch-assyrische Medizin in Texten und Untersuchungen*, 6 Vols. Berlin: De Gruyter.

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BIN 1 Keiser, C.E., 1917. *Letters and Contracts from Erech Written in the Neo-Babylonian Period*. (Babylonian Inscriptions in the Collection of James B. Nies, vol. 1.) New Haven: Yale University Press.

BIN 3 Keiser, C.E., 1971. *Neo-Sumerian Account Texts from Drehem.* (Babylonian Inscriptions in the Collection of B.J. Nies, vol. 3.) New Haven: Yale University Press.

BM Siglum for objects in the British Museum, London.

BPOA Biblioteca del Proximo Oriente Antiguo (Madrid: Consejo Superior de Investigaciones Científicas, 2006ff.)

BPOA 6 Sigrist, M., & T. Ozaki, 2009a. *Neo-Sumerian Administrative Tablets from the Yale Babylonian Collection. Part One* (Biblioteca del Próximo Oriente Antiguo 6.) Madrid: Consejo Superior de Investigaciones Científicas.

BPOA 7 Sigrist, M., & T. Ozaki, 2009b. *Neo-Sumerian Administrative Tablets from the Yale Babylonian Collection. Part Two* (Biblioteca del Próximo Oriente Antiguo 7.) Madrid: Consejo Superior de Investigaciones Científicas.

BRM 1 Clay, A.T., 1912. *Babylonian Business Transactions of the First Millennium B.C.* (Babylonian Records

in the Library of J. Pierpont Morgan, Part 1.) New York: Privately printed.

CAD *The Assyrian Dictionary of the Oriental Institute of the University of Chicago.* Chicago: The Oriental Institute, 1956–2010.

CBS Siglum for objects in the University Museum in Philadelphia (Catalogue of the Babylonian Section).

CDLI Cuneiform Digital Library Initiative, https://cdli.ucla.edu

CHD Goedegebuure, P.M., H.G. Güterbock, H.A. Hoffner & T.P.J. van den Hout (eds.), 1980–. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*. Chicago: The Oriental Institute.

CM 26 Sharlach, T.M., 2004. *Provincial Taxation and the Ur III State.* (Cuneiform Monographs 26.) Leiden: Brill.

CT 22 Campbell Thompson, R., 1906. *Cuneiform Texts from Babylonian Tablets in British Museum*, vol. 22. London: British Museum.

CT 32 King, L.W., 1912. *Cuneiform Texts from Babylonian Tablets in British Museum*, vol. 32. London: British Museum.

CT 55 Pinches, T.G. 1982. *Cuneiform Texts from Babylonian Tablets in the British Museum Part 55. Neo-Babylonian and Achaemenid Economic Texts*. London: British Museum Publications.

CTH Laroche, E. 1971. *Catalogue des Textes Hittites*. Paris: Klincksieck.

DAS Lafont, B., 1985. *Documents Administratifs Sumériens, provenant du site de Tello et conservés au Musée du Louvre*. Paris: Editions Recherche sur les Civilisations.

DMMA Siglum for objects in the Département des Monnaies, médailles et antiques de la Bibliothèque nationale de France.

DUL Del Olmo Lete, G. & J. Sanmartín, 2015. *A Dictionary of the Ugaritic Language in the Alphabetic Tradition*. Translated and edited by W.G.E. Watson. Third revised edition. 2 vols. (Handbuch der Orientalistik 112.) Leiden: Brill.

EA Siglum for the Tell El-Amarna Letters, following the edition of Knudtzon, J. A., 1915. *Die El-Amarna-Tafeln.* Leipzig: J.C. Hinrichs'sche Buchhandlung.

ePSD Electronic version of *The Pennsylvania Sumerian Dictionary*, http://psd.museum.upenn.edu

ETCSL Black, J.A., G. Cunningham, J. Ebeling, E. Flückiger-Hawker, E. Robson, J. Taylor & G. Zólyomi (eds.), 1998–2006. *The Electronic Text Corpus of Sumerian Literature.* Oxford, http://etcsl.orinst.ox.ac.uk/

FM 2 Charpin, D. & J.-M. Durand (ed.), 1994. *Recueil d'études à la mémoire de Maurice Birot.* (Florilegium Marianum II.) Paris: Société pour l'étude du Proche-Orient ancien.

Hh *The Series HAR-ra='hubullu'*, Materials for the Sumerian lexicon (MSL), 5, 6, 7, 9, 10 & 11. Rome: Pontificium Institutum Biblicum, 1957–.

HSS 14 Lacheman, E.R., 1950. *Excavations at Nuzi V. Miscellaneous Texts from Nuzi, Part 2, The Palace and Temple Archives*. (Harvard Semitic Studies 14.) Cambridge (Mass.): Harvard Univ. Press.

HW² Friedrich, J. & A. Kammenhuber (eds.), 1975–. *Hethitisches Wörterbuch. Zweite, völlig neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte*. Heidelberg: Winter.

IB Siglum for finds from Isin (Isan Bahriyat).

IM Siglum for objects in the Iraq Museum, Baghdad.

ITT 5 de Genouillac, H., 1921. *Inventaire des Tablettes de Tello conservées au Musée Imperial Ottoman*. *Tome V. Époque présargonique, Époque d'Agadé, Epoque d'Ur III*. Paris: Édition Ernest Leroux.

KAH 2 Schroeder, O. 1922. *Keilschrifttexte aus Assur historischen Inhalts, Heft II*. (Wissenschaftliche Veroffentlichungen der Deutschen Orient-Gesellschaft 37.) Leipzig: J.C. Hinrichs'sche Buchhandlung.

KBo *Keilschrifttexte aus Boghazköi* (Bd. 1-22 in Wissenschaftliche Veroffentlichungen der Deutschen Orient-Gesellschaft) Leipzig/Berlin, 1916 ff.

KRI Kitchen, K.A., 1969–1990. *Ramesside Inscriptions. Historical and Biographical,* 8 vols. Oxford: Blackwell.

KUB *Keilschrifturkunden aus Boghazköi*, Berlin 1921 ff.

LAPO 16 Durand, J.-M., 1997. *Les Documents épistolaires du palais de Mari, tome I.* (Littératures anciennes du Proche-Orient 16.) Paris: Éditions du cerf.

LAPO 18 Durand, J.-M., 2000. *Les Documents épistolaires du palais de Mari, tome III.* (Littératures anciennes du Proche-Orient 18.) Paris: Éditions du cerf.

LD Lepsius, C.R., 1849–59. *Denkmäler aus Aegypten und Aethiopen* (plates), 6 vols. Berlin: Nicolaische Buchhandlung.

LKU Falkenstein, A., 1931. *Literarische Keilschrifttexte aus Uruk*. Berlin: Berlin Staatliche Museen zu Berlin Vorderasiatische Abteilung.

M Siglum for texts from Mari.

Moore, Mich. Coll.
Moore, E., 1939. *Neo-Babylonian Documents in the University of Michigan Collection*. Ann Arbor: University of Michigan Press.

MSL VIII/I Landsberger, B., 1960. *The Fauna of Ancient Mesopotamia. First Part: Tablet XIII.* (Materialien zum Sumerischen Lexikon VIII/1.) Rome: Pontificium Institutum Biblicum. [with the assistance of A. Draffkorn Kilmer & E.I. Gordon].

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MVN 11 Owen, D.I., 1982. *Selected Ur III Texts from the Harvard Semitic Museum*. (Materiali per il Vocabolario Neosumerico 11.) Rome: Multigrafica Editrice.

MZ Siglum for finds from Tell Mozan.

NBC Siglum for tablets in the Nies Babylonian Collection of the Yale Babylonian Collection.

NCBT Siglum for tablets in the Newell Collection of Babylonian Tablets, now Yale University, New Haven.

OIP 99 Biggs, R.D., 1974. *Inscriptions from Tell Abu Salabikh*. (Oriental Institute Publications 99.) Chicago: The University of Chicago Press.

OIP 115 Hilgert, M., 1998. *Cuneiform Texts from the Ur III Period in the Oriental Institute, Vol. 1: Drehem Administrative Documents from the Reign of Šulgi.* (Oriental Institute Publications 115.) Chicago: The Oriental Institute.

OIP 121 Hilgert, M., 1998. *Cuneiform Texts from the Ur III Period in the Oriental Institute, Volume 2: Drehem Administrative Documents from the Reign of Amar-Suena*. (Oriental Institute Publications 121.) Chicago: The Oriental Institute.

P CDLI (Cuneiform Digital Library Initiative) number.

PDT 1 Çig, M., H. Kizilyay & A. Salonen, 1956. *Die Puzris-Dagan-Texte der Istanbuler Archäologischen Museen Teil 1: Texts Nrr. 1-725.* (Academia Scientiarum Fennica Annales, série B, tome 92.) Helsinki: Academia Scientiarum Fennica.

PKG 18 Orthmann, W., 1985. *Der alte Orient*. (Propyläen Kunstgeschichte 18.) Berlin: Propyläen Verlag.

PTS Siglum for unpublished texts in the Princeton Theological Seminary.

RGTC *Répertoire géographique des textes cunéiformes*. (Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe B.) Wiesbaden: Reichert, 1974–.

RIMA 2 Grayson, A.K., 1991. *Assyrian Rulers of the Early First Millennium* BC *I (1114–859* BC*).* (The Royal Inscriptions of Mesopotamia, Assyrian Periods Vol. 2.) Toronto, Buffalo & London: University of Toronto Press.

RIME 1 Frayne, D., 2008. *Presargonic Period (2700–2350* BC*)*. (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 1.) Toronto: University of Toronto Press.

RIME 4 Frayne, D., 1990. *Old Babylonian Period (2003–1595* BC*)*. (The Royal Inscriptions of Mesopotamia, Early Periods Vol. 4.) Toronto: University of Toronto Press.

RINAP The Royal Inscriptions of the Neo-Assyrian Period; Open Richly Annotated Cuneiform Corpus, available at http://oracc.museum.upenn.edu/rinap/index.html

RLA *Reallexikon der Assyriologie und vorderasiatischen Archaologie.*

RS Siglum for documents from Ras Shamra (Ugarit).

SAA 2 Parpola, S. & K. Watanabe, 1988. *Neo-Assyrian Treaties and Loyalty Oaths.* (State Archives of Assyria 2.) Helsinki: Helsinki University Press.

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SAA 12 Kataja, K. & R. Whiting, 1995. *Grants, Decrees and Gifts of the Neo-Assyrian Period.* (State Archives of Assyria 12.) Helsinki: Helsinki University Press.

SAA 13 Cole, S.W. & P. Machinist, 1998. *Letters from Assyrian and Babylonian Priests to Kings Esarhaddon and Assurbanipal*. (State Archives of Assyria 13.) Helsinki: Helsinki University Press.

SAA 17 Dietrich, M., 2003. *The Neo-Babylonian Correspondence of Sargon and Sennacherib*. (State Archives of Assyria 17.) Helsinki: Helsinki University Press.

SAA 19 Luukko, M. 2012. *The Correspondence of Tiglathpileser III and Sargon II*. (State Archives of Assyria 19.) Helsinki: The Neo-Assyrian Text Corpus Project.

SAA 20 Parpola, S. 2017. *Assyrian Royal Rituals and Cultic Texts*. (State Archives of Assyria 20.) Helsinki: The Neo-Assyrian Text Corpus Project.

SAT 2 Sigrist, M., 2000. *Sumerian Archival Texts. Texts from the Yale Babylonian Collection 2*. Bethesda: CDL Press.

SF Deimel, A., 1923. *Schultexte aus Fara*. (Wissenschaftliche Veröffentlichung der Deutschen Orientgesellschaft 43.) Leipzig: J.C. Hinrichs'sche Buchhandlung.

SP Alster, B., 1997. *Proverbs of Ancient Sumer*. Bethesda: CDL Press.

TCL 12 Conteneau, G., 1927. *Contrats Néo-Babyloniens I, de Téglath-Phalasar III à Nabonide*. (Textes cunéiformes, Musées du Louvre 12.) Paris: P. Geuthner.

TCL 13 Contenau, G., 1929. *Contrats néo-babyloniens II. Achéménides et Séleucides.* (Textes cunéiformes, Musées du Louvre 13.) Paris: P. Geuthner.

TRU Legrain, L., 1912. *Le temps des rois d'Ur: recherches sur la société antique d'après des textes nouveaux*. (Bibliothèque de l'École des Hautes Études 199.) Paris: H. Champion.

TU Thureau-Dangin, F., 1922. *Tablettes d'Uruk à l'usage des prêtres du Temple d'Anu au temps des Séleucides.* (Musée du Louvre. Département des antiquités orientales. Textes cunéiformes.) Paris: P. Geuthner.

U. Siglum for finds from Ur.

UCP 9/1,I Lutz, H.F., 1927. *Neo-Babylonian Administrative Documents from Erech: Part I*. (University of California Publications in Semitic Philology Vol. 9 no. 1/I.) Berkeley (CA): University of California Press.

UCP 9/1,II Lutz, H.F., 1927. *Neo-Babylonian Administrative Documents from Erech: Part II*. (University of California Publications in Semitic Philology Vol. 9 no. 1/II.) Berkeley (CA): University of California Press.

UDT Nies, J.B., 1920. *Ur Dynasty Tablets: Texts Chiefly from Tello and Drehem Written during the Reigns of Dungi, Bur-Sin, Gimil-Sin and Ibi-Sin*. Leipzig: J.C. Hinrichs'sche Buchhandlung.

VA Siglum for objects in the Vorderasiatisches Museum, Berlin (Vorderasiatische Abteilung).

VAT Siglum for objects/tablets in the Vorderasiatisches Museum, Berlin (Vorderasiatische Abteilung. Tontafeln).

VS 1 Ungnad, A. & L. Messerschmidt, 1907. *Vorderasiatische Schriftdenkmäler der Königlichen Museen zu Berlin.* Vol. 1, Texts 1–115, Königliche Museen zu Berlin. Sammlung der Vorderasiatischen Altertümer. Leipzig: J.C. Hinrichs'sche Buchhandlung.

VS 16 Schröder, O., 1917. *Altbabylonische Briefe*. (Vorderasiatische Schriftdenkmäler der königlichen Museen zu Berlin 16.) Leipzig: J.C. Hinrichs'sche Buchhandlung.

VS 17 van Dijk, J. 1971. *Nicht-kanonische Beschwörungen und sonstige literarische Texte*. (Vorderasiatische Schriftdenkmäler der Königlichen Museen zu Berlin 17.) Berlin: Akademie Verlag.

WB Erman, A. & H. Grapow (eds.), 1971. *Wörterbuch der ägyptischen Sprache,* 5 vols. Berlin: Akademie Verlag.

WMAH Sauren, H., 1969. *Wirtschaftsurkunden aus der Zeit der III. Dynastie von Ur im Besitz des Musée d'Art et d'Histoire in Genf*. Naples: Istituto orientale di Napoli.

YBC Siglum for tablets in the Yale Babylonian Collection.

YOS 7 Tremayne, A., 1925. *Records from Erech, Time of Cyrus and Cambyses (538-521 B.C.)*. (Yale Oriental Series, Babylonian Texts, vol. 7.) New Haven: Yale University Press.

YOS 8 Faust, D.E., 1941. *Contracts from Larsa, dated in the Reign of Rim-Sin*. (Yale Oriental Series, Babylonian Texts, vol. 8.) New Haven: Yale University Press & London: H. Milford, Oxford University Press.

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YOS 19 Beaulieu, P.-A., 2000. *Legal and Administrative Texts from the Reign of Nabonidus*. (Yale Oriental Series, Babylonian Texts, vol. 19.) New Haven: Yale University Press.

Preface

Augusta McMahon

The chapters in this volume invert traditional approaches to past human-animal relationships, placing animals at the forefront of these interactions and celebrating the many ways in which animals enriched or complicated the lives of the inhabitants of the ancient Near East. The authors embrace insights from text, archaeology, art and landscape studies. The volume offers rich evidence for the concept that 'animals are good to think' (Levi-Strauss 1963), enabling humans in categorizing the world around us, evaluating our own behaviours, and providing analogies for supernatural powers that are beyond humans' control. However, totemism has never fit the ancient Near East well, because most animals had varied and endlessly complicated relationships with their human associates, as these chapters vividly describe. Taboos on eating or handling animals ebbed and flowed, and the same animal could have both positive and negative associations in omen texts. Animals were good (or bad) to eat, good (or bad) to think, good (or bad) to live with (Kirksey & Helmreich 2010) and good (or bad) to be. Through detailed, theoretically informed and well-supported case studies, this volume moves the study of human-animal-environment interactions forward, presenting animals as embedded actors in culture rather than simply objectified as human resources or symbols.

The chapters in the first section emphasize the agency of animals via their abilities to resolve crises for humans and deities and to shift between animal and human worlds. Animals have paradoxical affects: as metaphors for wilderness and chaos, or as valued companions, helpers, or votive sacrifices. The variety of interactions and assumptions cautions us to treat animals, as we do humans, as individuals. Reconstruction of animals in past rituals has a long history, usually focused on animals associated with the gods and/or animals used in formal religious sacrifice. But the chapters in the second section also examine the impact of lesser-known animals and less formal encounters, e.g., in the landscape or in funeral contexts within the home. The value and meanings of animals could vary with context.

The fascination engendered by hybrid or composite figures is also well represented. The persistence of composite figures in the Near East, from fourth millennium BC human-ibex 'shamans' on northern Mesopotamian Late Chalcolithic seals to *lamassu* and *mušhuššu* of the first millennium BC, suggests that the division and recombination of animal body elements fulfilled a human need to categorize powerful forces and create a cosmological structure. The anthropomorphizing of animals is another facet of the flexibility of animal identifications in the past. The authors here also grapple with the question of whether composite images represent ideas or costumed ritual participants.

The chapters also cover the most basic of animal–human relations, that of herd management, use in labour, and consumption, digging deeply into details of mobility, breeding and emic classifications. Economic aspects of the human-animal relationship are currently being rejuvenated through archaeological science techniques (e.g., isotopes, ZooMS), which give us unparalleled levels of detail on diet, mobility, herd management, and species. Matching these insights from science, the issues raised here include the value of individual animals versus that assigned to species, the challenges of pests, the status ascribed to and reflected by different meat cuts, animals as status and religious symbols, and animals' tertiary products or uses (e.g., transport versus traction, bile). These studies allow a more detailed reconstruction of Near Eastern economy and society, as well as emphasizing the flexibility of the relationships between animals, as well as between human and animal.

The authors implicitly advocate for a posthumanist multispecies ethnography, which incorporates

nonhumans and argues for equal care to be given to nonhumans in the realms of shared landscapes, violence, labour and especially ecology (Kirksey & Helmreich 2010; Kopnina 2017; Parathian *et al*. 2018). This approach advocates for nonhumans' agency in creating shared worlds, in contrast to the traditional approach to animals as symbols or resources in the service of humans. Going forward, the challenge will be to convert the acknowledgement of equal cultural contribution into support for nonhuman species to speak for themselves; this shift from passive subject of research inquiry to genuine active agency in academic writing does not have an easy or obvious path, and many nonhuman animals may be overlooked. Indeed, multispecies ethnography ideally seeks to incorporate plants, microbes, stones and more (Ogden *et al*. 2013; Smart 2014), many of which are ephemeral in the archaeological record and all but omitted in ancient texts. However, ancient texts do support a new approach which questions our modern boundaries between species. Our perpetual struggle to translate terms for different species of equids, to distinguish whether a word refers to rats or mice, or to link zooarchaeological remains to lexical lists, reinforces the complexity and flexibility of these concepts, and the futility of attempts at absolute categorization.

The chapters in this volume should inspire colleagues to grapple with animals, nonhumans and contexts that could not be included here. For instance, the snake has as lengthy a history of human engagement in the Near East as does the lion and had similarly unusual powers. While the lion was an icon of strength, the perfect symbol for the proximity of the emotions of awe and fear, the snake has the sneaky ability to slither between worlds, to avoid capture, and to deliver an almost imperceptible lethal injury. Fear of the snake conquers awe. Like the fox, the presence or actions of the snake, as listed in *Šumma ālu*, may be positive or negative omens. The snake was present at key moments in both Mesopotamian and Biblical literature; its actions (stealing the plant of immortality, offering the fruit of the tree of knowledge) changed the fate of humans forever. Whether represented coiled and copulating on Late Chalcolithic seals, grasped by Late Uruk 'Masters of Animals' or first millennium BC *lamaštu*, snakes and their paradoxical nature deserve deep scrutiny. There are many other nonhuman animals deserving of similar problematization and integration, and the eclectic and exciting research stream represented by this volume shows us the way.

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Chapter 21

Face to face with working donkeys in Mesopotamia: insights from modern development studies

Jill Goulder

In the developed world the close daily presence of working animals has been rapidly wiped from our urban consciousness. Working animals remain central to the lives of millions in the developing world today; there are cogent reasons for increasing recognition of their major influence in antiquity – not just for ploughing and transport, but in terms of related new human occupations and activities.

Archaeological thought has become insulated from detailed appreciation of rural employment of animals, relying on unquestioning acceptance of high-level European and Asian anthropological models, with 'oxen' (no mention of female cows or donkeys) as an abstraction rather than as living creatures with their maintenance and husbandry requirements (see Goulder 2020, 151).

Andrew Sherratt in his iconic secondary-products model (1981) focused on the advent and diffusion of ox-ploughing in Mesopotamia, with ox-carts for transportation as in the contemporary Central Asian steppes. He originally mentioned donkeys only briefly as working on long-distance pack routes in the southern Levant, though he later acknowledged their spread to Mesopotamia (Sherratt 2003, 238, 243). Sherratt's model for Mesopotamia perhaps made unconscious reference to early use of working animals in Europe, where ploughing was often deeper and heavier and where donkeys were not yet present. This led to the sign for a plough, seen in the earliest texts in the late fourth millennium BC, as being widely associated with ox-ploughing; however, Englund (1995, 33) points out that in the earliest texts

> [o]nly several uncertain accounts register together the existence of both the plow represented by the sign APIN and oxen represented by the sign GU_4. Whether oxen played a large role in field work in the Late Uruk period is thus a matter of conjecture.

Working donkeys appear in Mesopotamian texts from the late fourth millennium BC and are commonly listed in the third millennium BC as employed in ploughing and other centralized agricultural operations.

Valasia Isaakidou (2011, 97) argues that Sherratt's secondary products model has been since then rather lazily taken up by commentators with

> preconceived notions of technological progress and economic intensification, driven by growing human population density and an expanding urban world system. For those disinclined to investigate farming practices, it offered an attractively clear, off-the-peg springboard for more interesting forays into human social behaviour. The extent to which data were accommodated to the model, rather than vice versa, became increasingly clear in later expositions….

I believe firmly that Andrew Sherratt would have been the first to agree that his model was designed as a basis for elaboration and adjustment, not for buying off the shelf.

Donkey-mindedness

The lack of 'donkey-mindedness' in discussion of this period outlined above, perhaps the product of a prevailing view of the virtues of deep (ox-) ploughing, has led to 'donkey-blind' models of early working-animal systems (Goulder 2018, 81). For example, Russell (2012, 208), in her otherwise useful text-book on humans and animals in prehistory, inexplicably omits the donkey from her table of 'major domestic animals', and, (on page 228), lists only cattle, horses, camels and even possibly dogs as likely early pack animals.

This is exacerbated by the issue that zooarchaeological detection of working-donkey use can be very problematic. Working donkeys in many cultures from antiquity to today have surprisingly rarely been eaten, with the carcasses left in the desert or dragged outside settlements, so they are very under-represented in food-middens. In earlier twentieth-century AD Mesopotamian archaeology, too, investigation was largely settlement-oriented, so again any working donkeys on small farms and villages were not detected. To add to their invisibility, *Equus asinus* remains are notoriously hard to tell from those of onagers (*Equus hemionus*) (e.g. Geigl & Grange 2012, 90); these were native to Mesopotamia and commonly hunted for meat and hides. The onager's intractable and restless temperament contrasts with that of the donkey; onager-donkey hybrids were employed for work in the third millennium BC, but it is now increasingly agreed, from faunal and textual evidence, that onagers were never systematically domesticated (Clutton-Brock 2012, 29). Zarins (2014, 14–32, 45–7, 65–7) makes a comprehensive case for interpretations of historical accounts and earlier texts on domesticated equids falling prey to confusion with donkeys and hybrids.

Absence of evidence should not be taken as evidence of absence, and these often unconsidered aspects are of central importance to my case for the under-estimation of the role and impact of donkeys in Mesopotamia (Goulder 2020). These factors result in a profile in the ancient Near East which is at odds with donkey use in modern developing regions. This inevitably impedes – among other elements – archaeological recognition of basic human-employing logistical matters such as breeding, supply, training, grazing and foddering, and of the impact of working animals on local economies through processes such as labour adjustments, hiring and lending, and the central contribution of short-distance transportation work.

Modern studies

There has been only very limited archaeological use of modern working-animal study sources in ancient Near Eastern studies to date, where ethnoarchaeology relating to animals has focused largely on the impact on human society of hunted and herded animals. Among the few exceptions, Renger (1990) consulted two official handbooks on draught animal use in sub-Saharan Africa for shedding light on working-animal use in third-millennium BC Mesopotamia. Bogucki (1993), a key post-Sherratt source for insight on the adoption of working animals in early Europe and commonly referred to in ancient Near Eastern work, cites four modern sub-Saharan African studies. Brodie (2008), focusing on the Aegean, also cites four modern African sources, and Goody (1976) refers to several of the same genre as examples of his wider findings; Halstead (e.g. 2014) makes use of many years of informal ethnographic observation among traditional farmers in present-day Greece.

I have therefore taken a new interdisciplinary approach, addressing the subject of the daily practicalities of working-animal usage through detailed qualitative analysis of several hundred official, NGO and academic studies of working-animal use in developing areas today (Goulder 2018, 82). A particularly rich source of studies is sub-Saharan Africa, where from the 1980s (post 'peak oil') there has been a new focus by agencies and NGOs on promoting use of working animals. While some useful working-animal studies have emerged from other regions, there is only limited published material from the modern Near East. Indeed, direct regional analogy there with use of working animals in antiquity would be largely inappropriate, due to major mechanization in many areas (Goulder 2016, 67). In a brief chapter it has been impossible to reference more than a small fraction of the 389 modern working-animal studies that form my data-set; my book (Goulder 2020) gives much more detail.

Sub-Saharan African studies have a particular value in that in many regions working cattle and donkeys have only been adopted in recent decades; in some regions, there has been a direct transition from hoe agriculture and human porterage to the use of animals, without intervening mechanization. As part of my research I also undertook brief observation visits myself to rural areas of Burkina Faso and Ethiopia (Fig. 21.1).

Such modern studies offer a largely untapped resource for assessment (with caveats) of the likely on-the-ground role and impact of working animals in antiquity – in particular on the unexamined role of donkeys. They investigate at farm and household level the practical social and economic ramifications of their adoption and use (largely ignored in more over-arching models), and demonstrate vividly the complexities of working-animal operational systems, sometimes in situations where the facilities today include little that was not available in the fourth millennium BC.

The use of ethnographies for study of ancient societies is an established approach, valuable in addressing potential biases and gaps. Wylie (2002, 145) argues cogently for their assistance in 'eliminating error and assessing likelihood, improving credibility and delimiting uncertainty'. In many of the recent working-animal studies by agencies in Africa and elsewhere there has been an explicit intention to move away from northern European priorities and to

Figure 21.1. *Interviewing farmers in western Ethiopia (© Jill Goulder 2014).*

establish local needs and practices with close attention to suitability of solutions to the local environment and farming traditions. This offers archaeologists the opportunity to reassess the often Western-centric epistemology of early working-animal use in the Near East, where there has been little challenge to assumptions such as that decisions, by animal-users and others, were always directed towards greater utility, productivity and profitability in developed-world terms (Wylie 2002, 145).

In my work I have taken an ethological approach to the studies, focusing on the irreducibles of natural animal behaviour and psychological responses to situations; these have an important influence on human interaction with cattle and donkeys in terms of work and husbandry. An imperfect recognition of their respective abilities and limitations can lead to an over-narrow view of their roles and value in the past, and my objective has been to test and offer revisions to common assumptions about their relative capabilities.

The social patterns of donkeys differ significantly from those of cattle. Donkeys live naturally in small sociable groups, so adapt well to working alongside humans; they are quick to learn and require little supervision. As widely evidenced today, a donkey can be led by a child to collect water, firewood and so on, freeing the mother to do other daily work such as making items for sale at markets. Donkeys, too, are used worldwide for unaccompanied smuggling of goods across national borders (e.g. (Africa) Jones 2009, 3; Sosovele 2004, 109; (Near East) Yilmaz 2012, 57; Nasser Kalawoun pers. comm. 2017). They have excellent memories for routes, very good night vision, and work well in difficult environments; advantage was taken of this by Assyrian merchants in the early second millennium BC for taking back-routes into Kaneš to avoid tax-payment on their goods (Larsen 2015, 157–8, 173, 179). Donkeys are also widely used, in the USA and elsewhere, as unaccompanied guard animals for flocks of sheep and goats: they can kill

coyotes and even see off mountain lions (e.g. Yilmaz 2012, 23). This is never something that cattle can do.

The physiological differences between donkeys and cattle have also affected their usage. Donkeys are strong for their feed input and low-maintenance: they are drought-tolerant, thrive on rough forage and are widely left free to find their own sustenance; as in general they are not a food source, they are less susceptible than cattle to theft. Cattle have greater absolute traction power, if this is needed for ploughing heavy soils, but constitute a greater investment than donkeys, with far more intensive herding, feeding and watering needs (e.g. Sosovele 2004, 107–9). Working cattle need high-quality grazing or foddering, with long periods in daytime to eat and ruminate (donkeys feed at night) and daily access to water, requiring active herding.

It has become clear during my research that top-down attempts to construct coherent theoretical models for the usage and benefits of working animals in the fourth and third millennia BC in Mesopotamia risk bypassing key findings. The adoption of working animals involves not solely the replacement of human labour (indeed it shifts or can even increase labour) but the development of entirely new social linkages, means of income, husbandry tasks and household arrangements. The complex minutiae of daily life with working animals – using an ox year-round, keeping a multi-purpose working cow, developing new income sources and household labour systems from donkey ownership (notably for women) – build up to a series of models hardly proposed yet.

Breeding and supply

A valuable and unexpected finding from the modern studies concerns the vast and geographically elaborate donkey-breeding industry in Africa and elsewhere. Despite more donkeys today than ever in prehistory being bred and traded, there is little published material to assist us in reconstructing likely systems in ancient Mesopotamia and beyond. Breeders and traders today as in antiquity inhabit remote regions and prefer to keep their activities out of official records, and as profitable entrepreneurs they are not the targets of aid organizations. Dercksen (2004, 258) underlines for example the scarcity of provenance information on the huge numbers of donkeys used in the pack-caravans described in the Kaneš texts. The modern West has lost touch with the complex nature and central importance until recent times of working-equid breeding and trading, equivalent perhaps to the vehicle industry today. The evidence from both antiquity and modern analogy is that large-scale breeding of donkeys for work, from the time of their early systematic use in Mesopotamia, has been conducted by specialists and located in remote, arid regions suited to their natural habitat.

In Mesopotamian texts, there are few references to breeding apart from to semi-nomadic Haneans breeding donkeys locally, as in early second-millennium BC Mari texts (Kupper 1957, 6–15; Zarins 2014, 201, 249). While the accumulation of donkeys at regional centres for onward transfer was susceptible to state control, I suggest that the systematic-breeding sector itself – perhaps concentrated in remote regions – was likely to have been privately operated. When systematic use of donkeys evolved in the late fourth/early third millennia BC, the breeding of donkeys may have become a specialist business for certain less mobile but still non-urban sub-groups. Milevski (2011, 177, 196, 232–5), discussing third-millennium BC southern Levant, suggests similarly from modern analogy that donkeys at the time were likely to have been bred by specialists, as in modern Arabia where the Solubba breed donkeys for other groups.

Among the few commentators on this barely recorded sector in modern Africa, Blench *et al*. (2004, 217; West Africa), Förster *et al.* (2013, 197; Egypt) and Pearson *et al.* (2001, 64, 67; Ethiopia) report how donkey-breeders raise their animals in remote, arid regions and sell them in a continual long-distance flow via large markets to donkey-merchants, who keep smaller groups of donkeys near urban and agricultural areas, supplying individual farmers and transporters and occasionally replenishing caravans. On my own brief research visits to West Africa and Ethiopia (2013/4) I witnessed ample further evidence of the scale and geographical scope of the donkey-breeding industry, supplying the huge demand for transport and traction donkeys in regions unsuited to breeding and where donkey mortality is high (Goulder 2018, 84; 2020, 53–5). Zarins (2014, 245) summarizes the textual references to donkey supply and demand in third-millennium BC Mesopotamia in terms that closely describe the modern African situations:

> [M]ortality rates were high and longevity was at a minimum. Therefore, the net local effect was negative, and, as a result, constant purchase from the peripheral areas of Mesopotamia was necessary to supplement local breeding.

There are intriguing clues in the texts to this phenomenon, with donkeys possibly being bred to the north and east and brought for sale at markets in

Mesopotamia, at transfer points between breeding and demand zones as happens in Africa today. Third-millennium BC commercial texts from Lagash and Mari indicate donkey supply centres at Dêr and Gutium in the Zagros region, Mari, and Kish in central Mesopotamia (e.g. Sallaberger 2014, 350; Zarins 2014, 160, 199); a tablet from Tello refers for example to more than 700 donkeys transferred hundreds of kilometres from Gutium to Lagash, a Mesopotamian demand centre. In the 'demand towns' in Africa today, there are regular markets (Fig. 21.2) and also urban 'pop-up' markets, where on a known day the streets of a town fill with donkeys brought in for sale. There are hints that a similar system operated in Mesopotamia in the early second millennium BC, where an Old Babylonian commercial letter advises a recipient 'concerning asses that you need, come here and buy asses, the asses have come up from the country' (Tablet BM 97347, CT 33 21; Zarins 2014, 201).

Kathryn Kelley (pers. comm. 2017) reports on the proto-cuneiform sign KUR – which has an association with mountains and foreign products – used in unprovenanced late fourth-millennium BC archaic texts in relation to donkeys (and male slaves), possibly indicating their importing for work over the Zagros mountains, perhaps from donkey-breeding rocky desert areas to the northeast.

Hiring and lending

At the next stage of the biography of a working donkey, then and now, overwhelming modern examples demonstrate how they circulate in the local community. Numerous accounts from sub-Saharan Africa describe a flourishing system of hiring, lending and communal ownership of donkeys, including 'contract' use for carrying others' produce and goods. These strong and self-generating levelling mechanisms enable maintenance of a minimum practical resource of working animals within a community.

Texts from antiquity support the hypothesis that the hiring, lending and sharing of donkeys was a central part of the donkey-using industry, enabling wide usage and allowing wealth disparities to be bridged. The hiring out of caravan animals is mentioned in the second-millennium BC Kaneš texts concerning the pack trade between Anatolia and Aššur; Dercksen (2004, 261–3) suggests that there may have been established local businesses hiring out donkeys for a stretch of the route, sometimes with a driver, and reclaiming the animals at the next town.

A text from second-millennium BC Deir el-Medina in Egypt suggests donkeys being hired out *ad hoc* for a few days, with the owner perhaps taking the donkey back home for the night (Janssen 2005, 11). Janssen

Figure 21.2. *Thrice-weekly donkey market in western Ethiopia (© Jill Goulder 2014).*

(2005, 110) and Janssen *et al.* (2003, 26–7, 44) report on a puzzle in several Deir el-Medina texts in which woodcutters (and also water-carriers, doorkeepers, policemen, a fisherman and a potter) hire donkeys from workmen, sometimes for only a few days and at high rates. Mitchell (2018, 50) explains this as indicating that donkeys were too expensive to be owned by such low-class workers, but the commentators cited above suggest that these recorded instances are in fact exceptions: woodcutters and water-carriers have daily need of transport and so may well have owned donkeys or obtained them from elsewhere, perhaps from a communal pool, with only occasional emergency hiring-in.

Both immediate benefit (e.g. grazing and protection from predators) and long-term social benefit can be achieved by lending donkeys. Donkeys are lent to help relatives and friends or to establish good relationships with neighbours and local groups (see e.g. the large Admassu and Shiferaw 2011 survey in Ethiopia (2011, 8)); Pearson *et al.* (2001, 23) report from an Ethiopian study that as a result 'donkey use seems to be part of the social network' in rural areas. Waithanji (2009, 34) reports as a practical point from a survey in Kenya that such lending 'is free to discourage further borrowing as paying for the donkey gives the person renting it a sense of entitlement to the donkey'.

In Mesopotamia, with its many centrally owned ploughing animals, there are few textual references to cattle hiring or sharing until late in the third millennium BC, when for example in a Girsu text, rent for plough animals is recorded in litres of barley (Heimpel 1995, 88). In early second-millennium BC texts, Stol (1995, 185, 191, 198–9) records regular references to cattle being hired for threshing/ploughing/pulling a wagon. He makes the point (1995, 198) that human members of the plough-team are similarly hired, underlining the seasonal nature of ploughing and the occupation elsewhere of humans and animals for the rest of the year.

The role of person-to-person dissemination

The modern development studies in regions of sub-Saharan Africa afford a particularly rich opportunity to read eye-witness accounts of adoption of working donkeys and cattle by cultures formerly using hand-cultivation and human porterage, bringing to life the sometimes sterile references in archaeology to diffusion and establishment of the new technology. There has been almost no envisaging of the actual process of adoption of working animals at ground level, particularly in the case of donkeys (introduced domesticates in Mesopotamia); the modern studies give strong reinforcement to a person-to-person information transfer model, subverting official initiatives (Goulder 2016, 72). African experience indicates that it is the person-to-person spread of understanding of the means of managing donkeys or cattle that precipitates widespread adoption of one or the other. Tibbs (1989, 12), writing of working-animal adoption in China, underlines that 'enthusiasm' for the new technology, as well as knowledge, is found to be 'best transmitted farmer to farmer'.

In western Ethiopia in 2014 I spoke for example to a farmer in a transmigrant community who had come from a cattle-using region but on arrival had seen a neighbour ploughing with donkeys, so had gone to him to learn how to use them and to make harness suitable for an animal with very different conformation from cattle (see Goulder 2020, 88–9). Similarly I met elderly farmers in central Burkina Faso in 2013 who explained that before the 1960s they had kept cattle and were aware of pack-caravan donkeys but had had no thought of using animals for cultivation until the concept was introduced by French post-colonial organizations; in the southwest, farmers had commonly held back from ploughing-animal adoption until young men returning from emigration brought eye-witness accounts and the funds to invest (and of course preconceptions as to which species to choose).

Resettled groups and returning wage-migrants in several other parts of sub-Saharan Africa are reported by regional experts at ATNESA workshops as having provided the concept and impetus for adopting animals for work (e.g. Sosovele 1994, 318–19; Starkey 1994a, 78); once implanted, new practices diffused from village to village, as with the southward spread of donkey use in regions of Africa (Starkey 1994b, 1). Starkey (1992, 21) also reports that oxen were promoted for ploughing and transport in several West African countries in the AD 1970s-80s, but that the farmers became more successfully introduced to working-animal adoption by their close cultural links with neighbouring regions such as Senegal, where donkeys were the established work animal.

Short-distance transportation

Local transportation, if mentioned at all in archaeological commentary, is still too often casually associated with the wheel, betraying perhaps a modern European bias and possibly preconceptions from analogy with the fourth-millennium BC development of ox-carts on the Central Asian steppe. Donkeys in ancient Near Eastern archaeology are spoken of almost entirely in the context of pack-caravans (see below), and these latter continue today in various parts of the world; but

Figure 21.3. *Carrying bricks in India (© Stephen Blakeway 2014, by permission).*

the two most common functions of the more than 45 million donkeys working in the world today are the carrying of fuel and water daily to rural and urban homesteads.

There is also the huge seasonal traffic of crops, fodder and dung from field to farm or to threshing-field or store, and from farm to village or market. Short-distance transport in villages and farms in the modern developing world is widely recognized as time-consuming and burdensome, in year-round terms far exceeding that of agricultural fieldwork (Waithanji 2014, 2). Studies of transportation activity in villages in Tanzania and Ghana, employing the tonne-km measure (effort involved in moving one tonne one kilometre), demonstrated that three-quarters of the annual transportation effort occurred within the village; water, firewood, and crops to the grinding-mill are the main activities, with water accounting for 70 per cent of the tonnage, women taking the majority of the burden, and the processes taking up to four hours daily (Doran 1994, 272–3).

Good modern example also gives strong evidence of the major modern unsung functions of donkeys for carrying bricks, cement, sand, timber, reeds and stones for construction (Fig. 21.3): a change in the archaeological record of the type or weight of material used, or change of source, could indicate new animal transportation. Similarly, with heavy or bulky raw materials – wood, clay, metal ore, charcoal, wool, flax – there could well be evidence of a dispersion of manufacturing sites, further from sources of raw materials and also from canals and rivers.

Transporting goods for others by donkey is commonly reported in studies of developing regions today as an important source of income and social benefit, and also for farmers aiming to maximize working-animal utilization in slack seasons (Goulder 2016, 72), with donkeys seen as productive assets in the same category as land and other holdings. Transporting fuel and water for financial gain is a staple in modern Africa and elsewhere; this trade is likely to have ancient antecedents, as with the water-carriers and woodcutters in second-millennium BC Egypt that I note earlier. Payment for transport services is often in kind, as recorded in antiquity, including repayment of obligations or storing up of goodwill.

Transport from field to farm and to consumption location has of course always been available in human form, but archaeological models of surplus-provision in Mesopotamia in the fourth-third millennium BC rarely address the practicalities of dealing with the major increase in bulk for transfer from the hinterland

Figure 21.4. *Donkeys with 100 kg grain-sacks at Yehil Berenda market, Addis Ababa (© Jill Goulder 2014).*

to newly urbanized nodes. Even less is said about what overwhelming modern evidence shows to be the key daily items conveyed year-round into urban areas in modern developing countries: fuel, water and construction materials.

Reports such as Admassu & Shiferaw's (2011, 27) working-equid survey results in Ethiopia demonstrate that in modern developing regions, use of donkeys in urban and peri-urban areas is commonly intensive and potentially lucrative; so this is a useful occupation for landless individuals. In modern Ethiopia '[a] large part of the people and of the economy of Addis Ababa depends on donkey transport for the movement of grain from wholesale centres to retail outlets and households' (Zenebe & Fekade 2004, 69), with several thousand donkeys employed daily at the vast Yehil Berenda grain-market (Fig. 21.4).

Analogies between urbanization in fourth-millennium BC Mesopotamia and modern situations are necessarily tentative and must rely on the resilience of basic forces; but insufficient attention has been paid to the practical workings of modern major cities. Tarr (1999, 434), writing of urban horse usage in AD nineteenth-century New York, encapsulates the inescapable need of cities for local essential supply systems:

> [o]ne way to think about cities is to conceptualize them as energy systems – as entities that require flows of energy for a wide range of purposes including heat, light, and power. Over time, the sources of these energy flows have changed from human to animal power, and then to steam, electricity, and gas.

Cities then as now became heavily dependent on their supply systems, with predictability of supply of foodstuffs and raw materials even more crucial than quantity (Marshall & Hildebrand 2002, 99–105). New modes of short-distance transportation to supply large centralized demand might have been a necessary context in which urbanization flourished, albeit not an initiator. I argue that the improvement to short-distance transport provided by local pack-donkey use was as central as were plough-generated surpluses to the operation of cities in fourth-third millennium BC Mesopotamia. It was also a crucial contributor to the burgeoning of centralized manufacturing and large-scale agriculture.

I have not addressed in this chapter the enigmatic and largely unrecorded subject of long-distance pack caravans, which operate firmly under the official

radar to this day: I expand slightly on this in my book (Goulder 2020, 116–33). Organizers of donkey-caravans throughout history and prehistory have been very interested in conducting profitable activities beyond the reach of authorities who would tax them, and of bandits who would similarly extract money from them. We can see this in the early second-millennium BC Kaneš cuneiform texts on the traffic between Aššur and Anatolia carrying tin and textiles, where as noted earlier donkey-caravans took difficult back-routes into Kaneš to avoid tax-payment on their goods (Larsen 2015, 157–8, 173, 179; Veenhof 1972, 34, 323–38).

Transforming women's lives?

A frustration in my research into the broader role of donkeys in fourth-third millennium BC Mesopotamia has been the marked scarcity of archaeological and textual clues to the daily lives of women. The study of women in this period has mainly to date been addressed anthropologically by top-down analyses of the changing social position of women in certain modern agricultural cultures (e.g. Goody 1976). In my bottom-up examinations of modern developing-world societies, where cattle ownership and usage are often prestige-related and largely the preserve of males, there is rich evidence that women often have considerably more cultural access to donkeys than to working cattle (Goulder 2016, 77–9). A theme in numerous published modern agricultural and socio-economic overviews and workshop papers is of this gender- and status-neutral attribution to donkeys; a major FAO working paper on animal traction worldwide reports that 'donkeys have fewer associations with masculine power than most other work animals' (Starkey 2011, 27).

The carrying of burdens is known as the traditional role of women in many cultures, and NGOs and agro-economic organizations in African regions in particular have focused significantly in recent years on the overwhelming benefits of donkey-use for easing the work of women (Fig. 21.5). In a major quantitative NGO survey in Ethiopia this is found to be the single most important social contribution of donkey ownership (Admassu & Shiferaw 2011, 8). As well as reduction of hardship, the delegation to donkeys of heavy load-carrying and manual cultivation work reduces reproductive and other medical problems in women; among mobile groups, donkeys can transport small children, lessening constraints on family size (Mitchell 2018, 36). Donkeys correctly employed are docile and easy to handle by women and their children. Occasional barriers are reported, as in some West African societies where women have access to

Figure 21.5. *Kenyan woman with seven children carrying food home from market (© Donkey Sanctuary 2011, by permission).*

donkeys but still carry fuel or water themselves (e.g. Starkey 2011, 26–7); the underlying reason may in fact be economic, as reported by Doran (1994, 275):

> '[h]ouseholds had to choose between conserving the energy of their animals or that of their women; in many cases the choice favoured the animals'.

The modern non-prestige status of donkeys has a long history: see e.g. Way (2011, 94) on donkey insults in texts from the third millennium BC in Mesopotamia. There has been debate on this as ancient Near Eastern depictions and the presence of equids in high-status burials appeared to indicate elite status for donkeys. Milevski (2011, 233) and others, though, make cogent arguments for 'elite' donkeys in southern Levant graves being rather symbols of the source of wealth of pack-caravan owning merchants. On closer examination, too, equids in elite texts, representations and burials in Mesopotamia are commonly the expensive and prized onager-donkey hybrids (Postgate 1986, 194–200; Weber 2008), while Zarins (2014, 53–65) has re-examined studies and faunal evidence from the elite burials at Ur, Kish and elsewhere, concluding that some of the bones were either not associated with the human burial or were not even from equids.

The near-invisibility of both donkeys and women in the archaeological and textual record in fourth- and third-millennium BC Mesopotamia is a significant obstacle to pursuance of this subject; future work may need to operate from the other direction, focusing on re-interpreting social and economic changes at the time in the light of the clear findings from modern studies of the likely impact of the advent of donkeys on the lives of the non-elite, and notably of women.

And finally, ploughing

The subject of ploughing in antiquity and today is a vast one, encompassing agronomic matters well beyond the scope of this short chapter. As I argue earlier, it is also an over-emphasized one in discussion of early working-animal use; so I provide here only a short note on some overlooked practicalities of ploughing adoption in relation to working animals.

Figure 21.6. *Woman ploughing with a donkey in central Burkina Faso (© Jill Goulder 2013).*

Strong evidence from modern ard-plough use in developing regions indicates that ploughing is not necessarily an advance over manual cultivation. For example, Kjaerby (1983, 38) reports that in parts of Tanzania rules were introduced banning ploughing altogether in light soils due to erosion problems. Ard ploughing can be deeper than manual digging, but this can be inappropriate for light, arid soils, resulting in desiccation. Ploughing opens the soil more speedily, but leads to an extra labour-burden per farm of weeding and harvesting, and of preliminary field-clearing, as well as of the major task of the care and feeding of the working animals. Top-down models of the adoption of plough agriculture commonly risk 'leaving out the animals', notably factors arising from the different virtues of oxen, cows and donkeys, which can apply to large and small farms alike.

Oxen are and were of course widely used for ploughing, but throughout history and up to today this is also commonly done in some regions by donkeys (Fig. 21.6) and female cows, especially in areas of light, dry soil. Texts from the third millennium BC record donkeys regularly used for ploughing and other field-work (e.g. Heimpel 1995; Zarins 2014, 190); they are widely used today in some regions, particularly where a multi-purpose animal is needed on a small farm. Female cows are little mentioned in earlier Mesopotamian texts (e.g. Maekawa 1979, 102): it may be that in centrally controlled agricultural regimes the extra feeding and care needed if cows are to work, as well as provide milk and calves, might not be considered worthwhile, whereas on the unrecorded small farms a female cow would again be multi-purpose. From the late third millennium BC, references become more common (e.g. Heimpel 1995, 89), though there are indications that listings included non-working females producing calves for a plough team.

Summing up

There has been very little focus on early systematic use of working donkeys in fourth-third millennium BC Mesopotamia, a result of the coinciding of several factors. In this chapter, I suggest a new evidential viewpoint, based on modern studies of day-to-day working animal use and management. My aim has been to collate from the growing body of on-the-ground working-animal studies from Africa and elsewhere the small-scale clues and descriptions of the social and economic consequences of the adoption and use of working donkeys and cattle in a range of modern communities. These shed light on adaptations in the ancient Near East and allow reassessment of the often Western-centric epistemology of donkey-use in particular, reducing their invisibility and moving towards greater appreciation of their role and impact.

These studies make clear how choice and usage of working animals are firmly based on the physiology and behaviour of donkeys and cattle. They underline the social and community adjustment – for good or bad – of working-animal adoption, notably the value of donkeys for small-scale farmers and for women and the disenfranchized. Short-distance pack work, between field, farm, village and market – the bedrock of modern employment of donkeys in developing regions – is almost wholly unrecognized in models of usage in fourth-third millennium BC Mesopotamia. Existing archaeo-anthropological models also fall short of examining the significant new activities and occupations consequent on adoption of such new technology.

Donkeys might usefully be regarded archaeologically in a similar light to organic materials: known to be present only by their impact on archaeologically detectable factors, with their absence from the record too readily resulting in their neglect in interpretation.

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Fierce lions, angry mice and fat-tailed sheep

Animals have always been an integral part of human existence. In the ancient Near East, this is evident in the record of excavated assemblages of faunal remains, iconography and – for the later historical periods – texts. Animals have predominantly been examined as part of consumption and economy, and while these are important aspects of society in the ancient Near East, the relationships between humans and animals were extremely varied and complex.

Domesticated animals had great impact on social, political and economic structures – for example cattle in agriculture and diet, or donkeys and horses in transport, trade and war. Fantastic mythological beasts such as lion-headed eagles or Anzu-birds in Mesopotamia or Egyptian deities such as the falcon-headed god Horus were part of religious beliefs and myths, while exotic creatures such as lions were part of elite symbolling from the fourth millennium BC onward. In some cases, animals also intruded on human lives in unwanted ways by scavenging or entering the household; this especially applies to small or wild animals. But animals were also attributed agency with the ability to solve problems; the distinction between humans and other animals often blurs in ritual, personal and place names, fables and royal ideology. They were helpers, pets and companions in life and death, peace and war. An association with cult and mortuary practices involves sacrifice and feasting, while some animals held special symbolic significance.

This volume is a tribute to the animals of the ancient Near East (including Mesopotamia, Anatolia, the Levant and Egypt), from the fourth through first millennia BC, and their complex relationship with the environment and other human and nonhuman animals. Offering faunal, textual and iconographic studies, the contributions present a fascinating array of the many ways in which animals influence human life and death, and explore new perspectives in the exciting field of human-animal studies as applied to this part of the world.

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