Introduction

Haskel Joseph Greenfield, born in Newark, New Jersey, in 1953, is a prominent figure in archaeology and anthropology whose research over the past 50 years has profoundly impacted our understanding of early agricultural and complex societies, spanning from the Neolithic to the Iron Age aside from his occasional forays into earlier and later periods. He earned his Ph.D. in Anthropology from the City University of New York in 1985, after completing his B.A. (1975) and M.A. (1980) at Hunter College, along with his M.Phil. (1980) at the Graduate Centre.

Following his doctorate, Haskel held teaching positions at Fiorello H. La Guardia Community College, (CUNY), St. John's University (Jamaica, NY), Indiana University (Bloomington), and Indiana University-Purdue University (Indianapolis) before joining the University of Manitoba (Winnipeg, Canada) in 1989. At the University of Manitoba, he serves as a Distinguished Professor of Anthropology, Co-Director of the Near Eastern and Biblical Archaeology Laboratory (NEBAL), and Coordinator of the Judaic Studies Program. Haskel continues to reside in Winnipeg with his wife Tina, and is surrounded by their four children, Rachael, Channah, Noah, and Boaz, and grandchild, Jesse.

Throughout his career, Haskel has worked on over 50 laboratory projects and more than 40 archaeological field projects. This work has led to significant contributions to the academic community through hundreds of publications, with over 228 works cited more than 4500 times. His seminal book, *Paleoeconomy of the Central Balkans (Serbia): A Zooarchaeological Perspective on the Late Neolithic and Bronze Age (ca. 4500–1000 B.C.),* published in 1986 is a substantial contribution to the field and continues to be widely cited today.

Throughout his career, Greenfield has received several accolades. Most notably, he was named a Distinguished Professor by the University of Manitoba in 2015, and in May 2024, he was awarded membership in the Academia Europaea, a pan-European academy of humanities, letters, law, and sciences, in recognition of his substantial contributions to the field of archaeology.

Over his 35 years at the University of Manitoba, Haskel has taught 17 different undergraduate courses and nine graduate seminars in the Department of Anthropology. These encompass a wide range from surveys in archaeology and biological anthropology, to regional studies focused on Europe and Southwest Asia, as well as specialized courses in methods, theory, early farming societies, zooarchaeology, and human anatomy. Among the thousands of students who have walked into Haskel's classrooms over the years, he has shepherded over 20 graduate students to completion. Many worked on material collected during his international field projects, while others developed theses using material from Manitoba, Ontario, and Greece.

After his eventual retirement, students in the years to come will not be taught by Haskel but they will know of his profound efforts to help create an outstanding faunal reference collection, develop a world class Near Eastern and Biblical Archaeological Laboratory at St. Paul's College, and his strategic initiatives to obtain transformative infrastructure funding for the department's archaeology laboratories. Few will appreciate a new dissecting table, fume hood, epoxy flooring, renovated plumbing, or other such seemingly mundane items. They will not know a time without them. The rest of us do and will remain eternally grateful.

Research Beginnings

Despite an exhaustive list of service work to the university and community, Haskel is unquestionably best known for his unwavering commitment to tireless and sustained research. His work encompasses a vast geographical range, including Europe (Bosnia, Greece, Hungary, Macedonia, Poland, and Romania), the Near East (Israel, Jordan, and Turkey), and South Africa. The outcomes of these projects have significantly enhanced our understanding of the foundations of early farming and complex urban cultures, focusing on aspects such as the Secondary Products Revolution, the origins of transhumant pastoralism, regional subsistence and land-use, intra-settlement spatial organisation, butchering technology, and the spread of metallurgy. Although these may seem like disparate interests, they reflect a trajectory of persistent curiosity regarding humanity's widespread adoption of domesticated animals and our tolerance for ever-increasing societal complexity.

We can observe one of these key themes from the earliest of Haskel's research, which lay in understanding diet and the role of domesticated animals in shifting socio-political environments. This interest formed the basis of his Ph.D. research, but began in the early 1980s during a study of several faunal assemblages from early colonial deposits in lower Manhattan. This work, later published in 1992 (*Northeast Historical Archaeology*), established that there was a dietary change from pork to mutton with the shift from Dutch control of New Amsterdam to British control of New York City.

Origins of Domestication in Eastern Europe

At the heart of Haskel's central research questions was the inquiry into why animals were domesticated in the first place. Between 1980 to 1985, his research focused

on testing the Secondary Products Revolution model developed by Andrew Sherratt to explain the evolution of cultures from the Neolithic to the Bronze Age in the Near East and Europe. Using newly collected data from temperate southeastern Europe (i.e., the central Balkans) through the excavation and analysis of nearly two dozen zooarchaeological assemblages from Serbia, Macedonia, Bosnia, and Greece, Haskel tackled the belief that domestic animals were first domesticated for both their primary (bone, hide, meat) and secondary products (milk, traction, wool). In his Ph.D. dissertation and the salient 1988 paper "On the origins of milk and wool production in the Old World" in *Current Anthropology,* we learned that the earliest domestic animals in Europe were not exploited for their secondary products (milk, wool, and traction) until almost 3000 years after initial domestication. This landmark research continues to shape and be supported by recent work on early farming societies across the Near East and Europe: milk lipids are found in the earliest pottery containers, goats seem to be the source of the earliest milk, and only in the terminal Neolithic were cattle and sheep exploited for milk, traction, and wool.

This enduring contribution to the origins of animal exploitation shifted in the mid-to-late 1980s to explore how early farmers managed their herds. It was long assumed that transhumant pastoralism developed alongside animal domestication. Through the excavation of sites in the highlands and lowlands of Bosnia and Serbia, and detailed analysis of zooarchaeological samples from various archaeological sites throughout the region, Haskel illustrated that transhumance emerged much later in the temperate climatic zone – after 3300 BCE, around the time secondary products became significant, and complex systems of land use developed during the Eneolithic or Bronze Age. Over two decades of research culminated in the 2006 co-authored book with Haskel's former MA student, Elizabeth Arnold, *The Origins of Transhumant Pastoralism in Temperate Southeastern Europe: A Zooarchaeological Perspective from the Central Balkans* (BAR, International Series No. 1538). This landmark work was revisited in Haskel's 2013 edited volume, *Animal Secondary Products: Archaeological Perspectives on Domestic Animal Exploitation in the Neolithic and Bronze Age* (Oxbow Books).

By the 1990s, Haskel's research expanded from a focus on human-animal relations to the broader examination of the earliest communities impacted by a farming way of life in temperate Europe. Excavations at the Early Neolithic sites in Serbia (Blagotin) and Romania (Foeni-Salaş) (1990–94) focused on the spatial organisation of settlements. These two sites demonstrated a radically different spatial organisation for Early Neolithic communities than previously found in Europe. These sites featured a layout consisting of pit houses arranged around a larger central structure and an open plaza. The central structure at Blagotin excavated with Svetozar Stankovic (Univ of Beograd) contained two large (80 cm high) free-standing female figurines, an infant burial, dozens of smaller figurines, non-local chipped stone tools, and an unusual large quantity of unbroken ceramic vessels and animal bones. In contrast, Haskel's excavations with Dr. Florin Draşovean (Museum of the Banat) at Foeni-Salaş in Romania found that the central structure and plaza there instead contained a range of everyday artefacts, with no evidence of ceremonial and/or ritual communal functions. While the communal area at Blagotin was ritual-focused, the one at Foeni was not; however, none of the existing hypotheses could explain the pattern or organising principles behind it. Many students participated in the Blagotin and Foeni excavations. The MAs by Tina Jongsma-Greenfield (1997), Sandra Jezik (1998), Gene Senior (2004), and Paul Zita (2006) were based on data from the sites.

The focus on animal bones provided the opportunity to also investigate butchering practices, especially the emergence of specialisation and the utilisation of different raw materials for butchering implements. Building on the methods for characterising bone surface modifications developed by Shipman (1981) and Olsen (1988), which utilise scanning electron microscopy (SEM), Haskel applied this technique to faunal assemblages in eastern Europe. In a series of seminal paper (Journal of Archaeological Science 1999 and Journal of Field Archaeology 2006) and subsequent chapter in *Experimental Archaeology: Replicating Past Objects, Behaviors, and Processes* (ed. J. Mathieu, BAR International Series 1035), Haskel significantly advanced our understanding of butchering mark morphology, and further cemented a means for tracking the timing and spread of metal technology. This expertise formed the basis for much of Haskel's subsequent research in the Near East and central Europe.

Early Farming Communities of South Africa

During a well-deserved sabbatical in 1994 – in part a recovery from the stresses of living and working through the devastating period that was the dismantling of Yugoslavia – Haskel and Tina ventured to South Africa for the wedding of Haskel's younger brother, Zev. It was there that Haskel met Len van Schalkwyk, a prominent archaeologist who, at the time, was working for the KwaZulu Monuments Council, the provincial heritage body of what is now KwaZulu-Natal. During a tour of some spectacular sites, Haskel was captivated by the archaeology of early farmers in the region. Unlike Europe and the Near East, early farming societies in southern Africa immigrated southward alongside iron metallurgy in addition to what in Eurasia was the classic full 'Neolithic package' (grinding and pottery technology and a suite of domesticated sheep, goats, and cattle). Of particular interest to Haskel was how villages were organised. At that time, an archaeological model was being developed based on ethnographic evidence. The so-called Central Cattle Pattern posited social organising principles to explain an arc or circular arrangement of houses around a central activity and livestock zone. Being notably similar to the

layout that Haskel found for early farming settlements in the Balkans, and with the possibility of an interpretive framework to explain the layout, this was too significant to pass up. Yet, little data on the internal economic and social organisation of Early Iron Age settlements and households had been collected. The potential of a site called Ndondondwane in the Thukela River Basin stood out, and three years of surveys, excavations, and several years of laboratory analysis followed (1995–98). As one of a few single-occupation settlements in Southern Africa, Ndondondwane stands to this day as a model of early village organisation. It encapsulates many of the spatial, production, and gendered divisions of labour that form the first principles of social organisation in the region for nearly 2000 years. Over 40 students participated in the Ndondondwane excavations and subsequent laboratory analyses. Edward (Ed) Fread's MA thesis on the fauna from the site, Matthew Singer's MA thesis on the spatial layout, Kent Fowler's Ph.D. (Alberta) on ceramic technology, and Elizabeth (Liz) Arnold's Ph.D. (Calgary) on animal mobility in the valley all stemmed from the work at Ndondondwane.

Zooarchaeology and Metallurgy in the Near East

With a host of enduring friendships forged in South Africa, in the early 2000s Haskel turned his attention to his long-held desire to work on the archaeology and history of the Near East. He was eager to revisit one of his early passions, having worked on the cemeteries from the Mesopotamian site of Kish for his MA.

Research overseas in the new millennium presented new logistical challenges, as he had a growing family in tow. He worked at the Hebrew University of Jerusalem during a sabbatical at the W. F. Albright Institute of Archaeological Research in Jerusalem in 2007–8 with his wife and three children, Channah, Noah, and Boaz, while Rachael, his eldest daughter, held down the fort in the family home in Winnipeg for the year. It was during this decade that Haskel's productivity soared with significant theoretical and methodological publications that set the industry standards and showcased his intellectual strength as one of the pioneers in both archaeology and his speciality, zooarchaeology and its' associated sciences.

Haskel's entry into the Early Bronze Age of Southwest Asia began at his beginning – with animals. Specifically, with cut-mark analysis of fauna from the southern Levant, Jericho (Tel es-Sultan), Tel Yarmouth, several other Levantine sites, and beyond to Turkey including sites such as Ziyaret Tepe (ancient Tušhan), Titriş Höyük, Göltepe, and Çatal Höyük. Another site of note that Haskel focused on was the Early Bronze Age (3100–2100 BCE) site of Göltepe located in the high mountains of southeastern Turkey (Anatolia). It is an early metallurgical production site, most likely because it sat in direct proximity to the only tin source in the Near East, the Kestel Tin Mine across the valley. His analysis of the metallurgical debris indicated intensive mining, smelting, and metal production occurred at the site, with these materials were exchanged as far away as Mesopotamia. Together with students Talisha Chaput and Tiffany Okaluk, the faunal and metallurgical analyses revealed a mix of technologies used in butchering: most of the meat on the bones was filleted with stone knives, while the heads of animals were often chopped open with metal axes. This cutting-edge research was experimental and ground-breaking, revealing new insights into butchering practices of Early Bronze Age societies.

In the same region, excavations at the Early Bronze Age site of Titriş Höyük exposed significant sections of neighbourhoods composed of domestic residences. This provided Haskel the opportunity to look at the nature of economic relations between different sectors of society. Indeed, a comparison of data between spatially distinct neighbourhoods demonstrated that there was little evidence of social inequality in terms of animal remains between districts (i.e. taxa, age, and body parts).

By contrast, zooarchaeological work at Ziyaret Tepe in collaboration with Tina Greenfield provided a different scale to examine changes in subsistence from a large step trench spanning the Early Bronze Age to the Islamic period deposits at the site. Results from the zooarchaeological remains gave insights into changes in subsistence associated with the ebb and flow of foreign powers across the region. Again, the link between dietary and cultural change was evident, just as it was in 17th century Manhattan. These analyses demonstrated that there were major subsistence changes in the region after the Early Bronze Age, coinciding with the repeated conquest of the region by Mesopotamian kingdoms and empires and its incorporation into their sphere of influence.

The many zooarchaeological collections from Near East sites formed the basis for not only updating the analytical techniques (*Journal of Field Archaeology* 2006), but also for constructing a regional picture of metal adoption, which Haskel provided in the aptly titled "The Fall of the House of Flint" study (*Lithic Technology* 2013). Metal technology was only made available to non-elite people during the later stages of the Middle Bronze Age; the Early Bronze Age (c. 3500–2100 BCE) was still a Stone Age to them. Haskel continues to refine the resolution of this pattern, recently examining a swath of faunal assemblages with former MA students Trent Cheney and Jeremy Beller from Aphek, Arad, Nahal Tillah, Tall Zirā'a, and Tel Shiqmim.

Early Urban Neighbourhoods of the Southern Levant

Moving away from animal economics, in the early 2010s Haskel began to investigate the nature of neighbourhoods and households in early urban settlements that arose in the southern Levant (Israel, Jordan) during the Early Bronze Age. In partnership with Prof. Aren Maeir from Bar-Ilan University (Israel), a host of modern scientific analytical

techniques was employed to understand the lives of people in a non-elite residential neighbourhood at Tell eṣ-Ṣâfi/Gath, Israel. Famous as the Philistine city of Gath, and reputedly the home of the biblical figure Goliath, Tell eṣ-Ṣâfi/Gath has provided valuable insights into early urban and domestic life, including the discovery of residences, streets, and fortifications dating back to around 2500 BCE. As the first large-scale and systematic excavation of an Early Bronze Age neighbourhood in the southern Levant, the project has spawned a host of insights into social, economic, and ritual life: from spatial planning to donkey burials, butchering practices, agriculture, trade, animal mobility, metallurgy, pottery technology, and even the biometrics of fingerprints on ceramic containers. Various students received training on the site and used data for their theses: Annie Brown (Ph.D. student), Sarah Richardson (Ph.D. 2024), Jon Ross (Ph.D. 2020), and Jeremy Beller (MA 2014). Nearly 40 undergraduate and graduate students participated over the years at the University of Manitoba's Archaeological Field School at Tell eṣ-Ṣâfi/Gath.

Haskel's ongoing research continues to illuminate the development of early societies, their economies, and social organisations, at both the smallest and largest scales, providing a deeper understanding of the ancient world and its relevance to contemporary human history. The papers in this volume engage with Haskel's legacy by exploring the economic and social dynamics of emerging complex societies. They are a recognition and celebration of his distinguished career in archaeology and in advancing discussions on the economic underpinnings of societal complexity across the Old World. In classic fashion, Haskel, in his eternal search for new discoveries in archaeology, has now undertaken new research in East Asia. We keenly look forward to his new research with colleagues from China.

Organisation of This Volume

The present volume celebrates Haskel's academic achievements and his significant contributions to archaeology. Its thematic organisation reflects key areas of research in which Haskel has deeply engaged: Community Activities and Organisation, Continuity and Transformations in Society, Technology and Production Economies, Exchange and Procurement Economies, and Foodways and Animal Economies. This breadth of topics is united by the overarching concept of "Economies of Scale", something Haskel champions as essential to understanding the far-reaching networks that connect distant regions and the day-to-day interactions by common individuals that shape communities, as well as everyone in between.

Community Activities and Organisation pertains to the day-to-day interaction of people within specific spaces. Bankoff and Winter touch on an element of Haskel's origins, the New York metropolis in which Haskel grew up, and its history with urban slavery in the USA. Across the Atlantic, Albaz and Maeir explore whether a house society model is applicable at Early Bronze Age Tell es-Safi/Gath through a discussion of the neighbourhood's architecture and layout. Beller et al.[1] posit how people spent their leisure time at Early Bronze Age Khirbat Iskandar, highlighting gaming connections between the southern Levant and Egypt.

Continuity and Transformations in Society adopts a wider perspective of dynamics among societies. Rosen grapples with the nuances of explaining 'collapse' among Negev societies by addressing a host of intrinsic and extrinsic factors. Chadwick et al. highlight social and practical utility of fortifications at Early Bronze Age Tell es-Safi/Gath. Vieweger and Soennecken describe evidence for occupational continuity from the Early Bronze Age through the Intermediate Bronze Age and into the Middle Bronze Age at Tall Zirā'a.

Technology and Production Economies encompasses the tools, techniques, and knowledge employed in the crafting of materials and commodities, especially within operational structures. Ross et al.[2] provide a pilot study to identify the potters at Early Bronze Age Megiddo using the novel approach of palaeodermatoglyphics. Fowler and van Schalkwyk offer new insights into Zulu ironworking, based on recent evidence situated within spatial and ritual associations. Richardson describes the diverse bone toolkit used by occupants of Early Bronze Age Tell es-Safi/Gath, spotlighting their overlooked importance for understanding behaviour. Ross et al.[3] use vessel shaping techniques and petro-fabric variability to suggest that Early Bronze Age Qedesh was supplied by a diversified yet specialised pottery industry.

Exchange and Procurement Economies refer to the means by which people acquire their raw materials and commodities. Matney and Lancaster evaluate the decision-making by occupants of Early Bronze Age Titriş Höyük behind the acquisition of various building materials, arguing that donkeys were utilised to achieve these tasks. Okaluk investigates the nature of metal exchange networks in Early Bronze Age Anatolia through butchering mark analysis on animal bones, particularly in the context of the extent of elite control over these interactions. Beller et al.[4] suggest that basalt commodities imported to Early Bronze Age Tell es-Safi/Gath can be viewed as luxury goods based on their extensive utilisation and abundance relative to other lithologies within the ground stone assemblage.

Foodways and Animal Economies pertain to the cultural practices and activities related to the production, management, and consumption of animals and their by-products. Arnold reviews the emergence and timing of transhumant pastoralism within the Balkans in light of recent isotopic data. Horwitz investigates the consumption

[1] Chapter 3 (first of two contributions by Beller)
[2] Chapter 7 (first of two contributions by Ross)
[3] Chapter 10 (second of two contributions by Ross)
[4] Chapter 13 (second of two contributions by Beller)

patterns of avifauna taxa among the occupants of The Castle of Good Hope, South Africa, emphasising the dietary choices of Dutch East India Company employees during the mid-17th to late-18th centuries CE. Lastly, Greenfield et al. explore the utilisation of cultic spaces at Late Bronze Age Tel Burna through a comparative analysis of faunal remains from elite and domestic contexts for a nuanced understanding of ritual behaviour.

The volume closes with short stories from close colleagues, friends, and family members, as they reflect on the impact Haskel has had on them, both professionally and personally.

Similarly, the three of us, all former students of Haskel's, had the privilege to experience his tutelage and spend countless hours with him in the field and laboratory.

We begin by expressing our deepest thanks to Haskel, whose infectious passion, tireless dedication, and steady encouragement have profoundly shaped our careers. Our gratitude also extends to the contributing authors; this volume would not exist without their generous and thoughtful contributions. We are likewise indebted to the editors at BAR, Jacqueline Senior, Dan Jones, and Clare Chapman for their patience and support throughout this project. And finally, we recall with affection Haskel's signature catchphrase—spoken often with humor, occasionally with exasperation, and never with regret: "... welcome to archaeology."

Kent D. Fowler
Tina L. Greenfield
Jeremy A. Beller
June 2025