Pig Taboos in the Ancient near East

Koot van Wyk*

Abstract

The cardinal study on the topic of pig eating in the Ancient Near East, is the work of Billie Jean Collins (2006). She focused basically on the issue as it relates to the Hittite cuneiform texts but did also probe sideways to other nations and the Bible, albeit minor comments. This study wishes to stand on the shoulders of Collins, adjusting some statements, adding other aspects from Archaeological sites and Gerhard Hasel's explanation of Clean and Unclean in Leviticus 11. What was found in this presentation, is that chronology as backbone in the Scriptures, if taken seriously, could explain the presence or absence of pig eating practices also among the Hittites and Egyptians (the New Kingdom). This research has investigated Collins' contribution of Hittites and Pig Consumption, Pigs in Hittite archaeology, Pigs in Egypt, Pigs in Mesopotamia, Pigs in Zoo-archaeology at Hesban in Transjordan, Pigs at Sites in Canaan, Pigs as Offerings in Hittite Rituals, Pig Taboo Rules in the Ancient Near East, Pigs as Medical Use in Mesopotamia, Pig Taboo in the Old Testament by Ackerman (1992) and Collins (2006), Pig Taboo among Later Greeks, Pig Taboo in the Old Testament by Gerhard Hasel (1991, 1994). Whereas the other Nations around Israel display an S-curve or down-trend and up-trend in the appearance and disappearance of evidence for the taboo against pig-eating, among the Israelites it was a straight line unchanged. For that matter, the sojourn in Egypt, the Exodus from Egypt, the presence in Assyria, the presence in Babylonia or Egypt later during the exiles and Persian periods, should be taken into consideration for observations from cuneiform texts, from papyri or pyramid texts or from the travel descriptions of Herodotus. The biblical reality of Israelites living in these domains under consideration and the evidence or absence of taboos against pig-eating from the same areas and times, necessitate re-evaluations of the data.

Introduction

Mary Parsons in her notes on pig-eating in Ancient Egypt made the comment that she is not aware that the Ancient Egyptians knew about *trichinellosis*.¹

^{*} Visiting Professor at Kyungpook National University Sangju Campus, South Korea, and Conjoint lecturer for Avondale College, Australia. He holds a D.Litt et Phil in Comparative Semitic Linguistics from the University of South Africa (2004) and a Th.D. from Rikkyo University in Tokyo, Japan (2008). He is married to Sookyoung Kim (Ph.D. in New Testament, Andrews University, Michigan USA 2008). She has worked on the "Warrior Messiah" and her dissertation was published by Cambridge Scholars Publishing. He studied Akkadian under Prof. dr. Izak Cornelius of Stellenbosch University, Cape, South Africa and Prof. dr. Frederick Charles Fensham. The role of the Secretary of William Foxwell Albright, Prof. dr. Leonna Running, as his teacher in Syriac Readings, should also be included. A great inspiration and acknowledgement is the Assyriologist of Japan, Prof. dr. Akio Tsukimoto of Rikkyo University, Tokyo. Aramaic Studies were strengthened by a number of individuals: Prof. drs. Theo Bothma of the University of South Africa; John Lübbe (linguistic slips); Hennie Dreyer (inscriptions); Rabbi Izak ben Yosef (UNISA lecturer in the seventies); Prof. drs. Walther Claassen of Stellenbosch University (inscriptions); Johann Cook (textual criticism). Prof. dr. Johann Erbes of Andrews University, Michigan, USA (Aramaic Texts). They all contributed to the interest in historical comparative Semitic linguistics and linguistic slips. Currently he is working together with dr. Joonhong Kim, a cognitive linguist. Before this he was associated with, and doing part-time work for, the vice-president of the Acoustical Society of Japan, Prof. dr. Hideki Kasuya of the Department of Electrical and Electronic Engineering, Utsunomiya University and dr. Hiroki Mori, both acoustic linguists. The main point is that all of us are drinking from pits that we have not dug. A special word of thanks should be expressed to Prof. dr. Akio Tsukimoto of Sophia University in Tokyo but who is strongly affiliated with Rikkyo University Tokyo and who has participated and directed a number of excavations by Japanese teams for more than a decade and a half in Israel. Also to a young Japanese archaeologist Mr. Takuzo Onozuka who is an Associate Fellow in Near Eastern Archaeology in the Tokyo National Museum and who has kindly provided me with the pig bone data of the LB and Iron Age I periods at Tel Rekhesh in Northern Galilee from the Japanese excavations. Prof. Tsukimoto also directed my attention to a publication by Israeli archaeologists on the topic and reminded me of the iconography of Kuntillet `Ajrud of a wild pig on Pithos A.

¹Trichinella is a disease that is connected to eating raw or undercooked pork or pig. Although frozen pork reduces the danger of this disease, there is no guarantee that smoking, freezing, microwaving, or cooking pork or pig will effectively prevent

Porphyry in 245 CE gave examples of vegetarian nations and he included the Egyptians, Jews, Syrians, Persians and Indians. However, if one looks at the statements of Herodotus in 480 BCE about the Egyptians, we get a total different picture. An ugly ditch exists between Herodotus and Porphyry and Porphyry's perceptions are colored by sources and Stoic biases and ideals of his time. Archaeology can reveal valuable aspects to the diet and the eating of pig among nations of the Ancient East. Among the nations, it appears that vegetarianism was regarded as an idyllic diet and one can see also in Genesis 1 and 2 that the original diet was vegetarian. Although there were the broad classifications of flesh as opposed to non-flesh diets, it is especially the pig-diet that deserves our attention here, since Leviticus 11 and throughout scripture, pig eating was divinely prohibited. Archaeology and cuneiform tablets have brought us more data to consider regarding this topic. We wish to look at pig-eating in Anatolia, Mesopotamia, Canaan, Transjordan, Egypt, among the Greeks and finally also in the Old Testament.

Hittites and Pig Consumption

Pig consumption among the Hittites was governed by a complex set of principles and the determiners were factors like status, gender, and the level of cultic influence from the religious sanctuaries. (Billie Jean Collins, "Pigs at the Gate: Hittite Sacrifice in its Eastern Mediterranean context" *JANER* 6 [Koninklijke Brill NV, Leiden, 2006]: 155-187; also available online—www.brill.nl). For anyone working with the concepts of pigs in the Ancient Near East, this scholar's work is mandatory.

Whenever a few texts are making reference to the eating of pork, in Hittite texts, they are in a ritualized context, suggesting that special religious significance was sometimes attached to the eating of pork (Collins 2006: 155). That is one reason why she concluded in one of her articles, that the consumption of pork in Hittite Anatolia "is unlikely to have been a simple matter of geography or ethnicity, but was governed by a complex set of principles involving determiners like status, gender, and the level of cultic influence from religious sanctuaries.²

Looking at other text in cultures surrounding the Hittites, Collins concluded that the sacrifice of pigs in the Hittite culture was a private matter. She found that they were killed to ensure the wellbeing of the Hittite community and the fertility of humans and crops. There was a festival performed in Istanuwa and there may be a correlation, she thinks, between the practice to sacrifice a pig at the ratification of treaties. The pig was used as a substitute for human sacrifice (Collins 2006: 155).

There is a wide range of textual evidence for the use of pigs, and the Hittite attitude was seemingly ambivalent towards pigs.

In his *Geography* by Strabo (64/3 BCE-25 AD), he mentioned the story of Cleon, a thief who transgressed the sanctity of the sacred area in Comana in the Pontus in northern Anatolia by "consuming pig flesh on the premises" (Collins 2006: 156). Strabo then writes that the area "is most conspicuously free from the impurity of the eating of swine's flesh; in fact, the city as a whole is free from it; and swine cannot even be brought into the city" (12.8.9) (Collins 2006: 156).

consumers to be free from these worms. "Curing (salting), drying, smoking, or microwaving meat does not consistently kill infective worms,".http://www.medic8.com/infectious-diseases/trichinellosis.htm. Pozio E, Owen IL, La Rosa G, Sacchi L, Rossi P, Corona S: "Trichinella papue n. sp. (Nematoda), a new non-encapsulating species from domestic and sylvatic swine of Papua New Guinea,"*International Journal for Parasitology*29 (1999):1825-1839. A. L. Willingham, M. V. Johansen, and H. O. Bøgh, "Congenital transmission of Schistosoma japonicum in pigs"*The American Journal of Tropical Medicine and Hygiene*60/2 (1999):311-312. "In swine farms, the trophic-topical relationships between the rat and swine are extremely complex and often the origin and development of trichinellosis are very unclear." E. Matenga, S. Mukaratirwa, E. Bhebhe, and A. L. Willingham, "Evidence of congenital and transmammary transmission of Trichinella zimbabwensis in rats (Rattus norvegicus) and its epidemiological implications," *International Journal of Applied Research in Veterinary Medicine*. 4 (2006): 307-312. "The domestic pig is the main reservoir host for *T. spiralis*." Despommier, Gwadz, Hotez, Knirsch, *Parasitic Diseases* (New York: Apple Tree Productions, 2005), 135. The comprehensive site for Trachinella research between 1833-2005 is http://www.trichinella.org/cit1.php. It is remarkable that all the animals listed by Moses in Leviticus 11 as unclean for eating, are nearly all appearing in the researches between 1833-2005 on Trichonella, e.g. Cockcroaches, horse, dog, cat, pig, fox, bear, crocodile, rats, etc. Keeping the pig clean will not solve the problems since their digestive systems are designed to deal with toxins mainly in the life-eco-system.

²This observation will come up again later and we must repeat that Israel's taboo against pig consumption was absolute and strictly connected to every Israelite. Deviation from this taboo was not considered ever to be appropriate. The taboo is revelation connected and happens to be sensible science in modern times. Scavengers are not considered food.

What Collins must take into account utilizing Strabo, is that Jews were by this time all over Anatolia as well. That is a factor that constrains "Greek" attitudes towards pigs in later times. We are all aware of the role of Philo and Alexandrian Jews and Josephus during the same time as Strabo. Hellenism is not Classical Greek but Greek amalgamated and transformed by outside influences of which Jewish traditions are one, especially when it comes to pig taboos.

Collins states that the "pig enjoyed a relatively low status in Hittite society. It was considered unclean for all the same reasons that it was unclean elsewhere in the Near East, and the temple administrators were amply warned, "Neither pig nor dog is ever to cross the threshold (of the temple) . . . If a pig or dog does somehow force its way to the utensils of wood or clay that you have, and the kitchen worker does not throw it out, but gives to the gods to eat from an unclean (vessel), to that one will the gods give excrement and urine to eat and drink" (*CoS* 1.83, §14). The complaint of the text is that the sound of pig is unpleasant³ and that it lives in a sty.⁴

Mursili II (1345-1315 BCE) was troubled by Kaska tribesmen and in his prayer he refers to them as "swineherds and weavers of linen" (KUR ^{URU}Ga-aš-ga na-at ^{LÚ.MEŠ}SIP.ŠAḤ.Ù ^{LÚ.MEŠ}E-PIŠ GADA e-eš-šir). ⁵ Collins thinks that they were women since Hittite culture was concerned to preserved masculinity (Collins 2006: 157). The period under consideration here coincide with the time of Ehud (1346-1266 BCE, Judges 3:30; 4:1). ⁶

According to Beckman, it is not a reference to an occupational option within Hittite society and culture (Beckman 1988: 38).⁷

Urhi-Tesub (Mursili III), was imprisoned by his usurper, Hattusili III, "like a pig in a sty" (*Apology* §11; CoS 1.77).

Urhi-Tesub was the nephew of Hattusili III and he was taken from the throne and driven to Egypt. The period of Hattusili III (1289-1246 BCE) coincide with the time of Jabin's Oppression (1266-1246 BCE) in Judges 4:3 and the beginning of the time of Deborah and Barak (1246-1206 BCE).⁸

Collins concluded that "pigs were best known to the inhabitants of the Hittite heartland as urban-dwellers, living among humans in villages and towns" (Collins 2006: 157).

Infractions by Pigs on Holy Areas

Pigs also came accidentally on the holy areas. In one example, Zullanni, the $GUDU_{12}$ -priest, failed to report a pig mounting an ass.⁹

In another case, the Temple brewer said: "My son died and I did not perform the rituals. I announced (my son's death) solemnly in the temple. (Also:) A pig trespassed (lit. committed a sin), but I did not perform the ritual".

³Collins (2006: 157) listed KBo 12.96 i 12' (CTH 433); KUB 14.1 rev. 92-94 (CTH 147). These are Hittite cuneiform texts.

⁴KUB 35.148 iii 42 (CTH 412; see Collins 1990:215 w. n. 19; Hutter 2000:100) (op.cit. Collins 2006: 157).

⁵KUB24.3 ii 38-39 with paragraph KUB 24.4 i 25-26 (CTH 376) (op. cit. Collins 2006: 157).

⁶Koot van Wyk, "Hittites and the Book of Judges F1-F16" in *Appendix: Guide to the Method of Writing a Dissertation on Judges* (Th.D. dissertation, Rikkyo University, Tokyo, Japan in 2008: 251).

⁷Gary Beckman, "Herding and Herdsmen in Hittite Culture." In *Documentum Asiae Minoris Antiquae: Festschrift für Heinrich Otten zum 75. Geburtstag*, eds. E. Neu and C. Rüster (Wiesbaden: Harrassowitz, 1988): 33-44. (See Collins 2006). ⁸Van Wyk (2008): 262. One needs to keep in mind that the end of Egyptian colonialism in Canaan and adjacent areas almost to the Euphrates by the Habiru and religious Hebrews under Joshua between 1410-1405 BCE, was snowballing the takeover of the Minoans by the Mycenean culture at Crete and those areas, and also the takeover of the Hurrians by the Hittites. The cities like Ugarit, should be understood as commercial centers for refugees and migrants, some from Canaan, that found a new horizon staged in pluralism and syncretism after the long dominant Egyptian period. The Late Bronze cuneiform texts from Palestine also indicate a multi-national presence. Mosaic theology, including taboos against pig eating (Leviticus 11) was a source that was transformed into a product by mixing the cultures. Pure Hebrew theology was paganized at Ugarit as I suggest we have evidence of in the Baal cycle and other myths (Van Wyk 2008: 243). Correlations between phrases of the Pentateuch, Job (Mosaic), and some early hymns of the Psalms, with later Ugarit literature, should not surprise us. Israelites also secularized and migrated for business and other purposes in the days of the Judges. The surprising correlations between Hittite historiography and Israelite historiography that captivated my professor, Charles Fensham, should also be seen in this light.

⁹KUB 18.9 iii 7-9 (CTH 580; Beal 2002:21). Cf. ii 22'-23' (see Collins 2006: 157).

Infractions on Gardens

The laws indicate that pigs were also a problem on gardens, field or grain-heap (§86; Hoffner 1997: 88, op. cit. Collins 2006: 157). Collins indicated that the environment in Anatolia is favorable for raising pigs, so that there would be not a serious competition between man and animal here.

Value of Pigs Higher than Sheep and Lower than Cows

"The Hittite Laws set a replacement value of twelve shekels on an adult grain-fed pig (§81; Hoffner 1997:85), making it more valuable than sheep, although not as valuable as cattle" (Collins 2006: 157).

Value of Cereal Raised Pigs Were Half-price of Grain Fed Pigs

They were called "pigs of the courtyard" and were half-priced.

Value of Pig-fat was Extremely High in Anatolia

Hoffner indicated that pig-fat was extremely expensive in Anatolia (Hoffner 1995: 109). ¹¹ The reason is that the fat was used to make perfume and used for medical treatments.

"When Lamashtu has hold of a person, then s/he (the physician) does as follows: [s/he takes] the *summanza* of a white pig, the defecation of a woman, . . . [. . .] and combines it (the mixture) together with cypress oil," *KBo* 21.20 i 16'-18' (*CTH* 461).¹²

Pigs Trained for Guard, Hunting and "Sheep Caring"

It is claimed that pigs are more intelligent than dogs and can be used in all roles that are given traditionally to the dog (Hyams 1972: 66-67). ¹³

Pigs are Scavengers and Used for Hygienic Purposes

Pigs, like dogs and other animals are scavengers that fulfill an essential role in the sanitation service of man (Collins 2006: 158).

Pigs Not Part of the Local Regulated Economy

De Martino found that pigs were not part of the laws that establish prices for commodities and Collins thinks that the likelihood is that pigs were not part of the integrated regional economy (De Martino 2004: 53; Collins 2006: 158).¹⁴

Pigs and Hittite Archaeology

Collins thinks that the picture presented by archaeology for evidence of pig exploitation in the Hittite period, is incomplete "with only a handful of sites reporting faunal remains over a significant period of time".

a. Butchering marks on pig bones not evidence that they were eaten

Faunal analysts claim that the marks on the bones were evidence that they were eaten. Von den Driesch and Boessneck (1981: 12-13) claim that they are primarily leftovers from butchering and kitchen refuse based on the patterns of the cut marks on the bones. Collins argued that "the presence of cut marks on the bones only indicates that the animal was butchered; it is not evidence that lion or leopards—or pigs or that matter—were eaten" This is a very good point, since the meat from one animal can be used to feed scavengers whose existence in the area is useful and necessary.

b. A pig finding report is given by Collins:

¹⁰ LÚ.MEŠ É.GAL hu-uh-ha-ašpu-nu-uš-šu-u-en UM-MA INA hi-il-la-ni LÚ.TIN¹.NA DUMU-RU-wa-mu-kán ak-ta nu-wa-za SISKUR.MEŠ UL DÙ-nu-un nu-wa I-NA É.DINGIR-LIM an-da ú-e-ri-ya-an har-ku-un ŠAḤ-wa wa-as-túl DÙ-at SISKUR-mawa-za UL DÙ-nu-un (KUB 5.9 obv. 25-28; op. cit. Collins 2006: 157 with references also to CTH 579; Starke 1990: 393-94; Beal 2002: 21). ¹¹Harry Hoffner, "Oil in Hittite Texts," Biblical Archaeologist 58 (1995:108-14).

¹²ma-a-an UN-an dDÌM.NUN.ME ap-pí-iš-ki-iz-zi nu kiš-an DÙ-[zi] ŠĀ ŠĀḤBĀBBĀR Úšum-ma-an-za MUNUS-ašša-ak-nu-mar [k]i-na-an-du-ušx[. . .] na-at Ì GIŠ ŠU.ÚR.MĀN me-na-ah-ha-an-da d[a-a-]i (see Collins 2006: 158).

¹³ E. Hyams, *Animals in the Service of Man* (Philadelphia: Lippincott, 1972) (See Collins 2006: 158).

¹⁴Stefano de Martino, "Pork Meat in Food and Worship Among the Hittites," in *Food and Identity in the Ancient World*, ed. C. Grottanelli and L. Milano (Padova, Sargon. 2004): 49-57. See also for earlier periods than the LB by J. N. Postgate, *Early Mesopotamia: Society and Economy at the Dawn of History* (London: Routledge, 1992): 166.

¹⁵Billie Jean Collins, *The Representation of Wild Animals in Hittite Texts* (Ph.D. dissertation. New Haven: Yale University, 1989): 287.

"The findings of Zeder (1998:118) for third-millennium **Tell Leilan** indicated a dramatic difference in the quantity of pigs between the citadel and the lower city, where pigs constitute fifty percent of the faunal remains.

Faunal evidence from the **Hittite capital at Boghazköy** suggests that, at least in the Late Bronze Age, the pig maintained its level of importance (von den Driesch and Boessneck 1981:48), which was, however, minor compared with sheep, goat, and cattle.

In the **Empire period**, domestic pig remains represent only 7 percent of the total faunal remains in the Lower City, while cattle are 36.6 percent and ovicaprids 50.6 percent (von den Driesch and Boessneck 1981:20).

Most of the published animal bones come from the quadrant J-K/20 in the residential section of the lower city, north of the Great Temple. In comparison, faunal remains recovered from the citadel were sparse, and were concentrated along its southern wall. Of the 190 animal bones recovered on the citadel, eleven were from domestic pigs (von den Driesch and Boessneck 1981:18).

On **Büyükkaya**, used primarily as a granary in the thirteenth century, but also possibly the site of some cultic activity, 16 pigs represent only 2.4 percent of the faunal remains compared with 5.4 percent in the Iron Age (von den Driesch and Pöllath 2003:295). The remains of three pigs were also found in the nearby cemetery at **Osmankayaşı** (Herre and Röhrs 1958:63, 70-71); the only other animals found at the cemetery were equids (13), dogs (6), sheep (3), and cattle (1). Unfortunately, we can only speculate as to why pigs were placed in the cemetery.

In the Hittite-period city of **Kuşisaklı-Sarissa**, pig bones were less frequent than at Boghazköy relative to other animals(von den Driesch and Vagedes 1997:125-26) and faunal specialists have identified subtle differences in the consumption patterns between elites and lower town occupants: In the residential area, pigs comprise 4.7 percent of remains compared with 3.5 percent on the Temple terrace (1997:130)" (Collins 2006: 158-159).

There is also the case of a "pig fetus found buried in a pit within the **Hittite rock sanctuary at Yazılıkaya** adjacent to Chamber B [Hauptman 1975:65-67], the funerary chamber for Tudhaliya IV, with its image of the Death-god carved in relief in the form of a dagger" (Collins 2006: 166).

- c. Redding and Rosenberg thought that pigs are kept as subsistence insurance. ¹⁶ (Also Collins 2006: 158 footnote 13).
- d. Boessneck and Von den Driesch suggested that pigs were killed at Korucutepe in eastern Anatolia in the LB period in such a large number because of their "refined taste" (contra Collins 2006: 158 footnote 13).

Pigs in Egypt

It is said that Herodotus provides some misleading statements regarding food-practices among the ancient Egyptians. He said they did not eat beans but beans were found in tombs (Alcock 2006). He said that pig eating was taboo among the Egyptians. The priests were forbidden to eat pork (Alcock 2006) but pigs were kept on the farms in the New Kingdom according to tomb paintings. At Tell el-Amarna a large pig farm, pig bones cut with knives were found. Then again the Pharaoh of the time, Ikhnaton, was skew with his traditional Egyptian religion. At other villages in Egypt archaeologists have also found pig bones. Scholars are speculating that the unclean habits of pigs and that pig spoiled faster than other beefs, may be the reason for the taboo (Alcock 2006). It is indicated that wild pigs (sus scrofa) were known in Egypt and Marie Parson indicated from her sources that they were known in the Nile Valley, in the Delta, the Faiyum and the Wadi Natrun. Some scholars think that pigs were rarely offered to gods. Archaeologically, pigs were abundant in areas associated with the working class or peasant-related activities, especially in the New Kingdom (Hecker 1982:62; 1984; Brewer 2002:440-42; Collins 2006: 161).

Brewer is of the opinion that pig avoidance in Egypt is based upon definitions according to social classes and particular times of the year (Brewer 2002: 443).

¹⁶Richard W. Redding and Michael Rosenberg. "Ancestral Pigs: A New(Guinea) Model for Pig Domestication in the Middle East" in *Ancestors for the Pigs: Pigs in Prehistory*, ed. Sarah M. Nelson, pp. 65-76. MASCA Research papers in *Science and Archaeology* 15 (Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 1998): 68.

In the time of Nefertiti it is said: "Look, maidservants [...] are offering pigs". In the Book of the Dead, pigs were offered. Scholars think that the god Ammut was sometimes depicted as a pig personifying Nut. There were pig sacrifices to Osiris. Also Seth was in the shape of a pig. Herodotus (370 BCE) said that when they touched a pig they washed their clothes. By the time Herodotus visited Egypt, a large number of Jews were colonized in that area and even had a temple at Elephantine. The point is that the customs attached to Egyptians by Herodotus may have been by Egyptian speaking Jews. In the Middle Kingdom there was the tale of Horus and the Pig. The sungod Re said in the tale that "the pig is an abomination to Horus" (de Buck 1918: 326). Marie Parsons concluded that scholars are divided on the existence and usage of pigs in ancient Egypt. She indicated that "The oldest domestic pig remains presently known in Egypt come from the large Predynastic settlement site of Merimda Beni Salama in the western Delta. . . . Pig remains have been found throughout Egypt at sites such as Hierakonpolis, Maadi, Abydos, and Armant, near graves belonging to the poorer classes, indicating that pork was an element in their diet, at least at the Predynastic period." She continued to say "In the early Fourth Dynasty tomb-chapel of Metjen at Saggara, the deceased states that he received a bequest from his father that included 'people, small livestock and pigs.' The Eleventh Dynasty tomb of the monarch Khety at Beni Hasan depicts a herd of pigs, the first in Egyptian art since the First Dynasty." In the Old and Middle Kingdoms pigs were scares in daily life scenes and not in the offering lists. Parsons indicated that in the New Kingdom "Pig-farming expanded during the New Kingdom. Inscriptions indicate that temples and wealthy citizens maintained large numbers of them on their country estates, and tomb-chapels of several nobles from the early 18th dynasty illustrate swine as well as other farmyard animals. The mayor of el-Kab relates that he owned a herd of fifteen hundred pigs. A temple of Amenhotep III [1405-1374 BCE] at Memphis was endowed with some 1,000 pigs and 1,000 piglets, and the mortuary temple of Seti I [1340 - 1258 BCE] at Abydos held large herds of swine on its domains." Amenhotep III offered one hundred adults and one thousand piglets to the temple of Ptah at Memphis, while Seti I [1340-1258 BCE] allowed pigs to be raised inside the temple consecrated to Osiris at Abydos (Brewer 2002:442; see Collins 2006: 160 footnote 19). The Amenhotep III took control of Egypt, Joshua has stripped him from any power in Canaan between 1410-1405 BCE. He had no military interest in Canaan during his reign. Amenhotep III instituted a strict migrant control on the borders, a natural action with Canaan in turmoil with the entry of Israelites under Joshua casting off the Egyptian colonialism. Pro-Egypt nations would have felt to flee to Egypt. As such, the Israelite presence and influence in Egypt during the days of Amenhotep III would be so minimal, that the resort to pigs as ritual objects at that time can be expected. Canaan is no longer an option for obtaining livestock, like sheep and cows, for the temples, and this may have led to his resorting to pigs as substitute. Seti I became ruler of Egypt during a period that is known in the book of Judges as a "rest period" for Israel and that was during the time of Ehud (1346-1266 BCE; Judges 3:30-4:1).¹⁸

Pigs in Mesopotamia

There were numerous words for pigs of different varieties in Akkadian (Salonen 1974: 8). Postgate indicated that they were important for their fat and for their meat (Postgate 1992: 166). Despite this use of pigs, Collins pointed out that pigs were unclean animals and were not welcome in a temple, similar to dogs (Scurlock 2002: 393; op. cit. Collins 2006: 160). Several scholars think that the taboos placed on pork consumption were to be the result of taboos in connection with particular cults (Houston 1993:155-56; Scurlock 2002:392-93). They are arguing that pork consumption was not basically a taboo, only particular cults did not tolerate it.

¹⁷Douglas Brewer, "Hunting, Animal Husbandry and Diet in Ancient Egypt," in *A History of the Animal World in the Ancient Near East*, ed. Billie Jean Collins, *HdO* I/64 (Leiden: Brill, 2002): 427-456.

¹⁸Neither in Israelite historiography nor in Egyptian records is there any mention that he entered Israelite territory. When he passed by to the Phoenician coastlands, it is over the desert to Edom and then from there, next to the east Jordan and then all the way up and over to the Lebanon. Megiddo was also an enemy of Seti I, as one can see in one of his inscriptions. The sudden appearance of pigs in the foreground in the New Kingdom seems to support the biblical chronology that Israelites left Egypt and with them, taboos as well. Biblical chronology calculates the Exodus in 1450 BCE and the entry into Canaan in 1410 and the five year period of conflict in the Amarna Tablets crisis corpus may have been in the last days of Thutmosis IV so that by 1405 BCE, Amenhotep III took over from his father. One of the first things Amenhotep III did was to set up migrant control to keep Canaanites out of Egypt since the Habiru arrived in Canaan and Canaanites had to flee to Ugarit and other islands (Koot van Wyk, "Appendix: Guide to the Method of Writing a Dissertation on Judges" in *A commentary on Archaeological Elements in the Book of Judges* (ThD dissertation, Rikkyo University, Tokyo, Japan, 2008]).

¹⁹J. N. Postgate, Early Mesopotamia: Society and Economy at the Dawn of History (London: Routledge, 1992).

Postgate goes further and believes that he can place a chronology on the taboos, by saying that widespread prohibitions against pork consumption were a late invention and introduction (Postgate 1992: 166). One has to place limits on the veracity of Postgate's observation, since one may question as to how widespread data he collected on this conclusion.

Pigs in Zoo-archaeology at Hesban in Transjordan

The work of Øystein Labianca at tell Hesban in Transjordan under supervision of Andrews University and their consortium, is valid here. In 1973 Labianca published his results of a systematic collection of bones at the tell during the Summer of 1971. More than 22,000 faunal remains were recovered of which 5,867 were bones. The tell had four fields A-D and 19 strata were identified from modern to Iron 1 (1200-925 BCE). Bedrock was reached in Field C and some squares in D during that time. Most of the bones were in squares B.1 (16.33%); B.4 (11.47%); C.4 (13.53%); C.5 (11.74%); and D.6 (16.02%). Field C ended in bedrock but in the Iron Age. Field D hit bedrock in the Roman period in some squares (Geraty 1973: 109). Field B had a cistern of the Iron Age. A reservoir that is older than 525 BCE, contributed to many bones in Field B. Labianca was able to compare the bones from this reservoir of the Iron Age and that of Field D ending in the Roman period, and as far as pigs are concerned, no pig bones were found in the reservoir of the Iron Age in Field B.1 but in Field D.6 of the Roman times (bones were from the Ayyubid/Mamluk periods, see Labianca 1973: 141), 1 pig was found. Absolute dating was established for Area D in Cistern D.6:33 where it was excavated in the stratified contexts created by the gradual filling of the cistern in the Ayyubid, Early and Late Mamluk periods. Numismatic evidence supports this dating (Geraty 1973: 101-104; Sauer 1973c: 56-63; Herr 1978a: 126, 127).

Pig remains were found in the following loci at Tell Hesban: A.1:28, 43, 58; A.2:25, 28, 35, 79; A.4:27; B.2:22; B.3:27; B.4:1, 6, 15, 16, 50, 55, 57; C.1:15, 38; C.2:14; C.4:19; C.5:1, 2; D.1:43, 44; D.6:35, 36, 45. Most of the bones were of young animals. One of them was charred and that is at C.1:38 which happened probably in the Iron Age. See below where Sauer indicated that the pottery from this area was mostly Iron Age or earlier, namely, Late Bronze. This would make it concurrent with the discussion on pigs in Hittite texts.²²

Then there is the *Madaba Plains Project* by Andrews University and their Consortium.²³ It was undertaken within a radius of 5-km of Tell el-`Umeiri.

Faunal readings were published and we list the pig examples: Square 7K41: U84 A.7K41:9 (5/28 [count or weight]); U84 A. 7K41:9 (1/9); Square 7K50: U84 A.7K50:3 (3/35); Square 7J87: U84 A.7J87:4 (2/27); U84 B.7J87:5 (1/12); Square 7K90: U84 B.7K90:2 (1/6); U84 B.7K90:2 (1/22); U84 B.7K90:9 (1/1); U84 B.7K90:15 (7/59); Square C.8L62: U84 C.8L62:1 (2/10); Square C.8L63: U84 C.8L63:1; Square D.5K76: U84 D.5K76:7 (3/42); Square D.5K76: U84 D.5K76:15 (1/2); Square D.5K77: U84 D.5K77:2 (1/4).

James Sauer noted that Iron IA pottery is normally a continuation of LB Age pottery and it is difficult to say whether potteries are in Iron IA or LB (which is a change in his position initially, in his early years, as opposed in his more advanced and professional age). His conclusions sound very stable in the 1994 article. He pointed out that if it is Iron IA-B pottery that is showing up it would be the period of the Judges (James Sauer, "An Interim Hesban Pottery Report, 1993" Hesban After 25 Years, eds. David Merling and Lawrence T. Geraty [Berrien Springs, Michigan: Institute of Archaeology, Siegfried Horn Museum, Andrews University, 1994]: 225-281. He mentioned that one should not compare Megiddo ceramics with Hesban but Bethel ceramics with Hesban since it is more hilly (Sauer 1994: 237). What is clear is that there are methodological problems with the earliest pottery identification at Hesban. Sauer is in process of a major shift to push the earliest pottery earlier. There is a large quantity of pig bones in the Iron IA-B times at Hesban and this indicates for Sauer that Ammonites or Moabites or even Amorites or Canaanites may have lived here (Sauer 1994: 237).

²⁰ Lawrence Geraty, "Hesban 1971: Area D" AUSS XI: 1 (January 1973): 89-112, especially the diagram at 109.

²¹ Bert de Vries, "Hesban in the Ayyubid and Mamluk Periods," *Hesban after 25 Years*, eds. David Merling and Lawrence T. Geraty (Berrien Springs, Michigan: Institute of Archaeology, Siegfried Horn Museum, Andrews University, 1994): 151-166. ²² Øystein Labianca, "The Zoo-archaeological Remains from Tell Hesban" *AUSS* XI: 1 (January 1973): 133-144.

²³ L. T. Geraty, Larry G. Herr, Ø. S. LaBianca, Randall W. Younker, *Madaba Plains Project: The 1984 Season at Tell-el-*'Umeiri and Vicinity and Subsequent Studies (Berrien Springs, MI: Andrews University Press and the Institute of Archaeology, 1989).

²⁴ James Sauer, "An Interim Hesban Pottery Report, 1993" *Hesban After 25 Years*, eds. David Merling and Lawrence T. Geraty (Berrien Springs, Michigan: Institute of Archaeology, Siegfried Horn Museum, Andrews University, 1994): 225-281

There are more than 100,000 sherds from excavations at Hesban (Sauer 1994: 225). Iron Age IA, IB, IC, IIA-B potteries from Area C were noted in bypassing by Boraas and Geraty in 1976 and 1978 descriptions of the stratigraphic reports, but they were not yet published in 1994 (Sauer 1994: 226-227). Late Bronze sherds from Hesban are shown in a photo (Sauer 1994: 234).

Pigs at Sites in Canaan

In Canaan at Early Bronze Arad, pig bones were found at all strata of the Early Bronze (2400-2000 BCE) (Amiran, 1978: 116). At Tell Qasile bones of four pigs were found (Mazar, 1985). The city is not completely Philistine since in strata X there is a reappearance of Egyptian, Cypriot and Phoenician ware. It seems that the city was cosmopolitan after 1,100 BCE. Philistine ceramic wares suddenly diminished with only pockets in areas like Area C. An article that appeared in 2013 highlights the role of pig husbandry in Iron Age Israel and Judah. ²⁵ It seems that the evidence from Transjordan and that of Israel and Judah displays similar results if compared for the Iron Age IIA period. As it is with any archaeological report relying on statistics for their conclusions, the major deficit in the evidence or data from the tells, is that archaeologists do not mention the quantity of exposure on each tell because each datum will have its own "weight of probability" which will affect the postulated percentage but also future and further excavations on the seven eighths of the tell that was not excavated yet, would change the percentages presented. The statistical picture can be misleading and slightly distant from reality.

²⁵Thanks go to prof. dr. Akio Tsukimoto from Tokyo, who has pointed out this article to me Lidar Sapir-Hen, Guy Bar-Oz, Yuval Gadot, and Israel Finkelstein, "Pig Husbandry in Iron Age Israel and Judah" ZDPV 129 (2013):1-20. The article focuses mainly on Iron Age IIB (older 800-721 BCE/ current 780-680 BCE dating) but it does expand into LB III (older 1175-1125 BCE/ current 1200-1130 BCE dating), Iron Age I (older Iron Age IB 1125-1100 BCE/ current 'early Iron I' 1130-1050 BCE dating) and Iron Age II A (older 925-800 BCE/ current 950-870 BCE dating) and later Iron Age IIC (older 721-586 BCE/ current 680-586 BCE dating). Thirty five Israelite sites were investigated (2013: 3) and a "pig bone" count were made and the quantities were further quantified and played around with to come up with observations and suggestions. Earlier theories and observations by Finkelstein in the late 1980's on settlement patterns in Israel during the Late Bronze and Iron Ages served as net for the ideas to be packed out on. There are lowlands and highlands; north and south; Late Bronze and Iron Ages; Canaanite and Israelite dichotomies. The conclusions are based upon pig frequencies that are calculated by computer from faunal assemblages from various sites in different periods. Tables can be found on pages 4-7 and a graphic map displays the synthesis of these percentages for the Iron Age IIB (2013: 8). Climate in Iron I indicated a high rainfall and in Iron II a lower rainfall. Forest sizes were bigger in Iron I and smaller in Iron II. Population growth was higher in Iron II than in Iron I. Pig appearances in Iron II at certain regions like Israel as opposed to Judah were higher in the Iron II than in Iron I. The article has to be looked at in the light of the broader textual history of Israel. Some notes: (1) Israel left Egypt in 1450 BCE under Thutmosis III and entered Canaan in 1410 after the death of Moses. This is the Late Bronze Period and for the next 300 years at least, great and sizeable urban centers dominated the scenes in Israel (about 25-30 of them). The towns were bigger in this period (Hamilton 1934: 1). In the Iron Age I from the time of Samuel and David smaller towns originated and 57 ha became 72 ha but also an increase of number from 80 in Iron Age I to 240 in Samaria and an increase from 46 in Iron Age I to 66 in the western Jezreel valley for the Iron Age II period or the Divided Kingdom Period. (2) Demography cannot be calculated unless the whole site and all sites are totally exposed by archaeology, otherwise it is mere projections. (3) One cannot expose an eighth of a site and superimpose that data over seven eighths that are not excavated. This brings Finkelstein's settlement theories into question and also in this case the pig conclusions based on these projections of unexcavated areas. The study is still important but the caution he expressed in 1988 is still valid today: "At the same time we cannot brush aside the possibility that certain groups who settled in the hill country in Iron I originated directly from the Canaanite urban society of the lowlands, it is just that the archaeological evidence to support the view is vague, if it exists at all" (Finkelstein 1988: 45). Continuity of Late Bronze and Iron Age I is no problem since Israel was already nearly 300 years in the country by that time. (4) The Divided Monarchy Period was known for intermarriage and acculturations with Aramaeans and Phoenicians and thus their habits were tolerated and endorsed. If they worshiped Baal they would have seen no problem to eat pig. (5) Notice that in the Late Bronze urban centers no pig evidence can be seen, at least not in the same percentages as in the later periods. This is the time when the Israelites settled in Palestine and the whole period between 1410 to the time of David is the period of the Judges. The period of the Judges would not be a pig-eating problem period for the Israelites. It is only in the period after the Divided Kingdoms that intermarriage brought with it also pig-eating habits. (6) The theories of Julius Wellhausen are not conducive for proper reconstruction of the reality of the past based on the text. The archaeology presented by these Israeli scholars aligns better with taking the text for what it is than to superimpose, with artificial Hegelianism, late datings from Wellhausen to the sources. The text (biblical) claims Israel was in Canaan in the Late Bronze since 1410 BCE and the tells (archaeology data) are evidence that in Late Bronze no pig evidence is dominant ("At the same time, pigs do not appear at the 'proto-Israelite' sites in the highlands" [Late Bronze II] Sapir-Hen et al 2013: 10). There is no settlement origin of Israel in the Iron Age II period since textually it is the period of the divided Monarchies.

The statistical analysis is not fruitless since it can provide indications of preference or taboo, but it is better to use the methodological descriptive jargon "thus far our investigations show that" thus putting data into a probability zone guarding against jumping to absolute and canonized conclusions. This dynamic will have both *tell* scholars and *text* scholars on their knees presenting their conclusions. The Settlement investigations of Finkelstein and now these pig results for Israel stand under this umbrella of suggestions here.²⁶

Let us highlight the relevant results from the Sapir-Hen et al. presentation in ZDPV 2013:

Multi-cultural Canaan with Egyptian imperial domination (van Wyk)

Middle Bronze Age II: Northern Israel highland (Shiloh). Pigs are in high percentage of 3.5 percent (Sapir-Hen 2013: 9-10).

Israel in Canaan since 1410 BCE (van Wyk)

Late Bronze Age II-III: Northern Israel lowland (Megiddo, Lachish, Ekron). Pigs were raised (Sapir-Hen 2013: 9). Egyptian administration and military presence sites: Aphek (2.4 percent) and Beth-Shean (11.75 percent). Beth-Shean is the highest in the Late Bronze Age (Sapir-Hen 2013: 10).

Late Bronze Age II-III: Northern Israel highland (Shiloh and Tell Dōthan). Pigs are absent (Sapir-Hen 2013: 9-10).

Late Bronze Age II-III: Neighboring sites (Near Megiddo and Beth-Shemesh and Ekron). No interest in pig husbandry (Sapir-Hen 2013: 9-10).

Late Bronze Age II-III: Judean sites. Nearly absent (Sapir-Hen 2013: 9).

Late Bronze Age II-III: Shephelah and Beer-Sheba Valley. Low frequency of pigs (Sapir-Hen 2013: 9).

Late Bronze Age II-III: Aroer is an exception because it is a trading highway site (Sapir-Hen 2013: 9).

Late Bronze Age II: Pre-Philistine site. Ekron (2.7%) (Sapir-Hen 2013: 10).

Samuel, Davidic and Solomonic Times (van Wyk)

Iron Age I: Northern Israel lowland (Dan, shore of Sea of Galilee [1%]). Small or no pig presence (Sapir-Hen 2013: 9).

Late Iron Age I: Northern Israel lowland (Megiddo VI 1.5%; Tēl Yoqnə^cām/Tell Qēmūn 1.5%. Low frequencies of pig bones (Sapir-Hen 2013: 10).

Iron Age I: Northern Israel highland. "Pigs do not appear" (Sapir-Hen 2013: 10).

Iron Age I: Shephelah site of Beth-Shemesh and Khirbet Qeyafa. No pigs (Sapir-Hen 2013: 10).

Iron Age I: Coastal site. Dor (no pigs for the entire Iron Age [see footnote 33]) (Sapir-Hen 2013: 10).

Iron Age I: Coastal Philistine urban sites (Ashdod 10.8%). Pig presence high (Sapir-Hen 2013: 10).

Early Iron Age I: Coastal Philistine urban sites. Ekron (19.5%). Pig presence high (Sapir-Hen 2013: 10).

Late Iron Age I: Coastal Philistine urban sites. Ekron (6.8%). Pig presence high (Sapir-Hen 2013: 10).

Iron Age I: Coastal central Philistine sites but smaller rural sites almost absent. Aphek (0.4%)(Sapir-Hen 2013: 10).

Iron Age I: Coastal northern Philistine sites but smaller rural sites almost absent. Tell Qasīle (1.2%) (Sapir-Hen 2013: 10).

Iron Age I: Coastal southern Philistine sites but smaller rural sites almost absent. Near Gaza (no pigs) at Qubūr el-Walēyide (Sapir-Hen 2013: 10).

Post-Solomonic Divided Kingdom Period (Phoenician, Aramean, Assyrian influences) (van Wyk)

Iron Age IIA: Northern Israel lowland (Hazor, Tēl Yoqnə^cām/Tell Qēmūn, Tēl Rehov/Tell es-Sārem). Higher values (Sapir-Hen 2013: 10).

Early Iron Age IIA: Northern Israel lowland (Tel Yoqnəcam/Tell Qemun). Higher values (Sapir-Hen 2013: 10).

Late Iron Age IIA: Northern Israel lowland (Hazor). Higher values (Sapir-Hen 2013: 10).

Iron Age IIA: Philistine urban site (Tell es-Sāfī 13.5%). Pig presence high (Sapir-Hen 2013: 10).

Iron Age IIA: Judean site (Lachish IV). Very little pig bones (Sapir-Hen 2013: 10).

Period of Isaiah (van Wyk)

²⁶Let me give one example. If I want to study the importance of the word "anoint" at Qumran but I only look at Cave One, then my percentages of using the word anoint cannot use the umbrella thought of "Qumran scribes had a 45% interest into the word anoint". I need to mention my *limitation* that I did not look at the other caves as well.

Iron Age IIB: Northern Israel lowland (Hazor, Megiddo, Beth-Shean). High values of 3.2-7.8% (Sapir-Hen 2013: 9).

Iron Age IIB: Northern Israel highland. Data not available (Sapir-Hen 2013: 9).

Iron Age IIB: Neighboring sites (pro-Phoenician and pro-Aramean sites). No interest in pig husbandry.

Iron Age IIB: Judean sites. Nearly absent (Sapir-Hen 2013: 9).

Iron Age IIB: Shephelah and Beer-Sheba Valley. Low frequency of pigs (Sapir-Hen 2013: 9).

Iron Age IIB: Aroer is an exception because it is a trading highway site (Sapir-Hen 2013: 9).

Judean Period until the Exile (van Wyk)

Iron Age IIC: Judean sites. Very little pig bone evidence (Sapir-Hen 2013: 11).

Despite the statistical handicap that one can see in the article, the tell evidence in the article supports the textual evidence from Scripture.

Pig Bones at Tel Rekhesh

A separate treatment of the pig-bones from Tel Rekhesh is necessary since they were not part of the discussion in *ZDPV* 2013 mentioned supra.²⁷ The Japanese contribution to the archaeology of Israel at various excavation sites and also at Tel Rekhesh cannot be overlooked.²⁸ The Faunal collections from this site were done from the years 2007, 2008, 2009, 2010. Carole Cope identified faunal finds from key loci at Tel Rekhesh in 2010. The following table was supplied by Mr. Onozuka regarding the overview of Faunal remains at Tel Rekhesh and of course I am focusing in this article on pig-bones.

LB (Number = 116)

Iron I (Number = 150)

	NIBPS	%	NIBPS	%
	(MNI)		(MNI)	
sheep/goat	51	44%	91	61%
	19	(40%)	(21)	(38%)
cattle	27	23%	26	17%
	(5)	(10%)	(11)	(20%)
Pig	16	14%	5	3%
	(9)	(19%)	(3)	(5%)
Donkey	9	8%	18	18%
	(7)	(15%)	(12)	(22%)
gazelle/deer	6	5%	18	18%
	(4)	(8%)	(12)	(22%)
Others	7	-	3	-
	(4)		(2)	

^{*} NIBPS = Number of Identified Bones per Species

^{27 . .}

²⁷ A special word of thanks goes to prof. dr. Akio Tsukimoto affiliated with Rikkyo University in Tokyo and Sophia University in Tokyo who has been directing Japanese teams of excavators for decades. In fact, the first time we met was after a Japanese participation in an excavation in El-Al on our way to the United Kingdom in the early 90's. A young Japanese archaeologist Mr. Takuzo Onozuka who is an Associate Fellow in Near Eastern Archaeology in the Tokyo National Museum kindly provided me with the bone data of the LB and Iron Age I periods at Tel Rekhesh in Northern Galilee.

At Tel Rekhesh one finds their presence strongly in 2006-2010. Prof. dr. Tsukimoto was strongly active in these endeavors. A number of publications came forth from Japan: Y. Paz and H. Kuwabara, The First Season of Excavations at Tel Rekhesh: The Preliminary Stage (15-27 March, 2006) - Excavation Results. *Orient Express: Notes et Nouvelles d' Archéologie Orientale* 1/2 (2007): 17-25; Y. Paz, M. Okita, A. Tsukimoto, S. Hasegawa, S. -G. Lim, D. T. Sugimoto, T. Onozuka, Y. Tatsumi, M. Yamafuji, Excavations at Tel Rekhesh. *Israel Exploration Journal* 1 (2010): 22-40; S. Hasegawa, Tel Rekhesh Excavations 2006-2009. *Israel Sprawozdania Archeologiczne* 62 (2010): 413-428; A. Tsukimoto, H. Kuwabara, Y. Paz and S. Hasegawa. Tel Rekhesh 2009: Preliminary Report. *Hadashot Arkheologiyot: Excavations and Surveys in Israel* 123 (2011). The excavation in 2009, for example was undertaken on behalf of the Rikkyo and Tenri Universities in Japan and underwritten by *Grant-in-Aid for Scientific Research* (A; Subject No. 19251006) and (B; Subject No. 20401036) of the *Japan Society for the Promotion of Science*, and was directed by A. Tsukimoto (Rikkyo University), H. Kuwabara (Tenri University), and Y. Paz (Ben-Gurion University, Be'er Sheva'). The expedition included S. Hasegawa, Y. Tatsumi, H. Hino, T. Onozuka, H. Tsumoto, T. Yamano and M. Yamafuji (area supervision), N. Yamauchi, Y. Iburi and H. Hashimoto (surveying), T. Uno (GIS survey), H. Nakano (photography) and N. Ortal and Z. Gal (administration). The information from Dr. Tsukimoto and Mr. Onozuka is thus welcomed.

There are certain restrictions to these data that Mr. Onozuka pointed out: the Late Bronze data is mostly from one square and thus presents a fragmented view that may be augmented in future excavations. Another valid point he mentioned is that most of the Iron I bones come from the Late Iron I phase. A tentative conclusion that Mr. Onozuka makes is that pig was not popular in the Late Iron I phase but that Late Bronze people here had a different view of animal husbandry.

Comparison of Tel Rekhesh and other sites in Israel during the Late Bronze and Late Iron I Age

If one compares the presence of pigs at Tel Rekhesh and at Beth-Shean (11.75%) which is the highest in the Late Bronze Age (Sapir-Hen 2013: 10), then one can say this report from Tel Rekhesh with the 19% presence in one square is quite high. Tel Rekhesh will lie in the highway to the North, so that Egyptians and other nations which wanted to avoid the Central Highlands, would move either from Tel Rekhesh to Beth-Shean and then down the east Jordan to the South following the Kings Highway, or they would go up the opposite direction. Biblically, Israel was already in the Highlands of Israel but cities like Megiddo and Beth-Shean, and one can include Tel Rekhesh, would have a high presence of multi-cultures and a liberal view of pig-taboos.

The Late Iron Age I at Tel Rekhesh (5%) compares also very well with the finds from Megiddo VI (1.5%). Also at Tel Yognacam/Tell Oemūn (1.5%) and it was concluded that at these other sites low frequencies of pig bones were encountered (Sapir-Hen 2013: 10). It is very likely that Tel Rekhesh is situated in the highway to the North and South empires and that military invasions and movements in Israel as a whole may account for the higher presence at Tel Rekhesh of pig bones for the Late Iron Age.

Iconographical Representations of Pigs

At Kuntillet `Ajrud a representation of a wild pig can be seen on Pithos A. This Pithos originated near Jerusalem in the Motza formation as petrographic and NAA tests revealed.²⁹ The result of the analysis of all the pottery from Kuntillet `Ajrud led the researchers to believe that the late eight century (ca. 722 BCE) could be an appropriate date for the site.³⁰

A wild pig terracotta clay model is also from the Persian Period dating to the time of Artaxerxes I (464-424 BCE) near Nippur. 31 Although the texts are in cuneiform script, many Aramaic script phrases and words can be found also on them. One should not haste to conclude that the presence of these examples means that the pig was eaten there. The function of the pigs at these places is not clear and one can also assume that they used them to consume the meal residue of the town without intention to eat them.

Pigs as Offerings in Hittite Rituals

Pigs as offerings are limited (Collins 1996; and also De Martino 2004: 50). When pigs are found in Hittite offerings, it was not the normal process of events (Collins 2006: 161). Collins suggested that the frequent appearance in the Hittite texts of pigs, are related to magic rituals.

There is a complex set of guidelines for pork consumption in Anatolia generally (Collins 2006: 160).

a. Pigs and other animals listed but not sure whether they are sacrificed

²⁹ Lily Singer-Avitz, "The Date of Kuntillet `Ajrud" *Tel Aviv* 33 (2006): 196-228, especially page 202. The analysts in this article moved away from any cultic consideration of the site or any theology construction for Israel and attributed the site to Assyrian military outpost presence (ibid., page 213). Much more can be said about this site so that a revision of conclusions of the iconography is imperative: cow and calf motif with a human hanging on the tail of the cow; the large beslike figure crudely drawn in a secondary action over the text and cow and the other beslike figure; the ibex flanking the metallic tree compared to tridacna art from Shechem; revision of the syntax and translation of the inscriptions on the Pithoi with regions (town names) rather than gods as the focus; and a number of methodological inconsistencies that crept in over the decades of the start of its publication.

³⁰Ibid., page 213.

³¹H. V. Hilprecht and A. T. Clay, Business Documents of Murashu Sons of Nippur Dated in the Reign of Artaxerxes I (464-424 B.C.) in The Babylonian Expedition of the University of Pennsylvania Series A: Cuneiform Texts Volume IX (Philadelphia: Published by the Department of Archaeology and Paleontology of the University of Pennsylvania, 1898), plate xiii no. 28. The find of texts of the Murashu family consisted of 870 texts that were distributed to Istanbul, Philadelphia and Jena.

Collins mentioned a text and its duplicate that listed pigs, horses, mules, asses, dogs and a deer among the festival paraphernalia in Luwian-populated Istanuwa (in the Lower land) (Collins 2006: 161). ³² It is not clear that these animals were offered.

b. Pig in a ritual listing is not necessarily for offering

In a late ritual a pig boar is included with goats, rams, a bull and a puppy but Collins maintains that puppies were not offering animals (Collins 2006: 161).³³

c. Pig in a distribution list is not necessarily for offering

A Middle Hittite text from the Hattian milieu, (KBo 21.82 iv 14'CTH 734), records the distribution of beer-bread, a pig, and a puppy to the storehouse-manager of Hattusa for purposes unknown (Collins 2006: 161).

d. Pig is used to cleanse a person of hurkel, a sexual offense

In Zuwi's Ritual a pig, a dog, and a puppy were used to cleanse a person of the offense of *hurkel*, a sexual offense (Hutter 2000: 103).³⁴ The animals are present to secure the removal of the sin, not as offerings (Collins 2006: 161 footnote 22).

e. Pig is slaughtered but in a strange ritual

At Kuliwisna in the Lower land, a Hittite queen officiates during a pig sacrifice that is directed to the Utniyantasdeities, who are local deities connected to the land (Trémouille 2002:361nr. 38; Collins 2006: 161).³⁵

The text reads:

"They drive out a pig and they kill it. They hold a thin loaf of bread under the blood and place it back before the deity. But the pig they prepare(?). They gut it and inflate its entrails. They butcher [it]. The pig's head they [. . .]. In/On it the entrails (acc.) they [. . .]."

f. Cooking a piglet for the goddess of childbirth Hannahanna

In another ritual where the Queen is present a piglet was given to Hannahanna (NIN.TU) goddess of childbirth and motherhood:

"[They dedicate?] one piglet to Hannahanna [and] they cook that same [pig]let in a pot."³⁷The piglet is cut into pieces since its head and entrails appear on the reverse side of the text (Trémouille, 2002:361 in Reverse lines 3'-4').

g. The fate goddesses, Gulses, receive regularly pork

"One cooked piglet and one pitcher of ordinary beer and wine[. . .] they place these before Hannahanna".³⁸

"One pig, one ram and one plow ox in good condition, (and) a fat cake: Let these be (given) to the Gulses." *h. The pig is only made of dough but used in a ritual for Anzili*

³⁴Manfred Hutter, "Tiere als Materia Magica im Ritual der Zuwi (CTH 412)," In *The Asia Minor Connection. Studies on the Pre-Greek Languages in Memory of Charles Carter*, ed. Yoël L. Arbeitman, *Orbis Supplementa* 13 (Leuven: Peeters, 2000): 95-106; see Collins 2006: 161.

³²KUB35.142 obv.3'-7' [Starke 1985:323; Collins 1989:142] and its duplicate KUB 55.38[Starke 1990:600-602].

³³KBo 22.125 i 3'-7' [CTH456] (see Collins 2006).

³⁵Marie-Claude Trémouille, "Une cérémonie pour Huwassanna à Kuliwisna" in *Silva Anatolica, Anatolian Studies Presented to Maciej Popko on the Occasion of his65th Birthday* (Warsaw: Agade, 2002): 351-369.

³⁶na-as-ta ŠAH pa-ra-a pé-e-da-an-zi na-an-kán ku-na-an-zi nu e-eš-ha-ni kat-ta-an NINDA.SIG kat-ta-an ap-pa-an-zi na-at-ša-an PA-NI DINGIR-LIM EGIR-pa ti-an-zi ŠAH-ma e-eš-ša-an-zi [na]-an-kan pít-tal-wa-an mar-kán-zi na-aš-ta ^{UZU}ge-en-zu pa-ri-an-zi [na-an]-kán mar-kán-zi nu SAG.DU ŠAH[o-o-a]n-zi nu-uš-ši ^{UZU}ge-en-zu a-x [-o]-x, KUB 43.56 iii 11'-17' (CTH 330; CHD P, 9 sub parai-). Collins says that Trémouille notes"Le rôle de la reine, dans la partie conservée du texte, consiste simplementà offrir l'animal aux divinités udniyantas (Trémouille 2002:361). For Collins the animal is not dispatched (Collins 2006: 161).

³⁷ [...] 1 ŠAḤ.TUR A-NA ^dNIN.TU x[... ŠAḤ.]TUR-pát IŠ-TU^{DUG}UTÚLza-nu-wa-an-z[i], KBo 20.89 obv.? 9'-10' (CTH 646) (see Collins 2006: 162).

³⁸1 ŠAḤ.TUR zé-e-a-an-ta-an Ù 1 DUG KA.GAG GEŠTIN [. . .] nu a-pa-a-attaA-NA DINGIR.MAḤ pé-ra-an ti-an-zi, KUB 55.53 obv. 13'-14' (CTH 434) (see Collins 2006: 162).

 $^{^{39}}$ 1 ŠAH 1 UDU.NÍTA 1 GÚ₄.APIN.LÁ SIG₅-an-za NINDA.Ì E.DÉ.A ki-i-ma A-NA $^{\rm d}$ Gul-ša-aš e-eš-du, KBo 11.10 ii 15'-16' (CTH 447; ed. Popko 2003:24, 35; see Collins 2006: 162).

"She takes a little from each stew and takes it there (to) the wood that is sitting before the pig of dough, but the remainder of the stews they set before Anzili."

i. A pig festival (nuntarriyasha)is celebrated by the Queen

A tablet is outlining the events of the nuntarriyasha-festival, which indicates that on the 35th day, the queen celebrates the festival (EZEN) of the pig (Collins 2006: 162).⁴¹

j. The pig in these rituals probably connected to fertility rites

A number of scholars are pointing to the association of the pig with fertility rites. 42

k. The pig as a metaphor for agrarian magic

In the *Benedictions of Labarna*, an appeal is made to a pig saying: "Just as a single pig gives birth to may piglets, let every single branch of this vineyard, like the pig, bear many grape clusters". ⁴³ It is only the Sun-goddess that receives a pig: "for the Sun-goddess of the Earth, one piglet to the fertile(?) earth."

l. A pig must be supplied when the villagers kill their pig

There are probably superstitious reasons or agragrian fertility superstition involved here for the whole village to kill one pig. Then they had to give also one pig to the hamina-men.

"When the people of Ulusna kill their pig<s>, they give one pig to the hamina-men". 44

m. A pig must be presented in the festival for Tetiwatti by Wolfmen

"When the wolfman hulhuliya-s the pork, he gives it to the priest of Tetewatti and the priest of Tetewatti sets it on the offering table in front of the deity. Then two wolfmen dance before the deity. The cultic prostitutes dance opposite." These are exceptional cases within the restrictions in general of pig meat in Hittite society.

n. Setting a piglet on fire at the ritual for Tunnawiya's ritual

"[They place] a foot and a hand, one each, [in] the pit. The jester [holds] a piglet [over] the hearth and they set [. .] . . . on fire" (CTH 670). Tunnawiya's ritual (CTH 408). The ritual texts are between CTH 390-500.

o. Standing stones at the Spring and Autumn Festivals received piglets

Tudhaliya IV (1250-1220 BCE during the time of Deborah and Barak [1246-1206 BCE] according to Judges 5:31), ordered the restoration of the Spring and Autumn festivals in the villages (KUB 12.2) and it lists sheep and piglets to the huwasi-s (standing stones) (Collins 2006: 164).

p. Certain deities received only piglets as offerings

"The Sun-goddess of the Earth, the divine spring Kuwannaniya, the zawalli-deities, Pentaruhsi, three lesser storm gods and an assortment of "male deities" attached to the cults of other, more senior, male deities all receive piglets rather than sheep" (Collins 2006: 164). Collins has argued that all these gods are of a chthonic nature, which is a Greek word for "beneath the earth".

q. Pig holocausts were rare in Hittite texts

Collins is comparing Myceneaen practices and wonders if the participants thought they will have access to cosmological powers in such rites.

⁴⁰na-aš-ta IŠ-TU TU₇.ḤI.A ku-e-ez-zi-ya te-pu da-a-i nu PA-NI ŠAḤ iš-na-aš ku-is GIŠ-ru ki-it-ta-ri na-at-sa-an a-pí-ya da-a-i TU₇.ḤI.A-ma hu-u-ma-an-da A-NA PANI ^dAn-zi-li ti-an-zi, KUB 17.23 i 11-14 (CTH 439); cf. ii 39' (see Collins 2006: 162).

⁴¹KUB 51.15 rev. 6' (CTH 626; Nakamura 2002: 70-71; de Martino 2004: 52). M. Nakamura, *Das hethitische nuntarriyašĥa-Fest* in *PIHANS* vol. 94 (2002); see Collins 2006: 162.

⁴²Otten and Siegelová (1970: 32, 36); Trémouille 2002: 362); Collins (2002b). Heinrich Otten and J. Siegelová, "Die hethitischen Guls-Gottheiten und die Erschaffung der Menschen," *AfO* 23 (1970): 32-38.

⁴³ nu-za 1 ŠAḤ ma-a-ah-ha-an ŠAH.TUR.HI.A me-ek-ku-uš ha-aš-ki-iz-zi ke-e-el-la-az ŠA ^{GIŠ}KIRI₆.GE[ŠTIN] 1-aš-ša ^{GIŠ}ma-a-ah-la-aš ŠAḤ-aš i-wa-ar mu-u-ri-uš me-ekku-uš ha-aš-ki-id-du . . . 1 ŠAḤ.TUR A-NA KI šu-uh-mi-li ták-na-aš ^dUTU-i KUB 43.23 rev. 19'-22', 57'-58' (CTH 820) (see Collins 2006: 163).

⁴⁴ Popko (1994): 102 l. 12' (see Collins 2006: 163). The conclusion of Collins that villagers were "tithed" a pig for the festival is not correct. Tithe is 10% and there is no indication that 10% of pigs had to be given for the festival (Collins 2006: 165 at footnote 33).

⁴⁵ ma-ah-ha-an-ma ^{LÚ}UR.BAR.RA ŠA ŠA› UZU hu-ul-hu-li-[ya-az-zi n]a-atA-NA ^{LÚ}SANGA ^dTi-ti-wa-at-ti pa-a-i na-at-ša[-an ^{LÚ}SANGA ^dTe-te-wa-at-ti PA-NI DINGIR-LIM ZAG.GAR.RA da-a-[i] § [na]m-ma 2 ^{LÚ}MEŠ UR.BAR.RA PA-NI DINGIR-LIM tar-ku-wa-an-zi MUNUS.MEŠ KAR.KI[D-ya] me-na-ah-ha-an-da tar-ku-wa an-zi (KBo 23.97 i 5-9 w. dupl. KUB 7.19 obv. 2'-6'; See Collins 2006: 164 for the original text. (Also CTH 639; ed. Pecchioli Daddi1992:103-4. The festival texts are CTH 591-724).

For example KUB 12.2. "They were not state sanctioned festivals, but rituals performed for private individuals or groups in which feeding large numbers of people was not the goal, that is, they were socially restricted (see Hamilakis and Konsolaki2004:146-47; op. cit. Collins 2006: 164).

Pigs for Human Consumption in Hittite Culture Rare

"Occasions when humans are described eating pork is even more rare and certainly as unusual as those involving the gods" (Collins 2006: 164).

a. Female attendants eat burned pig in a detailed ritual

In a very detailed description of Hittite ritual, a bad omen of the Moon is cancelled during the birth of a boy or girl by hitting seven bronze or iron nails in a piglet and seven nails elsewhere as well. The importance of the number seven for the Ancient Near East as a whole, as subject, is also curious here. ⁴⁶ Collins indicates that the eating of a pig here is extremely rare.

b. Female attendants swallow a piglet at the ritual for Teteshapi

"[S/he] tak[es] up [. . .]. For the priestesss/he takes a cup [. . .] and they swallow down the piglet. [. . .] they hit. The side x[. . .] § The priestess [. . .-s] Teteshapi. . . ." (Collins 2006: 166).

c. Clearest example (very rare) of pig consumption at a Hittite ritual

It is a Hittite meal involving a pig in Ashella's ritual at Hapalla where a goat, ram and pig were offered to the god who has caused a plaque in the army: "At daybreak on the third day, they bring one goat, one ram, and one pig. After they prepare three thick loaves and one pitcher of beer, they drive them to an uninhabited region in the countryside. They spread out branches, place the three thick loaves again, and dedicate the goat, ram and pig to that god who made this plague in the army (saying): 'Let that deity eat. Let that deity drink. And in the land of Hatti and in regard to the army of the land of Hattilet there be peace. Let him (the deity) be turned in favor (to the army).' They eat and drink. Then they come away" (Collins 2006: 166).

d. Pig meat was used to trick cannibal enemies to think it is human meat

In one Hittite text, the Hittite soldiers moved out to meet the enemies who were cannibals. In the text KBo 3.60 = BoTU 21, the allied forces met the enemies and Kaniu puts the enemies to test to determine whether they are mortal or divine: "Kaniu took cooked pork and set it before DUMU.MA>.LÍL (saying): 'If he hazziya-s this then (he is) a god, but if he does not ha[zziya-] it then (he is) a man, and [a mortal] we can fight.' DUMU.MA>.LÍL [took] the pork and ate it. [He gave] them {i.e., his comrades} to eat. [He] gave them to drink."⁴⁷ The meaning of Güterbock is making the pig a substitute for human flesh. The text is dating probably to the time of Hattushillish I which is ca. 1600-1580 BCE. This falls within the enslavement period of Israel in Egypt according to Masoretic Text Chronology (1850-1450 BCE).

e. The ritual of Walkui indicates pork avoidance for human consumption

The priest of the Deity of the Night, Walkui, recommended that "a man eats anurura-herb or pork in a dream, or if by divine chance he comes across an urura-herb among the herbs in the temple, or if by divine chance he comes into contact with a pig carcass." The ritual is in Kizzuwatna the region rich with Hurrian traditions. Scholars like Mouton (2004) and De Martino (2004) argue that the text is proof of Hurrian avoidance of eating pork. The argument of the text is that the individual is contaminated by the sin and then needs an extensive cleansing ritual. This may help the problem eventually, they thought. One should pay attention to this particular instruction by Walkui. When Moses wrote Leviticus 11 sometime between 1448-1410 BCE, long before this Hittite text, he also indicated that touching a live pig per se cannot make a person unclean. Touching a carcass of a pig makes a person unclean.

 $^{^{46}}$ The text is KUB 17.28 i 1-24 = CTH 730.1 and its full reading is found at Collins 2006: 164 at footnote 37.

⁴⁷Güterbock understands the term abstractly to mean "to recognize," (as in "hit [the mark]). Collins thinks that this is the best explanation.

⁴⁸See the article by G. Hasel, "Is the distinction of clean and unclean animals made in Lev 11:2-23, 41-45 (and in Deut 14:3-20) still relevant today?" http://www.biblicalperspectives.com "Evidently this is true only of the carcass of an unclean animal, but not of a live unclean animal." (Hasel 1991: 32 footnote 13). The Bible and Hittite practice coincide here but 200 years apart, Moses in 15th century BCE and Hittite texts in the 13th -12th and later centuries BCE. For updates on chronology of the Bible and Hittites, see Koot van Wyk, *Archaeological Elements in Judges in the Appendix: Guide to the method of writing a dissertation on* 124

Pigs Are Assumed to Be the Domain of Woman

Melinda Zeder noted that the issue is complex but that woman may be closer associated to the raising or presence of pigs.

a. Pigs were involved in rituals related to the fertility of women

A number of Hittite texts dealt with this issue.⁴⁹

b. Pigs were invoked to secure the wellbeing of the community and models were placed on foundations of buildings.⁵⁰

Collins is very clear that no actual pig was placed in the foundations but only models of pigs, for example copper models.⁵¹

c. The goddesses to whom the rituals of pigs apply were fertility goddesses

It is only the god Utniyantes that is connected to the land. All the other goddesses, says Collins, is connected to fertility (Collins 2006: 170).

d. The Queen's role with pigs were probably also related to fertility and prosperity

Collins indicated that the Queen text mentioned supra, is probably also connected to her role as royal patron although as elite she would avoid pigs (Collins 2006: 170).

Pig Taboo Rules in the Ancient near East

Theories regarding the avoidance of pigs in the Ancient Near East in general and Leviticus 11 particularly fall into various groups:

a. Pigs are disgusting to farm with

This theory holds that Israelites and Arab ancestors found the pigs disgusting since they are focused on sheep and goats (Firmage 1992:1134; Hesse 1995:215; cf. Hyams 1972:70-71; Collins 2006: 170).

b. Pigs are not ecologically practical (wet vs. dry) or economical (rural vs. urban) or social (ritual vs. secular)

This theory holds that these three factors made it difficult to consider pigraising as an option (Hesse and Wapnish 1997:240-53; Collins 2006: 170).

c. Pig consumption fluctuated depending on the level of political centralization

According to this theory, it depends who was in control of the political domain of the country, that will affect the quantity of pig consumption. (Zeder 1996:307; 1998:119-20; Collins 2006: 170).

d. Pigs are scavengers and it is natural for health reasons not to eat scavengers

This theory will hold that one should not underestimate the ability of the Ancients to know what a scavenger is and what risks people take upon themselves by eating it. It is noteworthy that nearly all animals listed as not fit for eating in Leviticus 11 are scavengers.

e. Pig taboo is not connected with ethnicity or geography

Collins holds this view but this is not exactly correct. One cannot limit it only to one ethnos but the Israelites were not known throughout their history to have consumed any pig. Nowhere in the history from Adam until modern days is there any reference that permits them to eat pig.

Judges (ThD dissertation, Rikkyo University, Tokyo, 2008). Unfortunately, Collins' biblical view is prescribed by modern historical criticism that is based upon the findings of the Arabist Julius Wellhausen in the Victorian Age, following the trend of Rationalism with a hermeneutics of suspicion superimposing eighteenth century German Literature Criticism over the biblical text. Chronology of the Bible thus cannot function properly for Collins et al with this modern existential, rationalistic superimposition. Instead of making the text speak for itself, Collins makes existentialism a program for observations. Collins does let the Hittite texts speak for themselves in relation to the biblical text, an unfair state of affairs.

⁴⁹See, e.g., KUB 36.83 i 3-7, iv 5-9; Bo 3617 i 4'-17'; KUB 12.44 iii 16-19(Collins 2002b; see Collins 2006: 170).

⁵⁰KUB 59.44 obv.7'-13' with duplicates KUB 40.23 i 6'-12' and KBo 23.90 i 2'-7' (CTH 470; Kühne1972:251-52; cf. Ünal 1999:220; de Martino 2004:51; see Collins 2006: 170).

⁵¹KBo 4.1 rev. 27-28 (CTH 413). Collins 2006: 170.

This taboo is definitely linked to Israel without a shadow of doubt. They were scattered over the Ancient World so that it is not easy to investigate pig taboos in other nations. They also received sometimes nicknames, so that the identification of a Hittite as pure Hittite is not *ipso facto* established without a shadow of doubt. It may be 99% correct but there is always a 1% left open for the opposite fact. Gideon's Canaanite nickname was Jerubaal.

In his book *Purity and Monotheism*, Walter Houston discussed that in Syro-Palestine, people were offering the food that they themselves saw fit to eat since the food to the gods was supposed to be eaten. The pig was not in their diet (Houston 1993:157; Collins 2006: 170).

"Further, neither pig nor dog may come through the doors into the place where the bread is broken. (Are) the mind of man and god somehow different? No! In this which (is concerned)? No! The mind (is) one and the same" (CoS 1.83, §2; op. cit. Collins 2006: 170).

Houston pointed out that table to altar taboos of pigs is related to the fact that the options were confined to that what is considered clean; that people were too poor to eat meat; Collins et al indicated that pigs were a low-class meal not fit for the elite (Collins 1989:284-86; 2002a:249; cf. von den Driesch and Boessneck1981:61-62; Ünal 1985:422; Collins 2006: 171).

Hesse argued that pork consumption was a low-level food in Egypt and Syro-Palestine (Hesse 1995:213).

Whereas in Anatolia, Egypt, and Syro-Palestine pig consumption was considered a low-class meal, in Israel it was absolutely forbidden. In Anatolia it was soldiers and female attendants to the ritual that ate the piglets exceptionally (Collins 2006: 171).

Pigs as Medical Use in Mesopotamia

In Mesopotamia, the asakku-demon was expelled with the use of a piglet substitute: "[Take] a piglet; [put it] at the head of the afflicted person. Remove its heart (and) [put it] on the man's epigastrium.[Sprinkle] its blood on the sides of the bed. Disarticulate the piglet and spread (the pieces) out over the sick man, then purify and cleanse that person with pure sweet water from the holy waterbasin and pass the censer and reed torch by him and scatter seven and seven cakes baked in ashes at the outer gate and give the piglet as his substitute and give (its) flesh instead of his flesh, (its)blood instead of his blood so that they may take (it instead of him). Give the heart which you put on his epigastrium instead of his heart so that they may take (it instead of him)" (Scurlock 2002:386; Collins 2006: 171). 52

There is further evidence of a pig taboo, at least for certain days during the time of Ashur-naşir-apli (883-859 BCE). At Nimrud in room NT 12 the text ND 5545 was found. It was a hemerological text and the first seven days of Tishri is provided with a list of prohibitions in the diet and what will happen if these prohibitions are ignored.⁵³

The king should not eat garlic on the second day, nor cooked flesh, flesh of an ox, goat or pig. On the fifth day, the king shall again not eat pig. On the eighth day the king was to cleanse himself and at this point of cleansing as a result of abstinence of items listed, he was to "fill his house with fruit from (his) garden". 54

What makes this text relevant is the concept in the time of Mesha and Omri of the Bible, that a person attain ritual cleansing through abstinence of products from beef eating and that a vegetarian diet is considered suitable for such a sanctified and clean person. What we do not know is whether this abstinence was only effective for these seven or eight days of Tishri. Pigs were eaten seemingly before and after this period but as food to approach the god, it was considered a taboo, of course also garlic, fish and onions.

Pig Taboo in the Old Testament

"Outside of the Pentateuch, the Hebrew Bible refers, rather obliquely, to the prohibition against pork only three times, each in Isaiah(65:2-5; 66:3; 66:17; Ackerman 1992:203)" (Collins 2006: 182).

_

⁵²One cannot miss the importance of seven again in this ritual also. Mesopotamia is controlled in all aspects of society with the seximal alternating decimal system so that the hepta (seven) system is foreign to Mesopotamia.

⁵³ P. Hulin, "A hemerological Text from Nimrud," *Iraq* 21 (1959): 42-53.

⁵⁴ ND 5545: Line 54.

"Finally, the offering of pig's blood in Isa 66:3 probably has less to do with breaking the Levitical prohibition per se (contra Ackerman1992:205), than with the use of pigs as sacrifices in substitution rituals or rituals of reconciliation or, most likely, in sacrifices having to do with fertility, since the offering of pig's blood is contrasted with cereal offerings. Fertility rites are also among the activities condemned in Isa 65:2-5 and Isa 66:17, along with necromancy, incubation and eating swine's flesh (Ackerman 1992:208-10). Not at all a part of secret, mystery religions, as argued by de Vaux (1958) and refuted by Ackerman (1992), pig sacrifice was about beginnings. Pigs were killed in private or group ceremonies to mark transitions like birth and marriage and, as substitutes, provided some measure of assurance that death could be held at bay" (Collins 2006: 182).

It is in the context of condemnation by Isaiah in line with Moses. Thus, any act with pig blood will be foreign influence in ritual of Israel and will thus be condemned.

Pig Taboo among Later Greeks

There is evidence of pig taboos in ca. 150 CE in a sanctuary where it is said by Xanthos that they should not eat pig and garlic (Haussleiter, 1935: 16 footnote 4).

Certain papyri indicated that they were sometimes expected not to eat pig (probably under Jewish influence) (Haussleiter, 1935: 20 footnote 7). It is also found in Byzantine recipes for magicians. The reason for abstinence was given, according to Haussleiter, that they feared that with the eating of meat and pig, certain demonic powers enter the human body and those powers would disturb the magician.

Medicine and magic was connected so that Hippocrates suggested that Epilepsy is a "holy sickness" and that suffering is controlled by cleanliness from demon-possession by a strict diet. The sick person was to abstain from pig (Haussleiter 1935: 21). Pigs were considered a favorite of demons.

Pig Taboo in the Old Testament by Gerhard Hasel

Gerhard Hasel did a research on the role of clean and unclean animals in Leviticus 11 which included the pig. His results are noteworthy:

1. Two Types of Clean/Unclean Distinctions in Israelite Law

Foundational to any discussion of the clean/unclean distinction is the fact that the Old Testament refers to two clearly defined types of uncleanness.

- 1.1. One type of uncleanness is permanent, non-ritual, non-cultic, and non-ceremonial in nature and purpose.
- 1.2. The other type is distinctly ritual, cultic, and ceremonial in nature and design.
- 1.3. The first type of uncleanness, the one that is non-ceremonial, is permanent in nature and, therefore, no action, ritual, or activity can remove it.
- 1.4. The other type of uncleanness, the one that is ceremonial in nature, is clearly ritual and ceremonial in nature and a cultic action is prescribed, because it is in need of removal.
- 1.5. "vital distinction between permanent, non-cultic, non-ritual, non-ceremonial uncleanness, on the one hand, and temporary, cultic, ritual, ceremonial uncleanness, on the other hand."
- 1.6. It must be noted that there are parts in the book of Leviticus that are outside the framework of ritual/cultic instruction such as most of Leviticus 17, 18 and 26, 27.
- 1.7. The book of Leviticus contains both ceremonial-ritual and moral-universal laws. The assumption that all material in the book of Leviticus is ceremonial in nature can hardly be sustained.
- 1.8. Under certain circumstances that which is inherently clean can acquire uncleanness—it can become unclean. The acquired uncleanness comes through contact with a carcass (Lev. 11:29-40; Num. 19:11-17), bodily emissions (Lev. 15:2-28) and human skin disease, usually designated leprosy (Lev. 13, 14), and so on.
- 1.9. The uncleanness thus acquired calls for a removal by means of some ritual prescription that has been provided. In the case of leprosy there was an elaborate cleansing ritual which included washing and/or bathing and sacrifices (Lev. 14:1-32).
- 1.10. "the type of uncleanness which is not acquired, and thus non-ritualistic and non-ceremonial. This uncleanness can be said to be innate or inherent in certain animals alone."
- 1.11. The unclean animals of Leviticus 11:2-23 are not unclean because of an acquired/attached uncleanness.

They have not become unclean from contact with anything that was unclean as is typical in acquired uncleanness. They are unclean in themselves. They are declared by God to be "unclean" (tame' ממא') and/or "detestable" (sheqets שמקי). In this sense we may speak of a designated uncleanness.

- 1.12. The innate, inherent, or designated uncleanness is an uncleanness which can never be removed by any ritual or cultic activity specified in ceremonial law. It is never removed by time, or a combination of cultic activity and time as in the case of the ritual/cultic uncleanness that has become attached to something that was originally clean.
- 1.13. In other words, there is no possibility to remove innate and non-acquired uncleanness by cooking, boiling, washing, sacrifice, lapse of time, or by anything else.
- 2. The uncleanness of animals designated unclean/detestable is of a different origin and has a different purpose than cultic or ritual uncleanness.
- 2.1. The ritual and cultic uncleanness is acquired by someone or something which was not previously unclean. Thus there is need, by means of some appropriate ritualistic/cultic action, to restore such to the former clean status.
- 2.2. The innate or inherent uncleanness, to the contrary, is permanent and irremovable.
- 2.3. It is not in need of a ceremonial cleansing.
- 2.4. It is divinely designated unclean for food purposes.
- 2.5. The uncleanness inherent in live animals cannot be transferred to those who come into contact with unclean animals.
- 2.6. The non-transferability of the inherent uncleanness indicates that it is of a different nature than ceremonial, ritual, cultic uncleanness.
- 3. Israel compared to ANE
- 3.1. Only in Israel, the carcass of dead animals, regardless whether clean or unclean, brought about uncleanness by contact.
- 3.2. No live animal by itself whether clean or unclean brings impurity to humans.
- 3.3. If the uncleanness of live animals was cultic or ritual in nature, there would be a cultic, ritual transference of uncleanness to persons or things that come into contact with such animals.
- 3.4. In short, the non-transferability of uncleanness from live unclean animals seems to reveal that the uncleanness of animals is of a different kind than ritual, ceremonial uncleanness, i.e. it is non-cultic and non-ritual.
- 3.5. The non-ritual, non-cultic uncleanness of a live animal does not pollute or cause impurity or uncleanness whether cultic or other.
- 3.6. We may suggest on the basis of this evidence that the innate, inherent, or designated uncleanness has a different origin and purpose than the acquired, ritual uncleanness. Both are radically separate from each other in origin, purpose and design. They cannot be equated. Each has its own meaning and relevance. Each one functions differently.
- 3.7. Leviticus 11 "reveals that a clean animal killed for food does not bring about uncleanness to the person who eats it or has contact with it. It affirms, however, that a person or utensil that has come into contact with a carcass of a creature that died of natural causes, whether inherently unclean or not, becomes unclean. It prescribes regulations on how such acquired uncleanness is disposed of in the Hebrew ceremonial system.
- 3.8. Two Hebrew words are used in Leviticus 11 for *unclean*: *tame* אמש *unclean* and *sheqets* איקש *detestable*. In parallel references in Deuteronomy, like the winged creatures of Leviticus 11:20, 23 which is "detestable" is in Deuteronomy 14:19 "unclean". "This suggests that both terms cover nearly the same meanings, but "detestable" seems to contain broader connotations." "To be `detestable' means to be in a state too serious to be handled by ritual, ceremonial cleansing."
- 3.9. The law is universal since it applies to both Israelite or foreigner/ger גר living with Israelites (Leviticus 17:13).
- 3.10. In other words, certain laws have a universal application; they are outside of the limited focus of ceremonial, ritual, cultic law.

Conclusions

It is concluded that the issue of presence or absence of pig-eating taboos in various Ancient Near Eastern cultures, if connected strongly with the perception of the investigating scholar regarding the role of Old Testament History, can have some answers to questions. If the biblical chronology is taken seriously as a historical and as a past reality given, the end of Egyptian colonialism in Canaan and adjacent areas almost to the Euphrates by Habiru and religious Hebrews under Joshua between 1410-1405 BCE, could have snowballed the takeover of the Minoans by the Mycenean culture at Crete and those areas, and also the takeover of the Hurrians by the Hittites. Ugarit should be understood as a commercial center for refugees and migrants, some from Canaan, who found a new horizon staged in pluralism and syncretism after the long dominant Egyptian period. The sudden disappearance of taboos against pig-eating in Egypt in the New Kingdom will then coincide with the absence of Israelites from Egypt and Canaanites barred to enter Egypt due to strict immigration laws under Amenhotep III. The Israelites and Hittites had many things in common; especially legal aspects and historiography and thus biblical chronology, if taken seriously, would argue that Israelite and Hittite interactivity, following the entry into Canaan in 1410 BCE until 1200 BCE, could account for an S-curve presence and absence of the pig-eating taboo with the Hittites. Hybridization took place among the cultures assimilating and transforming in the process of inculturation and thus these nations could imitate the taboo from Israelites present in their societies since the taboo, different from the other nations, had no S-curve of presence and absence with the Israelites, but with them it was a strong unchanged straight line taboo . That scavengers cannot be food, remained unchanged as principle of taboo among Israelites and the Old Testament and New Testament texts, testifies of that phenomenon.

Bibliography

- Ackerman, Susan. 1990. "Sacred Sex, Sacrifice and Death: Understanding aProphetic Poem." Bible Review 6/1:38-44.
- ——. 1992. Under Every Green Tree: Popular Religion in Sixth-Century Judah. HSM46.Cambridge: Harvard Semitic Museum.
- Alcock, Joan P. 2006. Food in the Ancient World. Greenwood Press.
- Amiran, Ruth. 1978. Early Arad. Jerusalem: The Israel Exploration Society.
- Archi, Alfonzo. 1979. "Il dio Zawalli: Sul culto dei morti presso gli Ittiti." Altorientalische Forschungen 6:81-94.
- Beal, Richard H. 2002. "Gleanings from Hittite Oracle Questions on Religion, Society, Psychology and Decision Making." In Silva Anatolica: Anatolian Studies Presented to Maciej Popko on the Occasion of His 65th Birthday. Ed. Piotr Taracha,11-37. Leiden: Brill.
- Beckman, Gary M. 1983. Hittite Birth Rituals. StBoT 29. Wiesbaden: Harrassowitz.
- ——. 1988. "Herding and Herdsmen in Hittite Culture." In Documentum Asiae Minoris Antiquae: Festschrift für Heinrich Otten zum 75. Geburtstag. Ed. E. Neu and C. Rüster, 33-44. Wiesbaden: Harrassowitz.
- ——. 1990. "The Hittite 'Ritual of the Ox' (CTH 760.I.2-3)." Orientalia 59:34-55.
- Boessneck, Joachim, and Angela von den Driesch. 1974. "The Animal Remains." JNES 33:109-12.
- Bommas M. 1999. "Die Mythisierung der Zeit". Die beiden Bücher über die altägyptischen Schalttage des magischen P Leiden I 346. Wiesbaden.
- Boysan-Dietrich, Nilüfer. 1987. Das hethitische Lehmhaus aus der Sicht der Keilschriftquellen. THeth 12. Heidelberg: Winter.
- Brewer, Douglas. 2002. "Hunting, Animal Husbandry and Diet in Ancient Egypt." In A History of the Animal World in the Ancient Near East. Ed. Billie Jean Collins, 427-56. HdO I/64. Leiden: Brill.
- Brunner-Traut, E. 1970."Altägyptische tiergeschichte und fabel, gestalt und strahlkraft." Wissenschaftliche Buchgesellschaft. Darmstadt.
- Burkert, Walter. 1985. Greek Religion. Translated by J. Raffan. Cambridge: Harvard University.
- ——. 1992. The Orientalizing Revolution: Near Eastern Influence on Greek Culture in the Early Archaic Age. Cambridge: Harvard University.
- Chan, Kim-Kwong. 1985."You Shall Not Eat These Abominable Things: An Examination of Different Interpretations on Deuteronomy 14:3-20." East Asia Journal of Theology 3: 88-106.
- Clinton, Kevin. 1988. "Sacrifice at the Eleusinian Mysteries." In Early Greek Cult Practice. Editor Robin Hägg, Nanno Marinatos and Gullög C. Nordquist. Stockholm: Åströms.

- ———. 2005. "Pigs in Greek Rituals." In Greek Sacrificial Ritual: Olympian and Chthonian. Proceedings of the Sixth International Seminar on Ancient Greek Cult. 25-27April 1997.Ed. R. Hägg, 167-79. Acta Instituti Atheniensis Regni Sueciae, A8XVIII. Stockholm: Åströms.
- Collins, Billie Jean. 1989. The Representation of Wild Animals in Hittite Texts. Ph.D. dissertation. New Haven: Yale University.
- ——. 1990. "The Puppy in Hittite Ritual." Journal of Cuneiform Studies 42:211-26.
- ——. 1995. "Ritual Meals in the Hittite Cult." In Ancient Magic and Ritual Power. Ed. M. Meyer and P. Mirecki,77-92. Leiden: Brill.
- ——. 1996. "On the Sacrifice and Consumption of Pigs in Hittite Anatolia." Paper presented at the Annual Meeting of the American Schools of Oriental Research. November 24, 1996, New Orleans, LA.
- ——. 2002a. "Animals in Hittite Literature." In A History of the Animal World in the Ancient Near East. Ed. Billie Jean Collins, 237-50. HdO I/64. Leiden: Brill.
- ———. 2002b. "Necromancy, Fertility and the Dark Earth: The Use of Ritual Pits in Hittite Cult." In Magic and Ritual in the Ancient World. Edited by P. Mirecki and M. Meyer, 224-41. Leiden: Brill.
- ———. 2006. "A Note on Some Local Cults in the Time of Tudhaliya IV." In The Life and Times of Hattusili III and Tuthaliya IV. Ed. Theo van den Hout, 39-48. Leiden: Netherlands Institute for the Ancient Near East.
- ——. 2006. "Pigs at the Gate: Hittite Sacrifice in its Eastern Mediterranean context." JANER 6.Koninklijke Brill NV, Leiden, 155-187. Also available online www.brill.nl
- Despommier, Gwadz, Hotez, Knirsch. (2005)Parasitic Diseases.New York: Apple Tree Productions.
- Detienne, M. 1989. The Violence of Wellborn Ladies: Women in the Thesmophoria. In The Cuisine of Sacrifice among the Greeks. Translated by Paula Wissing. Ed. M. Detienne and J.-P.Vernant, 129-47. Chicago: University of Chicago.
- DeVaux, R. 1958. "Les sacrifices de porcs en Palestine et dans l'Ancien Orient."Von Ugarit nach Qumran. Ed. J. Hempel and L. Rost.Berlin: Töpelmann, 250-65.
- De Martino, Stefano, 2004. "Pork Meat in Food and Worship Among the Hittites." In Food and Identity in the Ancient World. Ed. C. Grottanelli and L. Milano, 49-57. Padova, Sargon.
- De Vries, Bert. 1994. "Hesban in the Ayyubid and Mamluk Periods." Hesban after 25 Years. Editors David Merling and Lawrence T. Geraty. Berrien Springs, Michigan: Institute of Archaeology, Siegfried Horn Museum, Andrews University, 151-166.
- Dorsey, David A. 2012. "Appendix: The Old Testament Laws Arranged by Subject." Evangelical Journal 21: 67-93.
- Finkelstein, I. "Searching for Israelite Origins." Biblical Archaeological Review 14 no. 5 (Sept/Oct 1988): 34-45.
- Firmage, Edwin. 1992. "Zoology."In Anchor Bible Dictionary. Vol. VI. Ed. D. N. Freedman, New York: Doubleday.
- Forstenpointner, Gerhard. 2001. "Demeter im Artemision?—Archäozoologische Überlegungen zu den Schweineknochenfunden aus dem Artemison."In Der Kosmos der Artemis von Ephesos. Ed. Ulrike Muss, 49-71. Vienna: Österreichisches Archäologisches Institut Sonderschriften Bd. 37.
- Geraty, Lawrence. January 1973. "Hesban 1971: Area D." Andrews University Seminary Studies 11: 1: 89-112.
- ———, Larry G. Herr, Ø. S. LaBianca, Randall W. Younker. 1989. Madaba Plains Project: The 1984 Season at Tell-el-'Umeiri and Vicinity and Subsequent Studies. Berrien Springs, MI: Andrews University Press and the Institute of Archaeology.
- Gimbutas, Marija. 1982. The Goddesses and Gods of Old Europe. Berkeley: University of California.
- Graf, Fritz. 1997. Magic in the Ancient World. Cambridge, MA: Harvard University.
- Gurney, Oliver. 1940. "Hittite Prayers of Mursili II." Liverpool Annals of Art and Archaeology 27:1-63.
- Güterbock, Hans G. 1938. Die historische Tradition und ihre literarische Gestaltung bei Babyloniern und Hethitern bis 1200 (2.Teil). Zeitschrift für Assyriologie 44:45-149.
- Hamilakis, Yannis, and Eleni Konsolaki. 2004. "Pigs for the Gods: Burnt Animal Sacrifices as Embodied Rituals at a Mycenaean Sanctuary." Oxford Journal of Archaeology 23:135-51.
- Hasegawa, S. 2010. Tel Rekhesh Excavations 2006-2009. Israel Sprawozdania Archeologiczne 62: 413-428.
- Hasel, Gerhard. 1991. "Is the Distinction of Clean and Unclean Animals Made in Lev 11:2-23, 41-45
 - (and in Deut 14:3-20) Still Relevant Today?" Journal of the Adventist Theological Society 2/2: 91-125.

- ——. 1994. "Ist die Unterscheidung von reinen und unreinen Tieren in 3. Mose 11 noch relevant?" Aller Diener Nr. 3: 2-33.
- Hauptman, Harald. 1975. Das hethitische Felsheiligtum Yazılıkaya. BoHa 9. Berlin:Gebr. Mann.
- Haussleiter, Johannes.1935. Der Vegetarismus in der Antike. Berlin: Verlag von Alfred Töpelmann.
- Hawkins, J. D. 1990. "The New Inscriptions from the Südburg of Boğazköy-Hattuša." Archäologischer Anzeiger 1990:305-14.
- Hecker, H. M. 1982. "A Zooarchaeological Inquiry into Pork Consumption in Egypt from Prehistoric to New Kingdom Times." Journal of the American Research Center in Egypt 19:59-71.
- ———. 1984. "Preliminary Report on the Faunal Remains from the Workmen's Village." In Amarna Reports I. Ed. Barry Kemp, 154-64. London: Egypt Exploration Society.
- Herre, Wolf, and Röhrs, Manfred. 1958. "Die Tierreste aus den Hethitergräbern von Osmankayası." In Boğazköy-Hattuša 2: Die hethitischen Grabfunde von Osmankayasi. Ed. K. Bittel, W. Herre, H. Otten, M. Röhrs, and J. Schäuble, 60-80. WVDOG 71. Berlin: Gebr. Mann.
- Hesse, Brian. 1995. "Animal Husbandry and Human Diet in the Ancient Near East." In Civilizations of the Ancient Near East. Volume I. Ed. Jack M. Sasson, 203-22. New York: Scribner's.
- Hesse, Brian, and Paula Wapnish. 1997. "Can Pig Remains be Used for Ethnic Diagnosis in the Ancient Near East?" In The Archaeology of Israel: Constructing the Past, Interpreting the Present. Ed. Neil Asher Silberman, and David Small, 238-70. JSOT Suppl. 237. Sheffield: Sheffield Academic Press.
- Hilprecht, H. V. and A. T. Clay. 1898. Business Documents of Murashu Sons of Nippur Dated in the Reign of Artaxerxes I (464-424 B.C.) in The Babylonian Expedition of the University of Pennsylvania Series A: Cuneiform Texts. Volume IX. Philadelphia: Published by the Department of Archaeology and Paleontology of the University of Pennsylvania.
- Hoffner, H. A., Jr. 1967. "Second Millennium Antecedents to the Hebrew 'ôb." Journal of Biblical Literature 86:385-401.
- ———. 1995. "Oil in Hittite Texts." Biblical Archaeologist 58:108-14.
- ——. 1997. The Hittite Laws: A Critical Edition. DMOA 23. Leiden: Brill.
- Hongo, H. 1998. "Patterns of Animal Husbandry in Central Anatolia in the Second and First Millennia BC: Faunal Remains from Kaman-Kalehoyuk, Turkey." In Archaeozoology of the Near East. Vol. III. Ed. H. Buitenhuis, L. Bartosiewicz, and A. M. Choyke, 255-75. Groningen: Centre for Archaeological Research and Consultancy, Rijksuniversiteit.
- Houston, Walter. 1993. Purity and Monotheism: Clean and Unclean Animals in Biblical Law. JSOT Suppl. 140. Sheffield: Sheffield Academic Press.
- Hout, Theo van den. 1998. The Purity of Kingship: An Edition of CTH 569 and Related Hittite Oracle Inquiries of Tut¢aliya IV. Leiden: Brill.
- Hughes, Dennis D. 1991. Human Sacrifice in Ancient Greece. London: Routledge.
- Hutter, Manfred. 1988. Behexung, Entsühnung und Heilung. Das Ritual der Tunnawiya für ein Königspaar aus mittelhethitischer Zeit (KBo XXI 1—KUB IX 34—KBoXXI 6). OBO 82. Freiburg/Göttingen: Universitätsverlag/VandenHoeck &Ruprecht.
- ——. 2000. "Tiere als Materia Magica im Ritual der Zuwi (CTH 412)." In The Asia Minor Connection. Studies on the Pre-Greek Languages in Memory of Charles Carter. Ed. Yoël L. Arbeitman, 95-106. Orbis Supplementa 13. Leuven: Peeters.
- ——. 2003. "Aspects of Luwian Religion." In The Luwians. Editor H. Craig Melchert. Pp.211-80. HdO I/68. Leiden: Brill.
- Hyams, E. 1972. Animals in the Service of Man. Philadelphia: Lippincott.
- Jameson, Michael H. 1988. "Sacrifice and Animal Husbandry in Classical Greece." In Pastoral Economies in Classical Antiquity. Ed. C. R. Whittaker, 87-119. Cambridge: Cambridge Philological Society.
- ——. 1991. "Sacrifice Before Battle." In Hoplites: The Classical Greek Battle Experience. Ed. Victor Davis Hanson, 197-227. London: Routledge.
- . 1994. "Theoxenia." In Ancient Greek Cult Practice from the Epigraphical Evidence. Proceedings of the Second International Seminar on Ancient Greek Cult Organized by the Swedish Institute at Athens, 22-24 November 1991. Ed.Robin Hägg, 35-57. Stockholm: Åströms.
- Jameson, Michael H., David R. Jordan, and Roy D. Kotansky. 1993. A Lex SacraFrom Selinous. GRBM 11. Durham, NC: Duke University.

- Jirku, Anton. 1972. "Leviticus 11, 29-33 im Lichte der Ugarit-Forschung." Zeitschrift für die alttestamentliche Wissenschaft 84 (1972): 348.
- Johnston, Sarah Iles. 1999. Restless Dead: Encounters Between the Living and the Dead in Ancient Greece. Berkeley: University of California.
- Kassian, Alexei, Andrej Korolëv, and Andrej Sidel'tsev. 2002. Hittite Funerary Ritual Sallis wastais. AOAT 288. Münster: Ugarit-Verlag.
- Kelly-Buccellati, Marilyn. 2002. Ein hurritischer Gang in die Unterwelt. Mitteilungender Deutschen Orient-Gesellschaft zu Berlin 134:131-48.
- Kennedy, Charles. 1981. "The Mythological Reliefs from Pozo Moro, Spain." InSBL Seminar Papers 1981, 209-216. SBLSP 20. Chico, CA: Scholars Press.
- Kühne, C. 1972. "Bemerkungen zu kürzlich edierten hethitischen Texten," Zeitschrift für Assyriologie 62: 236-61.
- Kümmel, Hans Martin. 1967. Ersatzrituale für den hethitischen König.StBoT 3.Wiesbaden: Harrassowitz.
- Labianca, Óystein. January 1973. "The Zooarchaeological Remains from Tell Hesban" Andrews University Seminary Studies 11: 1: 133-144.
- . 1978. Man, Animals and Habitat An Integrated Overview. Andrews University Seminary Studies 16.1: 229-252.
- ———. 1986. The Diachronic Study of Animal Exploitation at Hesban: The Evolution of a Research Project, 167-182 in the Archaeology of Jordan and Other Studies. Ed. L. T. Geraty and L. G. Herr. Berrien Springs: Andrews University.
- ———. 1990. Sedentarization and Nomidization: Food System Cycles at Hesban and Vicinity in Transjordan. Hesban 1. Berrien Springs, MI: Andrews University/Institute of Archaeology.
- Lebrun, René. 1999. "Fragment d'un rituel de Walkui, prêtre de la déesse de lanuit (KBo XXXII 176 = Bo 83/902)." ArOr 67:601-8.
- Matenga E., Mukaratirwa S., Bhebhe E., Willingham AL (2006). Evidence of congenital and transmammary transmission of Trichinella zimbabwensis in rats (Rattus norvegicus) and its epidemiological implications. International Journal of Applied Research in Veterinary Medicine. 4: 307-312.
- Mazar, A. 1985. Excavations at Tell Qasile. Jerusalem: Hamakar Press Ltd.
- Meeks, M et Favard-Meeks, C. 1993.La vie quotidienne des dieux égyptiens. Hachette, Paris.
- Miller, Jared L. 2004. Studies in the Origins, Development and Interpretation of the Kizzuwatna Rituals. StBoT 46. Wiesbaden: Harrassowitz.
- Moran, A. L. 1966. "The Literary Connection Between Lv 11,13-19 and Dt 14,12-18." Catholic Biblical Quarterly 28: 271-77.
- Mouton, Alice. 2004. "Le rituel de Walkui (KBo 32.176): quelques réflexions surla déesse de la nuit et l'image du porc dans le monde Hittite." Zeitschrift für Assyriologie 94:85-105.
- Moyer, J. C. 1983. "Hittite and Israelite Cultic Practices: A Selective Comparison," Scripture in Context II: More Essays in Comparative Method. Ed. W. W. Hallo et al. Winona Lake: Eisenbrauns, 29-33.
- Neu, Erich. 1974. Der Anitta-Text. StBoT 18. Wiesbaden: Harrassowitz.
- ——. 1980. Althethitische Ritualtexte in Umschrift. StBoT 25. Wiesbaden: Harrassowitz.
- Neve, Peter. 1993. Hattuša—Stadt der Götter und Tempel: Neue Ausgrabungen in der Hauptstadt der Hethiter. Mainz: von Zabern.
- Newberry P. 1928. "The pig and the cult-animal of Seth." Journal of Egyptian Archaeology 14: 211-225.
- Otten, Heinrich, and J. Siegelová. 1970. "Die hethitischen Guls-Gottheiten und die Erschaffung der Menschen." Archiv für Orientforchungen 23:32-38.
- Parker, Robert. 1983. Miasma: Pollution and Purification in Early Greek Religion. Oxford: Clarendon.
- Parsons, Marie. "Pigs in Ancient Egypt." http://www.touregypt.net/featurestories/pigs.htm (accessed 18/12/2012).
- Paz Y. and H. Kuwabara, 2007. The First Season of Excavations at Tel Rekhesh: The Preliminary Stage (15-27 March, 2006) Excavation Results. Orient Express: Notes et Nouvelles d'Archéologie Orientale 1/2: 17-25.
- Paz, Y., M. Okita, A. Tsukimoto, S. Hasegawa, S. -G. Lim, D. T. Sugimoto, T. Onozuka, Y. Tatsumi, M. Yamafuji. 2010. Excavations at Tel Rekhesh. Israel Exploration Journal 1: 22-40

- Pecchioli Daddi, Franca. 1992. Osservazioni su alcuni teonimi hattici. In Sedat Alp'a Armağan. Festschrift für Sedat Alp. Hittite and other Anatolian and Near Eastern Studies in Honour of Sedat Alp, 97-108. Anadolu Medeniyetlerini Arastirmave Tanıtma Vakfı Yayınları, Sayı 1. Ankara.
- ——. 2001. "A Song of Release from Hattic Tradition." Akten des IV. Internationalen Kongresses für Hethitologie.Würzburg, 4.-8.Oktober 1999.Ed. Gernot Wilhelm, 552-60. StBoT 45. Wiesbaden: Harrassowitz.
- Perez Vazquez, Fransico. 2005. "El cerdo en el antiguo Egipto." Ediciones Tecnicas of Calidad.
- Petropoulou, A. 1987. "The Sacrifice of Eumaeus Reconsidered." Greek, Roman, and Byzantine Studies 28: 135-49.
- Popko, Maciej. 1994. Zippalanda: Ein Kultzentrum im hethitischen Kleinasien. THeth 21. Heidelberg: Winter.
- ———. 2003. Das hethitische Ritual CTH 447. Warsaw: Agade.
- Postgate, J. N. 1992. Early Mesopotamia: Society and Economy at the Dawn of History. London: Routledge.
- Pozio E, Owen IL, La Rosa G, Sacchi L, Rossi P, Corona S. 1999. Trichinella papue n. sp. (Nematoda), a new non-encapsulating species from domestic and sylvatic swine of Papua New Guinea. International Journal for Parasitology29:1825-1839.
- Rappaport, Roy A. 1967. Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People. New Haven: Yale University.
- Redding, Richard W., and Michael Rosenberg. 1998. "Ancestral Pigs: A New (Guinea) Model for Pig Domestication in the Middle East." In Ancestors for the Pigs: Pigs in Prehistory. Ed. Sarah M. Nelson, 65-76. MASCA Research papers in Science and Archaeology 15. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Render, Johannes and Nissen, H. J. 2001. "Schwein. I. Vorderasien und Ägypten." Der Neue Pauly. Enzyklopädie der Antike. Band 11: 291-292.
- Rundin, John S. 2004. "Pozo Moro, Child Sacrifice, and the Greek Legendary Tradition." Journal of Biblical Literature 123:425-47.
- Rushdy.1911. "Le dépiquage du blé par les porcs." ASAE 11: 161.
- Salonen, A. I. 1974. Beiträge zur Geschichte des Schweins im Zweistromlande. Studia Orientalia 43/9. Helsinki: Societas Orientalis Fennica.
- Sapir-Hen, Lidar; Guy Bar-Oz, Yuval Gadot, and Israel Finkelstein, "Pig Husbandry in Iron Age Israel and Judah" Zeitschrift des Deutschen Palästina Vereins 129 (2013): 1-20.
- Sasson, Jack M. 1976. "Isaiah LXVI 3-4a." Vetus Testamentum 26: 199-207.
- Scurlock, JoAnn. 2002. "Animals in Ancient Mesopotamian Religion." In A Historyof the Animal World in the Ancient Near East. Ed. Billie Jean Collins, 361-67.HdO I/64. Leiden: Brill.
- Singer, Itamar. 1983. The Hittite KI.LAM Festival. Part One. StBoT 27. Wiesbaden: Harrassowitz.
- Singer-Avitz, Lily. 2006. "The Date of Kuntillet `Ajrud" Tel Aviv 33: 196-228
- Soysal, Oguz. 1988. "Einige Überlegungen zu KBo III 60." Vicino Oriente 7:107-28.
- Spaeth, Barbette Stanley. 1996. The Roman Goddess Ceres. Austin: University of Texas at Austin.
- Speyer, Wolfgang. 1993. "Einblicke in die Mysterien von Eleusis." In Religio Graeco-Romana. Festschrift für Walter Pötscher. Ed. J. Dalfen, G. Petersmann, F. Schwarz, 15-33. Grazer Beiträge, Suppl. 5.
- Starke, Frank. 1985. Die keilschrift-luwischen Texte in Umschrift. StBoT 30. Wiesbaden: Harrassowitz.
- . 1990. Untersuchung zur Stammbildung des keilschrift-luwischen Nomens. StBoT 31.Wiesbaden: Harrassowitz.
- Taracha, Piotr. 2000. Ersetzen und Entsühnen. Das mittelhethitische Ersatzritual für den Großkönig Tuthalija (CTH *448.4) und verwandte Texte. Leiden: Brill.
- Te Velde H. 1992. "Some Egyptian deities and their pigishness." 571-578.
- Trémouille, Marie-Claude. 2002. "Une cérémonie pour Huwassanna à Kuliwisna."In Silva Anatolica, Anatolian Studies Presented to Maciej Popko on the Occasion of his 65th Birthday, 351-69. Warsaw: Agade.
- Tsukimoto, A., H. Kuwabara, Y. Paz and S. Hasegawa. 2011. Tel Rekhesh 2009: Preliminary Report. Hadashot Arkheologiyot: Excavations and Surveys in Israel 123. See online http://www.hadashotesi.org.il/report_detail_eng.asp?id=1678&mag_id=118
- Ünal, Ahmet. 1985. "Beiträge zum Fleischverbrauch in der hethitischen Küche: Philologische Anmerkungen zu einer Untersuchung von A. von den Drieschund J. Boessneck über die Tierknochenreste aus Bogazköy-Hattusa." Orientalia54:419-38.

- ——. 1996. The Hittite Ritual of Hantitassu from the City of Hurma Against Troublesome Years. Ankara: Turkish Historical Society.
- ——. 1999. "A Hittite Foundation Ritual on the Occasion of Building a New Fortified Border Town." In Studi e Testi, 213-23. Florence: Elite.
- Vaux, Roland de. 1958. "Les Sacrifices de porcs en Palestine et dans l'Ancient Orient."In Von Ugarit nach Qumran (Fs Eissfeldt), 250-65. Berlin: Alfred Töpelmann.
- Van Wyk, Koot. 2008. "Appendix: Guide to the Method of Writing a Dissertation on Judges." In A commentary on Archaeological Elements in the Book of Judges. Th.D. dissertation, Rikkyo University, Tokyo, Japan.
- ———. 2008. "Hittites and the Book of Judges F1-F16." In Appendix: Guide to the Method of Writing a Dissertation on Judges. Th.D. dissertation, Rikkyo University, Tokyo, Japan.
- ———.1996. "Archaeology and Diet.." In Archaeology in the Bible and Text in the Tel. Berrien Center. Michigan. Louis Hester Publications, 300-340.
- Von den Driesch, Angela, and Joachim Boessneck. 1981. Reste von Haus- und Jagdtieren aus der Unterstadt von Boğazköy-Hattuša. Boğazköy-Hattuša XI. Berlin: Gebr. Mann.
- Whitehead, Harriet. 2000. Food Rules. Ann Arbor: University of Michigan.
- Wright, David P.1987. "The Disposal of Impurity. Elimination Rites in the Bible and in Hittite and Mesopotamian Literature." SBL Dissertation Series. Atlanta, GA: Scholars Press. 200-206.
- Zeder, Melinda. 1996. "The Role of Pigs in Near Eastern Subsistence: A View from the Southern Levant." In Retrieving the Past: Essays on Archaeological Research and Methodology in Honor of Gus W. Van Beek. Ed. Joe D. Seger, 97-310. Winona Lake, IN: Eisenbrauns.
- ——. 1998. "Pigs and Emergent Complexity in the Ancient Near East." In Ancestors for the Pigs: Pigs in Prehistory. Ed. Sarah M. Nelson, 109-22. MASCA Research papers in Science and Archaeology 15. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology. Internet-sites consulted: http://www.reshafim.org.il/ad/egypt/bestiary/pig.htm (accessed 17/12/2-12).

한글초록

고대 근동에서의 돼지 섭취의 주제가 B. J. 콜린스(Collins, 2006)에 의해 힛타이트 설형문자 문헌과의 관계에 초점을 맞추어 연구되었으며 미미하나 그녀는 다른 국가들과 성경과의 관계에서도 이 주제를 조사하였다. 본 연구에서는 몇 가지 서술을 조정하고 고고학적 발굴과 레위기 11 장의 정결한/부정한 동물에 대한 G. 하젤(Hasel)의 설명으로부터 다른 측면을 더함으로 콜린스의 연구를 확대시키고자 한다. 연대기를 성경의 중추로 심각하게 고려한다면 힛타이트인들과 신왕조의 애굽인들 사이에 돼지 섭취 관습의 유무 여부를 설명할 수 있음이 본 연구를 통해 발견되었다. 본 연구에서는 힛타이트인들과 돼지 섭취에 관한 콜린스의 공헌, 힛타이트 고고학에서 발견되는 돼지, 애굽과 메소포타미아에서의 돼지, 트랜스요르단의 헤스반 동물 고고학, 가나안 발굴지 등에 나타나는 돼지, 힛타이트 의식(儀式)에서 제물로서의 돼지, 고대 근동의 돼지 금기 규율, 메소포타미아에서의 돼지의 의학적 사용, 아커만(Ackerman, 1992)과 콜린스(2006)에 의해 연구된 구약에서의 돼지 금기율, 후기 헬라인들의 돼지 금기율, 하젤(1991, 1994)에 의해 연구된 구약에서의 돼지 금기율 등이 조사되었다. 이스라엘 주변 국가의 돼지 섭취 금기의 경우 S-커브, 감소 경향, 증가 경향, 등을 보이며 그 증거가 나타났다 사라졌다 하는 반면 이스라엘의 경우는 그 증거가 변함없는 직선으로 나타난다. 따라서 설형문자 문헌, 파피루스 또는 피라미드 문헌, 헤로도투스의 여행기 등에서 이 주제를 관찰함에 있어 이스라엘인들의 애굽 체류, 출애굽, 앗시리아와 바벨론의 이스라엘인들의 존재 여부, 포로기 동안 애굽에서의 존재 여부, 페르시아 시대의 이스라엘인 존재 여부 등이 고려되어야 한다. 이들 지역에서 이스라엘인들이 살았다는 성서적 현실과 그 동일 지역과 시기에 나타나는 돼지 섭취에 대한 증거 유무를 고려하여 데이터를 재평가하는 것이 필요하다.