

TAXATION (UNTIL THE END OF THE THIRD INTERMEDIATE PERIOD) الضرائب (حتى نهاية العصر الانتقالي الثالث)

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TAXATION (UNTIL THE END OF THE THIRD INTERMEDIATE PERIOD)

الضرائب (حتى نهاية العصر الانتقالي الثالث)

Sally L. D. Katary

Steuer und Abgaben (bis zum Ende der Dritten Zwischenzeit)
Imposition et Impôts (jusqu'à la fin de la Troisième Période Intermédiaire)

Although hampered by many limitations in source material, scholars have amassed many details concerning the ancient Egyptian taxation system from all periods and have begun to understand how the system may have worked. The best documentation for taxation comes from the New Kingdom, when the combined evidence of government records and administrative texts leads to the conclusion that Egypt enjoyed a "mixed economy." The economic system fostered a complex system of economic interdependency wherein market forces played a complementary role: thus it was a "mixed" rather than a redistributive economy. Temples played a major role in the collection and redistribution of tax revenues. Especially important was the grain tax, which is well documented from many perspectives and was largely derived from the cultivation of lands on temple domains. Taxes were also paid to the Royal Treasury in livestock and other commodities. Taxation included a labor component in the form of the conscription of workers obliged to toil periodically tilling fields, laboring on construction projects, digging irrigation canals, and obtaining raw materials abroad. Tax revenues were used to finance royal building projects, maintain royal residences, carry on work in the quarries, supervise border security, wage war, support officials on missions, finance external trade, and safeguard trade routes. By the end of the Third Intermediate Period, the effects of the monetization of the economy gradually began to be felt. During this transformation, taxes in kind were replaced by taxes in coin.

لقد نجح العلماء في جمع الكثير من التفاصيل حول نظام الضرائب المصرية على مر العصور التاريخية – على الرغم من العقبات التي وقفت أمام جمع هذه المعلومات- وبدأوا في فهم النظام الذي كان معمولاً به، وترجع أفضل الوثائق المتعلقة بالضرائب إلى الدولة الحديثة وبناءاً على السجلات الحكومية والنصوص الإدارية يمكن الاستنتاج إلى أن مصر كانت تتمتع بنظام اقتصادي «مختلط»، ولقد عزز النظام الاقتصادي منظومة معقدة من التكافل الاقتصادي والذي لعبت به قوى الأسواق دوراً تكميلياً، وبذلك كان اقتصاداً «مختلطاً» وليس اقتصاداً معتمداً على إعادة توزيع الثروة، ولقد لعبت المعابد دوراً رئيسياً في جمع وتوزيع عائدات الضرائب، وكان لضريبة الحبوب أهمية خاصة، وهي موثقة من جوانب عدة وكانت مستمدة إلى حد كبير من زراعة الأراضي المملوكة من قبل المعابد، ودفعت أيضاً ضرائب للخزينة الملكية من المواشي وغيرها من السلع الأخرى وشمل جمع الضرائب عنصر الأيدي العاملة حيث تم تجنيد العمال الذين يستوجب عليهم دفع ضرائب للعمل بالأراضي الزراعية، والعمل على مشاريع البناء، وشق الترع والقنوات، والحصول

على المواد الخام من خارج البلاد (التعدين والتحجير)، كما استخدمت عائدات الضرائب لتمويل مشاريع البناء الملكية والحفاظ على القصور الملكية، والاستمرار في العمل في المحاجر، والإشراف على أمن الحدود، وشن الحروب، ودعم البعثات الرسمية، وتمويل التجارة الخارجية، وحماية الطرق التجارية، وبحلول نهاية عصر الانتقال الثالث بدأ تدريجياً ظهور تأثير استخدام التعاملات النقدية على الاقتصاد، وفي أثناء هذا التحول تم استبدال جمع الضرائب بالسلع إلى جمعها مادياً.

Despite significant advances in the study of the ancient Egyptian economy over the past thirty years, taxation remains a vexing topic. There is no lack of data but rather a great deal of evidence from a wide variety of textual sources that are without context and of varying degrees of reliability. Since even the most valuable documentary sources for taxation are essentially “one of a kind,” it is not possible to explain fully the process of taxation or to reconstruct cogently the history of taxation in any one period, let alone from the beginnings of Egyptian civilization down to the end of the Third Intermediate Period.

For the Old Kingdom, the Palermo Stone, a major royal inscription detailing biennial assessments of various categories of wealth; a series of taxation exemption decrees for temples and their staffs; and the autobiographies of court officials provide most of our knowledge and represent different perspectives. Middle Kingdom tomb biographies shed light on the tax-collecting activities of nomarchs, while an important administrative text, Papyrus Brooklyn 35.1446, deals with forced labor. Fortunately by the New Kingdom, the availability of large numbers of papyri and ostraca documenting the economy, as well as evidence in the form of temple and tomb inscriptions, gives a much more complete picture of taxation in the Egyptian economic system than ever before. Nevertheless, there remain critical gaps in our knowledge and understanding of how the economy, and taxation in particular, functioned. There is, for example, no documentary evidence for the existence of a central office of tax collection for the state, though one has been assumed to have existed on the basis of the position of Chief Taxing

Master (*ʿ3 n št*, “Great One of Assessments”), known from the Wilbour Papyrus but no source external to temple administration (see *New Kingdom*). Even such a major issue as the relationship of the state to the temples and the systems of financial administration that connected these entities requires further clarification.

Theoretical Frameworks

For years, Egyptologists embraced the ideas of Karl Polanyi concerning the universality and cultural dependency of economic processes and developed the reciprocity-redistributive model of the ancient Egyptian economy (Bleiberg 1984, 1988, 1996; Eichler 1992; Janssen 1975b, 1979; Müller-Wollermann 1985; Polanyi 1977; Polanyi et al. 1971). The primary idea, derived from the ideology of Egyptian kingship, was that in return for taxing the land and property of his subjects, pharaoh regularly donated land and property from the general revenues to recipients of his choice, including institutions, settlements, and individuals. This redistribution of tax revenues would have fostered mutually beneficial reciprocal ties between the ruler and the ruled and contributed to social solidarity. However, other scholars found fault with this interpretation and derived their conception of the economy from the general principles of economic rationalism underlying the modern market economy (Eyre 1998: 173 - 191, 2000: 15 - 39, 2004: 157 - 186; Römer 1989: 7 - 20, 1994; Warburton 1997; Wilke 2000: 81 - 95). They addressed the economic reality reflected in inscriptions and reliefs, drawing attention to the importance of the market and the pressure of strong individual demand as

crucial elements underestimated by the followers of Polanyi (Kemp 1989: 232 - 260, 2006: 302 - 335; Römer 1989: 7 - 20). The conflict in approaches is especially troublesome with regard to taxation since transactions that appear to be part of the temple economy and are identified as taxation might instead reflect true commercial activity (Bleiberg 2007: 180). It is suggested that the modern economic term “mixed economy” be used to identify the emerging understanding of the Egyptian economy. In such an economy, the state collection and redistribution of taxes, i.e., revenues in kind derived from the labor of the populace intended for the use of the state, was complemented by the operations of the market to satisfy individual demand across all socioeconomic classes, fixing the prices for commodities while stimulating the economy.

Forms of Taxation

Until the first millennium BCE, taxes were paid in grain, cattle, and other commodities. Labor was also a form of taxation, executed with the *corvée*, a system of enforced state servitude by peasant workers in all areas of the economy. The Egyptians of the Pharaonic period did not possess an economy based upon the use of coinage as money. Coinage first made its appearance in Egypt during the 26th or Saite Dynasty, but was not issued by kings until the 29th Dynasty (Bleiberg 1996: 25; Curtis 1957: 71 - 72). While weights in metals were used as valuations for products and services as early as the Old Kingdom (Castle 1992: 256 - 263; Černý 1954: 904), material goods were the medium of purchase in barter transactions based upon these valuations (Kemp 1989: 248 - 260, 2006: 319 - 326). The Egyptians engaged in barter or “money-barter,” the latter representing “an intermediate stage in the progress from a barter economy to a money economy...a stage in a theoretically evolutionary development” (Janssen 1975a: 545). While there is some evidence that taxes might have been paid in gold and silver (among other commodities) by towns and villages (Davies 1943: 32 - 36, 103 - 106, pls. 29 - 35; Kemp

1989: 259, fig. 80, and 237) and gold occurs in official texts most often in association with officials at the southern frontier (Castle 1992: 260 - 262), this was not the case with ordinary individuals. Taxes in “money” were unknown until the Third Intermediate Period (Muhs 2005: 3 - 6).

Terminologies

The complex fiscal terminology employed in Egyptian texts provides a formidable challenge to render each term in its context as accurately as possible. It is seldom possible to find a single word that does the job adequately. This is because “tax” and even “state” are troublesome Western terms in understanding an ancient economy where such concepts may not be suited to the economic reality (Haring 1997: 301). Some would argue that “tax” and “taxation” are terms best avoided altogether in favor of terms such as “deliveries,” “contributions,” and “transfers,” which do not evoke “modern concepts of state finance” (Haring 1997: 301).

While the most important source of revenue in ancient Egypt was certainly the “harvest tax” or *šmw*, there was a wide variety of other revenues collected by the state, the terms for which share an extreme vagueness in their definition. It appears that the Egyptians were very loose in their application of terminology, using common words such as *šmw* (“harvest”) to express economic concepts as well as to convey their literal meaning in the very same text, endowing the same word with multiple meanings (Janssen 1975b: 174 - 175). Thus, the terms for various types of deliveries to the state are not at all well understood. Some terms such as *htr* appear to have contradictory meanings (see below *New Kingdom*: 3. Taxation terminology in the New Kingdom). The interpretation varied with the context; the terms are best understood only by freeing ourselves from the limitations of modern Western patterns of thought (Janssen 1975b: 176). Often it is best simply to use the Egyptian terms for want of adequate translations that embrace each and every occurrence.

The ideal source for the study of Pharaonic taxation would be documents from the state tax-collecting authority. However, the one document that seems to fit this bill, the taxation text on the verso of the Royal Canon of Turin, is too fragmentary to provide definitive evidence. We must consult occurrences of the terms in a wide variety of administrative, autobiographical, and literary texts (see below *New Kingdom*: 3. Taxation terminology in the New Kingdom), where the exact nature and purpose of the text must be taken into account. This greatly affects the understanding of the terms since the reliability of texts varies widely. The Late Egyptian miscellanies, for example, cannot be accepted with the same degree of reliability as the late 19th Dynasty Bilgai Stela (see below) or the royal donation text, P. Harris I, from the 20th Dynasty (Erichsen 1933; Grandet 1994 - 1999; Schaedel 1936), because the miscellanies are literary texts rather than actual documents. Exemption decrees, such as those from Coptos in the 6th Dynasty, identify the kinds of requisitions and labor from which certain foundations were to be exempted, as well as name the individual officeholders and administrative departments whose involvement was required to carry out the king's will. Other crucial documents for taxation such as the Ramesside Wilbour Papyrus and the Third Intermediate Period Papyrus Reinhardt reflect the perspective of temples as administrative organizations and raise questions as to the proper understanding of the revenues detailed (see *The Third Intermediate Period*).

Temporal Considerations

Also relevant are questions of the degree to which Egyptian taxes increased or decreased over time with respect to productivity and inflation and at what intervals taxes were paid. The quantification of yields in ancient Egypt is a perilous quest with wide margins for error (Eyre 2004: 164, n. 53 with sources, 170). The problems with evidence for inflation were initially explored by Černý (1933) and later by Janssen (1975a). Old Kingdom evidence from the Palermo Stone of biennial inventories of

the wealth of land and resources suggests a two-year tax system. How long such a biennial system may have lasted after the Old Kingdom—if that was the system—cannot however be ascertained (Schott 1971: 71). The frequency of the phrase *n tnw mpt* (“of every year”), which regularly follows the term *htr* in New Kingdom texts, suggests that taxes at some time became annual: thus the understanding of “the annual levy” (Redford 1972: 145).

Early Dynastic and Old Kingdom

At the unification of the Predynastic kingdoms of Upper and Lower Egypt c. 3100 BCE, a national system of taxation was established at Memphis to support the king and his court as well as monumental building activities and other state projects. Memphis became the locus for the elite of Old Kingdom society and its major institutions. The state's authority to tax and collect revenues from production was imposed upon a village-based society composed of complex layered hierarchies responsible for the management of land. Village identity and solidarity were likely embedded at the deepest level in the social ecology of Egypt (Eyre 1999: 35 - 39, 2004: 167, 174). From the outset, local elites would have had the difficult task of balancing the demands of the central government for revenue with local power structures (Eyre 2004: 167). Thus, an imbalance in social and economic relations between the central authority and the rural countryside is a striking feature of the Old Kingdom (Seidlmayer 1996: 108).

The late Predynastic Period provides only fragmentary evidence of tax paid to the Royal Treasury, for example, tomb inscriptions from Abydos (Petrie 1902: 3, pls. 1 - 3) and a cylinder vessel from Tarkhan (Petrie et al. 1913: pl. 61). The black basalt stela known as the Palermo Stone from the late 5th Dynasty recounts principal events in reigns going back to Predynastic times (Redford 1986: 88 - 90; Wilkinson 2000). Among the events detailed in the individual regnal years is the biennial “Following of Horus” (*šmsw Hr*; Helck 1972:

1.1:4; Kees 1961: 102 - 103; Wilkinson 1999: 142, 220 - 221, 2000). This royal tour along the Nile recorded Egypt's economic wealth as measured in herds of livestock, arable fields, resources in precious metals, and human population. From the 2nd Dynasty onwards, a biennial cattle census (*ḡwt*) was added, followed by a "census of gold and fields." Records of the height of the annual Nile inundation were used to determine tax due on arable fields, establish the probability of meeting taxation goals, and remedy any shortfalls (Butzer 1976). However, the degree to which central authority managed to penetrate the countryside is unknown and probably unknowable (Eyre 1999: 37).

The Royal Treasury, under a royal chancellor (*ḡmw-ḡtj*) who reported to the vizier (*tjtj*), supervised the collection, storage, processing, and distribution of state revenues. The Treasury had roots in the Predynastic Period when the rival kingdoms of Upper and Lower Egypt each possessed its own financial institution. Names given to the new Treasury reflect this history: the Treasury of Upper Egypt (*pr-ḡd*, "The White House"), the Treasury of Lower Egypt (*pr-dšr*, "The Red House"), and eventually "The Two White Houses" (*prwj ḡd*). This bicameral organization reflected the differences between Upper and Lower Egypt in terms of geography, society, and economy (Wilkinson 1999: 125 - 127). Only with separate administrations could the distinctive needs of Upper and Lower Egypt be effectively met.

Produce from Egyptian fields was shipped to the storage facility called the *pr-šn* pending redistribution to dependent government employees (Kaplony 1963, Vol. 3: fig. 367; Lacau and Lauer 1959: pl. 18, no. 90). Donations to cult and funerary temples were also stored in government granaries since the crown and local institutions were tightly bound by mutually beneficial reciprocal responsibilities (on granaries see Garstang 1903: pl. 19.7; Seidlmayer 1996: pl. 23). The *pr ḡrj-wḡb* or "house of largess" redistributed revenues in kind to dependents as well as to the state-supported cult temples (Gardiner

1938: 85 - 89; Málek 1986: 35). The Treasury also supplied the daily needs of the Memphite court with a variety of products according to inscriptions from the late 3rd Dynasty tomb of the Overseer of the Treasury (*ḡmj-r pr-ḡd*) Pehernefer (Junker 1939: 63 - 84; Wilkinson 1999: 129 - 131). How this system would have benefited those at the bottom of the social pyramid is not at all evident since any redistribution of tax revenues clearly helped the elite of the society, who could count on a share in the revenues (Eyre 1998: 185).

1. Tax exemptions. Tax revenues financed lavish royal building programs, maintained royal residences and harems, supported work in the quarries, and also supplied military posts to maintain border security and safeguard trade routes. As financial demands upon temples and funerary endowments increased, these institutions demanded exemption from specific kinds of tax obligations, including compulsory labor that would take personnel away from the maintenance of the funerary cult (Eyre 1987a: 18 - 19, 2004: 181; Goedicke 1967; Hayes 1946: 2 - 23; Helck 1975; Strudwick 2005: 97 - 127). Charters of tax immunity were awarded, but these were primarily intended to protect the temples from arbitrary exploitation by unauthorized persons. For example, the 4th Dynasty exemption decree of Shepseskaf, the oldest preserved, protected the interests of the estate and staff of the pyramid of Menkaura (Strudwick 2005: no. 16, 97 - 98). Pepy I's decree to protect the estate and staff of Sneferu's pyramid at Dahshur exempted the *ḡntj-š*, who served the estate in exchange for access to endowment land, from both taxation and conscription (Eyre 1999: 47 - 48; Strudwick 2005: no. 20, 103 - 105). Temples gained special privileges but remained wedded to the state for their mutual benefit. The absence of any exemption from the cattle levy suggests that while many obligations could be the subject of compromise between the temples and the state, this tax could not be negotiated (Bleiberg 2007: 181).

Moreover, the state left the door open to procuring temple support and personnel for

special government undertakings as is suggested in a letter, purportedly from Pepy II, quoted in the autobiography of the governor of Upper Egypt Harkhuf. This letter orders the procurement of supplies for a trade mission returning from Nubia from “every temple—without making an exception therefrom” (Sethe *Urk. I*: 131, 4 - 7; Kemp 1983: 107; however, see Lichtheim 1973: 27; Strudwick 2005: no. 241, 333). Similarly, the army of the governor of Upper Egypt Weni during the reign of Pepy I included troops under the command of “Overseers of Priests of Upper and Lower Egypt” (Sethe *Urk. I*: 102, 5 - 6; Kemp 1983: 107; Lichtheim 1973: 20; Strudwick 2005: no. 256, 354). Thus, the charters of immunity were not ironclad defenses for temples from royal interference (Goedicke 1967: 88, 107 (n. 59), and 246; Kemp 1983: 107).

While charters of immunity took productive agricultural land from the tax base and freed temple workers from compulsory labor—national service—on government projects, they did not eliminate all the financial obligations of the landowning institutions to the state (Kanawati 1977: 72). Therefore, temple immunity from certain fiscal obligations likely did not drastically affect the stability of the Old Kingdom administration.

From the late 5th Dynasty throughout the 6th Dynasty, the state confronted challenges to its tax-collecting authority (Kanawati 1980: 128 - 129). To this end, the office of the vizier of Upper Egypt at Abydos was created, Weni likely being the first vizier of Upper Egypt to hold office at such a distance from the capital (Sethe *Urk. I*: 105, 11 - 13, cf. 106, 9 - 10 in Strudwick 2005: no. 256, 352 - 357). Moreover, Pepy II subordinated the tax-collecting activities of Upper Egyptian nobles to the direct control of the southern vizier. Despite the administrative decentralization that gave nomarchs increasing autonomy, the state maintained financial control over the capital and provinces until the crippling effects of excessive expenditures, inadequate inundations, provincial independence, and the sharp increase in social inequalities brought

the Old Kingdom state to its knees (Moreno García 2001: 411 - 450; Müller-Wollermann 1986).

2. Tax evasion. Tax collectors routinely encountered delinquency in the payment of tax revenues, dereliction of duties by officials, and outright dishonesty. The Saqqara mastaba of the 6th Dynasty vizier Khentika depicts five governors of a *hwt* charged with corruption and/or dereliction of duty in the remission of tax revenues being soundly beaten for their offenses (James and Apted 1953: pl. 9). Centuries later, similar scenes appear in the Theban tomb chapel of Menna, a Treasury official under Thutmose IV in the 18th Dynasty (James 1984: 84 - 85; *PM I,1*: 134 - 135). Tax evasion was not only a crime that was punishable by swift justice regardless of the social or economic status of the offender, but was also an endemic affliction of the central government in Pharaonic Egypt.

Middle Kingdom

The collapse of the Old Kingdom was followed by the tumultuous First Intermediate Period during which the equilibrium between the central authority and powerful provincial interests broke down. The pharaohs of the Middle Kingdom were able to stabilize the central government (Kemp 1983: 112 - 116, 174 - 182; Müller-Wollermann 1986). From the Middle Kingdom comes detailed documentation of punishments inflicted on peasants who sought to avoid the corvée and thereby deny the state its right to their occasional labor tilling fields, maintaining irrigation channels, working on construction projects, or obtaining raw materials abroad. Papyrus Brooklyn 35.1446 describes the situation of eighty inhabitants of Upper Egypt who fled their national service obligations in the reign of Amenemhat III and were subsequently sentenced to indefinite terms of compulsory labor on government *hbsw* lands, their families imprisoned until their return (Hayes 1955; Menu 1973: 84 - 87, 1981: 51 - 76; Quirke 1990: 127 - 154). The agricultural labor referred to in this text is perhaps better described as conscription to forced tenancy

on land undergoing development or redevelopment than what is commonly understood by the term “corvée labor” (Eyre 2004: 183).

Such conscription was a form of taxation by the state imposed upon all Egyptians below the rank of official, including priests and, most importantly, unskilled laborers from a huge labor pool at the bottom of Egyptian society, largely consisting of peasants tied to the land they worked, irrespective of its ownership (Camino 1997: 3 - 4; Eyre 1987a: 19 - 20). The burden of such forced agricultural labor for the vast majority of Egyptian laborers was not only inescapable but often unfairly and ruthlessly applied despite pleas to the authorities from persons unjustly seized (e.g., P. Berlin 10023A from Lahun; Wente 1990: no. 88, 74). It is difficult to see how such persons would have benefited from a redistributive tax system, with the possible exception of those peasant farmers toiling upon the estates of temples exempted from the corvée by royal charter (Camino 1997: 21 - 22).

New Kingdom

The temples grew in wealth, importance, and independence during the New Kingdom, continuing to draw revenues from the state to maintain their properties, support their personnel, and supply certain aspects of their cult in recognition of their role in the collection and redistribution of tax revenues (Haring 1998: 77 - 80). P. Harris I, the most valuable New Kingdom source for the wealth of the temples of Amun, Ra, Ptah, as well as smaller temples and the fiscal interrelationships between and among the temples and the crown, is testimony to the nature of the revenue system that linked temples and state under pharaoh’s authority. In recording the new donations of land, personnel, and property made personally by Ramesses III, it is convincing evidence of the continued central role of the Egyptian temples in an economy based on agricultural wealth that required a complex administrative system to function successfully.

The general levy (*ḥtr*) provided offerings for temple altars, livestock for sacrifice, clothing for temple statues, and assorted cult necessities. Since surviving fiscal documents are mostly temple records, there is a lack of documentation of the taxation system from the state’s perspective (Warburton 1997: 322, n. 1196). We are therefore unable to verify the existence of a central tax collection authority despite the existence of the *ʿ3 n št* (“Great One of Assessments,” that is, “Chief Taxing Master”: Gardiner 1948, II: 10, 57, 71 n. 1, 150 [§200], 204; Fischer-Elfert 1989: 43 - 46; Haring 1997: 298 - 300; Janssen 1975b: 175; 1991, 83 - 84 note (b); Römer 1994: 373 - 376; Warburton 1997: 165).

Moreover, since the unidentified *ʿ3 n št*, mentioned in the Wilbour Papyrus as the supreme authority in the assessment process, has been identified with the Steward of Amun Usermaatranakhte who occurs in the same text and is linked with the lands of secular institutions in P. Wilbour and in the Griffith and Louvre Fragments of the Third Intermediate Period (see *The Third Intermediate Period*; Gardiner 1941 - 1948, Vol. 2: 204; Bierbrier 1975: 11 and n. 78; Haring 1997: 299 - 300), it is conceivable that powerful temple and state offices were vested in the same person. Were that the case, which is by no means certain, it would reinforce the understanding of temple and state as inextricably bound entities under the control of pharaoh who stood above both (Haring 1997: 300 - 301). In such a context, it is clear how problematic the application of terms such as “tax” and “taxation” can be since these terms do not adequately reflect the complex historical reality.

Taxes supplied military garrisons and foreign settlements comprised of prisoners of war and mercenaries (Redford 1972: 144 - 145). The quarrying of stone for state construction projects was also dependent upon general tax revenues (Redford 1972: 144 - 145). Even the wages of the workmen of the royal necropolis at the village at Deir el-Medina were derived from taxes. The Treasury of Pharaoh sometimes made

payments and the commodities were subsequently stored in Theban temple granaries (Eyre 2000: 35; Janssen 1975a: 455 - 459; Kemp 1989: 193, 2006: 256). The general levy also provided for the costly maintenance of the royal palaces and harems. For the greater part of the New Kingdom, the economy performed effectively through the efforts of an efficient bureaucracy under the vizier in conjunction with both the Treasury of Pharaoh and Granary of Pharaoh.

1. Primary sources and their interpretation. The administration of the general levy is documented in the Theban tomb chapel inscriptions of Rekhmira, vizier of Upper Egypt under Thutmose III and Amenhotep II (Anthes 1934: 155 - 163; Davies 1943; Farina 1916: 923 - 974, plates A and B; Faulkner 1955; Helck 1958: 29 - 43; James 1984: 62 - 67; Kitchen 1975: 290.13 - 291.10; Lichtheim 1976: 21 - 24; Newberry 1900; Sethe 1909, *Urk. IV*: 1103, 14 - 1117, 5; van den Boorn 1988; Virey 1889). The vizier's day-to-day responsibilities are detailed as he administers the complex business of the state. While wall paintings depict Rekhmira performing the functions of his office, the accompanying inscriptions illuminate the ethical principles that guided the New Kingdom administration. Not only did the vizier oversee the collection and receipt of taxes from the hands of various officials, he also met with the overseers of the Treasury in order to be informed of the finances of every government department. The taxation scene in the tomb of Rekhmira and the modest amounts paid suggest that when circumstances demanded revenues in excess of those raised by the usual levies on provincial towns and villages, the demand would be passed down the administrative channels with orders to free up stocks wherever available or obtain revenues through exactions at the local level (Davies 1943: pls. XXIX - XXXV, with 32 - 6, 103 - 106; Kemp 2006: 306, 307, fig. 107; Newberry 1900: pl. VI).

Early in the reign of Amenhotep IV/Akhenaten, evidence of the talatat from the ninth pylon at Karnak reveals that temple

walls in the precinct of the Aten had been inscribed with lists of the taxes levied by the king upon temples and municipalities throughout the country for the support of his new cult (Murnane 1995: 30 - 31; Traunecker 2005: 145 - 182). Fixed taxes consisting of modest quantities of silver, incense, wine, and material were requisitioned from the domains of various deities, and variable taxes consisting of precious metals, cloth, and foodstuffs were also demanded, destined for the "Domain of the Disk in Heliopolis of the South." The latter category includes contributions made by mayors (*ḥꜣtj-ꜥ*) and those from various royal domains. Scenes depict the king receiving revenue from Upper Egypt, Middle Egypt, and Lower Egypt beneath the life-giving rays of the Aten. In mentioning the names of the domains of many of the great Egyptian deities, these inscriptions suggest the peaceful coexistence of Atenism with traditional Egyptian religion at least during the early years of Amenhotep IV/Akhenaten. Moreover, the offerings of all the gods and goddesses "who are on the soil of Memphis" mentioned by the Steward of Memphis Ipy in the Ghurab letter as issued on behalf of Amenhotep IV perhaps may also be understood in this light (Murnane 1995: no. 22, 50 - 51; Traunecker 2005: 174).

Following the stormy Amarna Period and the restoration accomplished under Tutankhamen, government reforms were imperative. Horemheb issued his edict at the Karnak temple of Amun to initiate extensive administrative and judicial reforms. He targeted the abuse of authority in both the central and local governments that characterized Akhenaten's reign, focusing on the unlawful seizure of tax revenues by unscrupulous officials and soldiers, occasioned by the pervasive lawlessness of the times (Helck 1955: 109 - 136; Kruchten 1981; Pflüger 1946: 260 - 276, pls. 1 - 6).

Horemheb reasserted the right of the state to collect taxes in goods and services for the support of the government and its enterprises and put violators of the edict squarely in defiance of the law. Horemheb's decrees

were, however, only a piecemeal effort at reform; the government was chiefly concerned with safeguarding state interests, a goal best achieved by reestablishing the traditional institutional framework for the collection and redistribution of tax revenues in which the temples had always played a central role (Kemp 1989: 235 - 236, 2006: 305 - 306; Théodoridès 1971: 291 - 322).

The collection and transport of tax revenues was a great temptation for those who thought they might personally benefit from inadequate security measures. Therefore it is not surprising to find documentary evidence of measures to ensure the safety of the property of temples and other foundations not only against continuing abuse by criminals, but also by predatory officials seeking either revenues or the labor of workers to which they were not entitled. For example, as set out in the Nauri Decree, Sety I granted a charter of immunity to safeguard from unauthorized seizure the staff and property of his temple of Osiris at Abydos, including royal donations of lands far to the south and the rich cargoes of ships from Nubia intended for the temple.

The warnings of this decree, carved high on a cliff at Nauri north of the Third Cataract, threaten horrific punishments for any transgression of the law by any commander, scribe, or inspector of the Nile fortresses, including loss of status in being made to serve as a cultivator (*jḥwtj*), understood here as a forced laborer for the temple (Edgerton 1947b: 219 - 230; Eyre 2004: 180; Gardiner 1952: 24 - 33; Griffith 1927: 193 - 206, pls. 37 - 43; Harari 1977: 57 - 73, 1984: 23 - 32; Janssen 1961: 100; Kemp 1970: 657 - 680; Kitchen 1979: 453 - 464, 1993: §24, 45 - 58; Spalinger 1991: 30 - 39). The Nauri Decree exemplifies the state's determination to secure the revenues that ensured the efficient operation of its economy and is consistent with the long-standing state protection of temple wealth and personnel that can be traced back to the Old Kingdom exemption decrees. The Nauri Decree could be interpreted as establishing the strength and occasionally arbitrary nature of central

authority as required by circumstance (Edgerton 1947a: 157).

There is no substantial documentation of land assessment and taxation in the New Kingdom until year 4 of Ramesses V in the 20th Dynasty when the Wilbour Papyrus was recorded. The Wilbour Papyrus provides assessment data for some 2800 plots of agricultural land in Middle Egypt under the charge of temples and secular institutions (Faulkner 1952; Fairman 1953: 118 - 123; Gardiner 1941 - 1948; Haring 1997: 283 - 326, 326 - 345 *passim*, 1998: 74 - 89, 2006: 125 - 136; Janssen 1986: 351 - 366; Katary 1989, 1999: 61 - 82, 2000: 171 - 208, 2001a: 111 - 123, 2006: 137 - 155, 2009: 263 - 319; Menu 1970; Stuchevsky 1982; Warburton 1997: 165 - 169). Text A records standard harvests used to calculate expected revenues from plots cultivated under two schemes of cultivation: a collectively organized scheme of cultivation under low-level agricultural administrators (non-apportioning domains) and independent smallholding by individuals identified by name and occupation (apportioning domains; for both systems, see Haring 1997: 298 - 301; Janssen 1986: 351 - 366). The "harvest duties" (*šmw*) forthcoming from the plots enumerated were collected by the House of Amun in Thebes and transported by temple staff to the granary of the House of Amun. The Wilbour Papyrus was thus probably a temple document rather than a document of the central government (Warburton 1997: 322).

Smallholders of a wide variety of occupations and titles, who were "private possessors" or "virtual owners" of their plots, paid dues on their harvest on only a tiny portion of their plot at a fixed rate of 1½ sacks per aroura. These plots were usually 3 or 5 arouras in size (1 aroura equals 0.27 hectares or 0.66 acre). Those "private possessors" who cultivated 5 aroura plots and held military occupations or other low-level service occupations may be comparable to the *ḥntj-š* of the Old Kingdom who farmed plots on temple endowment land in exchange for their service (Eyre 1999: 52). Larger tracts of cultivated land in non-apportioning domains

were worked by field laborers (*jḥwtj*) supervised by institutional staff. These tracts incurred a tax of 30 percent of the harvest (Janssen 1986: 358 - 360). Also detailed are holdings of crown land (*khato*-land and *mine*-land of pharaoh), located upon the domains of institutions, supervised by institutional staff, and cultivated by field laborers. The briefer Wilbour Text B is also concerned with *khato*-lands of pharaoh, in the same area, under at least some of the same administrators, but has received far less attention from scholars (Gardiner 1941 - 1948, Vol. 2: 161 - 196; Haring 1997: 283 - 284, 299, 315 - 318).

The Wilbour percentage of assessment (assessment rate) data indicate that some occupations of smallholders once assumed to be socially homogeneous do in fact occupy several distinct socio-economic niches that are interrelated across occupational boundaries as distinct subclasses in society. Occupational designations, such as *jḥwtj*, *wꜥb*, *rwꜥw*, and *wꜥw*, embrace individuals of widely varied socio-economic status from extremely modest to elite (Katary 2009: 263 - 319).

The Wilbour Papyrus has been understood to reflect an agrarian regime in which temples and secular institutions administered cultivable land as departments of the state or even a branch of government administration (Gasse 1988: 233; Haring 1997: 17 - 20; Janssen 1979: 509, 1986: 366; Kemp 1970: 659; Warburton 1997: 300 - 302), or perhaps better said, as partners with pharaoh of the entity called “state,” even if the temples were not actually incorporated in the structure of the “state” (Eyre 2000: 35). Debate concerning whether the revenues recorded in P. Wilbour were taxes payable to the crown or rents contributory to the temples is irrelevant since the infrastructure for tax collection consisted of tightly interconnected parallel bureaucracies of temples and government (Janssen 1975b: 180 - 182, 1979: 509 - 511, 1986: 364, 365; Kemp 1989: 193 - 197, 2006: 256 - 258; Warburton 1997: 300 - 338). Temples, as a kind of “supra-local institution” (Eyre 2000: 35), collected payments in kind

that could be considered “taxes” broadly speaking (the German *Abgabe*) and were, at the same time, beneficiaries of the general tax levy.

In his work on ceremonial and administrative texts from the Theban mortuary temples (*ḥwt*), in particular that of Ramesses III at Medinet Habu and the Ramesseum of Ramesses II, described as being *m pr 'Imn* (“in the House/Domain/Estate of Amun”), Haring (1997) identifies no consistent pattern of economic relations among these temples, the temple of Amun at Karnak, and the palace. If the link here was more religious than administrative or legal and did not imply economic dependence (Haring 1997: 30 - 34), traditional understandings of *m pr 'Imn* (“in the House of Amun”) must be reconsidered (Kemp 1989: 203, fig. 71, 210 - 211, 2006: 266, fig. 97, 274; Mallinson 1995: 205).

The transport of tax revenues is the subject of the Turin Taxation Papyrus. This document, from year 12 of Ramesses XI, describes the collection by Scribe of the Necropolis Dhutmose of grain revenues (*šmw*) payable to the state by various institutions and individuals intended to cover the overdue wages of the necropolis workmen at Deir el-Medina (Eyre 2000: 35; Gardiner 1941: 22 - 37, 1948: xiii - xiv, 35 - 44; Janssen 1975a: 455 - 459; Kemp 1989: 193, 2006: 256). The mayor of the city and the chantresses of Amun received the grain for storage in Theban granaries. Other Ramesside texts detailing the collection and transportation of grain revenues, such as P. Amiens and its other half P. Baldwin, P. Louvre 3171, the Griffith and Louvre Fragments, and P. British Museum 10447, also testify to the closely interwoven network of bureaucrats and agencies engaged in revenue collection, transportation, and distribution (Gardiner 1941: 19 - 73, 1948; Gasse 1988; Haring 1997: 326 - 345; Janssen 2004).

2. Social impacts and realities. Model letters included among the Ramesside Late Egyptian miscellanies colorfully describe the problems encountered by farmers (*jḥwtj*) in meeting

their tax assessment (Caminos 1954; Gardiner 1937). Unable to remit the taxes due on his land, the overburdened farmer is beaten by the tax collector's bully men and forced to witness the abuse of his wife and children (P. Anastasi V, 15, 5ff.; P. Sallier I 6, 2ff.). This grim portrayal of the miseries of the small farmer cannot be taken literally however. The letters were likely intended to remind lazy students of the great privilege of their occupation since the scribe "has no dues (*šꜣyt*) (to pay)" (P. Anastasi V, 17, 2). With the factual reliability of such letters in doubt, their testimony for the understanding of the terminology of taxation is put into question (Eyre 1994: 110).

Such accounts of the lives of *jḥwtjw* in the Late Egyptian miscellanies can be profitably viewed in light of the Middle Kingdom Loyalist Instruction, a wisdom text popular during the New Kingdom. A reading of this work could lead to the conclusion that an underlying principle of good government at this time was the recognition of the need for social solidarity and a sense of reciprocity between the ruler and his subjects (Berlev 1972: 30 - 32; Eyre 2004: 179). Failure to abide by such advice could lead to social, political, and economic ruin. Therefore the official is advised: "Do not overwhelm the field-laborer with work; a man who complains, does he return to you next year?" (Parkinson 1991: 70 - 71; Quirke 2004: 108 - 111).

Taxpayers did not always accept the tax obligations ascribed to them. In P. Valençay I, an actual letter from the reign of Ramesses XI, a taxpayer adamantly protests his innocence when falsely accused of defaulting on his tax obligation (Eyre 2004: 171; Gardiner 1948: 72 - 73, 1951: 115 - 124; Haring 1997: 298 - 301; Katary 1989: 207 - 216; Porten 1996: 57 - 59; Wente 1990: no. 156, 130 - 131). Meron, mayor of Elephantine, complained to the Chief Taxing Master (*šꜣ n šꜣ*) concerning taxes demanded of him on a plot of *kbato*-land that was in fact the responsibility of "private persons," "freemen," or even "independent farmers"

(*nmḥw*) "who pay gold (*fꜣj nbw*, *nbw* understood as "payment" or "money") to the Treasury of Pharaoh" (Eyre 2004: 171; Helck 1958: 183; Janssen 1975b: 149; Katary 1989: 211 - 212; Porten 1996: 59, n. 20; Römer 1994: 412 - 451).

This letter confirms evidence from P. Bologna 1094 5, 8 - 7, 1 concerning a prophet of the House of Seth who is outraged when ordered to pay tax he swears he does not owe saying, "It is not my due tax (*ḥtr*) at all!" (Caminos 1954: 17 - 20). Also, in P. Anastasi V 27, 3 - 7, a taxpayer fulminates against unjust taxation when he says, "It is I whom you have found to penalize (*šꜣḥ*) among the entire body of taxpayers (?) (*šꜣ*)" (Caminos 1954: 272 - 275). Whatever the truth of these accusations from the miscellanies, taxpayers' rage was likely widespread, and Meron's letter was possibly just the tip of the iceberg.

Tax disputes inevitably made their way into the courts. The Memphite tomb chapel inscription of Mose, from the reign of Ramesses II, recounts the litigation that ensued among three rival branches of a family over the control of property granted by Ahmose I to Mose's ancestor, the ship-master Neshi, as a reward for valor shown in fighting the Hyksos (Gaballa 1977; Gardiner 1905). Documentation of tax payments by smallholders was evidently kept in the archives of the Treasury of Pharaoh and the Granary of Pharaoh in Pi-Ramesses in the Delta, and it was to these offices that one appealed concerning rights of ownership. Government records were not inviolable, however, since one of the parties attempted to alter the records in her favor. If this text is taken at face value, corruption in the day-to-day workings of the offices that formed the administrative hub of the tax system was a very real problem.

3. Taxation terminology in the New Kingdom. The wide variety of technical terms in use identifies levies demanded by the state on individuals, groups, institutions, and towns and reveals the complexity of New Kingdom fiscal policy and the problems posed by the use of common words to denote particular

economic concepts (Janssen 1975b: 174 - 175). Fragmentary tax lists on the verso of the Royal Canon of Turin, from the reign of Ramesses II, mention several terms (Gardiner 1959: pls. 5 - 9; Helck 1972: 1.1.3 - 12; Janssen 1975b: 173 - 177; Redford 1972: 151 - 152). Assuming the likelihood that the lists were compiled by a central tax-collecting authority, they have great importance for understanding the terminology of taxation. However, since many of the lines are incomplete, the value of the text is greatly compromised.

B3kw(t), “work, labor”—a word used in many senses—in a revenue context refers to obligatory payments or deliveries (Warburton 1997: 237 - 257). *B3kw(t)* may come from sources outside the agricultural sector from the produce of fishermen, natron-workers, and mat-makers (Turin 3,1 - 3), even though the expression *b3kw jhwtj* occurs in P. Harris I, 12b, 3 in reference to grain (Helck 1972: 1.1:5.9; Janssen 1975b: 174). However, it has been argued that *b3kw(t)* collected from foreign lands, groups of foreigners, or even Egyptians was payment intended for a wide variety of temple expenses, including the financing of royal expeditions (Bleiberg 1988: 168). *Tp-drt*, “head-hand,” was possibly a head tax on lower-ranking individuals, including controllers, deputies, Medjay, and probably also temple officials rather than their institutions, payable to pharaoh with valuable commodities (Janssen 1975b: 173, 175 n. 222, 1991: 87 - 88, note (y); Warburton 1997: 287 - 291, 322). *šdyt* denotes the “exaction” of a tax, whereas *š3yt*, “dues,” occurs in such expressions as “dues of the staff” and “the precise exaction,” fixed deliveries owed by individual officials, determined by the *htrj* assessment (Redford 1972: 151, n. 58; Warburton 1997: 278 - 291). *Htr/htrj* occurs in such phrases as “exact levy” and “the levy which is upon them,” a usage that contrasts with the sense of the term in Deir el-Medina documents where *htr/htrj* signifies deliveries of the necropolis workmen’s wages rather than dues paid by them: evidence of the redistribution of tax revenues to dependents/employees (Janssen 1975b: 176; Redford 1972: 151, n. 58; Warburton 1997:

263 - 277). This is easily explained when it is considered that the “dues” paid by taxpayers were redistributed in the form of “wages” to state dependents/employees. *Htr*, consisting of deliveries of fish from a local official for the harem of Mi-wer, according to the Ghurab Fragments, could also supply harems and palaces (Gardiner 1948: 15; Redford 1972: 149). The verb *htrj* (“to assess”) applies to all exactions including *š3yt*, *šmw*, *b3kw*, and *htrj* (Warburton 1997: 277).

Three of the terms for varieties of tax occur in the late 19th Dynasty Bilgai Stela, from the eastern Delta, concerning the estate of a chapel (*jpt*) of Amun of Usermaatra Setepenra (Ramesses II). Here, a Commander of the Fortress of the Sea who is responsible for the chapel declares that he is “an official advantageous to his lord, paying (his) *šmw* in full and (his) *š3yt* in full” (Frood 2007: 177 - 180; Gardiner 1912: 49 - 57, pl. 4; Haring 1997: 151 - 153). *šmw* is understood here as harvest-tax, a proportion of the harvest owed on assessed fields; *š3yt* is interpreted as dues (Warburton 1997: 282 - 286). The Commander took pride in his achievement by boasting, “my excess of *šmw* and *š3yt* (paid) was ten times greater than my [annual] levy (*htrj*) of *šmw* and *š3yt*.” The Commander of the Fortress of the Sea may have exaggerated his productivity in remitting taxes so greatly in excess of his due perhaps to obtain royal protection for the chapel, since the style of the composition suggests an appeal for attention and assistance from a superior (Haring 1997: 152 - 153). Nevertheless, that an official of his rank and situation was responsible for the payment of both *šmw* and *š3yt*, which constituted his (annual) levy (*htrj*) for a chapel located far from Thebes, expands upon the bare outline of taxes provided by the Turin Canon tax lists.

In texts describing the rewards given to the high-priest Amenhotep by Ramesses IX, inscribed on a wall in the Karnak temple of Amun, the protagonist proclaims that harvest-tax (*šmw*), dues (*š3yt*), and labor (*b3kw*) of the people of the House of Amun-Ra, King of the Gods, were under his authority (Černý

1975: 628 - 629; Frood 2007: 74; Haring 1997: 18; Janssen 1991: 87, note (y); Lefebvre 1929: pl. 2). Amenhotep also shows diligence in sending the *jnw* and *tp-drt* to pharaoh (Frood 2007: 74; Haring 1997: 18; Janssen 1991: 87 note (y); Warburton 1997: 322).

Payments of *šmw* and *šyt*, understood as rendered unto pharaoh, likely remained in the temple storehouses, implying that Amenhotep was never actually required to send tax revenues to pharaoh that were intended to supply Amun-Ra, King of the Gods (Warburton 1997: 321, 322). If so, this would be evidence of the degree of control temples retained in managing their own finances. This idea is confirmed in P. BM 10401, an administrative text of the late 20th Dynasty, that concerns payments of Upper Egyptian temples and their staffs to the *ʿ3 n št*. The “requisitions” here were likely transactions within the temple administration better described by the German term *Abgabe* than the English word “taxes” (Janssen 1991: 79 - 94; Warburton 1997: 322). These revenues were likely intended for the temple of Amun rather than the royal court (Janssen 1991: 93). Once again, we are seeing documentation of taxation from the temple’s perspective rather than that of the central government (Warburton 1997: 322 n. 1196).

Bškw(t) is not the only term used to describe the labor component of taxation. The Nauri Decree gives us the terms *brt* (“agreement,” “contract?”) and *bḥ* in reference to the unlawful seizure of men for compulsory labor by or on *bšrt(?)* for cultivating fields and harvesting crops (*bḥ* for “plowing” (*sk3*), or *bḥ* for “harvesting” (*ʿw3y*); Edgerton 1947b: 221, n. 13; Eyre 2004: 181; Griffith 1927: 200ff., n. 10). P. Mallet III - IV from the reign of Ramesses IV (Eyre 2004: 181; Wente 1990: no. 151, 127 - 128) also employs the rare term *bḥ* to refer to the compulsory agricultural work of *jḥwtjw*, herdsmen (*mnjw*), and Medjay on the order of the Overseer of Cattle of the House of Amun. Such agricultural work might have embraced field clearance and land development (Eyre 2004: 181). *Bḥ* can also refer to the work of weavers of a state

institution (P. Anastasi VI, 76 in Caminos 1954: 297, 299, n. 76; Hayes 1973: 34), as well as the toil of laborers in quarries and construction (Sethe *Urk. IV*: 1374, 9, in Cumming 1984: 91).

During the New Kingdom, foreign lands, even if not under Egyptian rule, were obliged to enter into “gift exchanges” with Egypt called *jnw*, “tribute” or “diplomatic gift,” which cemented international relationships (Bleiberg 1996; Warburton 1997: 221 - 236, 322 - 323). Foreign princes gave annual gifts in face-to-face exchanges of commodities for “the breath of life” (Bleiberg 1996: 96). Ineni, architect of Thutmose I, describes the “*jnw* of all foreign lands” that was the annual levy (*htr*) the pharaoh exacted on behalf of the temple of Amun (Sethe *Urk. IV*: 70, 4 - 6; Redford 1972: 150). Hatshepsut refers to the labor of foreign lands as their annual levy for the House of Amun (Sethe *Urk. IV*: 331, 14 - 16; similarly Sethe *Urk. IV*: 186, 2 - 3, 436, 4 - 5, 503, 8, 744, 7 - 8, 931, 8 - 10, 1236, 17ff.; Redford 1972: 150). As Egypt expanded farther into Western Asia and Nubia, *jnw* became an increasingly important source of revenue. Like Egyptian towns and provinces, foreign states contributed to the annual levy with gifts of silver, gold, lapis lazuli, precious stones, chariots, horses, cattle, and small game, as well as people to provide labor (Redford 1972: 150, n. 48). For all this, there is a lack of precision to the term *jnw* since it can also refer to income intended for the coffers of pharaoh or the state administration; temples also had *jnw*-income (Warburton 1997: 236).

The Third Intermediate Period

For the Third Intermediate Period (Kitchen 1996; Lloyd 1983: 279 - 348; Taylor 2000: 330 - 363), the tenth century Upper Egyptian land list known as P. Reinhardt provides evidence of plots of land (*jḥt-bḥ* or *bḥ*) of uncertain status, apparently worked with corvée labor in contrast to plots cultivated by smallholders (Vleeming 1993: §12). These references underscore the continued importance of compulsory agricultural labor in the economy

following the collapse of the New Kingdom. Even with the high casualty rates associated with the more hazardous *corvée* activities such as quarrying stone, labor was, after all, very cheap (Cooney 2007: 167; Eyre 1987b: 182).

Royal monumental sources in particular highlight the continuing prominence of temples as the recipients of tax revenues. Examples include the stela of Shoshenq I at the temple of Heryshef in Heracleopolis that celebrates the king's restoration of the customary tribute (*tp n htr*) of 365 oxen for the daily ox-offering at the temple from towns in the vicinity of Heracleopolis (Edwards 1982: 542 - 543; Kitchen 1996: §247; Redford 1972: 153 - 154). Remarkable similarities have been noted between Shoshenq's fiscal scheme and that of the Hebrew king Solomon. It is possible that Solomon modeled his system upon the Egyptian after centuries of contact with Egyptian administrators (Redford 1972: 153 - 156).

The preeminence of temples in the Libyan Period is further documented in the jubilee inscription of year 22 of Osorkon II from the temple of Bastet at Bubastis. The inscription appears to give tax-exempt status to Thebes and her people in thanks to Amun on the occasion of the dedication (Naville 1892), a policy consistent with earlier Pharaonic practice giving temples tax exemptions as a sign of special privilege for their indispensable participation in the economy (Grimal 1992: 325; Naville 1892: 4). However, the great resemblance of the inscription to the text of a jubilee inscription from Amenhotep III's temple at Soleb in Nubia suggests that it was a copy (Kitchen 1996: §280). Therefore, while the stela cannot be used as conclusive evidence for taxation in the Third Intermediate Period, tax-exempt status may have been given during the festival year (Kitchen 1996: §280).

Additional royal sources provide evidence for taxation as a mechanism to support a variety of royal actions including building works as seen in Taharqo's restoration of the temple of Kawa in Nubia and the building of

a new temple to Amun (Macadam 1949, 1955; Morkot 2000: 252 - 256; Welsby 1996: 17, 33, 173). The great Victory Stela of Piye (Cairo JE 48862, 47086 - 47089), set up in the temple of Amun at Gebel Barkal, proclaims the allegiance of the vassal king of Heracleopolis and his contribution of a levy to support the royal house (Gardiner 1935: 219 - 223; Goedicke 1998; Grimal 1981, 1992: 335 - 341; Kitchen 1996: §§324 - 328; Lichtheim 1980: 66 - 84; Morkot 2000: 17 - 18, 167 - 168, 182 - 196; Myśliwiec 2000: 73 - 85; Reisner 1931: 89 - 94; Schäfer *Urk. III*: 1 - 56; Spalinger 1979: 273 - 301; Welsby 1996: 63 - 64). This is evidence that the use of taxation to maintain palace lifestyles remained consistent throughout Pharaonic history. A related strategy was that of Taharqo, who assigned the wives and children of chieftains of Lower Egypt to serve in his temple as a labor tax in punishment for their rebellions (Arkell 1961: 132; James 1991: 697; Morkot 2000: 256).

Although there are many documents concerning the leasing of land during the Kushite and later periods (Donker van Heel 1996, 1998: 90 - 102; Hughes 1952; Menu 1988: 165 - 181), there is a lack of information about the status of the leased fields, the size of the fields, and the way in which the crucial term *šmw* ("harvest," "harvest-tax") should be understood. Therefore, it is extremely difficult to make any generalizations about the taxation of land (Donker van Heel 1998: 90 - 102).

While the substantially smaller number of inscriptions for the Third Intermediate Period limits understanding of the tax system, there was evidently continuity in the application of taxes in grain (*šmw*) in Papyrus Reinhardt and the Griffith and Louvre Fragments (Gasse 1988), as well as evidence for the continuation of the compulsory labor (agricultural *corvée*) in P. Reinhardt on lands specifically set aside for conscripted labor (*jht-bh*, *bh*; Vleeming 1993: 51 - 55). However, major changes were afoot as is seen in the expanded use of silver as a medium of exchange rather than simply a unit of value, evidenced in Third Intermediate Period abnormal hieratic and Demotic contracts. When taxes are reckoned in silver

in the late Pharaonic period, they appear to have been largely restricted to the elite and merchant classes (Muhs 2005: 4). Since the expansion of taxes in money happened only gradually over the late Pharaonic period, with limited evidence surviving, the monetization

of taxation is a topic best reserved for the Ptolemaic and Roman chapter in Egyptian history when foreign rulers transformed an Egyptian innovation into an important component of a successful market economy.

Bibliographic Notes

There are few technical treatments of taxation in ancient Egypt in the Egyptological literature and all are relatively brief. The earliest comprehensive account was that of Helck (1972). At the same time, Redford (1972) wrote about aspects of the Egyptian taxation system in the context of similarities in the system of Solomon, but this was never intended to be a comprehensive study. These treatments were followed by the comments of Janssen (1975b) about taxation during the New Kingdom as part of a lengthy article about the New Kingdom Egyptian economy. Warburton (1997) devoted considerable attention to taxation in the framework of the New Kingdom economy and provided a detailed study of a number of technical terms. Haring (1997) also comments on the subject in his study of the mortuary temples of the New Kingdom. Subsequently, taxation has been treated briefly in Egyptological reference works in articles by Bleiberg (1999), Katary (2001b), and again by Katary (2007) in a multi-authored work devoted to topics in the study of Egyptian civilization. Egyptologists devote more attention to the economy of the New Kingdom than to earlier periods because of the greater availability of documentation, but studies of earlier periods are available, mostly written from the perspective of the administration (for example, Kanawati 1977, 1980; Moreno García 1997, 1999; Müller-Wollermann 1986; Quirke 1990; Wilkinson 2000). Excellent studies on taxation in the Ptolemaic and Roman Periods are also on hand but are not within the purview of this article. Comprehensive studies of the Egyptian economy were undertaken mostly by European authors in the last quarter of the twentieth century, Helck (especially 1958, 1963 - 1969, 1975) and Janssen (especially 1975a) being the most prolific authors, providing articles and monographs on many aspects of taxation. Other more recent invaluable monographs specifically concerned with taxation may also be mentioned, including Bleiberg's study (1996) of *jnw* and van den Boorn's study (1988) of the early New Kingdom vizierate based upon the text of the "Duties of the Vizier" in the tomb inscriptions of Rekhmira. Traunecker's article (2005) on the taxation inscriptions of Amenhotep IV/Akhenaten, from talatat of the precinct of the Aten at Karnak, explores in some detail one of the most extraordinary New Kingdom taxation texts. Kemp's already classic survey of Egyptian society and history (1989, 2006) has a strong economic component that is not to be missed. Other articles on economic history relevant to taxation that are not mentioned in the text but are certainly not to be missed include Gutgesell (1982), Warburton (1991, 2000), Lehner (2000), and Römer (2007). Studies of individual economic and administrative documents are integral to the study of taxation. The most important of these are the Wilbour Papyrus, the Turin Taxation Papyrus, the Decree of Horemheb, the Bilgai Stela, Papyrus Reinhardt, Papyrus Prachov, the Grundbuch Papyri, and the Griffith and Louvre Fragments, as well as the evidence of the literary compositions that comprise the Late Egyptian miscellanies. Titles in the publication and analysis of these and other relevant texts are provided in the accompanying *References*. Since taxation comes up in the biographical inscriptions of government officials, these too are added to the bibliography for taxation (Frood 2007; Lichtheim 1988). Studies of land tenure cannot be separated from the subject of taxation and should be considered an essential companion subject. Many scholars have contributed to this area of study with monographs (including Gasse 1988; Katary 1989; Menu 1970; Stuchevsky 1982; and

Vleeming 1993), and these works are supplemented by numerous related articles by these authors. On the small farmer and *ka* priest Hekanakhte, there are the notable monographs of James (1962), Goedicke (1984), and Allen (2002), and the article of Baer (1963). Others contributing relevant articles include notably Baer (1962), Bleiberg (1984, 1988, 1994), Janssen (1975b, 1979, 1981, 1986, 1991), Eyre (1987a, 1987b, 1994, 1997, 1998, 1999, 2000, 2004), Eichler (1992, 1999), Haring (1998, 2004, 2006), Moreno García (1998, 2000, 2001, 2006, 2007, 2008, 2009), Römer (1989, 2001), Seidlmayer (1996), Spalinger (1979, 1991), and Donker van Heel (1998). Special mention must be made of Eyre's study (2000) of the rural economy through theoretical approaches that employ the deductive mode of reasoning to draw conclusions concerning the economy and land tenure by examining the underlying hydraulic regime. This analysis takes into account data from all periods of Egyptian history, including eighteenth and nineteenth century Egypt. The approach is extremely valuable but has limitations (Moreno García 2008). Finally, the lifelong contributions of Sir Alan Gardiner should be given special mention for the wide range of texts published and topics pursued, including the ground-breaking publication of the Wilbour Papyrus over the years 1941 - 1948. The magnitude of the contributions by H. W. Helck and Jac. J. Janssen should also not go without special mention.

References

Allen, James

- 2002 *The Hekanakht papyri*. Publications of the Metropolitan Museum of Art 27. New York: Metropolitan Museum of Art.

Anthes, Rudolf

- 1934 Ein bisher unbekanntes Exemplar der Dienstordnung des Wesiers. In *Mélanges Maspero I/1: Orient ancien*, pp. 155 - 163. Cairo: Institut français d'archéologie orientale.

Arkell, Anthony

- 1961 *A history of the Sudan: From the earliest times to 1821*. 2nd edition, revised. London: University of London, The Athlone Press.

Baer, Klaus

- 1962 The low price of land in ancient Egypt. *Journal of the American Research Center in Egypt* 1, pp. 25 - 45.
1963 An Eleventh Dynasty farmer's letters to his family. *Journal of the American Oriental Society* 83, pp. 1 - 19.

Berlev, Oleg

- 1972 *Trudovoe naselenie Egipta v epokhu Srednego tsarstva*. Moscow: Nauka.

Bierbrier, Morris

- 1975 *The Late New Kingdom in Egypt (c. 1300 - 664 BC): A genealogical and chronological investigation*. Warminster: Aris & Phillips.

Bleiberg, Edward

- 1984 The king's privy purse during the New Kingdom: An examination of INW. *Journal of the American Research Center in Egypt* 21, pp. 155 - 167.
1988 The redistributive economy in New Kingdom Egypt: An examination of *bškw(t)*. *Journal of the American Research Center in Egypt* 25, pp. 157 - 168.
1994 "Economic Man" and the "Truly Silent One": Cultural conditioning and the economy in ancient Egypt. *Journal of the Society for the Study of Egyptian Antiquities* 24, pp. 4 - 16.
1996 *The official gift in ancient Egypt*. Norman, Okla. and London: University of Oklahoma Press.
1999 Taxation and conscription. In *The encyclopedia of the archaeology of ancient Egypt*, ed. Kathryn Bard, pp. 761 - 763. London and New York: Routledge.
2007 State and private enterprise. In *The Egyptian world*, ed. Toby Wilkinson, pp. 175 - 184. London and New York: Routledge.

Butzer, Karl

- 1976 *Early hydraulic civilization in Egypt: A study in cultural ecology*. Chicago and London: The University of Chicago Press.

Caminos, Ricardo

- 1954 *Late-Egyptian miscellanies*. London: Oxford University Press.
1997 Peasants. In *The Egyptians*, ed. Sergio Donadoni, pp. 1 - 30. Chicago and London: University of Chicago Press.

Castle, Edward

- 1992 Shipping and trade in Ramesside Egypt. *Journal of the Economic and Social History of the Orient* 35, pp. 239 - 277.

Černý, Jaroslav

- 1933 Fluctuations in grain prices during the Twentieth Egyptian Dynasty. *Archiv Orientální* 6, pp. 173 - 178.
1954 Prices and wages in Egypt in the Ramesside Period. *Cahiers d'histoire mondiale* 1(4), pp. 903 - 921.
1975 Egypt: From the death of Ramesses III to the end of the Twenty-first Dynasty. In *The Cambridge ancient history*, Vol. 2, part 2, ed. I. E. S. Edwards, C. J. Gadd, N. G. L. Hammond, and E. Sollberger, pp. 606 - 657. Cambridge: Cambridge University Press.

Cooney, Kathryn

- 2007 Labour. In *The Egyptian world*, ed. Toby Wilkinson, pp. 160 - 174. London and New York: Routledge.

Cumming, Barbara

- 1984 *Egyptian historical records of the later Eighteenth Dynasty*. Fascicle II. Warminster: Aris & Phillips. (Translated into English from the original hieroglyphic text as published in W. Helck, *Urkunden der 18. Dynastie*, Heft 17 - 19. With reference to Professor Helck's German translation.)

Curtis, James

- 1957 Coinage in Pharaonic Egypt. *Journal of Egyptian Archaeology* 43, pp. 71 - 76.

Davies, Norman de Garis

- 1943 *The tomb of Rekh-mi-Re at Thebes*. 2 volumes. Publications of the Metropolitan Museum of Art, Egyptian Expedition 11. New York: The Plantin Press, 1944.

Donker van Heel, Koenraad

- 1996 *Abnormal hieratic and early demotic texts collected by the Theban Choachytes in the reign of Amasis: Papyri from the Louvre Eisenlohr lot*. PhD thesis: Leiden University.
1998 Use of land in the Kushite and Saite Periods. In *Landless and hungry? Access to land in early and traditional societies: Proceedings of a seminar held in Leiden, 20 and 21 June, 1996*, CNWS Publications 67, ed. Ben Haring, and Remco de Maaijer, pp. 90 - 102. Leiden: Research School CNWS.

Edgerton, William

- 1947a The government and the governed in the Egyptian Empire. *Journal of Near Eastern Studies* 6, pp. 152 - 160.
1947b The Nauri decree of Seti I: A translation and analysis of the legal portion. *Journal of Near Eastern Studies* 6, pp. 219 - 230.

Edwards, I. E. S.

- 1982 Egypt: From the Twenty-second to the Twenty-fourth Dynasty. In *The Cambridge ancient history*, Vol. 3, part 1, ed. John Boardman, I. E. S. Edwards, N. G. L. Hammond, and E. Sollberger, pp. 534 - 581. Cambridge: Cambridge University Press.

Eichler, Eckhard

- 1992 Polanyi-Keynes-Warburton: Zur Rekonstruktion des altägyptischen Wirtschaftssystems. *Göttinger Miszellen* 131, pp. 25 - 31.
1999 Fiskalisches Vokabular und die Wirtschaft des Neuen Reiches. *Discussions in Egyptology* 44, pp. 37 - 47.

Erichsen, Wolja

- 1933 *Papyrus Harris I: Hieroglyphische Transkription*. Bibliotheca Aegyptiaca 5. Brussels: Édition de la Fondation égyptologique Reine Elisabeth.

Eyre, Christopher

- 1987a Work and the organisation of work in the Old Kingdom. In *Labor in the ancient Near East*, American Oriental Series 68, ed. Marvin Powell, pp. 5 - 47. New Haven, Conn.: American Oriental Society.
- 1987b Work and the organisation of work in the New Kingdom. In *Labor in the ancient Near East*, American Oriental Society 68, ed. Marvin Powell, pp. 167 - 221. New Haven, Conn.: American Oriental Society.
- 1994 Feudal tenure and absentee landlords. In *Grund und Boden in Altägypten (rechtliche und sozio-ökonomische Verhältnisse): Akten des internationalen Symposions, Tübingen 18. - 20. Juni 1990*, Untersuchungen zum Rechtsleben im alten Ägypten 2, ed. Schafik Allam, pp. 107 - 133. Tübingen: Schafik Allam.
- 1997 Peasants and “modern” leasing strategies in ancient Egypt. *Journal of the Economic and Social History of the Orient* 40, pp. 367 - 390.
- 1998 The market women of Pharaonic Egypt. In *Le commerce en Égypte ancienne*, Bibliothèque d'étude 121, ed. Nicolas Grimal, and Bernadette Menu, pp. 173 - 191. Cairo: Institut français d'archéologie orientale.
- 1999 The village economy in Pharaonic Egypt. In *Agriculture in Egypt: From Pharaonic to modern times*, ed. Alan Bowman, and Eugene Rogan, pp. 33 - 60. Oxford: Oxford University Press.
- 2000 Pouvoir central et pouvoirs locaux: Problèmes historiographiques et méthodologiques. In *Égypte pharaonique: Déconcentration, cosmopolitisme*, Méditerranées: Revue du Centre d'études internationales sur la romanité 24, ed. Bernadette Menu, pp. 15 - 39. Paris: L'Harmattan.
- 2004 How relevant was personal status to the functioning of the rural economy in Pharaonic Egypt? In *La dépendance rurale dans l'Antiquité égyptienne et proche-orientale*, Bibliothèque d'étude 140, ed. Bernadette Menu, pp. 157 - 186. Cairo: Institut français d'archéologie orientale.

Fairman, Herbert Walker

- 1953 Review of A. Gardiner: *The Wilbour Papyrus*. *Journal of Egyptian Archaeology* 39, pp. 118 - 123.

Farina, Giulio

- 1916 Le funzioni del visir faraonico sotto la XVII dinastia. *Rendiconti della Reale Accademia dei Lincei. Classe di scienze morali, storiche e filologiche* 5, Vol. 25, pp. 923 - 974, plates A and B.

Faulkner, Raymond

- 1952 *The Wilbour Papyrus, Vol. 4: Index*. Oxford: Oxford University Press. (Edited by Alan H. Gardiner.)
- 1955 The installation of the vizier. *Journal of Egyptian Archaeology* 41, pp. 18 - 29.

Fischer-Elfert, Hans-Werner

- 1989 Zwei Akten aus der Getreideverwaltung der XXI. Dynastie (P. Berlin 14.384 und P. Berlin 23098). In *Miscellanea Aegyptiologica: Wolfgang Helck zum 75. Geburtstag*, ed. Hartwig Altenmüller, and Renate Germer, pp. 39 - 65. Hamburg: Archäologisches Institut der Universität Hamburg.

Frood, Elizabeth

- 2007 *Biographical texts from Ramessid Egypt*. Writings from the Ancient World 26, ed. John Baines. Atlanta: Society of Biblical Literature.

Gaballa, Gaballa Ali

- 1977 *The Memphite tomb-chapel of Mose*. Warminster: Aris & Phillips.

Gardiner, Alan

- 1905 *Inscription of Mes: A contribution to the study of Egyptian judicial procedure*. Untersuchungen zur Geschichte und Altertumskunde Ägyptens 4/3. Leipzig: Hinrichs.
- 1912 The stele of Bilgai. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 50, pp. 49 - 57, plate IV.
- 1935 Piankhi's instructions to his army. *Journal of Egyptian Archaeology* 21, pp. 219 - 223.
- 1937 *Late-Egyptian miscellanies*. Bibliotheca Aegyptiaca 7. Brussels: Fondation égyptologique Reine Elisabeth.

- 1938 The mansion of life and the master of the king's largess. *Journal of Egyptian Archaeology* 24, pp. 83 - 91.
- 1941 Ramesside texts relating to the taxation and transport of corn. *Journal of Egyptian Archaeology* 27, pp. 19 - 73.
- 1941- *The Wilbour Papyrus*. 3 volumes (1941 - 1948). Oxford: Oxford University Press.
- 1948 *Ramesside administrative documents*. London: Oxford University Press.
- 1951 A protest against unjustified tax-demands. *Revue d'Égyptologie* 6, pp. 115 - 133.
- 1952 Some reflections on the Nauri decree. *Journal of Egyptian Archaeology* 38, pp. 24 - 33.
- 1959 *The Royal Canon of Turin*. Oxford: Griffith Institute.
- Garstang, John
- 1903 *Maḥāsna and Bêt Khallâf*. Egyptian Research Account Memoir 7. London: Quaritch.
- Gasse, Annie
- 1988 *Données nouvelles administratives et sacerdotales sur l'organisation du domaine d'Amon, XXe - XXIe dynasties: À la lumière des Papyrus Prachov, Reinhardt et Grundbuch (avec édition princeps des papyrus Louvre AF 6345 et 6346-7)*. 2 volumes. Bibliothèque d'étude 104. Cairo: Institut français d'archéologie orientale.
- Goedicke, Hans
- 1967 *Königliche Dokumente aus dem Alten Reich*. Ägyptologische Abhandlungen 14. Wiesbaden: Harrassowitz.
- 1984 *Studies in the Hekanakhte Papers*. Baltimore: Halgo.
- 1998 *Pi(ankh)y in Egypt: A study of the Pi(ankh)y stela*. Baltimore: Halgo.
- Grandet, Pierre
- 1994- *Le Papyrus Harris I: BM 9999*. 3 volumes (1994 - 1999). Bibliothèque d'étude 109 and 129. Cairo: Institut français d'archéologie orientale.
- Griffith, Francis Llewellyn
- 1927 The Abydos decree of Seti I at Nauri. *Journal of Egyptian Archaeology* 13, pp. 193 - 208.
- Grimal, Nicolas
- 1981 *La stèle triomphale de Pi(ankh)y au Musée du Caire: JE 48862 et 47086 - 47089*. Mémoires publiés par les membres de l'Institut français d'archéologie orientale 105. Cairo: Institut français d'archéologie orientale.
- 1992 *A history of ancient Egypt*. Oxford and Cambridge, Mass.: Blackwell.
- Gutgesell, Manfred
- 1982 Die Struktur der pharaonischen Wirtschaft - eine Erwiderung. *Göttinger Miszellen* 56, pp. 95 - 109.
- Harari, Ibram
- 1977 Le principe juridique de l'organisation sociale dans le décret de Sêti Ier à Nauri. In *Le droit égyptien ancien*, ed. Aristide Théodoridès, pp. 57 - 73. Brussels: Institut des hautes études de Belgique.
- 1984 Le recrutement de main d'oeuvre dans le décret de Sêti Ier à Nauri. *Serapis* 7, pp. 23 - 32.
- Haring, Ben
- 1997 *Divine households: Administrative and economic aspects of the New Kingdom royal memorial temples in western Thebes*. Egyptologische Uitgaven 12. Leiden: Nederlands Instituut voor het Nabije Oosten.
- 1998 Access to land by institutions and individuals in Ramesside Egypt (Nineteenth and Twentieth Dynasties: 1294 - 1070 BC). In *Landless and hungry? Access to land in early and traditional societies: Proceedings of a seminar held in Leiden, 20 and 21 June, 1996*, CNWS Publications 67, ed. Ben Haring, and Remco de Maaijer, pp. 74 - 89. Leiden: Research School CNWS.
- 2004 Texts, taxes and temples. *Chronique d'Égypte* 79, pp. 22 - 30.
- 2006 Institutional agriculture and the temples in Ramesside Egypt. In *L'agriculture institutionnelle en Égypte ancienne: État de la question et perspectives interdisciplinaires*, Cahiers de recherches de l'Institut de papyrologie et d'égyptologie de Lille 25, ed. Juan Carlos Moreno García, pp. 125 - 136. Villeneuve d'Ascq: Université Charles-de-Gaulle, Lille 3.
- Hayes, William
- 1946 Royal decrees from the temple of Min at Coptus. *Journal of Egyptian Archaeology* 32, pp. 3 - 23.

- 1955 *A papyrus of the late Middle Kingdom in the Brooklyn Museum [Papyrus Brooklyn 35.1446]*. New York: The Brooklyn Museum.
- 1973 *Ostraka and name stones from the tomb of Sen-Mut (no. 71) at Thebes*. Publications of the Metropolitan Museum of Art, Egyptian Expedition 15. New York: Arno Press.
- Helck, Wolfgang
- 1955 Das Dekret des Königs Haremheb. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 80, pp. 109 - 136.
- 1958 *Zur Verwaltung des Mittleren und Neuen Reiches*. Leiden: E. J. Brill.
- 1963- *Materialien zur Wirtschaftsgeschichte des Neuen Reiches*. Vol. 1 - 6 (1963 - 1969). Wiesbaden: Verlag der Akademie der Wissenschaften und der Literatur in Mainz.
- 1972 Abgaben und Steuern. In *Lexikon der Ägyptologie*, Vol. 1 (columns 3 - 12), ed. Wolfgang Helck, and Eberhard Otto. Wiesbaden: Otto Harrassowitz.
- 1975 *Wirtschaftsgeschichte des Alten Ägypten im 3. und 2. Jahrtausend vor Chr.* Handbuch der Orientalistik. Leiden and Cologne: Brill.
- Hughes, George
- 1952 *Saite Demotic land leases*. Studies in Ancient Oriental Civilization 28. Chicago: Oriental Institute of the University of Chicago.
- James, Thomas Garnet Henry
- 1962 *The Hekanakhte papers and other early Middle Kingdom documents*. Publications of the Metropolitan Museum of Art, Egyptian Expedition 19. New York: The Metropolitan Museum of Art.
- 1984 *Pharaoh's people: Scenes from life in Imperial Egypt*. Oxford: Oxford University Press.
- 1991 Egypt: the Twenty-fifth and Twenty-sixth Dynasties. In *The Cambridge ancient history*, Vol. 3, part 2, ed. John Boardman, I. E. S. Edwards, N. G. L. Hammond, and E. Sollberger, pp. 677 - 747. Cambridge: Cambridge University Press.
- James, Thomas Garnet Henry, and M. R. Apted
- 1953 *The mastaba of Khentika called Ikbekbi*. London: Egypt Exploration Society.
- Janssen, Jac. J.
- 1961 *Two ancient Egyptian ship's logs: Papyrus Leiden I 350 verso and Papyrus Turin 2008 + 2016*. Leiden: Brill.
- 1975a *Commodity prices from the Ramessid Period: An economic study of the village of necropolis workmen at Thebes*. Leiden: Brill.
- 1975b Prolegomena to the study of Egypt's economic history during the New Kingdom. *Studien zur Altägyptischen Kultur* 3, pp. 127 - 185.
- 1979 The role of the temple in the Egyptian economy during the New Kingdom. In *State and temple economy in the ancient Near East: Proceedings of the international conference organized by the Katholieke Universiteit Leuven from the 10th to the 14th of April 1978*, Vol. 2, Orientalia Lovaniensia Analecta 6, ed. Edward Lipiński, pp. 505 - 515. Leuven: Departement Oriëntalistiek.
- 1981 Die Struktur der pharaonischen Wirtschaft. *Göttinger Miszellen* 48, pp. 59 - 77.
- 1986 Agrarian administration in Egypt during the Twentieth Dynasty. *Bibliotheca Orientalis* 43, pp. 351 - 366.
- 1991 Requisitions from Upper Egyptian temples (P. BM 10401). *Journal of Egyptian Archaeology* 77, pp. 79 - 94.
- 2004 *Grain transport in the Ramesside Period: Papyrus Baldwin (BM EA 10061) and Papyrus Amiens*. Hieratic Papyri in the British Museum 8. London: The British Museum Press.
- Junker, Hermann
- 1939 *Phrnfr*. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 75, pp. 63 - 84.
- Kanawati, Naguib
- 1977 *The Egyptian administration in the Old Kingdom: Evidence on its economic decline*. Warminster: Aris & Phillips.
- 1980 *Governmental reforms in Old Kingdom Egypt*. Warminster: Aris & Phillips.

Kaplony, Peter

- 1963 *Die Inschriften der ägyptischen Frühzeit*. 3 volumes. Ägyptologische Abhandlungen 8. Wiesbaden: Harrassowitz.

Katary, Sally L. D.

- 1989 *Land tenure in the Ramesside Period*. London and New York: Kegan Paul International.
- 1999 Land-tenure in the New Kingdom: The role of women smallholders and the military. In *Agriculture in Egypt: From Pharaonic to modern times*, ed. Alan Bowman, and Eugene Rogan, pp. 61 - 82. Oxford: Oxford University Press.
- 2000 O. Strasbourg H 106: Ramesside split holdings and a possible link to Deir el-Medina. In *Deir el-Medina in the third millennium AD: A tribute to Jac. J. Janssen*, ed. Robert Demarée, and Arno Egberts, pp. 171 - 208. Leiden: Nederlands Instituut voor het Nabije Oosten.
- 2001a Labour on smallholdings in the New Kingdom: O. BM 5627 in light of P. Wilbour. *Journal of the Society for the Study of Egyptian Antiquities* 28, pp. 111 - 123.
- 2001b Taxation. In *The Oxford encyclopedia of ancient Egypt*, Vol. 3, ed. Donald Redford, pp. 351 - 356. Oxford and New York: Oxford University Press.
- 2006 The wsf plots in the Wilbour Papyrus and related documents: A speculative interpretation. In *L'agriculture institutionnelle en Égypte ancienne: état de la question et perspectives interdisciplinaires*, Cahiers de recherches de l'Institut de papyrologie et d'égyptologie de Lille 25, ed. Juan Carlos Moreno García, pp. 137 - 155. Villeneuve d'Ascq: Université Charles-de-Gaulle, Lille 3.
- 2007 Land tenure and taxation. In *The Egyptian world*, ed. Toby Wilkinson, pp. 185 - 201. London and New York: Routledge.
- 2009 Distinguishing subclasses in New Kingdom society on evidence of the Wilbour Papyrus. In *Élites et pouvoir en Égypte ancienne*, Cahiers de recherches de l'Institut de papyrologie et d'égyptologie de Lille 28 (2009 - 2010), ed. Juan Carlos Moreno García, pp. 263 - 319. Lille: Université Charles-de-Gaulle, Lille 3.

Kees, Hermann

- 1961 *Ancient Egypt: A cultural topography*. London: Faber and Faber. (Edited by T. G. H. James. Translated from the German by Ian F. D. Morrow.)

Kemp, Barry

- 1970 Temple and town in ancient Egypt. In *Man, settlement and urbanism*, ed. Peter Ucko, Ruth Tringham, and G. W. Dimbleby, pp. 657 - 680. London: London University, Duckworth.
- 1983 Old Kingdom, Middle Kingdom and Second Intermediate Period c. 2686 - 1552 BC. In *Ancient Egypt: A social history*, ed. Bruce Trigger, Barry Kemp, David O'Connor, and Alan Lloyd, pp. 71 - 182. Cambridge: Cambridge University Press.
- 1989 *Ancient Egypt: Anatomy of a civilization*. London and New York: Routledge.
- 2006 *Ancient Egypt: Anatomy of a civilization*. 2nd edition. London and New York: Routledge.

Kitchen, Kenneth

- 1975 *Ramesside inscriptions: Historical and biographical I: Ramesses I, Sethos I, and contemporaries*. Oxford: Blackwell.
- 1979 Egypt, Ugarit, Qatna and covenant. *Ugarit Forschungen* 11, pp. 453 - 464.
- 1993 *Ramesside inscriptions: Translated and annotated: Translations I: Ramesses I, Sethos I and contemporaries*. Cambridge, Mass., and Oxford: Blackwell.
- 1996 *The Third Intermediate Period in Egypt (1100 - 650 BC)*. 2nd edition. Warminster: Aris & Phillips.

Kruchten, Jean-Marie

- 1981 *Le décret d'Horemheb: traduction, commentaire épigraphique, philologique et institutionnel*. Brussels: Université de Bruxelles.

Lacau, Pierre, and Jean-Philippe Lauer

- 1959 *La pyramide à degrés IV: Inscriptions gravées sur les vases*. Cairo: Institut français d'archéologie orientale.

Lefebvre, Gustave

- 1929 *Inscriptions concernant les grands prêtres d'Amon Romé-Roÿ et Amenhotep*. Paris: Geuthner.

Lehner, Mark

- 2000 Fractal house of pharaoh: Ancient Egypt as a complex adaptive system, a trial formulation. In *Dynamics in human and primate societies: Agent-based modeling of social and spatial processes*, ed. Timothy Kohler, and George Gumerman, pp. 275 - 353. Oxford and New York: Oxford University Press.

Lichtheim, Miriam

- 1973 *Ancient Egyptian literature: A book of readings, Volume I: The Old and Middle Kingdoms*. Berkeley, Los Angeles, and London: University of California Press.
1976 *Ancient Egyptian literature: A book of readings, Volume II: The New Kingdom*. Berkeley, Los Angeles, and London: University of California Press.
1980 *Ancient Egyptian literature: A book of readings, Volume III: The Late Period*. Berkeley, Los Angeles, and London: University of California Press.
1988 *Ancient Egyptian autobiographies chiefly of the Middle Kingdom: A study and an anthology*. Orbis Biblicus et Orientalis 84. Freiburg: Universitätsverlag; Göttingen: Vandenhoeck & Ruprecht.

Lloyd, Alan

- 1983 The Late Period, 664 - 323 BC. In *Ancient Egypt: A social history*, ed. Bruce Trigger, Barry Kemp, David O'Connor, and Alan Lloyd, pp. 279 - 348. Cambridge: Cambridge University Press.

Macadam, M. F. Laming

- 1949 *The temples of Kawa: Oxford University excavations in Nubia I: The inscriptions*. London: Oxford University Press (on behalf of the Griffith Institute, Ashmolean Museum).
1955 *The temples of Kawa: Oxford University excavations in Nubia II: History and archaeology of the site*. London: Oxford University Press (on behalf of the Griffith Institute, Ashmolean Museum).

Málek, Jaromír

- 1986 *In the shadow of the pyramids: Egypt during the Old Kingdom*. Norman, Okla.: University of Oklahoma Press.

Mallinson, Michael

- 1995 Excavation and survey in the central city, 1988 - 92. In *Amarna Reports VI*, Occasional Publications 10, ed. Barry Kemp, pp. 169 - 215. London: Egypt Exploration Society.

Menu, Bernadette

- 1970 *Le régime juridique des terres et du personnel attaché à la terre dans le Papyrus Wilbour*. Institut de papyrologie et d'égyptologie 1. Lille: Publications de la faculté des lettres et sciences humaines de l'université de Lille.
1973 L'ordonnancement interne du P. Brooklyn Museum 35.1446. *Chronique d'Égypte* 48, pp. 84 - 87.
1981 Considérations sur le droit pénal au Moyen Empire égyptien dans le p. Brooklyn 35.1446 (texte principal du recto): Responsables et dépendants. *Bulletin du centenaire: Supplément au Bulletin de l'Institut français d'archéologie orientale* 81, pp. 57 - 76.
1988 Les actes de vente en Égypte ancienne, particulièrement sous les rois Kouchites et Saïtes. *Journal of Egyptian Archaeology* 74, pp. 165 - 181.

Moreno García, Juan Carlos

- 1997 *Études sur l'administration, le pouvoir et l'idéologie en Égypte, de l'Ancien au Moyen Empire*. Aegyptiaca Leodiensia 4. Liège: Centre Informatique de Philosophie et Lettres.
1998 La population *mrt*: Une approche du problème de la servitude dans l'Égypte du IIIe millénaire. *The Journal of Egyptian Archaeology* 84, pp. 71 - 83.
1999 *hwt et le milieu rural égyptien du IIIe millénaire: Économie, administration et organisation territoriale*. Paris: Honoré Champion.
2000 Acquisition de serfs durant la Première Période intermédiaire: Une étude d'histoire sociale dans l'Égypte du IIIe millénaire. *Revue d'Égyptologie* 51, pp. 123 - 139.
2001 L'organisation sociale de l'agriculture dans l'Égypte pharaonique pendant l'Ancien Empire (2650 - 2150 avant J.-C.). *Journal of the Economic and Social History of the Orient* 44, pp. 411 - 450.
2006 Les temples provinciaux et leur rôle dans l'agriculture institutionnelle de l'Ancien et du Moyen Empire. In *L'agriculture institutionnelle en Égypte ancienne: État de la question et perspectives interdisciplinaires*, Cahiers de recherches de l'Institut de papyrologie et d'égyptologie de Lille 25, ed. Juan Carlos

- Moreno García, pp. 93 - 124. Villeneuve d'Ascq: Université Charles-de-Gaulle, Lille 3.
- 2007 The state and the organization of the rural landscape in 3rd millennium BC Pharaonic Egypt. In *Aridity, change and conflict in Africa: Proceedings of an international ACACIA conference held at Königswinter, Germany, Oct. 1 - 3, 2003*, ed. Michael Bollig, Olaf Bubbenzer, Ralf Vogelsang, and Hans-Peter Wotzka, pp. 313 - 330. Cologne: Heinrich-Barth Institut.
- 2008 Review article: La dépendance rurale en Égypte ancienne. *Journal of the Economic and Social History of the Orient* 51(1), pp. 99 - 150.
- 2009 Les *ḥwtjw* et leur rôle socio-économique au IIIe et IIe millénaires avant J.-C. In *Élites et pouvoir en Égypte ancienne*, Cahiers de recherches de l'Institut de papyrologie et d'égyptologie de Lille 28 (2009 - 2010), ed. Juan Carlos Moreno García, pp. 321 - 351. Lille: Université Charles-de-Gaulle, Lille 3.
- Morkot, Robert
- 2000 *The black pharaohs: Egypt's Nubian rulers*. London: Rubicon Press.
- Müller-Wollermann, Renate
- 1985 Warenaustausch im Ägypten des Alten Reiches. *Journal of the Economic and Social History of the Orient* 28, pp. 121 - 168.
- 1986 *Krisenfaktoren im ägyptischen Staat des ausgehenden Alten Reichs*. Tübingen: Universität Tübingen.
- Muhs, Brian
- 2005 *Tax receipts, taxpayers, and taxes in Early Ptolemaic Thebes*. Oriental Institute Publications 26. Chicago: Oriental Institute of the University of Chicago.
- Murnane, William
- 1995 *Texts from the Amarna Period in Egypt*. Writings from the Ancient World 5. Atlanta, Ga.: Scholars Press.
- Myśliwiec, Karol
- 2000 *The twilight of ancient Egypt: First millennium B.C.E.* Translated by David Lorton. Ithaca and London: Cornell University Press.
- Naville, Édouard
- 1892 *The festival-hall of Osorkon II, in the great temple of Bubastis (1887 - 1889)*. Memoir of the Egypt Exploration Fund 10. London: Trübner & Co.
- Newberry, Percy Edward
- 1900 *The life of Rekmara: Vezir of Upper Egypt under Thothmes III and Amenhetep II (circa B.C. 1471 - 1448)*. Westminster: A. Constable and Co.
- Parkinson, Richard
- 1991 *Voices from ancient Egypt: An anthology of Middle Kingdom writings*. Norman, Okla.: University of Oklahoma Press.
- Petrie, William Matthew Flinders
- 1902 *Abydos I*. Memoir of the Egypt Exploration Fund 22. London: Egypt Exploration Fund.
- Petrie, William Matthew Flinders, Gerald Wainwright, and Alan Gardiner
- 1913 *Tarkhan I and Memphis V*. British School of Archaeology in Egypt 23. London: British School of Archaeology in Egypt.
- Pflüger, Kurt
- 1946 The Edict of King Haremhab. *Journal of Near Eastern Studies* 5(4), pp. 260 - 276.
- Polanyi, Karl
- 1977 *The livelihood of man*. New York: Academic Press.
- Polanyi, Karl, Conrad M. Arensberg, and Harry W. Pearson (eds.)
- 1971 *Trade and market in the early empires: Economics in history and theory*. Chicago: Henry Regnery Co. (1st edition published in 1957.)

Porten, Bezalel

- 1996 *The Elephantine Papyri in English: Three millennia of cross-cultural continuity and change*. Leiden and New York: Brill.

Porter, Bertha, and Rosalind Moss

- 1960 *Topographical bibliography of ancient Egyptian hieroglyphic texts, reliefs, and paintings (PM), Vol. 1: The Theban necropolis: Part 1: Private tombs*. 2nd edition, revised and augmented by Jaromír Málek. Oxford: Griffith Institute.

Quirke, Stephen

- 1990 *The administration of Egypt in the late Middle Kingdom: The hieratic documents*. New Malden: SIA Publishing.
2004 *Egyptian literature 1800 BC: Questions and readings*. Egyptology 2. London: Golden House.

Redford, Donald

- 1972 Studies in relations between Palestine and Egypt during the first millennium B.C., Part I: The taxation system of Solomon. In *Studies on the ancient Palestinian world*, ed. John Wevers, and Donald Redford, pp. 141 - 156. Toronto: University of Toronto Press.
1986 *Pharaonic king-lists, annals and day-books: A contribution to the study of the Egyptian sense of history*. SSEA Publications 4. Mississauga, Ontario: Benben Publications.

Reisner, George

- 1931 Inscribed monuments from Gebel Barkal. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 66, pp. 76 - 100.

Römer, Malte

- 1989 Einige Anmerkungen zur Diskussion über die Ökonomie im alten Ägypten. *Göttinger Miszellen* 108, pp. 7 - 20.
1994 *Gottes- und Priesterherrschaft in Ägypten am Ende des Neuen Reiches: Ein religionsgeschichtliches Phänomen und seine sozialen Grundlagen*. Ägypten und Altes Testament 21. Wiesbaden: Harrassowitz.
2001 Landholding. In *The Oxford encyclopedia of ancient Egypt*, Vol. 2, ed. Donald Redford, pp. 255 - 258. Oxford and New York: Oxford University Press.
2007 Die Aussagekraft der Quellen für das Studium ägyptischer Wirtschaft und Verwaltung (1. Teil). *Zeitschrift für Ägyptische Sprache und Altertumskunde* 134, pp. 66 - 81.

Schaedel, Herbert

- 1936 *Die Listen des grossen Papyrus Harris: Ihre wirtschaftliche und politische Ausdeutung*. Glückstadt: Augustin.

Schäfer, Heinrich

- 1905 *Urkunden der älteren Äthiopienkönige (Urk. III)*. Urkunden des Ägyptischen Altertums 3. Leipzig: J. C. Hinrichs.

Schott, Siegfried

- 1971 "Jahr 15" am Rande einer Inventartafel aus Heliopolis: Zur Jahreszählung altägyptischer Annalen. In *Aufsätze zum 70. Geburtstag von Herbert Rieke*, Beiträge zur ägyptischen Bauforschung und Altertumskunde 12, ed. Gerhard Haeny, pp. 65 - 73. Wiesbaden: In Kommission im Franz Steiner Verlag.

Seidlmayer, Stephan

- 1996 Town and state in the early Old Kingdom: A view from Elephantine. In *Aspects of early Egypt*, ed. Jeffrey Spencer, pp. 108 - 127. London: British Museum Press.

Sethe, Kurt

- 1905- *Urkunden der 18. Dynastie (Urk. IV)*. 4 volumes (1905 - 1958). Urkunden des ägyptischen Altertums IV. Leipzig: J. C. Hinrichs.
1909 *Die Einsetzung des Veziers unter der 18. Dynastie*. Untersuchungen zur Geschichte und Altertumskunde Ägyptens 5/2. Leipzig: Hinrichs.
1933 *Urkunden des Alten Reichs (Urk. I)*. Urkunden des ägyptischen Altertums I. Leipzig: J. C. Hinrichs.

Spalinger, Anthony

- 1979 The military background of the campaign of Piye (Piankhy). *Studien zur Altägyptischen Kultur* 7, pp. 273 - 301.
- 1991 Some revisions of temple endowments in the New Kingdom. *Journal of the American Research Center in Egypt* 28, pp. 21 - 39.

Strudwick, Nigel

- 2005 *Texts from the Pyramid Age*. Writings from the Ancient World 16. ed. Ronald J. Leprohon. Leiden and Boston: Brill.

Stuchevsky, Iosif

- 1982 *Zemledeľ'sty gosudarstvennogo khozjaĭstva drevnego Egipta epokhi Ramessidov*. Moscow: Izdatel'stvo "Nauka".

Taylor, John

- 2000 The Third Intermediate Period (1069 - 664 BC). In *The Oxford history of ancient Egypt*, ed. Ian Shaw, pp. 330 - 368. Oxford: Oxford University Press.

Théodoridès, Aristide

- 1971 The concept of law in ancient Egypt. In *The legacy of Egypt*, ed. John Harris, pp. 291 - 322. Oxford: Clarendon Press.

Traunecker, Claude

- 2005 Amenhotep IV: Percepteur royal du disque. In *Akbénaton et l'époque amarnienne*, ed. Thierry-Louis Bergerot, pp. 145 - 184. Paris: Éditions Khéops; Centre d'égyptologie.

van den Boorn, G. P. F.

- 1988 *The duties of the vizier: Civil administration in the early New Kingdom*. London: Kegan Paul International.

Virey, Philippe

- 1889 *Le tombeau de Rekhmara, préfet de Thèbes sous la XVIIIe dynastie*. Mémoires publiés par les membres de la mission archéologique française au Caire 5/1. Cairo: Institut français d'archéologie orientale.

Vleeming, Sven

- 1993 *Papyrus Reinhardt: An Egyptian land list from the tenth century B.C.* Berlin: Akademie Verlag.

Warburton, David

- 1991 Keynes'sche Überlegungen zur altägyptischen Wirtschaft. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 118, pp. 76 - 85.
- 1997 *State and economy in ancient Egypt: Fiscal vocabulary of the New Kingdom*. Orbis Biblicus et Orientalis 151. Freiburg: Academic Press; Göttingen: Vandenhoeck & Ruprecht.
- 2000 Before the IMF: The economic implications of unintentional structural adjustment in ancient Egypt. *Journal of the Economic and Social History of the Orient* 43, pp. 65 - 131.

Welsby, Derek

- 1996 *The kingdom of Kush: The Napatan and Meroitic empires*. London: British Museum Press.

Wente, Edward

- 1990 *Letters from ancient Egypt*. Writings from the Ancient World 1. Atlanta: Scholars Press and Society of Biblical Literature.

Wilke, Thomas

- 2000 Ancient Egypt: An economist's view. *Göttinger Miszellen* 178, pp. 81 - 95.

Wilkinson, Toby

- 1999 *Early dynastic Egypt*. London and New York: Routledge.
- 2000 *Royal annals of ancient Egypt: The Palermo Stone and its associated fragments*. London and New York: Kegan Paul International.