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EGYPTIAN CURSES 2  
*A Research on Ancient Catastrophes*

Edited by GIUSEPPINA CAPRIOTTI VITTOZZI

With contributions by

A. ANGELINI, M. BALDI, G. CAPRIOTTI VITTOZZI, F. CONTARDI, G. DEIANA, P. FALCIONI,  
M. FEA, S. GUSMANO, A. IACOVIELLO, V. P.-M. LAISNEY, K. LEMMENS, B. MARCOLONGO,  
R. MONTANARO, C. MORO, P. NEGRI SCAFA, P. PLINI, M. SALA, R. SALZANO,  
C. SIMONETTI, G. SQUILLACE, C. STEWART, D. VENTURA

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**DISASTERS CONNECTED WITH THE RHYTHM OF THE NILE  
IN THE TEXTUAL SOURCES**

**FEDERICO CONTARDI**

**ARCHÉOLOGIE DES SOCIÉTÉS MÉDITERRANÉENNES - UNIVERSITÉ PAUL-VALÉRY, MONTPELLIER**



**2**



## Abstract

*Famines and epidemics (i3dt rnpt) are two of the natural catastrophes connected with the rhythm of the Nile: the former were determined by a low inundation, while the latter were the consequence of excessive stagnation of the waters. With regard to famines, much has been written; in this paper, I focus on the interpretation of the textual sources of the First Intermediate Period in order to test the thesis of B. Bell (which occasionally still finds acceptance), who considered the end of the Old Kingdom as a consequence of a series of famines determined by climate change. As for the epidemics, their diffusion during the year is examined in the light of the calendar of the lucky and unlucky days (papyrus Sallier IV and papyrus Cairo JE 86637), and one tablet of the XVIII dynasty in the Louvre, which seems not have been hitherto considered as a textual witness of this phenomenon.*

## 1. Introduction

In the course of the millennia of Egyptian history, there is a repeated occurrence of natural catastrophes which placed the individual and society in the face of dramatic phenomena such as destruction and death. Two of these phenomena, famine and epidemics (*i3dt rnpt* “annual pestilence”), were closely connected with the inundation of the Nile, that annual event which was the bearer of life throughout the land. It may seem paradoxical, but precisely that event which was so beneficial gave rise to lethal results. The famine and the epidemics were tragic events that were wholly unexceptional, even if they did not both occur with the same frequency. In fact, the famine was a less frequent event than the annual pestilence. The construction of the Aswan dam has notably changed the Egyptians’ way of life, especially in the country, and has also put an end to man’s dependence on the rhythms and the whims of nature.

## 2. Famines

Before the construction of the great Aswan dam, the fertility of the Nile Valley depended exclusively on the rhythm of the annual flooding of the river, which ended up covering a vast area of the land on both banks for several months. This natural phenomenon happened in the summer months when, on the Ethiopian Plateau, the waters of the Blue Nile carried the powerful torrents of the monsoon rains. Once the waters had receded, leaving huge deposits of silt, the soil became very fertile. The best return from this considerable supply of water was rendered possible by human effort by means of hydraulic operations.

The life and economy of the country depended on the inundation. A poor one, for example, produced a lesser amount of fertile land and so smaller harvests. The negative effects of this were attenuated by the employment of means intended to optimise the supply of water. It appears clear, therefore, that organisational efficiency in providing technological and human solutions were the means of limiting the extent of the famine and its effects. The first textual reference which documents the construction of a work allowing the better employment of the waters of a low inundation is contained in the biography of the nomarch Khety I from Asyut (tomb V) of the IX-X Heracleopolitan dynasty<sup>1</sup>. In it, the nomarch records how, thanks to the construction of what seems to have been a barrage, which allowed the transportation of a large volume of water measuring ten cubits (probably in width, about five metres), he succeeded in guaranteeing a hydraulic supply which was able to flood the land in even the highest sites (*i3wt*)<sup>2</sup>. Staying with the text, the structure, provided with a gate, had a function similar to that of a sluice<sup>3</sup>. This work allowed the nome to escape the water crisis which, instead, afflicted the neighbouring provinces to which the governor promptly offered his support.

1 Schenkel 1965, 71-72.

2 Schenkel 1978, 29-30, 32.

3 Schenkel 1978, 32.

Much has already been written on the theme of the famine and we do not intend to repeat all the documentary evidence of this phenomenon here. It is interesting to observe, however, that, despite the fact that the textual documentation relating to the low floods of the Nile and the consequent famines are present more or less throughout the whole of Egyptian history, the greater number are concentrated in the First Intermediate Period, that is, in that historical period of 200 years which goes from the end of the Old Kingdom to the end of the XI dynasty (2150-1940)<sup>4</sup>, when the power of the local self-governing units replaces the unitary Memphite state. This factor actually induced some scholars, starting in the seventies, to claim that the continual sequence of famines which occurred after the VI dynasty was the proof of a global climate change tending towards increased dryness and that this was at the root of the collapse of the Memphite monarchy – and therefore of the Old Kingdom – and the formation of local independent entities. This thesis was supported by B. Bell<sup>5</sup> and then taken up again by D. O'Connor<sup>6</sup>. It spread widely in the scientific community though without finding unanimous approval<sup>7</sup>. In more recent times, however, it continues to find its supporters, especially in Fekri A. Hassan<sup>8</sup>, but also, equally, its opponents<sup>9</sup>.

It seems interesting, then, to dwell on this discussion for a moment. Which of the two positions corresponds to the real historical facts? How are we to assess the written documentation? To tackle this problem, it is necessary to consider the textual documentation, bearing in mind the fact that the text is an expression of a culture and that it has a coherent meaning only within that culture.

### 2.1. The documentation

The textual documentation can be classified into two distinct categories: the autobiographies of the high provincial officials and the literary texts. The autobiographies are compositions, written on the walls of tombs, which celebrate the moral and political qualities of the individual by mentioning the important events which happened during his time of office. If their reliability is to be measured by bearing in mind the eulogistic intent of such compositions, they nonetheless represent a precious historical source. The literary sources, by contrast, are not properly historical source, and each reference has to be duly weighed and assessed in order to spot a possible historical correspondence, from the fact that the things recorded in them can refer to a generic past or to periods which are more circumscribed but still distant with regard to the period of the written material which preserves them. One of the methodological limits of the thesis advanced by B. Bell is the fact that it is based on both the sources without employing due caution.

If we consider the nature of these two documental typologies, it appears to me more than ever necessary to begin with the autobiographies. The first list is contained in the work of J. Vandier on the famine in all the periods of Egyptian history<sup>10</sup>, while, for an update, which brings in the material published in the meantime, we are indebted to the study of Moreno Garcia on the administration of the First Intermediate Period<sup>11</sup>. The total number of autobiographies which

4 For the absolute dating, I am following Hornung – Krauss – Warburton 2006, 490-495.

5 Bell 1971.

6 O'Connor 1974.

7 Among the supporters of this thesis: Redford 1992, 61-62. More cautious instead is the assessment of B. Kemp concerning the responsibility of the famines for the fall of the Old Kingdom: Kemp 1983, 180-181.

8 Hassan 1997; 2007.

9 Moeller 2005; Willems 2010, 82.

10 Vandier 1936, 100-114.

11 Moreno Garcia 1997, 88-92. Moreno Garcia's study adds a further thirteen documents to the fifteen already collected by Vandier. I have deliberately omitted the biography of Qar, governor of Edfu (Moreno Garcia 1997, 88; Vandier 1936, 3 n. 1 and 100) of the VI dynasty because it does not refer either to the low floods of the Nile or to the famines, although it has a generic mention of having given bread to the starving, referring to a *topos* very common in all the previous and subsequent biographies.



refer more or less explicitly to the low inundations of the Nile and to famines amount to twenty-eight, a significant quantity when one considers that no biography from the Old Kingdom refers to such phenomena. It is precisely this abundance of documentation that is one of the principal arguments of Bell's thesis<sup>12</sup> in support of the occurrence and gravity of this phenomenon. However, this factor is clearly also its weak point. If it is true, in fact, as he maintains, that a continual series of famines led to the weakening and fall of the Memphite state and so to the end of the Old Kingdom, how does one explain the fact that these are never mentioned in any document of the VI dynasty and appear only in the following period?

The autobiographies of the governors and provincial officials leave no doubts concerning the nature of the events described from the fact that a specific lexicon was employed. The most common term is *hkr(w)*, a root which contains the concept of starving and of famine. The expression which indicates the period or periods of famine is *rnpt hkrw*<sup>13</sup>, but equally usual is the expression *rnpt (nt) snb-ib*, literally "the year of the health of the heart", probably indicating the year of courage<sup>14</sup>, and *rnpt ksnt* "the miserable year", if need be followed by *nt snb-ib* "of courage"<sup>15</sup>.

The context in which this phenomenon occurs is where the governor of the province celebrates his good governance which consists in sustaining his population, sparing them the effects of the famine and of a low inundation of the Nile which has instead afflicted the neighbouring provinces, taking a toll of lives. Some governors record having sustained even the populations of the other provinces, donating the emmer and barley which they lacked. Never in any inscription is it stated that the population of their own province died of hunger.

The famine is presented as a phenomenon which, though investing Egypt in equal misery, spares the population of those provinces that are well governed. The phenomenon does not seem to be disastrous and violent to the point of determining the end of an entire political structure like the Memphite monarchy. Rather, it seems here that a good administrative organisation was the most effective tool with which to tackle the periods of famine.

The famine is always presented as a phenomenon leading to a solution which never places in jeopardy the safety of the territory and the population governed by the nomarch. The autobiographies can be divided into two categories:

1) autobiographies which celebrate the nomarch as the one who has kept his population alive, with the possible addition that people of the neighbouring provinces died of hunger. To this group, which is also the most numerous and which occurs with expressions that are partly standardised, belongs, for example, the stele of Mentuhotep (University College London 1433):

"When a low inundation (*h<sup>c</sup>py šri*) occurred during the twenty-fifth year (of Amenemhat I or Sesostris I)<sup>16</sup>, I did not let my district starve (*hkr*). I gave to it Upper Egyptian barley and emmer. I did not let misery come to pass in it until high inundations (*h<sup>c</sup>py ʕ*) came again"<sup>17</sup>.

2) autobiographies which celebrate the nomarch as the one who has managed to feed the populations of the neighbouring provinces as well as his own people. Most representative of these inscriptions is undoubtedly that of Ankhtifi of Moalla, since it records the events in a detailed way, more so than the inscription of Antefoqer<sup>18</sup>.

12 Bell 1971, 8.

13 *Wb* III 175,8; Vandier 1936, 61.

14 *Wb* IV 160,1; Vandier 1936, 90.

15 Vandier 1936, 62.

16 For the dating of the beginning of the XII dynasty: Schenkel 1964, 7.

17 Vandier 1936, 113.

18 Vandier 1936, 111.

“All of Upper Egypt died of hunger until each man ate his own sons, but, as for me, I saw to it that no one died of hunger in this nome (...) I caused the house of Elephantine to live, I caused *Ibt-ngn* to live during those years, after the cities of Hefat (Moalla) and Hormer were satisfied”<sup>19</sup>.

All the documentation shows that the famine was not necessarily a disastrous phenomenon from which there was no escape. It was precisely the activity and policy of the nomarchs that allowed them to be able to deal with it by employing clear-cut strategies, first among which was the creation of reserves of cereals such as to guarantee minimum requirements<sup>20</sup>. Obviously such a task was anything but easy since the reserves had to cover a whole year. Accordingly, a careful system of rationing was of absolute importance. The official, Senni (*CGC* 20500), records the responsibility of his office in the years of famine:

“I measured out Upper Egyptian barley for the sustenance of all this city in the doorway of the count, overseer of priests Djefi in the miserable years of famine (*rnpwt ksnt nt snb-ib*)”<sup>21</sup>.

If the reserves of cereal did not prove sufficient, it was necessary to seek the support of the neighbouring provinces by acquiring their grain. They, in their turn, recorded such sales, masking them as acts of generosity. From the biography of Djari (Cairo JE 41437), we understand how such an acquisition must have been the result of some tight bargaining, based, probably, on the ability and the diplomacy of the official doing the acquiring to succeed in obtaining the most advantageous conditions:

“The great ruler made me fare north to obtain food, consisting of Upper Egyptian barley for this whole land, from Elephantine to the nome of Aphroditopolis, because of my knowing matters and speaking well”<sup>22</sup>.

On another stele (Bruxelles E. 4985)<sup>23</sup>, the same Djari mentions the year of famine and the activity engaged in for the support of his territory. It seems clear to me that this mention is to be linked with the above-mentioned mission to the north to obtain barley and that, for reasons of propaganda, there is no mention that the solution to the problem of the famine was achieved through acquiring barley from other provinces. Clearly, in similar texts, where the propagandist character is strong, the opposite point of view, that is, of the one supplying the barley, is the only one that merits emphasis. It is understood in those autobiographies where the nomarch is celebrated as one who has provided food for the populations of the neighbouring provinces as well as for his own people. Only rarely is this “act of generosity” presented in its more properly commercial, even mercenary, aspect, though this happens in the biography of Ankhtifi:

“I made a loan of Upper Egyptian barley as rations to the north”<sup>24</sup>.

A more technical solution for dealing with the famine consisted in the employment of structures such as to make the best management of the scarce water supply. Systems of this kind must have existed despite the fact that there is only one mention, in the above-cited biography of Khety I at Asyut (tomb V), which speaks of the creation of a kind of dam which allowed the flow of water (*itrw*) to be channelled towards the fields (*hbsw*) and to be regulated by means of a gate<sup>25</sup>.

The years of low inundation of the Nile were by no means characteristic of the First Intermediate Period. There exists, in fact, a whole series of inscriptions which testifies that this phenomenon, which could be repeated in consecutive years, happened over and over again

19 Vandier 1950, 220-221.

20 The inscription of Tjuti (*CGC* 20502) makes a generic reference to a plan for the provisioning of the city with food: Schenkel 1978, 40.

21 Schenkel 1965, 31; Fischer 1964, 67-68 and pl. 18.

22 Lichtheim 1988, 40; Schenkel 1965, 100.

23 Schenkel 1965, 101.

24 For the translation, see Vandier 1936, 105 and comment 107-108, 121; Schenkel 1965, 54.

25 Brunner 1937, 11, 64.

in other periods too. The chronological distribution of the documentation shows that it is practically absent in those historical periods in which the power of the state is strong. The attestations stop at the beginning of the XII dynasty with the reign of Sesostri I (biography of Amenemhat at Beni Hassan<sup>26</sup>; letter 2 of Heqanakht<sup>27</sup>) and resume in the Second Intermediate Period (tomb of Bebi at El-Kab and the stele of Horherkhutef)<sup>28</sup>. Throughout the long period of the New Kingdom, the famine appears only in literary contexts (story of Khonsuemheb and the ghost<sup>29</sup>; in a supplication to Amun<sup>30</sup>) and in the final part of Papyrus Harris I<sup>31</sup>, where the end of the XIX dynasty is narrated through the *topos* of the period of chaos. The sole text without a propagandist aim, and so largely sticking to reality, is the papyrus with the trial of the grave robbers (Papyrus BM 10052)<sup>32</sup>. In one passage, one of the accused declares that he received silver in exchange for barley in order to provide against the year of the famine (“the year of the hyenas, when people were hungry”). The context seems to indicate that the expression “year of the hyenas” is meant to indicate the year when the lack of food forced people to eat these animals. In fact, in the village of the workmen of Tell el-Amarna, deposits of hyena bones have been found with cuts typical of butchery, evidence for the use of such animals for eating<sup>33</sup>.

Mention of the low inundations of the Nile and of famines lasts until the Greco-Roman period, being attested on temple inscriptions. These types of texts have a strong propagandist connotation and manner. In them, thanks to their benevolence, the gods guarantee the sovereign years of prosperity safe from famines<sup>34</sup>.

This same value judgement can also be ascribed to the literary texts of the Middle Kingdom, that is, to those texts to which B. Bell (and also Fahkri) attribute historical value<sup>35</sup>. A text like the prophecy of Neferti, like the discourse to mankind of the Papyrus Harris I, utilises the famine theme – together with other *topoi*, such as the theme of social disorder – to propagandist ends. The text celebrates the accession of a sovereign as one who brings the country back to conditions of order and stability, social as well as natural. From a practical point of view, the absence of a sovereign, or the absence of a strong power, inevitably produced inauspicious conditions.

Lack of organisation in the management of the inundation, in the carrying out of agricultural work, and in the measuring and redistribution of cereals were decisive factors leading to the unleashing of problems of nutrition and to the deterioration of the social balance. Naturally, that deteriorated when there also happened a low inundation of the Nile for to tackle the effects of this a highly efficient organisation was indispensable. From this point of view we should understand the passage of the Teaching of Amenemhat I “no one died of hunger in my years (of reigning) and no one died of thirst”. In fact, the significance of this phrase is not that during his reign there were no low inundations but rather that the administrative machine had always been efficient.

## 2.2. Assessment of the written documentation

The written evidence relating to the end of the III millennium cannot be taken as proof to demonstrate that in that period there were continual and frequent low inundations of the Nile and that these were the cause of the fall of the Old Kingdom.

26 Vandier 1936, 114.

27 Allen 2002, 16.

28 Vandier 1936, 115.

29 Gardiner 1932, 91,4.

30 Papyrus Anastasi IV: Gardiner 1937, 45,6.

31 Grandet 1994, 335.

32 KRI VI, 791,7.

33 Legge 2011, 616-620.

34 For some of the evidence, including the famous Famine Stele: Vandier 1936, 132-149.

35 Bell 1971, 12-16; Hassan 2007, 361-374.

As far as the biographies are concerned, it is not necessary to interpret the concentration of documentation in the First Intermediate Period as proof that that period was the scene of exceptionally numerous famines. Those texts mentioned famine – a subject which could not have been posted on a royal inscription because it would have signified the displeasure of the divine world with the sovereign<sup>36</sup> – to highlight the qualities of the governor of the province in dealing with it. In the ensuing periods, when power was re-established in the hand of a single sovereign for the whole country, this theme disappears from the official-propagandist documentation but appears in documents which are not an expression of the royal power such as, for example, the second letter of Heqanakht or the papyrus with the trial of the grave robbers (Papyrus BM 10052, see above). It reappears when the central power is weak again, as, for example, during the XXII dynasty, in the autobiography of Djedkhonsu-iuf-ankh<sup>37</sup>.

Thus, in the autobiographies of the First Intermediate Period, the famine, more than a natural phenomenon, is chiefly a cultural one, employed by the nomarchs – sometimes in proportions exaggerated out of all reality – as a means of legitimation, to demonstrate in a tangible way their role as dispensers of life for their population<sup>38</sup>.

If, then, the textual documents of the First Intermediate Period cannot be considered in support of Bell's theory of a sudden climate change towards aridisation at the end of the III millennium, neither can the scientific results aimed at studying the variation in the level of the annual inundation of the Nile, based on observations of the level of the lake of Fayum and on measuring the alluvial sediments of the Delta. In fact, this scientific investigation, led by N. Moeller, seems to demonstrate that the climate change was gradual and very slow, and that, therefore, it was not such as to lead to the collapse of an entire state system<sup>39</sup>.

### 2.3. The inundation of the Nile and the systems of irrigation

A few years after the formulation of Bell's thesis, some studies appeared which were partly influenced by it. Among these is the essay of W. Schenkel on the introduction of irrigation systems into the Egyptian economy<sup>40</sup>. His claim is that the introduction of systems of irrigation on a vast scale happened only in the First Intermediate Period to tackle the famines due to the continual poor inundations<sup>41</sup>. The proof was the mention of the first work of irrigation in the biography of Khety I from Asyut of the First Intermediate Period. To demonstrate that such irrigation systems did not exist in the Old Kingdom, Schenkel observed that: 1) the written sources never refer to irrigation systems, 2) and there is an absence of specific titles designating the officials in charge of such an important task, despite the richness and variety of titles in the Old Kingdom<sup>42</sup>.

The silence for the Old Kingdom with regard to irrigation works is striking, but it is necessary to bear in mind that the same situation holds also for the Middle Kingdom<sup>43</sup>. Things being thus, therefore, it would seem that the employment of an irrigation system would be an exception limited to the First Intermediate Period and determined by the particular climatic situation

36 The famous Famine Stele, a royal inscription apparently promulgated by Djoser, does not contradict this statement since it is clearly an historical forgery of the Ptolemaic period created in priestly circles so as to make the territorial rights of the temple of the god Khnum stretch back into a distant era.

37 Vandier 1936, 121.

38 Moreno Garcia 1997, 86-87.

39 Moeller 2005, 153-167.

40 Schenkel 1978.

41 Schenkel does not consider the scene on the mace of the king-scorpion on which the sovereign is represented in the act of digging a canal as evidence for a canal to irrigate the fields so much as for a navigable canal: Schenkel 1978, 28.

42 The title *ḏ-mr* does not seem to have had anything to do with canal works: Martin-Pardey 1976, 43-54; Schenkel 1978, 27-29.

43 Luft 1994, 260.

which would not be repeated later on. Such a scenario seems to me rather improbable since those techniques could or must have been employed also during the famines which happened at least at the beginning of the Middle Kingdom.

The archaeological data, however, seems to demonstrate a different situation since artificial forms of dams, aimed at contained the flood waters, existed already from the time of the IV dynasty. Such barrages could have various functions: protecting the inhabited centres from inundation<sup>44</sup>; avoiding the spreading of the waters by forming reservoirs and so permitting the waters to reach the highest lands; and creating hydro-reserves. The most ancient remains of a dam are at the site of Sadd el-Kafara, situated about twelve kilometres from Helwan, on the Wadi Garawi. Radiocarbon analysis dates the work to about the IV dynasty<sup>45</sup>. The function of this structure seems to have been that of creating a basin to supply water for the alabaster workers, even if other interpretations are possible<sup>46</sup>.

However, it is to be borne in mind that the natural conformation of Egypt itself favoured an optimal distribution of the flood waters, covering even the most distant parts of the banks and that therefore great irrigation works were not necessary. In fact, in addition to its natural slope which goes from south to north, the Nile has a transverse one which rolls over both the banks, from the river bed towards the desert hills<sup>47</sup>. The land furthest from the bank is a little lower than that just beside the river. This slope is the result of the accumulation of silt during the annual inundations, silt which was distributed in an irregular way: the heavier bits were deposited just next to the banks while the lighter ones ended up progressively further away. Such a transverse slope had a further positive consequence, that of favouring the formation of a secondary hydrographic network parallel to the Nile. Along this line of depression beside the desert hills, a flow of water was deposited fed by the residue of the flood water and by the seepage of water coming from the higher ground.<sup>48</sup> The way these outer layers were fed, in particular by the seepage of water absorbed from the higher ground, must have given the impression, at least in some places, of a phenomenon similar to that of the inundation of the Nile which took place some months later. M. Gabolde has observed that this phenomenon received a theological interpretation and the place in which the resurgence of the waters was observed was called *tpht Nwn* “cave of Nun”, which, in the Theban region, corresponded to the area of the small temple of Medinet Habu. Among a wealth of documentation, Gabolde refers to an inscription of Antoninus Pius on the portico of this temple<sup>49</sup>, which describes this phenomenon very clearly: *Nwn h<sup>c</sup>.f m Twnw šm<sup>c</sup> r sp3t igrt wp.f H<sup>c</sup>py* “Nun appears in Heliopolis of the South in the district of Igeret (the necropolis), so he begins (inaugurates) the inundation”<sup>50</sup>.

My claim is that, during the Old Kingdom, the natural rhythm of the inundation, combined with this optimal geographical situation, was of itself sufficient to fertilise the land which had to satisfy the basic needs of a population which when all is taken into account was not very numerous. Certainly, artificial systems of irrigation must have existed, though perhaps not on a vast scale, and these permitted a better exploitation of the low inundations<sup>51</sup>. It is possible that a more systematic use of irrigation systems might have been brought into use as a result of demographic growth which involved a greater need for food.

44 The tradition of this practice go back as far as the dawn of Egyptian history. In fact, Herodotus (*Historiae* II 99) records the tradition that king Menes had a dam constructed to protect Memphis from the inundation.

45 Vercoutter 1994, 315.

46 Vercoutter 1994, 324.

47 Alleaume 1992, 303-307; Gabolde 1995, 245-246.

48 Alleaume 1992, 304-305.

49 *PM* II 461, 4c.

50 Gabolde 1995, 250.

51 Endesfelder 1979, 42.

### 3. The annual pestilence (*i3dt rnpt*)

On the one hand, the annual inundation of the Nile brought life, rendering fertile the cultivable land. On the other hand, however, it caused an annual mortal epidemic (*i3dt rnpt*) which spread during particular periods of the year, when the stagnant waters of the flooding and the hot weather of the summer determined the proliferation of pathogenic agents. The fear of this pestilence was so deep that exorcisms against it were included in some religious and ritual texts. There was also an attempt to forecast the danger by means of the interpretation of omens recorded on calendars dedicated to that purpose. In cases where the sickness struck an individual, there was recourse to medical treatments which, as we shall see, consisted, wholly in the recitation of magic formulae, meaning that for that type of sickness there was no cure of a pharmaceutical kind. There are also those who do not consider the *i3dt rnpt* to be a real sickness but as an indication of negative demoniacal influences<sup>52</sup>. However, I hold that it is clear from the texts that this term indicates a sickness of the infective variety, something that is also demonstrated by the temporal limits within which it manifested itself<sup>53</sup> and the indication of its transmission through breathing and swallowing.

The cause of the annual pestilence (the term “plague” is purely conventional) is never stated directly. The calendrical omens recorded on papyrus Cairo JE 86637 and on papyrus Sallier IV – both of them from the Ramesside period – show that the sickness broke out during two specific periods of the year. The first, and longer, lasted from the third month of *akhet*, day 20 (24 September), to the first month of *peret*, day 19 (22 November)<sup>54</sup>. The contagious period extended over a temporal arc of about sixty days, corresponding exactly to the period in which the inundation of the Nile was withdrawing<sup>55</sup>. The waters were stagnant for a long time; the humidity, the high summer temperatures and the terrible hygienic conditions, due also to the carcasses of the animals drowned during the flooding, constituted the ideal conditions for the explosion of forms of epidemic fever. The second, shorter, period, corresponded to the end of the year, precisely during the five epagomenal days, that is, the period immediately preceding the arrival of the new inundation<sup>56</sup>, when the waters had already withdrawn from the land for a long time and the soil was very dry. The principal danger lay in a possible scarcity of food and from a shortage of drinking water; moreover, the presence in some areas of the flood water stagnant in putrid wells formed a breeding ground for the development of bacteria. The same calendar refers to this situation in the positive interpretation of the omen, arranging the perils feared in a hierarchical order: “he shall not die of hunger, he shall not die of thirst (...) he shall not die of the annual pestilence (*i3dt rnpt*), remaining healthy every day”<sup>57</sup>.

The cause of this sickness was interpreted by the destructive force of the goddess Sekhmet, her arrows and her demon-messengers. These arrows could fall on both ordinary mortals and the sovereign equally. The protection of the latter was particularly important from an ideological point of view since it was he who was the guarantor of order and stability. This is why there are numerous formulae of exorcism for the protection of the king included in several rituals. Some are more explicit, others make an indirect reference to the annual plague. Among the explicit texts is a series recorded on the walls of the temple of Edfu in which the protection of the falcon

52 Yoyotte 1968, 82-83; more recently: Bommas 1999, 59.

53 According to H. Györy the pestilence of the year was not a specific illness which occurred regularly at the end of the year but a collection of various infectious diseases transmitted through the breath and the air (Györy 2010, 83).

54 Papyrus Sallier IV 8,8-9 and Papyrus Cairo JE 86637 15,1-2; Leitz 1994, 134-135. In the temples of Edfu (*Edfou* VI 98,11) and Dendera (*Dendara* VIII 57,6) the new year is invoked for the protection of the season of *peret* from the annual pestilence: Germond 1986, 48-49.

55 The same period of time is also observed by Strabo (XVII,1,4).

56 Papyrus Cairo JE 86637 verso 9,11-10,4; Leitz 1994, 416-417.

57 Leitz 1994, 417.

Horus, hypostasis of the Pharaoh is invoked: “protect the living image, the living falcon! Protect him and free him from the pestilence which is in this country” (*Edfou* VI 265, 5-6); “protect him from all the arrows and from the pestilence of the year” (*Edfou* VI 264, 11)<sup>58</sup>. Clearly, the end of the year was the most critical period from which it was necessary to be protected. Papyrus Leyden I 346, of the XVIII dynasty, is made up of a collection of formulae and exorcisms against the violent action of the divinities, of Sekhmet and her followers; a part is also expressly dedicated to the pestilence of the year<sup>59</sup>.

Other rituals, however refer to the phenomenon indirectly without naming it. In the ritual for the renewing of royal power during the new year (Papyrus Brooklyn 47.218.50 2,4-7), the wish is expressed for the sovereign that “there be not against him the destruction of Sekhmet or the destroying demons of Bastet (...). O Sekhmet, Bastet, protect the sovereign (...) from all the evil furies of this year”<sup>60</sup>. To avoid such fatal consequences, in addition to protection rituals, rituals intended to placate the goddess were employed such as the *shṭp-Shmt* “to pacify Sekhmet”, which took place at the end of the year to encourage the return of the flood water which was the bearer of life<sup>61</sup>.

If the goddess Sekhmet was responsible for these epidemics, her priests (*w<sup>c</sup>b Shmt*) were in charge of the healing of the sickness by means of magic arts<sup>62</sup>. The only medical text which devotes a section to the annual pestilence is the papyrus Edwin Smith of the beginning of the XVIII dynasty. By contrast with the other sections, where for every pathology the treatment to be carried out on the patient is recorded, this section instead records eight formulae for the prevention of the sickness. With regard to the aetiology of the sickness, in addition to explanations of a mythico-religious character, more objective causes are also recorded, such as, for example, the breath (*t3w*), a sign that the contagion could occur through the air passages (Papyrus Edwin Smith 18,1-11; 18, 11-16) and through the accidental swallowing of a fly (Papyrus Edwin Smith 19, 14-18)<sup>63</sup>. Food too and even objects and furnishings could constitute a source of contagion. An example would be the bedroom<sup>64</sup>, in which the individual lived his moments of greatest vulnerability, that is, during sleep (Papyrus Edwin Smith 19,18-20,8)<sup>65</sup>.

The actions of the priest of Sekhmet in relation to the annual pestilence were codified in dedicated manuals. The only example which has been preserved hails from the library of the temple of Sobek in Tebtynis, going back to the I-II century<sup>66</sup>. As far as it is possible to understand, given the particularly fragmentary state of this manuscript, the most significant novelty of this text is constituted by the indication of the symptoms, such as fevers, the presence of secretions, inflammations of the mouth and abdominal pains; further worthy of note is the reference to the contagious nature of the sickness, the necessity of keeping the patient in isolation and the need to disinfect objects<sup>67</sup>.

At this point, it seems opportune to examine a document which has not been given due consideration in connection with the theme of the *ḳ3dt rnpt*. However, although the *ḳ3dt rnpt* is not mentioned expressly, this document concerns it directly, as is shown by a comparison with the

58 Germond 1981, 287-288 (the text has a rich documentation: 286-311).

59 Bommas 1999, 13-15.

60 Goyon 1972, 57.

61 Goyon 2006.

62 Engelmann – Hallof 1996.

63 Bardinnet 1995, 518-519.

64 There existed a specific ritual for the protection of the bedroom from the dangers of the end of the year, originally for the sovereign and later, in the Graeco-Roman age, for the use of private individuals (Papyrus Cairo 58027 x+4,3b-x+4,8c: Pries 2009, 91-99). In it, protection from “all the things of this year (...)” was effected by means of the preparation of an ointment which was to be smeared over the body of the individual and on each window of the house so as to create a kind of impenetrable barrier.

65 Bardinnet 1995, 520.

66 Papiri della Società Italiana inv. I 73 e Papyrus Carlsberg 463: Osing – Rosati 1998, 189-215.

67 Osing – Rosati 1998, 196.

calendars of propitious and unpropitious days (Papyrus Cairo JE 86637 and Papyrus Sallier IV), which were treated above. We have here a tablet, written in hieratic, going back to the XVIII dynasty and originating from Thebes. It bears the list of the months of the year, accompanied in each case by an omen and its interpretation<sup>68</sup>. The aim of this composition was that of knowing whether, following a particular omen, there was the danger of a sickness in each month. The sickness is always and exclusively mentioned with the expression *dhrt*<sup>69</sup> and never with *ḳdt rnpt*. However, if we compare the calendrical dates of this tablet with the periods of the irruption of the annual pestilence, just as they are recorded in the calendars of propitious and unpropitious days (Papyrus Cairo JE 86637 and Papyrus Sallier IV), the analogies are such as to cause us to hold that, in many cases, it is precisely the *ḳdt rnpt* that is hidden behind *dhrt*. In other words, *dhrt* seems to express the generic concept of an epidemic sickness contracted through the air passages<sup>70</sup> in which the *ḳdt rnpt* is also included. In this connection, two passages from the papyrus Edwin Smith leave no room for doubt: “that is the protection for the year and the warding off of the sickness (*dhrt*) in the year of the pestilence (*m rnpt ḳdt*)” (18,11-12); “another formula to ward off the breath of the sickness (*dhrt*) of the slaughterers, of the incendiaries, those sent by Sekhmet” (18,12-13).

Each month’s omens could be interpreted in three ways: absence of sickness, sickness without deaths, sickness with death. In some months, on the other hand, a double omen was possible signifying that that period was not necessarily dangerous but that the sickness could or could not happen during that period. In what follows, I record only the results of the prognostications for each month:

I month of the inundation season: “there will be sickness (*dhrt*), but there will not be death throughout the land”.

II inundation month: “this month is good! There will not be fever (*šmmt*) in it”.

III inundation month: “there will be sickness (*dhrt*), but death will not occur”.

IV inundation month: “there will be sickness (*dhrt*) and death will occur”.

I month of the *peret* season: “there will be death because of the activity of the priest *wab*”.

II *peret* month: positive omen: “good month (*nfr*)”; negative omen: “death will occur throughout the land”.

III *peret* month: negative omen: “sickness (*dhrt*) will occur in this month”; positive omen: “sickness (*dhrt*) will not occur in this month”.

IV *peret* month: “sickness (*dhrt*) will happen in this month; there will be deaths among women and among baby boys and baby girls”.

I month of the *shemu* season: “sickness (*dhrt*) will not occur in this month”.

II *shemu* month: positive omen: “it (the month) is without any sickness (*dhrt*)”; negative omen: “death will happen throughout the land”.

III *shemu* month: positive omen: “the month is good (*nfr*)”; negative omen: “some will be dead”.

IV *shemu* month: positive omen: “the month is good (*nfr*)”; negative omen: “some will be dead”.

Epigomenal; days: “you will say: I am the priest *wab*; I possess what belongs to this goddess (...)”: positive omen: “the month is good (*nfr*)”; negative omen: “some will be dead”.

68 Vernus 1981.

69 Von Deines – Westendorf 1962, 988; Bardiniet 1995, 101-102.

70 The same opinion is held by Bardiniet 1995, 101.



The coincidence of the calendars of propitious and unpropitious days and the tablet with regard to the *ḳdt rnpt* is total. In fact, in the former, the period of the outbreak of the *ḳdt rnpt* went from the III month of the inundation, day 20 (24 September), to the I month of *peret*, day 19 (22 November). In other words, from the end of the III month of the inundation to the end of the I month of *peret*. In the tablet, it is clear that the danger of mortal illnesses lasts from the IV month of the inundation to the I month of *peret*. The fact that the third month of the inundation could carry the risk or not of sickness agrees fully with the information furnished by the calendar of propitious and unpropitious days (which place the beginning of the *ḳdt rnpt* on day 20), inasmuch as the outbreak of the sickness could be delayed for ten days or so according to the climatic and environmental conditions. The same argument goes also for the final period of the epidemic: the fact that the table indicates the II month of *peret* as a month in which the sickness can manifest itself or not signifies that in the less fortunate years an extension of the sickness could occur although according to the calendar of propitious and unpropitious days it would normally end on day 19 of the I month of *peret*. The passage “there will be death because of the activity of the priest *wab*” recorded on the tablet with reference to the first month of *peret* is significant because it is a clear, if indirect, reference to the *ḳdt rnpt* and to its priest of Sekhmet.

The other period of coincidence between the calendars of propitious and unpropitious days and the tablet is that relating to the epagomenal days. Both texts affirm that the risk of dying is not certain and depends on the knowledge or lack of it of certain formulae and so, in the final analysis on the efficacy of the priest *wab*. The tablet also shows that, in addition to the critical periods mentioned above, the temporal arc which goes from the II month of *shemu* to the IV month of *shemu* could also carry the risk of sickness.

If we observe the periods when this sickness was in circulation as recorded on the tablet, it is clear that these follow perfectly the cycle of the inundation of the Nile: the periods free from the sickness were the first two months of the year, when the fresh water regenerated Egypt, and the first month of *shemu*.

## ABBREVIATIONS

*CGC* = *Catalogue générale des antiquités égyptiennes du Musée du Caire*

*Dendara VIII* = É. CHASSINAT – F. DAUMAS, *Le temple de Dendara VIII*, Le Caire 1978.

*Edfou VI* = É. CHASSINAT, *Le temple d’Edfou VI* (Mémoires publiés par les membres de la Mission archéologique française au Caire 23), Le Caire 1931.

*JE* = *Journal d’Entrée*, Egyptian Museum, Cairo

*KRI VI* = K.A. KITCHEN, *Ramesside Inscriptions, Historical and Biographical*, Oxford 1983.

*PM II* = B. PORTER – R. MOSS, *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings II. Theban Temples*, Oxford 1972<sup>2</sup>.

*Wb* = A. ERMAN – W. GRAPOW, *Wörterbuch der ägyptische Sprache*, 7 vols., Berlin 1926-1961.

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