

**Monnier, Franck: 2017 *L'ère des Géants. Une description détaillée des grandes pyramides d'Égypte*, Paris: Editions De Boccard, 272 pages.**

Reviewed by Jaromír Krejčí

Franck Monnier is a very productive author in the frames of the history of the ancient Egyptian architecture – he is co-editor of *The Journal of Ancient Egyptian Architecture* – as well as excellent illustrator of individual ancient monuments built in Egypt and Nubia. It is therefore understandable that after a publication on Egyptian fortresses and several articles on partial problems concerning the pyramids and their construction, Monnier decided to focus his 2017's publication on the beginnings of the construction of the Egyptian royal pyramids and their further development during the Third and majority of the Fourth Dynasty.

The monograph is divided into several parts which were further subdivided into chapters, and it is opened by a foreword of another top connoisseur of the pyramids of the Old Kingdom, Audran Labrousse. It is followed by an introduction, which represents an overview of the book and describes its aims, a chronological table of rulers of Egypt, as well as a table of the pyramids described and discussed in the book, maps and plans concerning the topic.

The first part of the book deals with the pyramids of the Third Dynasty. As a matter of course, the most important chapter represents a thorough description and analysis of architecture of the first pyramid complex of ancient Egypt – that of Netjerikhet (Djoser). Monnier follows up-to-date research of this monument and uses it in his discussion in a proper way. He thoroughly discusses how the concept of the construction of the pyramids came into existence. A thorough attention has been also paid to the results of the Latvian expedition which made a geophysical survey of Netjerikhet's complex also covering not until now unearthed parts of the complex's underground. Besides it, he discusses, on a wider space, the existence of the Dry Moat, its appearance and its function. Here it can be mentioned, that the author's reconstruction of the situation along the southern part of the Dry Moat (fig. 1.06) is somewhat problematic. In the situation when we do not know what the superstructures of the royal tombs of the Second Dynasty kings looked like, Monnier reconstructs them as being quite large. His reconstruction of this area thus does not give much room between the ends of the individual Dry Moat for the access to the main entrance to the pyramid complex close to the south-eastern corner of its retaining wall.

An important place in this part of the book is also played by discussion on other royal monuments dated to the Third Dynasty – the unfinished pyramid complex of Sekhemkhet, the Layer Pyramid in Zawyet el-Aryan, as “the pyramid” no. 1 in Abu Rawash. In the following chapter, he describes the problems connected with the large enclosures built to the west of the Netjerikhet pyramid in Saqqara. The sixth chapter is dedicated to small pyramids built from Sila in the north to Elephantine in the south and which are sometimes dated to the reign of Snofru, in a broader sense into the transitive period between the Third and Fourth Dynasty.

The third part of the book deals with the pyramids of King Snofru – the one which was built in Meidum and other two built in Dahshur. Important for the history of ancient Egyptian architecture is the discussion concerning the Bent Pyramid which represents the first proper pyramid. The evaluation of the development of all three major pyramids ascribed to Snofru has been also included in this part.

The following part of the monograph was dedicated to the reign of the most important kingly giant – Khufu. His, the largest Egyptian, pyramid attracts attention for millennia and it thus became the most discussed pharaonic monument not only in modern times but also by ancient, medieval, and Renaissance-humanistic authors. Despite all this attention paid to it through millennia, there are many issues which have not been explained satisfactorily, yet, and the author of the actual monograph also try to deal with them.

The fifth part of the book has been dedicated to the period between the reigns of Radjedef and Rakhef. This period is rather tricky as there are some problems in concern with the chronology of the kings on the Egyptian throne as well as attribution of the northern unfinished pyramid in Zawyet el-Aryan to a specific ruler (Baka?). The pyramid complex of Radjedef in Abu Rawash is specific in many ways – its position, general layout or some architecture features enable a rather broad discussion concerning its purpose, appearance, and dating. The fourteenth chapter has been attributed to the pyramid complex of Rakhef, the last one among the pyramid tombs built for the Old-Kingdom giants. Besides the pyramid and other parts of its complex, the author also discusses problems connected with the Great Sphinx and its temple.

In the last part of the book, more general issues connected with the construction of the royal pyramids have been described and discussed. In the fifteenth chapter, the question on the orientation of the pyramid as well as methods of “scientific” star observations that were used during the design of the pyramid complexes, are discussed. Together with them, also the issue of the so-called ventilation shafts in the Khufu pyramid is being discussed. In Monnier’s opinion, these shafts were built in connection with their orientation towards the bodies on the night sky. Problems connected with building materials and their quarrying is discussed in the sixteenth chapter. An important question is examined in the seventeenth chapter – the transportation of the building material to construction sites; the building methods through which the construction blocks were elevated to the place of their usage were shown in the eighteenth chapter. The Nile valley and its surroundings gave a rich array of possibilities where to obtain materials for the construction of the Egyptian pyramids. To detect and exploit them, the Egyptians showed great tenacity. They organised expeditions to remote areas not hesitating to go beyond the borders of the country into remote areas – Sinai, Levant, or Nubia – to get the various stones composing the architectural complexes of pyramids: limestone, granite, gneiss, basalt, alabaster. They mined copper and organized the far trade concentrated on the cedar wood. The rising experience with extracting diverse rocks – even though the hardest ones – and working out the stone objects and using of various materials gained during the late Protodynastic and Early Dynastic Period helped workers and craftsmen to use these capabilities to start to erect the pyramids at the beginning of the Third Dynasty. The author has confirmed that the general idea that we know next to nothing about Egyptian building techniques is incorrect. On the contrary, it turns out that, despite some grey areas in this respect, we have quite a lot of evidence about them. The author also confirms that the transport of building materials to the site is well documented in pictorial representations,

although some of these can be dated to later epochs of ancient Egyptian history. In this case, however, we have to be quite careful in transferring knowledge obtained on the basis of pictorial (or epigraphic) material from later periods.

As a matter of course, quarrying and obtaining of building material, its transportation to the construction sites, *etc.*, is tightly connected with the situation of the workforce, the pyramid builders, craftsmen and artisans which have been also analysed and discussed in the nineteenth chapter. We have relatively little information about the daily life associated with workers and craftsmen, being of rather character. The Egyptological literature often evokes, in connection with workforce, a kind of compulsory service that required able-bodied men to go to work in the pyramid construction sites during the Nile floods when they were kept from working in the fields. Nevertheless, based on the results of the archaeological expedition at Heit el-Ghurab led by Mark Lehner (plus the Kroemer Dump Site), it is now known that at least during the reigns of Khafre and Menkaure several thousand workers were employed year-round on the royal construction site(s). These were housed near the construction site of the pyramid complexes on which they worked. Based on analyses of food residues, they seem to have been relatively well-fed – this demonstrates that the central administration was careful to ensure that they were always able to carry out their tasks. About another important topic – injuries and deaths cause by accidents during the construction process we have, however, a rather small portion of information.

The last chapter represents an epilogue in which Monnier briefly summarizes what he has concluded in his book and suggests his ideas about further development of pyramids as an architectural type in ancient Egypt.

The descriptions, analyses, thoughts of the book's author are very well explained and argued. The author draws not only on his own field experience but also on relevant literature on the topic. Of great informative value are numerous illustrations and photographs accompanying the text of the book; they, in a very proper way, document and support the facts described in the text. The illustrations represent an equally important and complementary part of the monograph. As it has been already mentioned, Monnier is, besides his scientific work, an excellent draftsman and a very capable user of software with help of which he makes outstanding 3D computer-aided reconstructions of architectural monuments, and it is very well visible in the book.

It is fully understandable that the author ceased the description and analyses of the Old Kingdom pyramid complexes at the end of the reign of Rakhef. Further pyramids show that the focus moved from the pyramid themselves to other parts of the pyramid complexes. It is also shown by decreasing of their measurements – pyramids were not giants anymore – illustrating so the decreasing of up-then hegemonistic power of the Egyptian kings. This development then also resulted in the standardization of the pyramid dimensions during the Fifth and Sixth Dynasties.

One of the problems which are not fully discussed in the book is the ideology behind the construction of the royal pyramids. Sacred architecture can be considered, in a figurative sense, as the meat that encases the skeleton of religious ideas. In analysing religious or mortuary architecture, we must keep in mind how important the religion was in its planning, and incorporation into the landscape. The religious beliefs were the major impetus for the construction of the pyramids showing so an exceptional position of the kings in Egyptian

society. The kings were the main – the only – link between the world of gods and the world of humans, the kings were responsible for the preservation of the divine order *maat*, and these religious-ideological ideas determined the form and function of the royal monumental funerary complexes of the Old Kingdom. This ideology is what was behind the formation of the pyramid complexes and may well explain some of the issues associated with the architecture. It has to be, however, mentioned here, that Monnier discusses how the idea of the form of tombstones above royal sepulchres in the form of the pyramids came to the existence during the reign of King Netjerikhet, around 2600 BC. Monnier rightly mentions that even the hypotheses concerning this topic developed multiplied, there is no certainty in concern with any of them. The idea of the pyramid should be seen as the mark of the ascendancy of the solar cult already at the beginning of the Third Dynasty. The Step Pyramid could have represented a gigantic staircase for the ascent of the king's soul to the north pole of the sky, among the never-setting stars – *i.e.* among other gods. Monnier makes, however, a little mention on another possibility, that the pyramid would have represented a kind of reconstruction of the Primeval Hill. At the same time, both ideas represent possibilities mentioned in the Pyramid Texts and they have been usually associated with the concept of the pyramid in Egyptological literature. We can also hypothesize that flat sides of proper pyramids which started to be built with the beginning of the Fourth Dynasty symbolize rays of the sun. These various aspects may likely have consciously or unconsciously entered the complex processes involved in the invention and development of the pyramid form as a huge tombstone over the king's burial. Unfortunately, the answer to these questions remains open.

Within the concept of the publication, perhaps the fascinating development of the logistics and craftsmanship used in the construction of the royal tombs of the Second and then Third Dynasties could have been presented in more depth. This development is fully reflected in the construction of the Step Pyramid. Nevertheless, the publication presents a very good overview and discussion of the issues related to the pyramids of the Third and most of the Fourth Dynasty and can only be recommended to the attention of readers.

(I would like to apologize profusely to colleague Franck Monnier for the fact that this review is coming out with such a delay due to a situation beyond my control.)

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