CHAPTER 10

The Discontinuity of King Djedefre's Pyramid

1. The Abrupt End of the Large-Pyramid Tradition

King Djedefre abandoned Giza and built his pyramid at Abu Rawash, approximately eight kilometers to the north. Dr. Mark Lehner has explained this relocation as a religious decision, noting that Djedefre was the first king to adopt the title "Son of Ra," and suggesting that Abu Rawash—being closer to Heliopolis, the center of the solar cult—was chosen for theological reasons. I do not reject this interpretation. However, several features of Djedefre's pyramid indicate changes that cannot be fully explained by religious motivations alone.

The first major discontinuity is the abrupt end of the large-pyramid tradition that had continued for roughly fifty years since the reign of Sneferu.

Although Djedefre's pyramid now survives only as a mound of rubble, long-term excavations by the French–Swiss mission have determined that its base measured 106 meters, with an estimated slope angle between 48° and 52°, implying a height of approximately 57 to 67 meters.
(Michel Valloggia, Le complexe funéraire de Rêdjédef à Abou-Rawash : état des travaux après dix campagnes (1995–2004), Bulletin de la Société



Fig. 10-1. Transition from Sneferu's first true pyramid to Djedefre's pyramid (drawn to identical scale)

française d'égyptologie, no. 161, 2004, pp. 12–27.)

Fig. 10-1 illustrates the progression from Sneferu's first true pyramid at Meidum to Djedefre's pyramid. The hypothetical outline of the Meidum pyramid on the left is based on Petrie's reconstruction, while the form of Djedefre's pyramid on the right is drawn from the French–Swiss mission's measurements. As the figure makes clear, the trend toward increasingly large pyramids—Meidum, Bent, Red, and Khufu—was suddenly broken, and the scale was drastically reduced.

Petrie measured the Meidum pyramid's slope at 51.5 degrees and its base at 144 meters, giving a height of roughly 90 meters. If we adopt a convenient slope of 50 degrees for Djedefre's pyramid (within the French–Swiss team's estimated range), Meidum's volume is 622,080m^3, whereas Djedefre's is only 236,500 m^3—merely 38 percent of Meidum's volume.

This reduction in scale also appears in the reign of Menkaure, leading to popular explanations that attribute the change to "national exhaustion." However, the actual resource and labor burden of pyramid construction varied greatly depending on the stage of the project, making such explanations unsatisfactory. The evidence suggests a shift in values rather than simple economic decline.

One striking example is the use of red granite as casing stone. Red granite had to be transported from Aswan, roughly 1,000 kilometers upstream along the Nile. Because granite cannot be worked with copper tools, quarrying, transport, and dressing would have required far greater labor than limestone. If the reduction in pyramid size were due to labor shortages, the adoption of red granite would contradict that explanation. The choice may reflect an ideological shift—perhaps even an aesthetic concept such as a two-tone exterior of red below and white above.

The internal structure of the pyramid, however, shows an even more dramatic departure from earlier designs.

Fig. 10-2 reproduces the cross-section (Fig. 3), plan of the trench (Fig. 2), and north–south section of the trench (Fig. 4) recorded by Howard Vyse and Perring. Because the dimensions in these figures do not perfectly match, the values should be regarded as approximate, with an

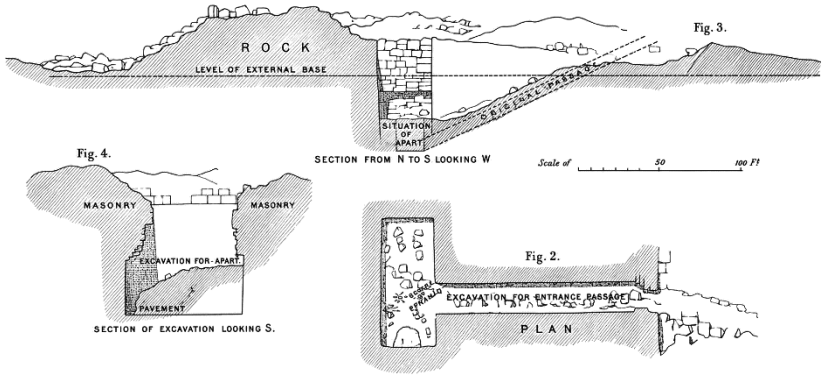

Fig. 10-2. Cross-section and trench diagrams of Djedefre's pyramid (traced from Howard Vyse, Operations Carried on at the Pyramids of Gizeh, vol. 3)

error margin of about five percent. Based on the scale in the drawings, the trench measures 34.6 feet (10.5 m) in width at the top, 74.1 feet (22.6 m) in length, and 66.6 feet (20.3 m) in depth—a massive cavity.

This trench was excavated downward from the top of the limestone bedrock. Its scale raises fundamental questions: Was it intended to be roofed with massive ceiling stones to form a burial chamber? Or was it meant to be filled in before the pyramid's masonry began? The dimensions exceed those of Khufu's King's Chamber (10.5 × 5.2 m, height 5.8 m), making it difficult to imagine how such a vast space could have been roofed and then built over with pyramid masonry. If the trench was intended to be filled, its purpose becomes even more obscure.

The trench appears to have served a function different from that of a conventional burial chamber.

Furthermore, the French–Swiss mission reports that the bedding surface of the granite casing stones inclines inward by approximately 12 degrees. After the structural crisis of Sneferu's Bent Pyramid, both the Red Pyramid and Khufu's pyramid adopted horizontal courses. The return to inward-leaning masonry in Djedefre's pyramid is therefore puzzling.

The number and magnitude of these discontinuities cannot be explained merely by a change of construction site. They suggest a deeper

transformation: a shift in the conceptual basis of pyramid construction, a deliberate break with the architectural tradition of Khufu's reign, or perhaps both.

2. Djedefre's Response to an Unfinished Khufu Pyramid

If Khufu died while his pyramid was still under construction—whether during the masonry stage or before the casing and ramp removal were completed—and if the project was subsequently abandoned, one must consider how Djedefre responded as his successor.

If construction ceased prematurely, the massive ramps built for transporting stone would have remained encircling the monument, leaving the site in the condition of an unfinished civil-engineering project. Removing these ramps would have required enormous labor.

In ancient Egypt, most unfinished projects were simply abandoned. Although a few cases appear to show successors completing predecessors' monuments, such instances are rare and often involve extending or repurposing existing structures—more akin to redevelopment than to completing an inherited project. In my research, I have found no evidence that any pyramid of the Old Kingdom, up to the Sixth Dynasty, was completed by a successor.

Although Giza today contains the pyramids of Khafre and Menkaure and numerous mastabas of high officials, at the time of Khufu's death the plateau may have been sparsely developed, dominated by an abandoned and incomplete construction site. Djedefre may therefore have avoided Giza not only for religious reasons but also because the location had become undesirable—perhaps even inauspicious—due to the failure of his father's monumental project.

If Khufu's pyramid remained unfinished after more than twenty-seven years of work, and if Khufu himself was not buried within it, then Djedefre, having witnessed this outcome, may have been reluctant to attempt another massive pyramid. His decision to build a smaller pyramid at Abu Rawash becomes understandable in this light.