Professor Byvanck's special interest in Greek pottery as shown in his many important publications emboldens me to write another article on the difficult subject of red-and-black glaze for this volume in his honour.

In my paper of 1951, I tried to find an answer to a hitherto unsolved problem, namely how the intentional red areas on some Athenian black-figured and red-figured vases were produced. How did Exekias, for instance, produce his picture of Dionysos in brilliant black against a glossy coral red background if both the red and the black glaze were identical? In other words why did the red glaze on the background not turn black in the reducing fire, as did the figured decoration, if the red glaze consisted of the same ingredients and was applied in the same thick coating as the black? Schumann's answer, which I published in my article of 1951, was simple. The areas that were to come out red were not exposed to a reducing fire at all; they were painted later than the black, and fired under purely oxidising conditions in a second firing.

In this article I want to describe a few hitherto unpublished examples of this remarkable technique that I have been able to examine recently, and then discuss a few specific problems which may help further to clarify the problems involved.

The most important of my new examples is in the Louvre (figs. 1–3).

1 For recent researches on the Attic glaze see Schumann, 1942 and 1943; Weickert; Oberlies-Köppen. Binns had shown that the glaze on Greek vases turned black or red according to the conditions of the firing. Schumann's important new contribution was the discovery that the Greek glaze was 'peptised' clay, that is, clay from which the heavier particles such as felspar, calcium, quartz, etc., had been removed (with the help probably of a protective colloid), plus some alkali; the latter was not sufficient to make it a glaze in the modern sense of the word but enough to give it the characteristic high gloss.  
2 MN B 2042. Height with lid, 14.2 cm, without lid, 11 cm.; diameter of body, 10.8 cm, of lid 7.1 cm. The vase has been in the Louvre since 1880. According to the inventory card it was bought in Cairo, but on the bottom of the vase is the notation in pencil: Athènes; so perhaps it was found in Athens. At all events it is Attic. The photographs come from the Laboratoire du Musée du Louvre. I owe them and the permission to publish the vase to the kindness of M. Devambez.
Fig. 1  Pyxis

Paris, Musée du Louvre