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Frontispiece: left: Istanbul
right: Halab (Aleppo);
both from the ʿAzīm Palace in Hamā,
courtesy of the Ministry of Culture, Damascus

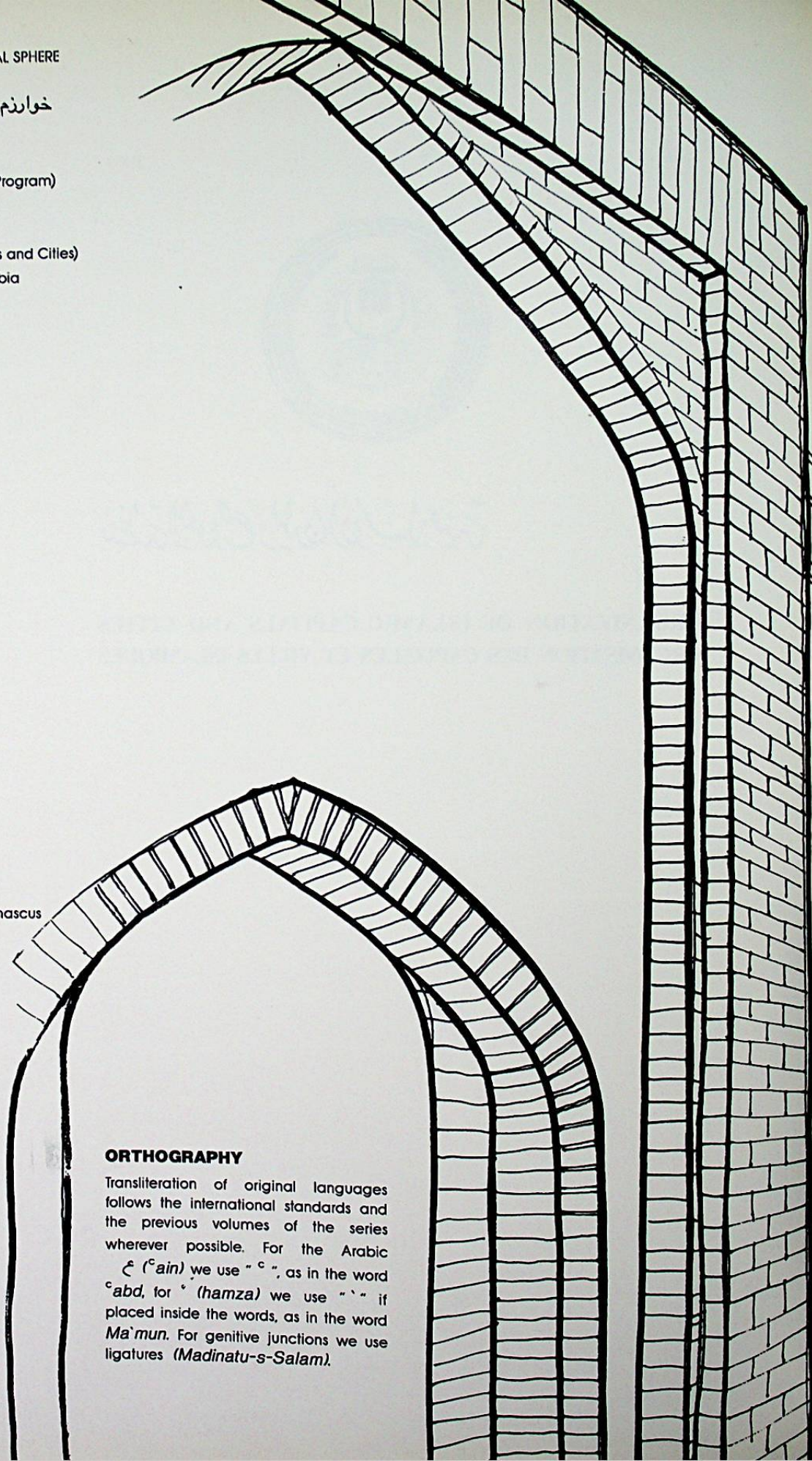
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ORTHOGRAPHY

Transliteration of original languages follows the international standards and the previous volumes of the series wherever possible. For the Arabic ʿ (ʿain) we use "c", as in the word ʿabd, for ʾ (hamza) we use "´" if placed inside the words, as in the word *Ma'mun*. For genitive junctions we use ligatures (*Madinatu-s-Salam*).





ARCHITECTURE OF THE ISLAMIC CULTURAL SPHERE

AMJAD BOHUMIL PROCHAZKA

KHAWĀRIZM

This volume, published in coedition by the
 ORGANIZATION OF ISLAMIC CAPITALS AND CITIES, Jeddah,
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 is a completely independent part of the series
 ARCHITECTURE OF THE ISLAMIC CULTURAL SPHERE.

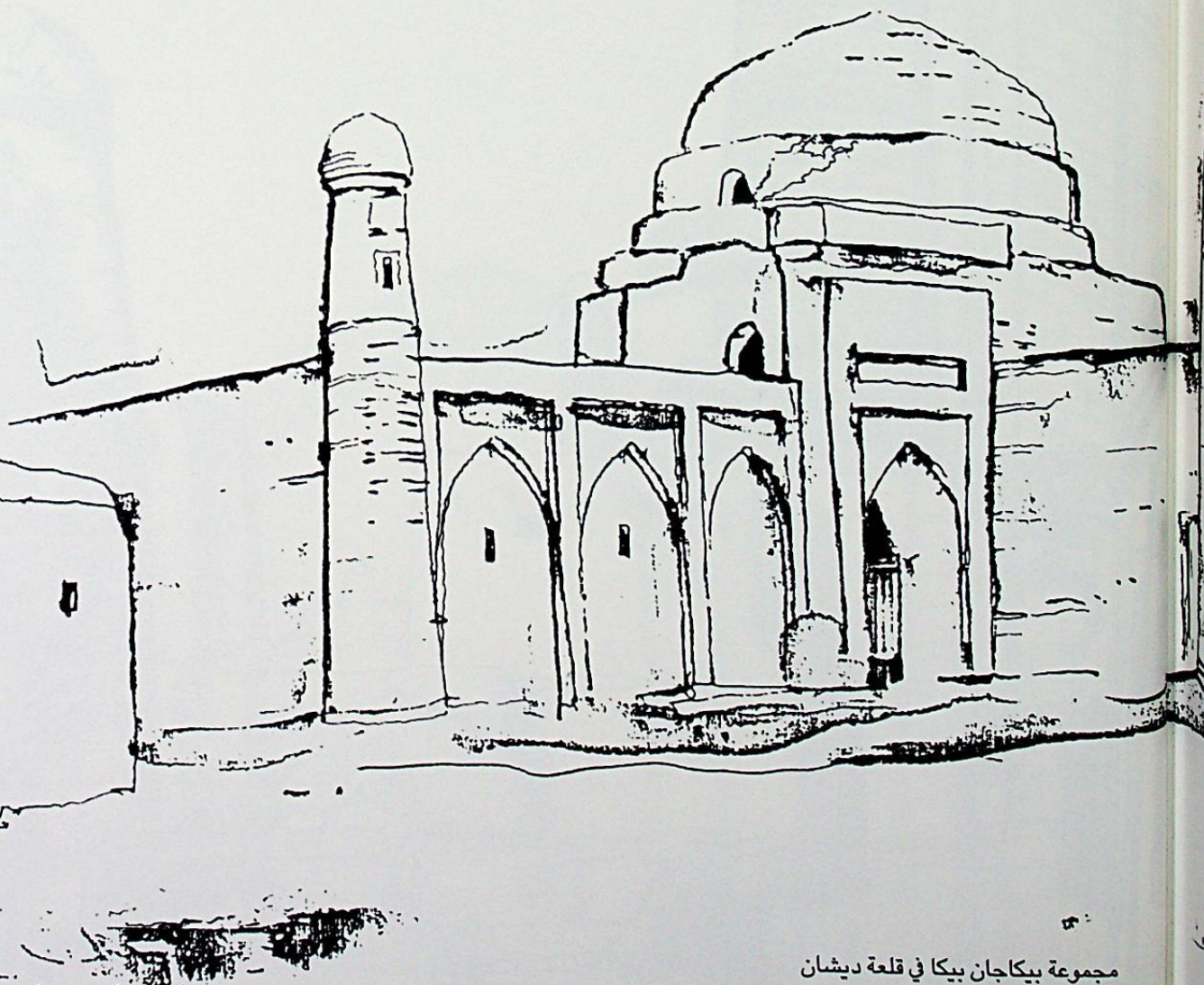
At the same time it is integrated into this series as its
 volume 3a. Together with other monographies focused upon
 important localities, it forms the third division of this series.

For certain more complex themes we refer to our previous
 volumes because of space and also because the majority
 of our readers collect the whole series.

ARCHITECTURE OF THE ISLAMIC CULTURAL SPHERE will be not
 only the first complete reference system concerning Islamic
 architecture ever published, but at the same time it will
 present a new approach to the subject, one which rejects
 mistakes which have been notoriously repeated until now.
 This task needs sometimes many arguments and much
 evidence which can be formulated and extensively
 documented only once. We ask you for your understanding.

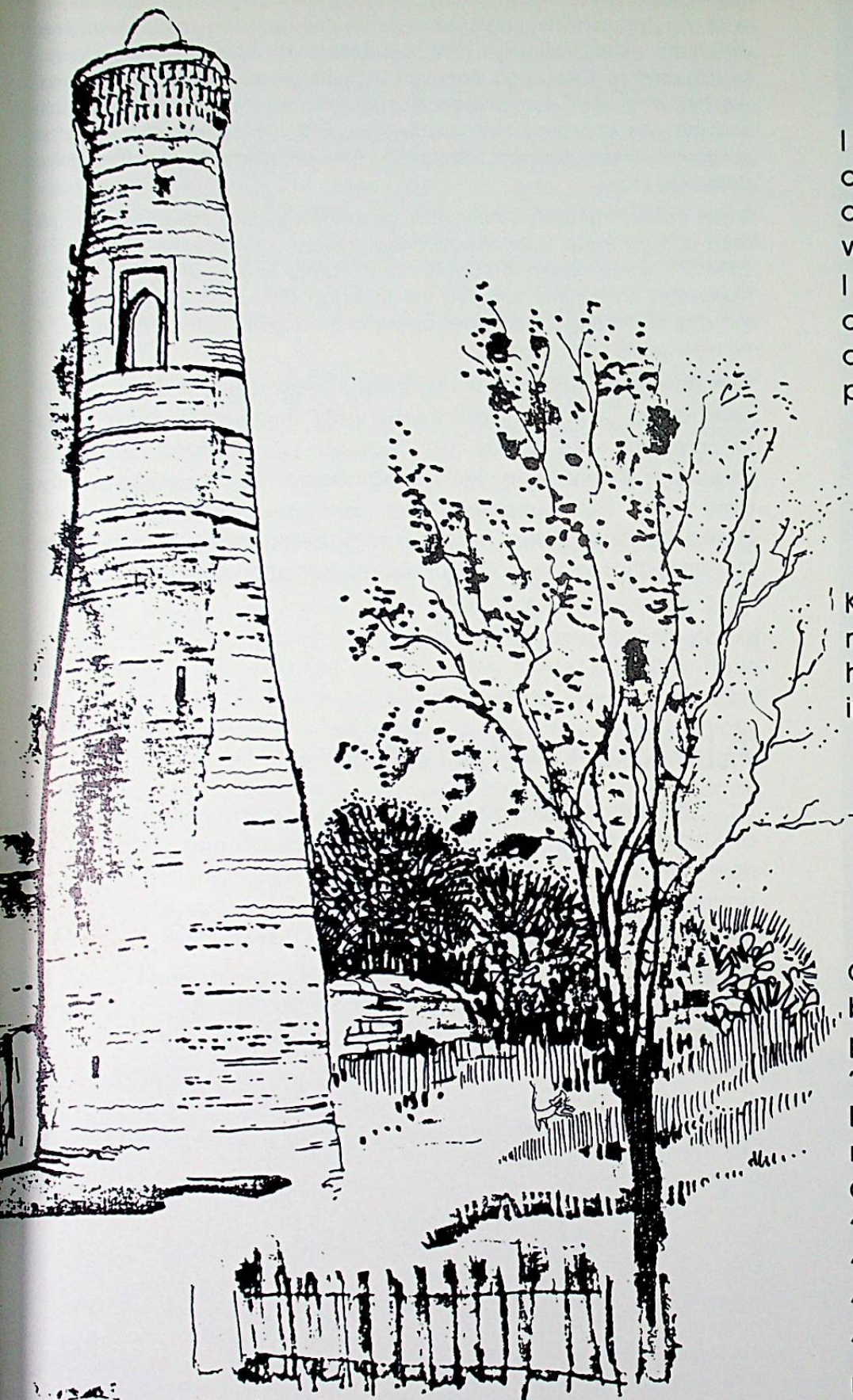
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مجموعة بيكا جان بيكا في قلعة ديشان

Ensemble Bika Djan Bika in
 the Dishan Qal'a



I have never seen another more densely populated country like Khawárizm. Rows of villages, one adjoining another, many residences and palaces where one can hardly find an uncultivated place. I do not suppose that there could be another such country in the world, more reknown for its richness and influence, and a country with such a large population, than Khawárizm.

Yáqút,

Arab traveller, before the Mongol conquest

Khawárizm (*read: Gurganj, the capital*) is the greatest and the most important Turkish city, it is rich in its beauty, it has marvellous market places and wide streets, and innumerable imposing buildings.

Ibn Battúta,

Arab geographer,

after the Mongol conquest,

shortly before the conquest of Timur

Once upon a time, one king built a strong and beautiful castle. When the work was finished the king proclaimed:

"Look at it! Anybody who will find a mistake, should be rewarded by two dirhams and the mistake repaired."

One day came an unknown man and said:

"This castle has two lacks."

"Which are they?" asked the king.

"The king will die and the castle will fall down."

"You are right," answered the king; he then turned to meditation and left this sinful world.

From *Tales of the Ancient Arabs*

after the late Prof.K.Petráček



The world in which we live today is managed, organized and planned by way of computers. The cheapest computer can solve, in less than no time, problems which seemed almost unsolvable not long ago. Other tasks, which used to take up a considerable amount of time of professional workers who could not afford any mistakes, are now performed within seconds. Likewise this book was formed and printed with the aid of a computer which helped also with the compilation of perspective drawings.

Small pocket computers may now be owned by any schoolboy. Should such a pupil have been asked twenty years ago to solve how much $2,719^{5,832}$ is, he would probably have hardly known where to begin. Nowadays, a numeric task like this takes up only as much time as the pressing of the digits, and these operations are quite natural to him, as if no other possibilities existed.

The development of the computer originated in days which seemed to us so very backward only because in those days people did not enjoy the benefit of modern technical inventions. But only our technology began in those apparently dark times. The foundation and first steps of computers were issued by one of the most famous personages of medieval mathematics, an important astronomer and geographer,

AL-KHAWĀRIZMĪ

He, whose complete name is Muhammad Ibn Ahmad⁽¹⁾ al-Khawarizmi, is a native of Khawarizm (Khoresm), which is now an almost forgotten country although formerly a significant cultural land. It is to this country and its architectural monuments that this book is dedicated.

We would like to create a sort of bridge connecting the congruous past and present, to commemorate and to honour this great mathematician and his contribution to the present day.

Al-Khawarizmi revealed the laws of common qualities which rule and master the relationship between quantities, the specifications of sequences and successions whereby all studies of high mathematics (starting with derivations and integral calculus) begin.

Al-Khawarizmi is the father of algebra and methods for solving equations of the second degree.

In the East, letters also represent numeric values as is the case with Roman numerals. Al-Khawarizmi used letters for general numbers (a, b, x, \dots) and numerals for determined numbers (1, 2, 78, 8061...). His system and method caused a revolution in mathematics and his writings were the source for all scientific branches in the East and subsequently in the West. His works were translated into Latin and formed, for many centuries, the highest authority in Europe; he was appreciated and studied by such personalities as Leonardo Fibonacci, the first algebraist of Christianity, who visited Syria and Egypt, just as Leibniz, the true inventor of infinitesimal calculus.

عمارة الحضارة الإسلامية

حواشي

الحضارة المنسية لمنطقة
ما بين بحري قزوين و أراي

أجد بوهميل بروخازكا

منظمة العمارة الإسلامية

