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Chapter 232 Printing Technology and the Reformation_3

This technology also did not present a bottleneck for the goldsmiths of Huaxia. The copperplate paper currency of the Song Dynasty had already used metal movable type to print different anti-forgery identifiers. However, metal movable type never became widespread in the Celestial Empire, rooted in the fundamental differences between the Chinese writing system and the Latin alphabet system.

The Chinese writing system contains over ten thousand characters, with several thousand being commonly used. The Latin alphabet system has only 26 letters, and ancient Latin even had only 21. The scale of type needed for each writing system is entirely different, with a staggering difference of two orders of magnitude. This vast disparity in production costs decides the practicality of the technology.

When it comes to training printing workers, those working with Chinese movable type must recognize thousands to tens of thousands of characters, understand phonetics and rhymes, know the location of each character amidst thousands in the type case, and prepare multiple copies of high-frequency common characters. Meanwhile, workers using the Latin alphabet need only spell with 26 letters, a feat ordinary apprentices can master in just a few days.

Xiulote silently reflected and finally nodded in decision.

The writing system of the Celestial Empire, after centuries of development, had completely embraced the woodblock printing technique. Metal movable type was used at most for anti-forgery on numerals. Thus, Mexica people, who adopted the Chinese characters, would also inevitably use woodblock printing. Its characteristics of low cost, simple technology, long-term preservation, and lower cultural demands on workers, also matched the current state of the Alliance.

Woodblock printing would continue to dominate the Alliance until the technological advances brought about by the Industrial Revolution made metal movable type extraordinarily inexpensive.

Within moments, Xiulote had set the Alliance's technological course for a century. He continued to look at the ink for woodblock printing.

Metal movable type does not absorb water and requires oil-based ink, which is made by adding animal and plant oils and refined turpentine to the ink. Having decided on wooden blocks, the young man was only concerned about the water-based ink used for the wood.

There were two types of ink currently in the Alliance, one was black ink made from natural coal, and the other was blue ink made from plant dyes and mineral clay.

Xiulote pondered silently. In the regions controlled by the Alliance, natural coal was extremely scarce, only occasionally used as black paint. These paints mainly came from the Zapotecs to the south, suggesting the existence of open-pit coal mines of unknown scale there.

According to the young man's memory, to the north, in the land of the Canine Descendants near the future Texas, there were not only large reserves of oil but also substantial coal mines formed simultaneously. These critical mining sites were strategic locations that must be secured, as they would also drive future industrial development.

Beyond natural coal, a common method for making ink in the Celestial Empire involved burning wood for smoke. Xiulote recalled the production process of Hui ink, analyzing every scene from his memory. This closely-guarded craft of the Ming Dynasty was freely circulated on the internet in the future.

Unfortunately, after much thought, he could only remember that it involved burning pine wood, collecting the top layer of pine smoke, and then adding glue for binding—there seemed to be a process

of gilding and engraving as well? Shaking his head, he decided to continue with the current plan, later arranging for craftsmen to attempt production.

The middle-aged jade craftsman Aquila had been waiting quietly for a while before he timidly raised his head, just in time to see His Highness shake his head. Filled with fear, he prostrated himself again, his head firmly pressed against the ground, resulting in a faint noise.

Xiulote shifted his gaze to Aquila on the ground. He smiled with satisfaction and promised out loud.

"Aquila, you've done well! From today on, I will appoint you as the Master Craftsman of woodblock carving, equivalent to a noble of military merit in the Alliance! You will receive titles to land with gold, silver, gemstones, and Chinampa! You may also promote two of your kin to be Royal Warriors, as my followers!"

At these words, Aquila lifted his head incredulously, his face a mix of shock and delight. Then, he bowed his head vigorously once more, kowtowing deeply on the ground with forceful thuds.

Xiulote's gaze lingered thoughtfully for a moment before he spoke again slowly.

"Starting tomorrow, I will assign two Samurai to be your personal escorts. The technological crafts here will be classified as top-secret by the Alliance. I will also send you dedicated apprentices. From today on, you are the craftsman exclusively for the Priesthood!"

Having finished, the young man observed the expressions of joy and devotion on the middle-aged jade craftsman for a while, then nodded approvingly before turning and walking toward the paper-making area.

