

# China's Gifts to the West

By Derk Bodde



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# China's Gifts to the West

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## Foreword

IN 1940 almost 10,000 new books were printed in the United States. Millions of copies of the 13,000 newspapers in the country were distributed. All of this was possible because we know how to make paper and to print with movable type—inventions which occurred in China. The world's first printed book, which is pictured on page 22 of this pamphlet, was made in China, 1,074 years ago.

As late as 1923 soy beans were practically unknown in the United States. But in 1940 there were over 79,000,000 bushels of soy beans grown on the farms of this country. The soy bean crop that year was worth over \$60,000,000, and was used to make bread, crackers, soups, steering wheels and dashboards for automobiles, plastic combs and brushes, and hundreds of other articles. The soy bean plant came to us from China. So did peaches and apricots and chrysanthemums, and scores of other plants.

We have all read about "our debt to ancient Greece and Rome" and about "our heritage from Europe." We need to think also about our gifts from the cultures and peoples of Asia. This pamphlet tells of some of the things given by China to the Western world.

The story of China's gifts to the West goes back hundreds and hundreds of years. When Columbus came to America, China had already been exchanging goods with Europe for centuries.

When one knows the story of these gifts from China he appreciates more deeply the importance of the Chinese to our ways of living in the United States. And he realizes the impor-

tance of closer, friendlier cooperation among all peoples and nations. He realizes the great importance of the countries of Asia to the welfare and advancement of life in America and the rest of the world.

China has given much to the world. Other nations have also given much to China. And the exchange of discoveries and inventions and products has not stopped. There will be richer ways of living for all of us as, in the future, the nations of Asia and the nations of Europe and America draw closer and closer together.

. . . .

This pamphlet brings together authoritative material on *China's Gifts to the West* not otherwise available in small compass. It is worth the consideration of all citizens and teachers who recognize the mounting importance of close relations between East and West. The long-continuing influence of Asiatic culture on Western civilization becomes clearer as one reads Dr. Bodde's document. The materials he presents offer substance and content for increasing and improving Asiatic studies in our schools, colleges, and agencies of adult education.

The pamphlet is of direct and special value to teachers of social studies and the humanities. In classes in these fields—especially in surveys of world history—it offers material for basic reading by entire classes or for special reports from interested pupils. The pamphlet is an excellent guide for teachers who seek to “filter” Asiatic materials into existing courses; for that purpose, it contains valuable suggestions for teachers of science, shopwork, and the arts as well as of social studies and humanities. Teachers of intermediate grades and student-groups responsible for assembly and club meetings will find here useful materials for dramatization and for programs.

The American Council on Education has long stressed the

importance of the international situation for American education. The appointment of a Committee on Asiatic Studies in American Education in 1941 is one outgrowth of the Council's concern in this field. Among the most neglected areas for comprehensive understanding of the world picture are the vast reaches and peoples of Asia. The Committee on Asiatic Studies has sought to aid schools in increasing and improving the Asiatic content of school curricula.

The Committee on Asiatic Studies in American Education is deeply indebted to Dr. Bodde for his preparation of the manuscript and to the Rockefeller Foundation for making its publication possible. This pamphlet is the first of a series now in preparation, intended as a contribution to the friendlier understanding of Asia on the part of American citizens.

HOWARD E. WILSON, *Chairman*

## Acknowledgment

IT IS A pleasure to acknowledge the kindness of those who have helped in the making of this pamphlet. Mrs. Fang Chao-ying, of the Asiatic Division, Library of Congress, who is known for her Chinese calligraphy, wrote the Chinese characters for the English title, which appear on the cover. Thanks are due to the Library of Congress for permission to reproduce the illustrations used in the pamphlet. Dr. Joseph Spencer and Mr. John Buoncristiani, both of the Office of Strategic Services, Washington, D.C., helped greatly in the preparation of the map. The actual drawing of the map is the work of Mr. Buoncristiani. Professor Conway Zirkle, of the Department of Botany, University of Pennsylvania, offered bibliographical suggestions which facilitated the writing of the section dealing with plants. Professor Thomas T. Read, of the School of Mines, Columbia University, supplied similar bibliographical aid for the section on Chinese minerals, to which he also gave freely from the results of his own research on that subject. To Professor Howard E. Wilson, chairman of the Committee on Asiatic Studies in American Education, American Council on Education, I owe a special debt of gratitude. His numerous suggestions have done much to make the pamphlet readable for students of high school age.

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University of Pennsylvania

November 8, 1942

Number 2 in this series, *CHINESE WRITING*, by Herrlee Glessner Creel, is now available. It is a 16-page pamphlet and sells at 25 cents a copy.

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The Chinese characters on the cover read: *Chung-kuo wu-p'in hsi-ju k'ao*. Literally translated, this means: "Study of the Introduction to the West of Products from the Central Country (China)."

The seal printed on the cover under the author's name is that used by the author when he lived in China. It reads *Pu Te*, which is the way the author's name is pronounced in Chinese. The seal is printed in red as is customary in China.

35 cents a copy

## China's Gifts to the West

CHINA has oceans to her east, steppes and deserts to her north and northwest, and mountains and jungles to her west and south. She has long seemed to be an outstanding example of isolation. Yet the Chinese succeeded long ago in breaking through these geographic barriers and opening trade routes to link their country with the outside world. As long as hundreds of years ago, materials and inventions and ideas traveled between China and the civilizations of India, Persia, Egypt, Greece, and Rome. Throughout the Middle Ages contact between China and the countries of Europe continued. In modern times the contact has increased. China has never been as isolated as we have often assumed.

The earliest of the trade routes between China and the outside world was a route for caravans. It led overland from Northwest China across the deserts of Central Asia (Turkestan), through Persia, and on to the shores of the eastern Mediterranean. From Central Asia, a branch which passed southward through Afghanistan, linked China with India. It is the route westward to the Mediterranean, however, with which we are here concerned. The Chinese conquest of Turkestan in the first century B.C. made it possible for caravans to carry goods over this road between China and the Mediterranean. Until 500 years ago it was the most important line of contact between China and the rest of the world. Over it passed many travelers, among them Marco Polo when he journeyed from Europe to reach China in the year 1275.

The second major trade route was the southern sea route by way of India. At its western end the route began either at the

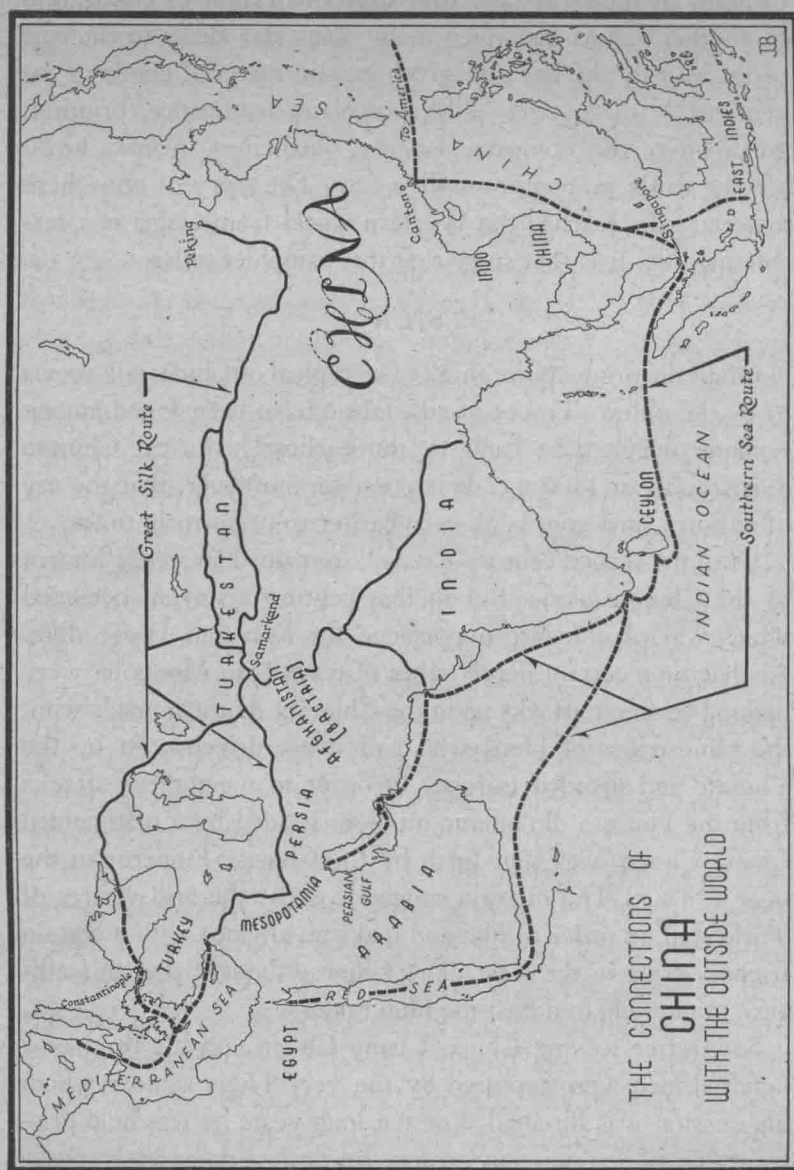


Red Sea or the Persian Gulf. It went south and then east across the Indian Ocean to India and Ceylon, from there around the tip of Malaya past the present Singapore, and up along the coast of Indo-China to Canton and other southern Chinese ports. The Chinese end of this route was opened in the second century A.D., but did not attain real importance until the coming of Arab ships to the Far East in the seventh century. In still later times the Chinese replaced the Arabs as the main seafarers between China and India. They developed the sea route so that it rivaled and at times even surpassed the overland road by caravan. When the Portuguese, Dutch, English, and others came to China from the sixteenth century on, this sea route became the main road to the East. Trade on the overland route declined. Ships had proven superior to camels as carriers of trade.

A third route approached China from the ocean side—across the Pacific Ocean by way of the Americas. This route became very important in the nineteenth century after the United States gained its independence. With the development of the New England clipper-ship trade with China, the route became as important as the older Indian Ocean route. Trade lines across the Pacific are in modern times a prime factor in the close and friendly relations between the United States and China.

For more than two thousand years, goods and ideas have been carried between China and the Western world by these three routes. China has contributed much to the Western world, and Europe and America to China. The story to be told here deals only with the gifts from China to the West. These contributions have influenced very greatly the development of Western civilization. For the two thousand years between 200 B.C. and A.D. 1800, China gave to the West more than she received in return.

It is difficult for the historian to trace in detail the path of ideas from one region to another. It is easier to trace the route



of material things as they pass from one center of civilization to another. China has given many ideas and ideals to the rest of the world; she has also given certain material goods or inventions or discoveries—silk, porcelain, tea, paper, printing, gunpowder, the compass, lacquer, medicines, plants, kites, playing cards, to mention only a few. The story of how these material gifts reached the Western world from China is a fascinating one. It is that story that this pamphlet tells.

### SILK

Of all the products we think of as typical of China, silk seems to be the oldest. Traces of silk fabric have been found among remains which date back to the earliest historical Chinese dynasty, about 1300 B.C. It is possible, moreover, that the use of silk in China goes back even earlier to prehistoric times.

Until the second century B.C., silk remained an article known to the Chinese alone. But in that century an event occurred which was of immense importance for East and West alike. At that time certain fierce tribes of nomads in Mongolia were making constant attacks upon the Chinese. These nomads were the same tribes of Huns who later were driven west by the Chinese and invaded Europe. In order to meet these attacks from the Huns, a diplomatic mission, headed by a man named Chang Ch'ien, was sent forth by the Chinese Emperor in the year 138 B.C. The mission sought to cross the arid wastes of Turkestan, in order to find and make an alliance with a certain friendly tribe in the west. The Chinese thought that this alliance might help to defeat the Hun raiders.

Soon after leaving China, Chang Ch'ien and his band of a hundred men were captured by the very Huns against whom his mission was directed. For ten long years he was held prisoner. Then, making his escape, he pushed dauntlessly westward once more. Finally he reached what was then Bactria, a

country in the extreme west of Turkestan, where he found the tribe that he had been sent to visit. They treated him with friendship, but showed no desire to join an alliance against the dreaded Huns. So Chang Ch'ien retraced his steps, only to suffer the misfortune of again falling a prisoner to the enemies. This time, however, he succeeded in escaping after a single year of captivity. In 126 B.C., twelve years after his departure, he returned to the Chinese capital, accompanied by but one of the hundred men who had started with him.

Chang Ch'ien's mission was a failure from a diplomatic point of view. But he brought back with him two important plants of western Asiatic origin. One was alfalfa, which was to prove of the greatest value to the Chinese as food for the horses used in their later military campaigns against the Huns. The other was the grape, which has ever since been one of China's favorite fruits.

Most important of all, however, Chang Ch'ien gave to the Chinese their first accurate knowledge of the expanses of Central Asia. Following his advice, they launched a series of military campaigns which during the next century broke the power of the Huns. Finally all of Turkestan was brought under Chinese rule. Across the desert the Chinese conquerors laid out a series of garrison posts. Thus, well before the birth of Christ, a trade route was established which crossed Turkestan from China, passed through Persian territory, and reached the eastern shores of the Mediterranean. From there ships could continue the journey to Rome itself. Thus were Rome and China, then the two most powerful empires in the world, linked by trade.

The most important product sent by China over this route to Rome was silk. Because of its high value and light weight, silk was ideal freight for the caravan trains of the long, long road. So much silk was carried over this route that it has since been commonly known as the great Silk Road.

In return for silk, the Roman Empire sent to the Chinese precious stones, wool textiles, asbestos, and—of greatest importance from a cultural point of view—glass, which is of western Asiatic origin. Yet none of these products could balance in value the precious silk. Woven into a semitransparent gauze, silk became the fashion among the ladies of Rome. In some periods of history silk was literally worth its weight in gold by the time it reached its destination. In fact, the Romans used so much silk and other Asiatic luxuries that during the first two centuries A.D. Rome suffered an adverse trade balance with Asiatic countries estimated to equal no less than half a billion United States dollars. One writer, indeed, has even gone so far as to suggest that this unfavorable trade balance was one important cause for the downfall of the Roman Empire.

After the collapse of Rome in A.D. 476, the silk trade was continued with Byzantium (Constantinople), the leading center of European civilization during the Middle Ages. During all this time, however, Europeans had no clear idea of how silk was produced. The Roman poet, Virgil (70–19 B.C.), for example, described silk as some kind of a vegetable product that is combed from trees. The Chinese, we may be sure, jealously guarded the methods of making silk. It was a valuable “trade secret.”

About the middle of the sixth century, however, some monks arrived in Constantinople from the East, bearing the startling news that silk was not “combed from trees,” but was produced by caterpillars. With the Byzantine Emperor’s encouragement they were sent eastward once more to bring back the secret of

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The pictures on pages 7–10 are taken from a series on silk making found in *T'ien-kung k'ai-wu*, a Chinese book originally printed in 1637 and reprinted by the Commercial Press, Shanghai, in 1927. A copy of this book may be found in the Asiatic Division, Library of Congress.



COLLECTING THE COCOONS



SORTING THE COCOONS



治絲一



SPINNING THE THREAD





WINDING SILK THREADS