

How the Silk Road Influenced the Food You Eat

Introduction

We have all heard the rhetoric about sustainable food systems and the slogans “Feed the World” and “Nine billion by 2050.” Likewise, we have heard about the “loss” of cultures around the world through the domination of one globalized culture that shapes every aspect of our daily lives, including how and what we eat. As the human population approaches nine billion, we are seeing unprecedented rates of deforestation in South America for the sole purpose of planting fields of soybean (*Glycine max*), an East Asian domesticate. Genetic diversity is being lost among crops around the globe as cloned and genetically identical hybrids are planted in fields from Russia to Mexico, and fruits and vegetables that were unheard-of in the northern temperate zone a generation ago are available all year round in markets and grocery stores. But how did humanity get to this point? How have we reached this fever pitch of global communication, commerce, and resource distribution? How did humans gain the ability to reshape the ecosystems around them and even the climate of the earth itself? The answers to these questions lie buried in the archaeological record.

Cherry-picking concepts from the literature of world systems, we can think of the globe today as one system or mechanical circuit. Within this system, poor economic decisions by a political leader in America or risky gambles by corporate bankers can send the entire globe into an economic crisis. A drought in California directly affects the price of oranges in

New York City. America's addiction to caffeine has caused the burning of millions of acres of ancient rainforests from Hawaii to Brazil. The combustion of fossil fuels in the United States and Western Europe is directly responsible for the melting of glaciers in the Himalaya and the decimation of tropical coral reefs, and it is in the process of submerging entire island nations.

Focusing on food systems, I look at globalization in Asian prehistory and history, starting about 4,500 years ago. When broken down to their simplest components, the ancient and modern processes of culture and gene flow are similar. Exchange along the Central Asian trade routes that came to be known as the Silk Road expresses, in its most basic sense, what Karl Marx referred to as commodity fetishism, the desire to obtain the exotic. People are willing to pay exorbitant sums to procure goods that their neighbors do not have. Commodity fetishism and conspicuous consumption are as much a part of the modern world as they were of the ancient world (if not far more so), and every reader of this book participates in them, although to varying degrees. Many scholars have studied how the exchange networks of the ancient world operated and connected people. But there remains the theoretical question of when the world system of Asia formed: when southwest, South, and East Asia became interconnected.

During the Yuan Dynasty (1271–1368)—the period of Mongol reign in China—Eurasia fell under one economic system, and the Mongolian trade routes led to all corners of Asia. By 1280, China, Central Asia, and Iran were under Mongol control—the *Pax Mongolica*—and trade routes stretched into more distant regions. Genghis Khan conquered the vast majority of Asia, occupying northern China by 1234, and his grandson assumed the Chinese throne by 1279. After the Mongol rulers (the Ilkhanate) pushed out the last of the Abbasid Caliphate from southwest Asia, the Asian continent was unified for the only time in history.

Yet Asia was deeply interconnected long before the formation of the Mongol khanates. In AD 751 the clash between the Arab and Chinese (Tang) Empires at the Talas River in Central Asia resulted in the full Islamization of Central Asia. This was the only military encounter between the great powers of the ancient world, but these empires and their predecessors had been economically connected for at least a millennium: trade along the Silk Road predated the Han Dynasty. Historical accounts claim that Zhang Qian, the first political envoy from the Chinese center, reached Central Asia in 126 BC. The written accounts in the *Shiji* (The records of the Great Historian, ca. 80 BC), although embellished with descriptions of fantastic beasts and other mythical details, attest to direct communication between Central Asia and East Asia in the early Han period. While these accounts may suggest that Central Asia was previously unknown to the Han, the mountains of Central Asia never impeded culture flow: people had been moving through the valleys like water through a leaky faucet for at least two millennia before Zhang Qian's journey to the west.

Archaeological evidence shows that the food systems of these regions were influencing each other as far back as the early third millennium BC. Around 2200 BC, at a small settlement in the Dzungar Mountains of northern Kazakhstan (at a site named Begash by archaeologists in the early 2000s), a family of farmers and herders ate bread made from grains that likely grew in a nearby field: broomcorn millet, a crop that was domesticated several millennia earlier in northeastern China, and wheat, a crop originating in the Fertile Crescent of southwest Asia.¹ Finding these two grains together provided the earliest evidence of a food system extending across a continent. The Silk Road remained a conduit for the mingling of the cuisines of different regions of East and Central Asia until the fourteenth century. Broomcorn millet continued to travel west through this corridor and

eventually became a major crop in the Roman Empire and across Europe. In the opposite direction, wheat was brought to East Asia and transformed into noodles and dumplings, dramatically influencing Chinese cuisine.

Increased connections between the food systems in Eurasia and beyond led to further globalization of regional cuisines. Eventually, rice (*Oryza sativa*) would become one of the most important grains in the Islamic world; the apple (*Malus domestica/pumila*) would become a symbol of America; and the peach (*Prunus persica*) would become an emblem of the US state of Georgia, while its cousin, the apricot (*Prunus armeniaca*), would become a hallmark of the nation of Georgia in the Caucasus. How each of these crops migrated from its place of origin in East or Central Asia is a fascinating story, requiring both an archaeological and historical perspective. In this book, I trace the origins and the paths of dispersal of these and other familiar crops. I illuminate how the farmers of the ancient world developed the foods we eat today and the role the Silk Road played in their evolution and dispersal.

THE BEGINNINGS OF THE SILK ROAD

When man migrates, he carries with him not only his birds, quadrupeds, insects, vegetables, and his very sword, but his orchard also.

Henry David Thoreau, “Wild Apples,” 1862

By dispersing plants and animals all around the world, humans have shaped global cuisines and agricultural practices. One of the most fascinating and least-discussed episodes in this process took place along the Silk Road. This story has come to light through recent discoveries in the fields of archaeology and biology—notably in the areas of phylogenetics and archaeobotany. I track a selection of plants on their historical journey along the trans-Eurasian exchange routes, revealing how the food on your kitchen table made its way across deserts, over mountains, and through thousands of

farming seasons, and how the introduction of new crops changed the course of human history.

In 2001, Michael Pollan's book *The Botany of Desire* enabled readers all over the world to learn how the apple made its way into our kitchens, and, according to Pollan, helped settle the American frontier.² Many readers were surprised to learn that the story of the apple tree reaches back to Central Asia, and that modern commercial apples have genetic linkages to truly wild populations outside Almaty, the former capital of Kazakhstan. In fact, it is the Silk Road itself that is responsible for the genesis of our modern apple, which is a hybrid of four separate populations. When the Silk Road merchants carried apple seeds across Eurasia, the trees hybridized with populations that had been isolated since the last glaciation of Eurasia, creating offspring that produced more and larger fruits.

Your grandmother's apple pie is not the only food on your table to trace its roots back to Central Asia, nor the only one to travel the great Silk Road. Pistachios (*Pistacia vera*) originated in the foothills of southern Central Asia, and almonds (*Prunus dulcis*) and English walnuts (*Juglans regia*) trace their lineages back to the foothills of southern Eurasia.

The Silk Road was the largest commerce network of the ancient world; it linked the edges of the Eurasian supercontinent to trading centers in Central Asia and indirectly connected the imperial centers of East and southwest Asia. While organized trade along the Silk Road, along with military outposts and government taxation, dates to the Han Dynasty (206 BC–AD 220), archaeologists have traced the dispersal of goods, ideas, cultural practices, and genes across Central Asia to the third millennium BC.³ I treat these earlier iterations of the Silk Road as precursors of the historical routes, and I give cultural exchange during the second and third millennia equal prominence with that of later periods. Over the past two millennia, control over the lands of the Silk Road, with their expansive deserts and mountain ranges, has passed back and forth between various political and ethnic

groups, including successive East Asian empires and Central Asian political entities, such as the Xianbei and Xiongnu. This ebb and flow of cultures shaped human history in myriad ways, including the spread of agricultural practices and crop varieties.

The Silk Road was not a road, nor was its main commodity silk. The popular image of long ribbons of camel caravans connecting Xi'an with Rome is just one of its temporal iterations. I define the Silk Road loosely, as a cultural phenomenon of exchange and interaction starting in the third millennium BC and intensifying during the first millennium BC, as exchange and mobility (in various forms) turned Central Eurasia into a complex social arena. The gradual increase in human mobility across Inner Asia, initially propelled by the spread of horse transport, seasonal human migration, and small-scale agropastoralism, played a significant role in shaping human history. Prehistoric Central Asians connected the far corners of the ancient world and spread innovations across it. Among the many ideas and technologies they picked up was the knowledge of how to grow and experiment with crops. Many of these crops were later transported and introduced to new geographic areas.

The chapters that follow trace the seven-thousand-kilometer journey that humans have been embarking upon for millennia (although few merchants likely traveled the entire route). They track the footsteps of European explorers like Marco Polo, Alexander von Humboldt, Sven Hedin, Aurel Stein, Nikolay Przhevalsky, Nikolai Ivanovich Vavilov, Owen Lattimore, and hundreds of thousands of merchants and herders who carried with them the genetic material for new varieties of plant and animal species. The resulting dispersal of organisms by humans was unmatched until the colonial expansion of Europe. Notably, the grain crops they carried would give rise to crop-rotation cycles, increasing the food supply and allowing empires to flourish in both Europe and Asia. Millet became the summer crop of the Persian Empire and the low-class crop of Rome, and wheat became the