STEEL IS MADE THROUGH PERSISTENT TEMPERING

Xinmin Liu

Seemingly a plain term used for tempering metal, *Bai lian cheng gang* 百炼成钢 in fact touts an opulent history of philological, cultural, and (lately) ideological refashioning. The word *gang* 钢 denotes a metallic alloy, but was used in classical Chinese interchangeably with a homophone, 刚, meaning firm and unyielding. Usually paired with *yang* 阳 to signify that which is masculine, aggressive, and sublime, *gang* has ethical, educational, and aesthetic meanings. 炼, the character with a fire radical, denotes an alchemist remolding amid blazing heat and cold liquid. The phrase *Bai lian cheng gang* 百炼成钢 means that steel is made through persistent tempering, and it attests to blacksmiths in ancient China who claimed to have made steel out of pig iron by continuously tempering the metal to not only blend with mixed ores but also rid itself of impurities. What drove the steel makers to temper the metal was a rich chronicle of ends and uses running the gamut of shamanism, Daoism, militarism and mysticism, which doubtless nurtured the roots of steel making and its extended meanings.¹ But it was in cultural and historical writings that the trope of tempering, through long and arduous trials and contests, came to imply the process of human character growth and maturation. As dynasties rose and fell and the modern age dawned, *lian gang* 联钢 absorbed a new mixture of ethical and political significance.

China experienced a traumatic coming-of-age while entering the modern era. In the late nineteenth century, British gunships relied on superior cannons to crack open China’s coastlines during the Opium War (1839–41). Japan invaded Korea and forced a naval war in the Yellow Sea on China in 1894–95, and then in 1900 the eight-power allies unleashed their armed intrusion and overran Beijing, the Qing imperial capital. These humiliating defeats at sea and on land left this

“Central Kingdom on Earth” reeling in shame and panic; her fate sank even deeper as the foreign powers demanded huge territorial privileges and costly reparations. Defeat, humiliation, and agitation fueled the educated elites’ urge to seek political and social reforms so China would be able to repulse foreign imperialists and, by mastering science and technologies from the West, to become a modern nation of power and wealth. These national crises prompted the eminent members of the literati to embrace the key ideas of Western learning—evolution, the nation-state, and individualism—widely believed to be the secret to Western nations’ material strength and technological advances. Foremost were evolution and individualism, which the reformist intellectuals explored and adapted as critical remedies for imperial China’s failures and vices.2

The drive for modernity also reinvigorated the notion of persistent tempering thanks to modern aspirations to breed a new type of individuals. The reformers affirmed individualism, but disagreed as to what should be the true and final aim of a valid self-realization. Yan Fu played a pioneering role in the Yangwu yundong (Western affairs or self-strengthening movement, 1894–96) by translating into Chinese core ideas of English liberalism and Western philosophy from Herbert Spencer’s A Study of Sociology, Thomas Huxley’s Evolution and Ethics, and Adam Smith’s Wealth of Nations. He introduced the ideas of evolution and the struggle for existence, taken from social Darwinism, to urge the Chinese to bring into full play their creative and assertive energy and wisdom, so that a reformed China would rise in power and wealth to equal the West. But his paraphrastic translation revealed his conception of the aspiring individual in quest of socially oriented goals—harking back to the ancient Confucian idea of qun (social grouping).

While national survival motivated Yan’s ingenious adaptations of evolution, what prompted Chen Duxiu’s idolization of evolution was the aspiration for a national rebirth. Born and reared on a scholar-gentry estate, Chen started his pursuit of moral goodness with harsh reality close at hand—as a rebel against his own patriarchal grandfather. His advocacy of Western science (including biological evolution)

---