

# Translation and transmutation: the *Origin of Species* in China

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**Abstract.** Darwinian ideas were developed and radically transformed when they were transmitted to the alien intellectual background of late nineteenth- and early twentieth-century China. The earliest references to Darwin in China appeared in the 1870s through the writings of Western missionaries who provided the Chinese with the earliest information on evolutionary doctrines. Meanwhile, Chinese ambassadors, literati and overseas students contributed to the dissemination of evolutionary ideas, with modest effect. The ‘evolutionary sensation’ in China was generated by the Chinese Spencerian Yan Fu’s paraphrased translation and reformulation of Thomas Huxley’s 1893 Romanes Lecture ‘Evolution and ethics’ and his ‘Prolegomena’. It was from this source that ‘Darwin’ became well known in China – although it was Darwin’s name, rather than his theories, that reached Chinese literati’s households. The *Origin of Species* itself began to receive attention only at the turn of the twentieth century. The translator, Ma Junwu (1881–1940), incorporated non-Darwinian doctrines, particularly Lamarckian and Spencerian principles, into his edition of the Chinese *Origin*. This partially reflected the importance of the pre-existing Chinese intellectual background as well as Yan Fu’s progressive ‘evolutionary paradigm’. In this paper, I will elucidate Ma Junwu’s culturally conditioned reinterpretation of the *Origin* before 1906 by investigating his transformation of Darwin’s principal concepts.

## Introduction

Darwin’s scholarship itself was at a key intersection framed by global intellectual communication and trade, connected through the nineteenth century’s new invention: the post office. The great virtue of Darwin’s global correspondence, including some fifteen thousand letters, is to remind us that even the most intimate aspects of Darwin’s intellectual life were embedded in the networks of cross-cultural exchange. Hence, as James Secord suggests, in order to understand the phenomenon of Darwin and Darwinism it makes sense to start with communication.<sup>1</sup>

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<sup>1</sup> James Secord, ‘Global Darwin’, in William Brown and Andrew Fabian (eds.), *Darwin*, Cambridge: Cambridge University Press, 2010, pp. 31–57, 31–32, 37.

Multiple historical inquiries have been made into the globalization of Darwinism. Thomas Glick's pioneering edited volume *The Comparative Reception of Darwinism* (1972) examined the reception of Darwinism, both pro- and anti-Darwinist opinions, in multiple European and American countries with diversified religious, philosophical and sociopolitical settings.<sup>2</sup> Since the mid-1990s, inquiry into the dissemination of Darwinism has shifted from a focus on Europe and America to Latin America, exemplified by the likes of *The Reception of Darwinism in the Iberian World* (2001) and *¡Darwinistas! The Construction of Evolutionary Thought in Nineteenth Century Argentina* (2012).<sup>3</sup> This study has been extended to the Islamic world, for instance in Marwa Elshakry's *Reading Darwin in Arabic* (2013), an engaging conceptualization which examines how evolutionary ideas propelled the conceptual transformation of religion and science themselves, and directed the intellectual and political history of the Arabian world from 1860 to 1950.<sup>4</sup> However, the transmission of Darwinism into China has not been well studied. As Glick notes, China is not a variation on a common theme, but an outstanding example, whereby reception was shaped by a scientific or philosophical culture that had nothing to do with that of the West and whose suppositions were completely different.<sup>5</sup>

An English-language monograph on Darwinism in China appeared in 1983, when James Pusey published his *China and Charles Darwin*, which demonstrates, successfully, that Darwinism was a stimulus that impelled the philosophical and social-political transformation in modern China. Pusey's most substantial topic of inquiry was how Darwinism interacted 'with Marxism and the Thought of Mao Tse-tung'.<sup>6</sup> Nonetheless, neither *China and Charles Darwin* nor the more recent *Evolution and Radicalism in China* and *The Rise of Evolutionism in China* have examined the role of the *Origin*.<sup>7</sup> As one of the authors justifies this omission: 'what I try to focus upon is not scientific Darwinism, but evolutionism in the realm of society and ideology'.<sup>8</sup> A greater focus on the transfer of science itself was pursued by *The Circulation of Knowledge between Britain, India and China* (2013). Research on Darwinism in

2 Thomas Glick (ed.), *The Comparative Reception of Darwinism*, Austin and London: University of Texas Press, 1972; Glick *et al.* have a volume on Darwinism in Europe. See Eve-Marie Engels and Thomas Glick (eds.), *The Reception of Charles Darwin in Europe*, London: Continuum, 2008.

3 See Thomas Glick, 'The comparative reception of Darwinism', *Science and Education* (2010) 19, pp. 693–703; Thomas Glick and Miguel Angel Puig-Samper (eds.), *The Reception of Darwinism in the Iberian World*, Berlin: Springer, 2001; Alex Levine and Adriana Novoa, *¡Darwinistas! The Construction of Evolutionary Thought in Nineteenth Century Argentina*, Leiden: Brill, 2012; Levine and Novoa, *From Man to Ape: Darwinism in Argentina, 1870–1920*, Chicago and London: The University of Chicago Press, 2010.

4 Marwa Elshakry, *Reading Darwin in Arabic*, Chicago and London: The University of Chicago Press, 2013.

5 Glick, *op. cit.* (3), p. 701.

6 James Pusey, *China and Charles Darwin*, Cambridge, MA: Harvard University Press, 1983, p. 452. Pusey has another monograph which focuses on Lu Xun (1881–1936), one of the most significant essayists in twentieth-century China. See Pusey, *Luxun and Evolution*, Albany, NY: SUNY Press, 1998.

7 Wu Pi, *Jinbualun yu zhongguo jijing zhuyi* (Theories of Evolution and Radicalism in China), Beijing: Peking University Press, 2005; Wang Zhongjiang, *Jinghua zhuyi zai zhongguo de xingqi* (The Rise of Evolutionism in China), Beijing: China Renmin University Press, 2010.

8 Wang, *op. cit.* (7), p. 344.

China specifically has been conducted by Haiyan Yang, whose splendid ‘Knowledge across borders’ (2013), along with her ‘Encountering Darwin and creating Darwinism in China’ (2013), provided a great framework for the dissemination of evolutionary ideas from the 1870s to the 1920s by adeptly situating Darwinism within the broad context of the history of publication and the means of knowledge distribution in late nineteenth- and early twentieth-century China.<sup>9</sup> Vincent Shen’s article ‘Translation and interpretation: the case of introducing Darwinian evolutionism into China’ (2016) is an example of more specific research, evaluating the linguistic and philosophical aspects of Ma Junwu’s translation of the *Origin*.<sup>10</sup> Nonetheless, research on the scientific reception of Darwinism, and particularly of the *Origin*, is still sparse and in need of deeper analysis.

My project will supply another picture of the new scholarly attention to the transnational reception of the *Origin*. Examples of this include Sander Gliboff’s *H.G. Bronn, Ernst Haeckel, and the Origins of German Darwinism* (2008), which studies how the *Origin* came to be translated into German in 1860, and how it served the translator’s purposes of reconceptualizing morphology, palaeontology and systematics.<sup>11</sup> Marwa Elshakry has studied the history of the Arabic *Origin*, translated by Isma’il Mazhar. ‘Published in Cairo [in 1918], the first translation consisted of Chapters 1–5 of the sixth edition of *Origin*: the translator described these chapters as the true core of the book. Ten years later, he added another four chapters’.<sup>12</sup> Coincidentally, this pattern resembles that of the translation of the *Origin* in China, where it was also presented in separate instalments, as will be examined below.

The present article aims to investigate the early period of Ma Junwu’s translation of the *Origin*. The first section is devoted to tracing the dissemination of evolutionary ideas in late nineteenth-century China, elucidating the background of Ma’s translation and identifying the motives that led to Ma’s transformation of the texts of the *Origin* and his reinterpretation of Darwin’s branching tree diagram. I will demonstrate how Lamarckian and Darwinian ideas coexisted in the Chinese *Origin*, and illuminate how Darwin’s branching model of ‘descent with modification’ was converted into a linear progressive one. I will clarify why Ma had little intention of overthrowing the pre-existing evolutionary paradigm established by Yan Fu’s ‘evolutionary sensation’ in the late 1890s, and explain how he solidified a Chinese interpretation of evolution under the flag of an authoritative name: Charles Robert Darwin.

9 Haiyang Yang, ‘Knowledge across borders’, in Bernard Lightman, Gordon McOuat and Larry Stewart (eds.), *The Circulation of Knowledge between Britain, India and China: The Early-Modern World to the Twentieth Century*, Leiden: Brill, 2013, pp. 181–208; Yang, ‘Encountering Darwin and creating Darwinism in China’, in Michael Ruse (ed.), *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, Cambridge: Cambridge University Press, 2013, pp. 250–257.

10 Vincent Shen, ‘Translation and interpretation: the case of introducing Darwinian evolutionism into China’, *Universitas: Monthly Review of Philosophy and Culture* (2016) 43, pp. 3–25; see also Shen, ‘Evolution through Chinese eyes: Yan Fu, Ma Junwu and their translations of Darwinian evolutionism’, *Asia Network Exchange* (2014) 22, pp. 49–60.

11 Sander Gliboff, *H.G. Bronn, Ernst Haeckel, and the Origins of German Darwinism*, Cambridge, MA: MIT Press, 2008.

12 Elshakry, op. cit. (4), p. 262.

### The background: evolutionism in late nineteenth-century China

When *On the Origin of Species* was published in 1859, China was struggling for survival against Darwin's homeland, the United Kingdom (and her allies), during the Second Opium War (1856–1860), which was terminated by the signing of the Convention of Peking (1860). This obtained for China a period of peace during which the Qing government had the prospect of building military and economic strength in preparation for future confrontation with foreign powers.

A new strategy was required to strengthen the moribund Qing regime and to find a new place for China in a transformed international ecosystem. This new strategy was the Self-Strengthening Movement (1861–1895), an official effort to graft Western technology onto a traditional Chinese cultural base.<sup>13</sup> The philosophy underlying this self-strengthening is concise. Feng Guifeng (1809–1874), regarded as a pioneer of this movement on account of coining the concept of 'self-strengthening' (*zhiqiang*), specified that 'what we have to learn from the barbarians is only the one thing, solid ships and effective guns'.<sup>14</sup> Hence self-strengthening could triumph by setting up arsenals, shipyards and schools for training students in Western technologies. Such innovations included the Kiangnan Arsenal (f. 1865), the Peking Tongwen guan (Interpreters' College, f. 1862) and the Fuzhou Naval College (f. 1866), and the hire of foreign advisers to cultivate Chinese artisans for manufacturing military wares. Missionaries, after being banned for several centuries (dating back to the prohibition of Christianity by the Kangxi Emperor in 1717), were reorganized by such groups as the London Missionary Society and the American Board of Commissioners for Foreign Missions, and entered China again after the First Opium War (1839–1842), providing the Self-Strengthening Movement with abundant sources of foreign advice.

These missionaries, or 'foreign advisers', provided the Chinese with their earliest information on evolution. The first Chinese reference to Darwin, as far as can be documented, appeared in 1871 at the Kiangnan Arsenal, whose Translating Department had been set up in 1867 primarily for rendering technical (particularly military) works into Chinese. Of necessity, this led to the introduction of the non-technological disciplines.<sup>15</sup> As an example, Charles Lyell's *Elements of Geology* (1865), which became a standard geological textbook for newly established undertakings in the Self-Strengthening Movement, was translated in 1871 under the Chinese title *Dixue qianshi* (A Brief

13 Champions of 'self-strengthening' believed that the 'substance' (*ti* 體) of Confucian culture was essentially invulnerable to the 'utility' (*yong* 用) of Western technology. Phillip A. Kuhn, *Origins of the Modern Chinese State*, Redwood City, CA: Stanford University Press, 2002, p. 52. On the Self-Strengthening Movement see Institute of Modern History, Academia Sinica (ed.), *Qing ji zi qiang yun dong yan tao hui lun wen ji* (Proceedings of the Conference on the Self-Strengthening Movement in Late Ch'ing China, 1860–1894), Taipei: Institute of Modern History, Academia Sinica, 1988; see also Jason Qu, 'Self-Strengthening Movement of late Qing China: an intermediate reform doomed to failure', *Asian Culture and History* (2016) 8, pp. 148–154.

14 Quoted in John King Fairbank and S. Teng, *China's Response to the West: A Documentary Survey*, Cambridge, MA: Harvard University Press, 1979, p. 53.

15 David Wright, 'The translation of modern Western science in nineteenth-century China', *Isis* (1998) 89, pp. 653–673, 662.

Introduction to Geology). The translators, American Baptist missionary Daniel MacGowan (1815–1893) and Chinese mathematician Hua Hengfang (1833–1902), conveyed to the unsuspecting Chinese audience the claim that neither Lamarckian doctrines nor Darwinian principles had been solidified in the West. The translators suggested, in *Dixue qianshi*, that the legitimacy of evolutionary theories was dubious:

Lamarck proposed that species are transforming gradually ... People do not believe in such a viewpoint. Recently, there is Darwin who argues that species can select their fittest circumstance to live, and their dispositions are changeable. The validity of Darwin's theory is not established either.<sup>16</sup>

Proselytizing foreign advisers had little interest in enlightening the Chinese on Darwin's central principles; instead, their main concerns were to critique transformism and to rebut secular theories of human origin. This partially explains why the *Descent of Man*, as an instantaneous target of rejection, was reported in the Chinese press much earlier than the *Origin*. In 1873, the publication of the *Descent* (1871) was introduced in *Shanghai News*, a newspaper established by a British businessman, Ernst Major (1841–1908). The short essay described how Darwin had argued that one of the pieces of evidence that humans and animals share common progenitors is their common forms of facial expression.<sup>17</sup> Yet this limited awareness of Darwin's work was still sinicized, for Darwinian scholarship was referred to as *shixue* ('evidential research'), the literal meaning of which is the meticulous evaluation of data based upon rigorous standards of precision. Evidential-research scholars claimed to get away from speculation altogether, and to rest their studies upon 'hard facts'. Unlike Western natural philosophers (including Darwin), Chinese evidential scholars, such as Dai Zhen (1724–1777), were not concerned to uncover the laws of nature, but instead took up scientific disciplines as a means of reconstructing China's splendid antiquity.<sup>18</sup>

Discussion of man's ape ancestry was introduced by the Anglican missionary John Fryer (1839–1928), who supervised the Translating Department of the Kiangnan Arsenal. 'In the beginning, there were only worms. Fishes, birds and beasts appeared later; the most intelligent one is the ape, which gradually evolved into man. The process is from the bad to the good, from the simple to the complex'.<sup>19</sup> Fryer went on: 'the origin of man is unimportant to us ... It is more economical to devote research to man's destiny than to waste time on his origin'.<sup>20</sup> Furthermore, for William Martin

16 Charles Lyell, *Dixue qianshi* (*Elements of Geology*, tr. Hua Hengfang and Daniel MacGowan), vol. 13, Shanghai: Kiangnan Arsenal, 1873, p. 16. All translations from the Chinese are my own.

17 Anon., 'Xiboshi xinzu renben yishu (A Western doctor's new publication: descent of man)', *Shen bao* (21 August 1873) 404, p. 2.

18 On evidential research see Benjamin Elman, *On Their Own Terms*, Cambridge, MA: Harvard University Press, 2005, Part III.

19 John Fryer, 'Hundun shuo' (On Chaos), *Gezhi Huibian* (The Chinese Scientific Magazine) (1877) 7, p. 6. 'Hundun Shuo' is an anonymous article; however, I agree with Benjamin Elman that the author was John Fryer, who tended to prepare unsigned journal articles. In the 1870s it was best for an unnamed Christian – no matter how secular – and his Chinese aide to critique Darwin obliquely. Elman, op. cit. (18), 347.

20 Fryer, op. cit. (19), pp. 6–7.

(1826–1916), the American Presbyterian missionary who directed the Peking Tongwen guan, ‘Tracking man’s origin through animals and plants is no more than studying the vestige of Creation’.<sup>21</sup>

Missionaries, with their exclusive focus on general transformism and human origin in their discussions of Darwinism, provided the Chinese with a dichotomous choice: divine action or secular causes (and it was crucial to rebuff the latter before the Chinese accepted it). These scattered references to evolutionary ideas in missionary presentations generated little reaction among Chinese literati, who had little interest in the biological distinction between man and animals. As Eske Møllgaard notes, the Confucian distinction between human and non-human is not biological but is always produced politically and philosophically.<sup>22</sup> Other provocative Darwinian concepts, such as natural selection and the struggle for existence, were omitted. For example, Joseph Edkins (1823–1905), the British Protestant missionary who translated Joseph Hooker’s *Botany* textbook in 1886, promoted natural theology but failed to inform his Chinese audience that Hooker accepted the Darwinian notion of the survival of the fittest.<sup>23</sup> Perhaps the most immediate reason why the earliest introductions of evolution provoked little reaction was that access to this new knowledge was limited. Independent presses and journalism dealing with new knowledge by the mid-1890s were weak in China. Chinese scholars had few local channels for acquiring new knowledge from the West and, more essentially, for framing their own expertise through creative discussion in print.<sup>24</sup>

The ‘evolutionary sensation’ in China was inaugurated by the Chinese Spencerian Yan Fu (1854–1921) after China’s humiliating defeat in the Sino-Japanese War (1894–1895). Yan was educated in the Fuzhou Naval College, the second-largest site for shipbuilding and education in Western sciences and engineering during the Self-Strengthening Movement. In 1877, Prosper Giquel (1835–1886), the ‘foreign adviser’ in this college, dispatched twelve students to England, with five attending the Royal Naval College in Greenwich – Yan was one of these five.<sup>25</sup> After studying navigation for two years in England, the twenty-five-year-old Yan came back to China in June 1879, and taught mathematics at the Fuzhou Naval College for a short period. In 1880, Li Hongzhang (1823–1901), one of the most powerful officials in the Self-Strengthening Movement, urged him to work in the Northern China Naval College in Tianjin, where Yan became the chancellor in 1890.

Yan’s British education led him to cast doubts on the established social–political order in late Qing China. His doubtfulness was further enhanced by China’s embarrassing failure in the 1894 Sino-Japanese War, which destroyed China’s North China Fleet (until then ranked eighth in the world). Yan, then chancellor of Northern China

21 William Martin, ‘Xiexue kaolue’ (Brief introduction to Western learning), in *Xuxiu siku quanshu* (The Continuation Books of Complete Library of the Four Treasuries), Shanghai: Shanghai Ancient Works Publishing House, 2002, pp. 739–740.”

22 See Eske J. Møllgaard, *The Confucian Political Imagination*, Berlin: Springer, 2018, pp. 102–105.

23 Elman, op. cit. (18), p. 328.

24 Yang, op. cit. (9), pp. 187–188.

25 Elman, op. cit. (18), pp. 372–375.



Naval College, the preparatory school for the North China Fleet, personally witnessed China's loss and weakness. His sorrow was further deepened by knowing that several of his classmates in Fuzhou Naval College, including Commanders Liu Buchan (1852–1895) and Lin Taizeng (1851–1895), committed suicide in this war. The Treaty of Shimonoseki (made final on 17 April 1895) ruined the whole sinitic world order, destroyed the national confidence of the Chinese and tested the results of the Self-Strengthening Movement. The Chinese henceforth realized that Western civilization was grounded on more than technology, and that China needed to seek a new road leading to power and wealth. Sociopolitical transformation became as demanding as technological development.

In response to this need, Yan published four eloquent essays from February to June 1895 in the *Tianjin Newspaper*, founded by German aristocrat Constantin von Hanneken (1854–1925). In one of these articles, entitled 'Yuan qiang' (In search of strength), Yan maintained that evolutionary ideas, with which he had become acquainted while in England, were the remedy for saving China's chaos in the post-1894 Sino-Japanese War period. China's loss in this war was a natural outcome of evolution, because, he proposed, 'the weak are conquered by the strong, the stupid are enslaved by the intelligent'.<sup>26</sup> Yan described Spencer as an honest admirer of Darwin: 'Spencer followed Darwin and applied his principles to human society'.<sup>27</sup> Yan neglected the substantial theoretical innovations for which Spencer was responsible, for he and his Chinese colleagues lacked the knowledge to realize that Spencer was more in tune with Lamarckian and even von Baerian traditions than with Darwinian ones.<sup>28</sup>

As an international intellectual, widely read by an enormous global audience, Spencer had tremendous influence in Victorian England, particularly during the period in which Yan studied at the Royal Naval College. Spencerian sociology, as one aspect of Yan's extensive curriculum of study, proposed that physical and intellectual abilities of individual persons determine national power. Following Spencer, Yan affirmed that the fundamental way forward was to apply evolutionary ideas to the Chinese: physically, mentally and morally. Nevertheless, he felt anxious about China's future:

Our country is enclosed by hostile powers ... [and] we do not have enough time to acquire [social] development before our country follows the deteriorating patterns of India and Poland. Before the Spencerian philosophy [of social development] is put into practice, the Darwinian principles will have already been applied.<sup>29</sup>

Yan, on 8 December 1897, initiated his own periodical, *Guowen huibian* (Collection of National News), which published a portion of his translation of Huxley's 'Prolegomena'. The book *Tianyan lun* 天演論 (On Natural/Heavenly Evolution), including both the 'Prolegomena' and 'Evolution and ethics', was printed in Mianyang 沔阳,

26 Yan Fu, 'Yuan qiang', *Zhi Bao* (4 March 1895) 32, p. 1.

27 Yan, op. cit. (26), p. 1.

28 See John Offer (ed.), *Herbert Spencer: Critical Assessments*, vol. 2, Abingdon: Routledge, 2004, Part Four.

29 Yan, 'Yuan qiang', *Zhi Bao* (5 March 1895) 33, p. 2. See also Ke Zunke and Li Bin, 'Spencer and science education in China', in Bernard Lightman (ed.), *Global Spencerism*, Leiden: Brill, 2015, pp. 78–102, 89.

Hubei Province, in April 1898.<sup>30</sup> Yan was not Huxley's admirer. Rather, he criticized Huxley from Spencer's perspectives in his own commentaries that constituted approximately half of the *Tianyan lun* text.

Evolution, in *Tianyan lun*, is progressive, as Yan expressed in his own annotation: 'we can judge from worms, plants and animals that evolution makes progress every day. There are vestiges from *infusoria* to man, which is a viewpoint of multiple naturalists'.<sup>31</sup> What Yan did not translate is also important. For example, he omitted to translate Huxley's non-progressivist interpretation of evolution: 'that every theory of evolution must be consistent not merely with progressive development, but with indefinite persistence in the same condition and with retrogressive modification, is a point which I have insisted upon repeatedly from the year 1862 till now'.<sup>32</sup>

Yan was convinced by Spencer's Lamarckian transformism and coined a Lamarckian-flavoured term – *tibe* – in his own commentary: 'An organism modifies its appearance and function for the sake of fitting the changing environment; such a process is named as *tibe*, which is the secret of evolution'.<sup>33</sup> The struggle for existence, according to Yan, is the cause of progressive *tibe*: 'If we stop men from struggling for existence, they will not use their minds and strength; hence *tibe* will not happen, and man will not make progress'.<sup>34</sup> Yan proposed that the principle of evolution is useful in both the organic world and human society, and treated *tibe* as equivalent to central Darwinian principles: 'All these three principles, the struggle for existence, natural selection and *tibe*, play an identical role in the evolution of living organisms and society'.<sup>35</sup> Progressiveness dominates both natural and social evolution: 'Organic beings make progress in natural evolution; hence social evolution is also doubtlessly progressive'.<sup>36</sup> He was skilful in merging theoretical factors from Darwin, Spencer and Lamarck to justify his own purpose: 'the growth of population surpasses the food increase, which is why people need to use their intelligence and the capability of self-governing. Disuse causes non-progressiveness; use leads to development'.<sup>37</sup>

Nonetheless, the initial preoccupation of Yan's work was not to make a distinction between Darwin, Lamarck and Spencer, but to search for a therapy to secure the racial survival of the Chinese, which had been threatened in the aftermath of a series of military and political catastrophes in the late nineteenth century. Yan warned that progressive development is perhaps the best solution for avoiding natural elimination,

30 Huxley's 1893 lecture, 'Evolution and ethics', was the second in the series of the prominent Romanes Lectures, given annually at Oxford University. Published as an essay in the following year, the forty-one-page lecture is prefaced by a forty-five-page 'Prolegomena', supplemented by thirty pages of footnotes exhibiting a remarkable range and depth of knowledge of philosophy in particular. See Gertrude Himmelfarb, 'Evolution and ethics, revisited', *New Atlantis* (2014) 42, pp. 81–87, 83.

31 Yan Fu, *Tianyan lun*, 2 vols., Mianyang: Lushi Shenshi Jizhai, 1898, vol. 2, p. 50.

32 Thomas Huxley, *Evolution & Ethics, and Other Essays*, London: Macmillan, 1894, 4.

33 Yan, op. cit. (31), vol. 1, p. 39. *Tibe* 體合 literally means 'adjusting the body to meet environmental needs'.

34 Yan, op. cit. (31), vol. 1, pp. 40–41.

35 Yan, op. cit. (31), vol. 2, p. 50.

36 Yan, op. cit. (31), vol. 2, p. 50.

37 Yan, op. cit. (31), vol. 1, p. 40.



because ‘the ones making progress survive and reproduce, the non-progressive ones suffered from diseases and became extinct. That is why there are multiple fossils underground’.<sup>38</sup> The Chinese must accept Spencer’s claim that ‘the nature of social evolution is progressive’.<sup>39</sup>

*Tianyan lun* became widespread, with some thirty editions appearing in subsequent years after its publication.<sup>40</sup> The Chinese scholar Cao Juren (1900–1972) estimated that over five hundred autobiographical memoirs from prominent Chinese intellectuals and politicians in the early twentieth century recalled the influence of *Tianyan lun*.<sup>41</sup> If ‘the survival of the fittest’ was the most powerful social Darwinist slogan in the West, then Yan’s mighty *wujing tianze, shize shengcun* 物競天擇，適者生存 (‘Things struggle, the fittest survive’), a catchphrase for sociopolitical change, had an equivalent dominance in China. The explosion of popular journals and the great sociopolitical transformation at the turn of the twentieth century helped popularize Yan’s work amongst a wide Chinese audience. The pragmatist Hu Shi (1891–1962), a disciple of John Dewey (1859–1952) at Columbia University, recalled how Yan Fu’s *Tianyan lun* rapidly became popular with young students – the twenty-two-year-old translator of the *Origin*, Ma Junwu, amongst them.<sup>42</sup>

### The arrival of the *Origin*

Born in Guilin, Guangxi Province, on 17 July 1881, Ma Junwu 馬君武 (or Mc Quinwoll) was educated in preparation for the imperial examination in his early life. He was talented in classical (Chinese) studies and was able to write formal ‘eight-legged essays’ by the age of fourteen.<sup>43</sup> However, he never took this exam because his scholarly concentration was redirected during 1896, in which year Ma became interested in studying science. Making such a decision was difficult for a young man in Ma’s time; the pursuit of ‘Western studies’, even at the end of the nineteenth century, was the first choice of few scholars. Rather it was a disappointing alternative for those whose path to an official career, via the imperial examination, had been blocked.<sup>44</sup>

Ma’s intellectual world and his personal life were intertwined, as they are for most of us. Ma’s interest in evolution had been initiated through his personal connections with

38 Yan, op. cit. (31), vol. 1, p. 41.

39 Yan, op. cit. (31), vol. 2, p. 50.

40 Han Jianghong, *Yanfu huayu xitong yu jindai zhongguo wenhua zhuanxing* (Yan Fu and the Cultural Transformation of Modern China), Shanghai: Shanghai Translation Publishing House, 2006, p. 18.

41 Cao Juren, *Zhong guo xueshu sixiang suibi* (Essays on Chinese History of Academic Thinking), Beijing: SDX Joint Publishing Company, 2003, p. 112.

42 Hu Shi, *The Autobiography at the Age of Forty*, Taipei: Yuan-Liou Publishing, 2005, p. 93.

43 An eight-legged essay or *bagu wen* (八股文) is normalized with eight parts – opening, amplification, preliminary exposition, initial argument, central argument, latter argument, final argument and conclusion – breach of which is not allowed. This essay style, in late imperial China, was necessary for passing the imperial examination. See Weiping Sun and Mingcang Zhang, *The ‘New Culture’: From a Modern Perspective*, Berlin: Springer, 2015, 151; see also Benjamin Elman, *Civil Examinations and Meritocracy in Late Imperial China*, Cambridge, MA: Harvard University Press, 2013, Chapter 2.

44 Benjamin Schwartz, *In Search of Power and Wealth*, Cambridge, MA: Belknap Press, 1964, p. 25.

several important Chinese evolutionists, Kang Youwei (1858–1927), Liang Qichao (1873–1929) and Sun Yat-sen (1866–1925).<sup>45</sup> Kang, who read the manuscript of the *Tianyan lun* sent by Yan Fu in 1896, promptly assimilated evolutionary ideas into his *Datong shu* (On the Great Unity), a Confucian–teleological evolutionary map for world unity.<sup>46</sup> Confucius and other great sages were, in Kang’s work, converted into ‘innovators’ who had championed institutional reform and social evolution. Kang became best known for his role in the Hundred Days Reform (1898).<sup>47</sup> Along with his brilliant protégé Liang Qichao, Kang advocated dramatic institutional revolutions, following the models set by the Meiji Emperor of Japan. Kang appears to have been one of the Confucian tradition’s truly creative thinkers, and one of its most radical as well, for he endeavoured to modify that legacy into a system that was not only not inherently conservative, but progressive.<sup>48</sup>

Ma Junwu attended Kang’s lecture of 1897 in Guilin, in which Kang advocated evolution and Western learning. This fortified Ma’s determination to pursue a scientific education. Two years later, Ma was recruited to study English and mathematics at the Guangxi Science and Technology Academy, the first scientific institution in Ma’s province. Yet Ma was expelled from the school in 1900, due to his radical stance on political reform. He then fled to Singapore, where he became Kang’s formal disciple (Kang had been exiled to Singapore owing to the failure of the Hundred Days Reform). The content of the conversation between Kang and Ma is not known, yet Ma, after this meeting, incorporated evolution-flavoured slogans into his poem: ‘*Tianyan* [natural evolution] has been dominant from the ancient to the present, ferocious struggles for existence occur all over the earth’.<sup>49</sup>

Ma acquired a minor sponsorship to study in Japan from the magistrate of Dongguan County in Canton Province and left for Yokohama in 1901. He took up residence in Kang Youwei’s Yokohama Great Unity School, where he met Kang’s disciple Liang Qichao, who was ‘Darwin’s loudest champion’ in China.<sup>50</sup> As China’s most prolific intellectual, with more than ten million published words, Liang relied even more on *Tianyan lun* in his calls for political reform and cultural progress. For Liang, the struggle between Chinese and Western culture, originally seen as in parallel, changed, in the aftermath of *Tianyan lun*, into a consideration of two unequal developments, in which Chinese culture was regarded as backward and Western culture as progressive.<sup>51</sup>

45 Pusey, op. cit. (6), Chapters 1, 6 and 7, has explored the evolutionary ideas of Kang, Liang and Sun.

46 Pusey, op. cit. (6), p. 19.

47 On the Hundred Days Reform see Rebecca E. Karl, Peter Zarrow, Richard Belsky, Tze-ki Hon and Ying Hu (eds.), *Rethinking the 1898 Reform Period: Political and Cultural Change in Late Qing China*, Cambridge, MA: Harvard University Asian Center, 2002.

48 June Grasso and Michael G. Kort, *Modernization and Revolution in China*, Armonk, NY: M.E. Sharpe, 2015, p. 54.

49 Ma Junwu, ‘Gui Guilin tuzhong’ (The way back to Guilin) (1900), in Guangxi Council of Ma Junwu’s Anniversary (ed.), *Ma Junwu Shixuan* (The Selected Poems of Ma Junwu), Guilin: The Council for Ma Junwu’s Anniversary, 1981, p. 13.

50 Pusey, op. cit. (6), p.154.

51 Cho-yun Hsu, *China: A New Cultural History* (tr. Michael Duke and Timothy Baker), New York: Columbia University Press, 2012, p. 547.

Ma had been a lifelong political ally of Sun Yat-sen since 1903, and Sun, in return, ordered his political partner to sponsor Ma's education in chemistry at Kyoto Imperial University, beginning in autumn 1903. As a revolutionary Darwinist, Sun Yat-sen, the future founding 'provincial president' of the Republic of China, proposed that the motivating force of history lay in man's ever-renewing efforts to ensure his subsistence. 'The problem of livelihood is the problem of subsistence ... Livelihood is the central force in social progress ... and social progress is the central force in history.'<sup>52</sup>

The Chinese translation of the *Origin* was initiated in early 1902, when Ma acted as a temporary editor of Liang Qichao's influential *Sein min choong bou* (New People's Journal). Almost all Ma's articles during 1902 and 1903 were published in *Sein min choong bou*, including his earliest translation of the 'Historical sketch of the progress of opinion on the *Origin of Species*'. Thenceforth Ma continued to publish the Chinese *Origin* as separate instalments:

15 April 1902, 'Historical sketch' ('Xinpai shengwuxue (ji tianyan xue) jia xiaoshi' 新派生物學 (即天演學) 家小史<sup>53</sup>)

October 1902, *Wujing pian* 物競篇, Chapter 3, 'Struggle for existence' (Figure 1)

October 1902, *Tianze pian* 天擇篇, Chapter 4, 'Natural selection'<sup>54</sup> (Figure 2)

December 1903, *Daerwen wuzhong youlai, yijuan* 達爾文物種由來, 一卷, 'Historical sketch' and Chapters 1–5<sup>55</sup> (Figure 3)

September 1920, *Daerwen wuzhong yuanshi* 達爾文物種原始, *Origin* in its entirety<sup>56</sup>

A gap of fourteen years is noticeable between two distinct periods of translation. The first period of translation (before 1906) consisted of Chapters 1–5 of the *Origin* and the 'Historical sketch' – Ma labelled these chapters the 'first volume' of Darwin's *Origin*. The translation of the *Origin* in its entirety, however, was accomplished in 1920. Historically, the first period of translation occurred during the late Qing Dynasty (1644–1911), while the second period was in the era of the Republic of China (1912–1949). The difference in the context between the first and second periods of

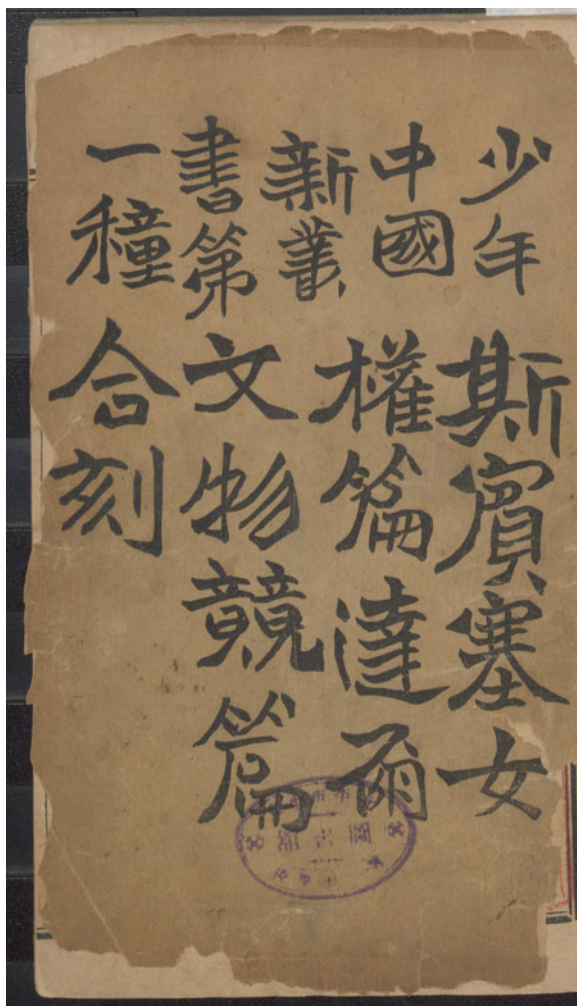
52 Quoted in Marie-Claire Bergère, *Sun Yat-sen* (tr. Janet Lloyd), Redwood City, CA: Stanford University Press, 2000, p. 384.

53 Ma Junwu, 'Xinpai shengwuxue (ji tianyan xue) jia xiaoshi', *Sein Min Choong Bou* (1902) 8, pp. 9–18.

54 The titles of *Wujing pian* 物競篇 (On the Struggle for Existence) and *Tianze pian* 天擇篇 (On Natural Selection) were the direct products of Yan Fu's provocative evolutionary slogans in *Tianyan lun*, *wujing* (物競) and *tianze* (天擇).

55 At the end of his first semester at Kyoto Imperial University (autumn 1903), Ma, then a twenty-three-year-old freshman, published the monograph entitled *Daerwen wuzhong youlai, yijuan* (Darwin's Origin of Species, vol. 1), which included the translation of the first five chapters and the 'Historical sketch'. The monograph, priced at one silver dollar, was printed on 1 November 1903, and circulated on 1 December 1903. This was distributed by two companies in Shanghai – Wenming Book Company and Guangyi Book Company. Guangyi Book Company was essentially the propaganda vehicle for Sun Yat-sen's Chinese Revolutionary Alliance. This monograph was then reprinted in 1906, in the summer of which Ma left Kyoto Imperial University, returned to Shanghai, and became the academic dean at the China Public College. Meanwhile he acted, secretly, as the president of Sun Yat-sen's Chinese Revolutionary Alliance's Shanghai Branch.

56 Ma's full translation of the *Origin* was published by Zhonghua Book Company in September 1920.



**Figure 1.** The translation of Chapter 3 of the *Origin*, *Wujing pian*, was bound together with Chapter 16 of Spencer's *Social Statics* (1851), which confirmed Ma's determination not to separate Darwin and Spencer, similar to the practice of his predecessor, Yan Fu. The full monograph above, entitled *Daerwen wujingpian sibinsai nvquan pian beke* (The Co-publication of Darwin's *On the Struggle for Existence* and Spencer's *The Rights of Women*), was announced by three companies in Shanghai, Kaiming Book Company, Wenming Book Company and Guangzhi Book Company, in October 1902. © 2018 Trustees of the National Library of China (Beijing).

Ma's translation was substantial, and was interwoven with the translator's personal background, the history of evolutionary thinking, the development of biological sciences, and political history in China. In the following section, I will investigate the first period of Ma's translation, showing how intellectual and social context shaped the reading of Darwin's work in China before the collapse of the Qing Dynasty.

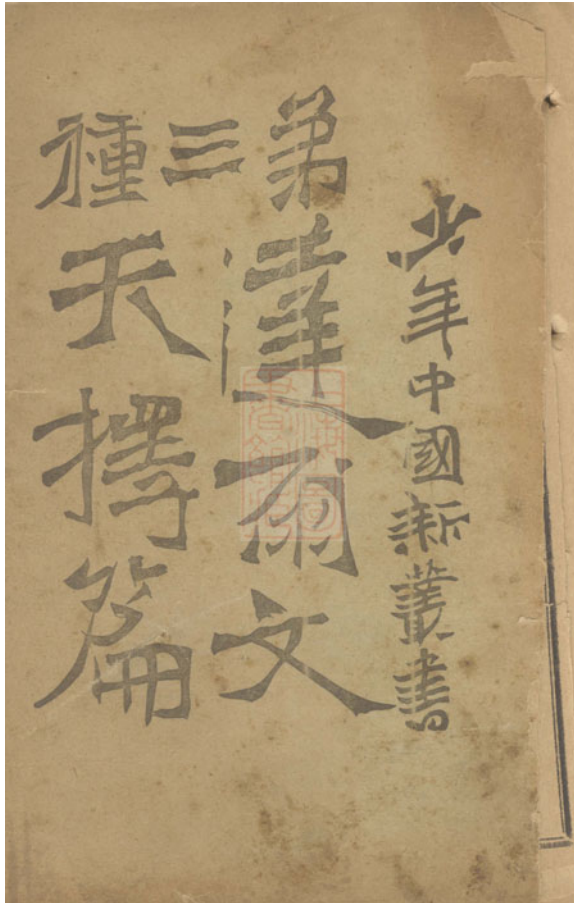


Figure 2. *Tianze pian* was distributed in October 1902 by the three companies that published *Wujing pian*. © 2018 Trustees of Shanghai Library.

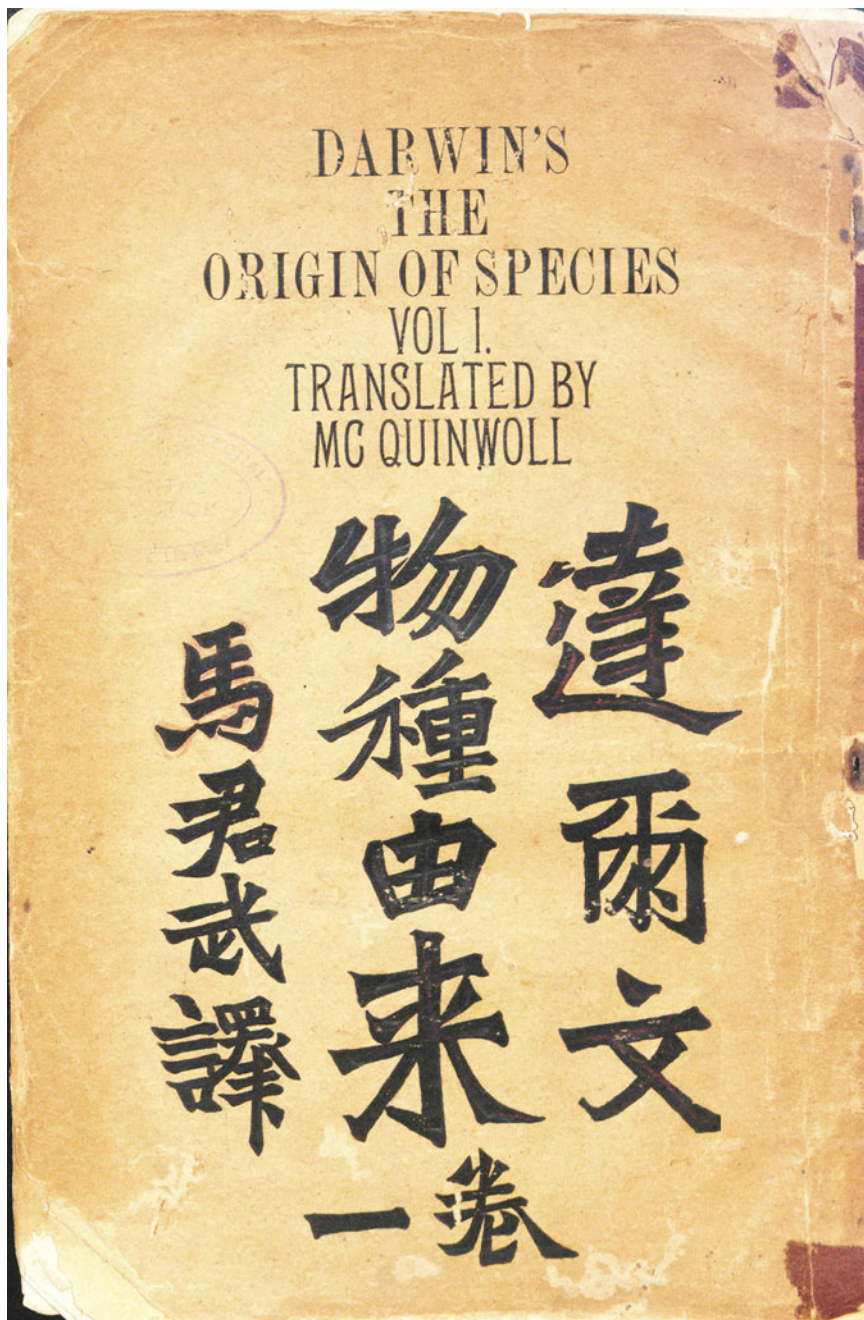
### The transformation of the *Origin*

Darwin published six editions of the *Origin* between 1859 and 1872, all of which have textual modifications, particularly the third, fifth and sixth editions.<sup>57</sup> Ma translated the sixth edition.<sup>58</sup> His translation style mimicked that of Yan Fu in his edition of Huxley's

<sup>57</sup> See Morse Peckham (ed.), *The Origin of Species: A Variorum Text*, Philadelphia: University of Pennsylvania Press, 2006.

<sup>58</sup> The first and the second editions could be excluded because Ma translated Darwin's 'Historical sketch' which had been added in the third edition in 1861; Ma mentioned both natural selection and the 'survival of the fittest'. As is commonly known, Darwin added the Spencerian phrase 'the survival of the fittest' for the first time to his fifth edition of the *Origin* (1869). Hence Ma's translation could be of either the fifth or the sixth edition; Chapter 4 of the sixth edition includes a subsection entitled 'Convergence of character', which the fifth edition does not. Charles Darwin, *The Origin of Species*, London: John Murray, 1872, p. 101. Ma translated the





**Figure 3.** The first edition of *Daerwen wuzhong youlai, yijuan* (Darwin's *Origin of Species*, vol. 1) was circulated on 1 December 1903 by Wenming Book Company and Guangyi Book Company in Shanghai. This volume was then reprinted in 1906. The first edition of this book is now lost. The above is the second edition published in November 1906. © 2018 Trustees of Australian National University Library.



work; Darwin's *Origin* was rendered into concise and poetic classical Chinese. It is unnecessary to question why Ma did not adopt 'vernacular Chinese', which later became the standard scientific language in China, for the whole vernacular-language movement still lay in the future; that is, in the mid-1910s. In the first period of Ma's translation, classical Chinese was still the orthodox scholarly medium of communication.

The rigid semantic form of classical Chinese, indeed, provided Ma with a convenient linguistic tool for transforming the original text in the *Origin*. In the following discussion, I will demonstrate how Ma utilized his linguistic strategy for reconciling China's previous progressive code of evolution with the ideas in Darwin's *Origin*, and how Darwin's branching model of 'descent with modification' was converted into a linear progressive one through in-depth analyses of the central Darwinian concepts: variation, adaptation, the struggle for existence and natural selection. The transformation of Darwin's most provocative doctrines not only reflects Ma's reconceptualization of evolution through the progressive lens of Chinese eyes, but also makes clear that Ma had little intention of contesting Yan Fu's progressive 'paradigm' of evolution.

'Variation' is, undeniably, a notion prioritized in Darwin's *Origin*, introduced in the text through a discussion of 'Variation under domestication' and 'Variation under nature'. After expounding on the 'Struggle for existence' and 'Natural selection', Darwin revisited variation under 'Laws of variation' in Chapter 5. In the Chinese translation, the concept of variation was transformed into the description of a progressive process:

What is *bianyì* [變異 (variation)]? It is that incipient species become ultimately converted into good and distinct species. Why does one individual differ from the other ones of the same species? Because wherever there are organic beings, there are struggles for life, which cause variations. If a variation, however slight, and from whatever cause proceeding, benefits one individual in a group, then [the other members] find that doing the same would be advantageous, and hence follow the identical way. Variation is the cause of species preservation. Continuous variations will occur in the offspring whose progenitor had already acquired variation, because of the struggle of life. The ones without variation will perish.<sup>59</sup>

Ma has evidently transformed Darwin's original text.<sup>60</sup> Variation, for Darwin, refers to individual differences, or, more accurately, 'modifications' in organisms in the process

heading of this subsection as *Texing zhi guiyi* 特性之歸一 ('Convergence of character'). Ma Junwu, *Tianze pian*, Shanghai: Kaiming Book Company, Wenming Book Company and Guangzhi Book Company, 1902, p. 49.

<sup>59</sup> Ma Junwu, *Wujing pian*, Shanghai: Kaiming Book Company, Wenming Book Company and Guangzhi Book Company, 1902, p. 2. The original Chinese text is: 變異何謂? 請由初始之種以變為良好分明之種也。同是一類之物何能獨與其餘別乎? 曰有生命即有競爭, 有競爭即變異。其變異甚微, 有原因之為先, 其種類之一個, 因必如是乃能自利也, 則自然變異以從之。其變異也, 所以自保衛其生命也。種類中之一個既變異, 其子孫嗣續又因爭自存之故而益變異焉。其不能變異以適生存者滅絕。

<sup>60</sup> Darwin, op. cit. (58), pp. 48–49. The original text is: 'It may be asked, how is it that varieties, which I have called incipient species, become ultimately converted into good and distinct species, which in most cases obviously differ from each other far more than do the varieties of the same species? How do those groups of species, which constitute what are called distinct genera, and which differ from each other more than do the species of the same genus, arise? All these results, as we shall more fully see in the next chapter, follow from the struggle for life. Owing to this struggle, variations, however slight, and from whatever

of the ‘descent with modification’; that is, from certain causes, the parental character becomes slightly modified in the progeny. Darwin’s variation was based upon his observation of slight differences in offspring, as he had observed in his barnacle taxonomy carried out between 1846 and 1854.<sup>61</sup> Ma conflated ‘variation’ with ‘variety’, and defined *bianyi* (variation) as meaning that ‘incipient species become ultimately converted into good and distinct species’. He thereby incorporated progressiveness into Darwin’s concept of variation. Indeed, progressiveness and consciousness-flavoured arguments appear in the Chinese *Origin* on multiple occasions: ‘if the climate changes, the residents strive to modify their body to adapt to the changing environment instantly’. Ma’s translation reiterated, ‘the transformation of species is continuous. In order to adapt to the environment, progress is ceaseless’.<sup>62</sup> By highlighting the ‘power of will’ and progressiveness, Ma assimilated Lamarckian or Spencerian developmental processes into the *Origin*. What Ma chose not to translate is also important. For instance, Darwin’s non-progressivist statement in the sixth edition – ‘natural selection, or the survival of the fittest, does not include progressive development’ – was omitted from the Chinese *Origin*.<sup>63</sup>

During the period of Ma’s translation, appeals to Darwin and Spencer frequently appeared together in Chinese mass publications. Spencer had published his philosophy of progressive social evolution prior to the publication of the *Origin*, and his writings were far more effective than Darwin’s in spreading the general gospel of evolutionism.<sup>64</sup> The Spencerian synthetic philosophy encompassed the formation of the cosmos from matter and force to the evolution of humanity, with all moral customs, social institutions and political systems seemingly accounted for. Such a perspective made Spencer attractive to international readers,<sup>65</sup> including Ma Junwu, who translated Spencer’s ‘The introduction of sociology’, Part II of the *Principle of Sociology*, in 1903. It is evident that Ma had read, at least partially, Spencer’s *Social Statics*, since his translation of Chapter 3 of the *Origin* was bound together with Chapter 16 of Spencer’s *Social Statics*. Spencer, who was not timid in speaking about progress, provided Ma with an abundant source of upward transformation. As Spencer argued in *Social Statics*,

Progress ... is not an accident, but a necessity. Instead of civilization being artificial, it is a part of nature; all of a piece with the development of the embryo or the unfolding of a flower. The modifications mankind has undergone, and is still undergoing, result from a law underlying the whole organic creation ... As surely as a blacksmith’s arm grows large ... [t]he eye tends to

cause proceeding, if they be in any degree profitable to the individuals of a species, in their infinitely complex relations to other organic beings and to their physical conditions of life, will tend to the preservation of such individuals, and will generally be inherited by the offspring. The offspring, also, will thus have a better chance of surviving’.

61 Peter Vorzimmer, *Charles Darwin: The Years of Controversy*, Philadelphia: Temple University Press, 1970, pp. 45–46; see also Janet Browne, *Darwin’s Origin of Species: A Biography*, New York: Grove Press, 2008, p. 54.

62 Ma Junwu, *Daerwen wuzhong youlai*, vol. 1, Shanghai: Wenming Book Company and Guangyi Book Company, 1906, p. 106; Ma, op. cit. (58), p. 4.

63 Darwin, op. cit. (58), p. 98.

64 Peter Bowler, *Darwin Deleted*, Chicago and London: The University of Chicago Press, 2013, p. 245.

65 Marwa Elshakry, ‘Spencer’s Arabic readers’, in Lightman, op. cit. (29), pp. 35–55, 38.

become far-sighted in the sailor, and short-sighted in the student ... So surely must the human faculties be moulded into complete fitness for the social state ... So surely must man become perfect.<sup>66</sup>

It is hard to say that Darwin was a ‘non-progressivist’, and scholarly debates over Darwin’s ‘progressivism’ have been long-standing.<sup>67</sup> However, Darwinian ‘progressivism’ is dissimilar to Lamarckian–Spencerian versions. Lamarck asserted, in his *Zoological Philosophy*, that ‘[p]rogress in complexity of organization exhibits anomalies here and there in the general series of animals, due to the influence of environment and of acquired habits’.<sup>68</sup> Lamarckian evolution is a linear progressive process, moving from the simplest to the most complicated organic forms; meanwhile, this process is affected by use and disuse, environment and consciousness. Lamarck held also to the teleological view that the human being is the *telos* of speciation.<sup>69</sup> Conversely, Darwin believed that monkeys and man might both give rise to other species, and no species, including man, could be produced twice.<sup>70</sup>

The Darwinian criterion for judging ‘progressiveness’ might have been derived from French zoologist Henri Milne-Edwards (1800–1885), who had applied Adam Smith’s (1723–1790) concept of the division of labour to zoology and believed that division of physiological labour achieves perfection within each type. Specialization or division of labour became the generally accepted definition of organic progress among zoologists

66 Herbert Spencer, *Social Statics*, New York: D. Appleton, 1882, p. 80.

67 Darwin was ambiguous about progress in the ‘descent with modification’; one of the reasons was that the laws of heredity remained unfledged during his lifetime. Steven Gould (1941–2002) and Ernest Mayr (1904–2005) have depicted Darwin’s principles as anti-progressivist, a claim that has been utilized to protect the heritage of neo-Darwinism developed in the postmodern synthesis period. Gould claimed, ‘The theory of Natural Selection did not triumph until the 1940s. Its Victorian unpopularity, in my view, lay primarily in its denial of general progress as inherent in the working of evolution. Natural selection is a theory of local adaptation to changing environments. It proposes no perfecting principles, no guarantee of general improvement’. Steven Gould, *Ever since Darwin*, New York: W.W. Norton, 1992, p. 45. However, such a viewpoint is rejected by other scholars, like Robert Richards (1942–) and Dov Ospovat (1947–1980). Richards articulates his objection as follows: ‘The historian–scientists [Gould], can, I believe, become too easily beguiled by the power of present scientific theory and consequently imagine that its ancestor theory carried the same logical implications’. Robert Richards, *The Meaning of Evolution*, Chicago: The University of Chicago Press, 2009, p. 85. Richards, op. cit., p. 89, argues that Darwin thought natural selection would produce even more progressive types. Although Darwin once promised that he would never use the words ‘higher’ and ‘lower’, he did write, in the *Origin*, ‘modern forms ought, on the theory of natural selection, to stand higher than ancient forms’. Darwin, op. cit. (58), p. 308. Nonetheless, the question is: what is higher, or what is Darwin’s criterion for judging ‘progressiveness’? A convincing answer is that Darwin might have adopted French zoologist Henri Milne-Edwards’s (1800–1885) criterion. See Dov Ospovat, *The Development of Darwin’s Theory*, Cambridge: Cambridge University Press, 1981, pp. 210–221; Lynn Nyhart, ‘Embryology and morphology’, in Michael Ruse and Robert Richards (eds.), *The Cambridge Companion to the ‘Origin of Species’*, Cambridge: Cambridge University Press, 2009, pp. 210–212; Richards, op. cit., pp. 141–142. Darwin’s idea of progress may also relate to his ‘principle of divergence’. See David Kohn, ‘Darwin’s keystone’, in Ruse and Richards, op. cit., p. 87; and Ospovat, op. cit., p. 210.

68 Jean-Baptiste Lamarck, *Zoological Philosophy: An Exposition with Regard to the Natural History of Animals* (trans. Hugh Elliot), London: Macmillan, 1914, p. 70.

69 Lamarck, op. cit. (68), p. 73.

70 Ospovat, op. cit. (67), p. 213.

in the 1850s.<sup>71</sup> From about 1854, Darwin considered Milne-Edwards's notion of the division of physiological labour as a mark of higher development.<sup>72</sup> Darwin may also have drawn such an idea from the German embryologist Karl Ernst von Baer (1792–1876), and argued in his *A Monograph of the Sub-class Cirripedia*, 'Von Baer considers that the perfection of the type of any animal is in relation to the amount of morphological differentiation'.<sup>73</sup>

Darwin decided to avoid the expressions 'higher' and 'lower' in his later editions of the *Origin*. Darwinian development is sometimes retrograde; that is, progressiveness is not always obligatory for the working of natural selection.<sup>74</sup> To mark his distinction from the popular evolutionism of the anonymous *Vestiges of the Natural History of Creation* (1844) that had assimilated Lamarckian progressivism, Darwin added this paragraph to the sixth edition of his *Origin*:

And it may be asked what advantage, as far as we can see, would it be to an infusorian animalcule – to an intestinal worm – or even to an earth-worm, to be highly organised. If it were no advantage, these forms would be left, by natural selection, unimproved or but little improved, and might remain for indefinite ages in their present lowly condition. And geology tells us that some of the lowest forms, as the infusoria and rhizopods, have remained for an enormous period in nearly their present state.<sup>75</sup>

However, Ma rendered this paragraph as follows:

Tiny organisms, like the infusorian animalcules, intestinal worms, and earthworms, are indeed lowly organized forms. Nonetheless, they are the highest living organisms in their own adapted living environment. Only if occupying the highest position could they survive until today. Otherwise, to suppose they are unfit for their environment, or struggling with more advanced species, they might have already been destroyed by natural selection. [This is why] geology shows some of the lowest forms, such as the infusoria and rhizopods, have remained for an enormous period in nearly their present state. I cannot on that account take this to be a fault of natural selection.<sup>76</sup>

In the Chinese translation, Ma, who removed Darwin's rejection of Lamarckian doctrines, took great pains to demonstrate Darwin's progressiveness in order to legitimize the progressive evolutionary interpretation held by Yan Fu and Spencer. For Ma, progressiveness or 'occupying the highest position' is indispensable for survival, since 'species making progress survive, those not evolving become extinct'.<sup>77</sup> To help

71 Ospovat, op. cit. (67), p. 217.

72 Robert Richards and Michael Ruse, *Debating Darwin*, Chicago: The University of Chicago Press, 2016, p. 157.

73 Charles Darwin, *The Works of Charles Darwin*, vol. 12, New York: New York University Press, 1989, p. 18; see also Richards, op. cit. (67), p. 142.

74 Ospovat, op. cit. (67), p. 218.

75 Darwin, op. cit. (58), p. 99.

76 Ma, op. cit. (62), p. 145. The original Chinese text is: 若極細微之水蟲 [Infusorian animalcule], 若腸蟲 [Intestinal worm], 若蚯蚓, 誠下等生物矣。而自宜于所處之地位而言, 則是數者之機體亦可謂之至高。惟至高也, 故能仍存於今日而無恙。苟不然者, 設是與其處境不宜, 而有更良之生物與之爭土, 則彼已早為天擇所滅矣。究地質之學, 可知極細微水蟲及根足類 [Rhizoids], 二者虽属极下等生物, 由初生以至今日, 其不变仍能存者甚多。我不能据以为天择病也。

77 Ma, op. cit. (58), p. 20.

Chinese readers better understand the significance of seizing an advantageous ecological position, Ma added a vivid example of human warfare to the Chinese *Origin*: the struggle for survival is 'like two armies that stand off on a mountain; success and failure are decided in one second. Any species that fail to transform and let their enemies occupy a higher position become extinct instantaneously'.<sup>78</sup>

In the 'Historical sketch', Darwin criticized, at least mildly, the Lamarckian concepts of use and disuse, environmental effects, progressiveness and spontaneous generation:

Lamarck seems to have been chiefly led to his conclusion on the gradual change of species, by the difficulty of distinguishing species and varieties, by the almost perfect gradation of forms in certain groups, and by the analogy of domestic productions. With respect to the means of modification, he attributed something to the crossing of already existing forms, and much to use and disuse, that is, to the effects of habit. To this latter agency he seems to attribute all the beautiful adaptations in nature; – such as the long neck of the giraffe for browsing on the branches of trees. But he likewise believed in a law of progressive development; and as all the forms of life thus tend to progress, in order to account for the existence at the present day of simple productions, he maintained that such forms were now spontaneously generated.<sup>79</sup>

Ma abridged and restructured this paragraph in the Chinese translation:

We therefore have a [Lamarckian] principle that the gradual change of species leads to beauty and perfection. However, the perfect gradation of forms is so delicate that it is hard to be detected. Species gradually become fine and perfect within certain types. All the beautiful adaptations come naturally through daily evolution. Shapes and colours of species are products of natural adaptation. Such as the long neck of the African giraffe, which is good for reaching the leaves on tall trees. There are no better explanations other than saying this [the long neck] arises spontaneously [or naturally].<sup>80</sup>

Apparently, Ma removed Darwin's criticisms of key Lamarckian doctrines in the Chinese *Origin*. In a way similar to Yan Fu, Ma made an effort to diminish the differences between Darwinian ideas and Lamarckian or Spencerian notions, because they all 'belonged' to the same camp. Ma annotated, in his translation of the 'Historical sketch', the claim that thirty-four naturalists (including Lamarck) shared an identical view with that of Darwin.<sup>81</sup>

Ma argued that the struggle for existence is the engine for progressive speciation: 'whenever there are organic beings, there are struggles for life, which cause variation'.<sup>82</sup> Darwin himself never worked out the causes of variation, speaking only of 'unknown laws' governing variation: 'Variability is governed by many unknown laws, of which

78 Ma, op. cit. (58), p. 13.

79 Darwin, op. cit. (58), p. 14.

80 Ma, op. cit. (62), p.10. The original Chinese text is: 於此得一公理焉，曰物類日益發達，以趨於美善。然物類之展變其微至不可覺察，而由一定之群類以遞進焉。其變也，一循自然，以日進與美善。萬類之形色，皆由變化以成其自然之宜。如非洲之芝獵狐 Giraffe，特戴一長頸者，所以便其食其高樹之叶也。其理解無他解焉，曰自然而已。

81 Ma, op. cit. (62), p. 9.

82 Ma, op. cit. (59), p. 2.

correlated growth is probably the most important'.<sup>83</sup> Darwin's struggle for life could not be straightforwardly treated as the direct cause of variation. It only elucidates why some individuals – that happen to have a combination of advantageous or fittest traits – succeed. Heredity, rather than consciousness or effort, is conducive to survival.

It was clear to Ma that Spencer's teleologically directed competition, rather than Darwin's less directional struggle for existence, would better propel Ma's 'obsolete' homeland, China, forwards. Moreover, the struggle for existence, for both Spencer and Ma, is 'selfish', as Spencer explained in the *Social Statics*:

It is a tolerably well-ascertained fact that men are still selfish. And that beings answering to this epithet will employ the power placed in their hands for their own advantage is self-evident. Directly or indirectly, either by hook or by crook, if not openly, then in secret, their private ends will be served. Granting the proposition that men are selfish, we cannot avoid the corollary, that those who possess authority will, if permitted, use it for selfish purposes.<sup>84</sup>

Spencerian selfishness struck a sympathetic chord in Ma's mind: 'Being selfish is man's nature and the spur for development'.<sup>85</sup> Ma stressed, 'the struggle for existence is also the best school for modifying human races'.<sup>86</sup> He disallowed artificial checks on the Spencerian social struggle: '[some] philosophers, being of high morality, assail selfishness, and promote their holy dogmas on civil rights in their ideal society. Rather, those ideas are the obstructions to social advance'.<sup>87</sup>

In the Notebook period and in the 'Sketch of 1842' and the longer 'Essay of 1844', Darwin considered 'perfect adaptation' to be the norm of nature, and the purpose of natural selection was to preserve harmonious and flawless adaptation.<sup>88</sup> But he gradually abandoned the idea of perfect adaptation in later life, particularly in the 1870s, when he published his sixth edition of the *Origin*. Darwin's concept of 'adaptation' was translated as *yinyun* 氤氲, a classical term from the ancient divination text *I Ching*.<sup>89</sup> *Yinyun*, a mysterious phrase meaning the harmonious interactions between *yin* and *yang*, might partially reflect the meaning of Darwin's 'adaptation'. However, this phrase was never adopted by Chinese scientists who later designated *shiying* 適應 as the standard Chinese term for 'adaptation'. One reason is that *yinyun* 氤氲 was a classical Chinese term, which was made obsolete in the vernacular-Chinese movement of the mid-1910s. Most of Ma's classical-Chinese-derived terms, including *leize* 類擇 (sexual selection), and most of the terms inherited from Yan Fu's *Tianyan lun*, such as *wujing* 物競 (struggle for existence) and *tianze* 天擇 (natural selection), were abandoned by Chinese biologists in the 1910s. With the flocking of Chinese students to Japan for

83 Darwin, op. cit. (58), p. 32. For Darwin, the law of correlated growth, borrowed from the French naturalist Georges Cuvier (1769–1832), became one of the explanations for variation; he also cited August Weismann's (1834–1914) theory for explaining the cause of variation; see Darwin, op. cit. (58), p. 7.

84 Spencer, op. cit. (66), p. 241.

85 Ma Junwu, 'The comparison between socialism and evolutionism', in Ma, *Ma Junwu Ji* (The Essays of Ma Junwu) (ed. Mo Shixiang), Wuhan: Huazhong Normal University Press, 1991, pp. 83–93, 86.

86 Ma, 'The comparison between socialism and evolutionism', op. cit. (85), p. 90.

87 Ma, 'The comparison between socialism and evolutionism', op. cit. (85), p. 86.

88 Ospovat, op. cit. (67), p. 73.

89 Ma, op. cit. (59), p. 1.



university study, and a flood of Chinese translations of Japanese texts (including Japanese translations of foreign literature), the line of least resistance was towards the wholesale adoption of the new Japanese vocabulary.<sup>90</sup>

Natural selection had been personified by Darwin in the first and second editions of the *Origin*, but then altered with the revisions of the third and subsequent editions. Ma's attitude towards natural selection is ambiguous. As an atheist, Ma had no difficulty in conveying Darwin's clarification of the secular idea of 'nature' in the insert of the third edition and in all subsequent editions of the *Origin*. He conveyed precisely Darwin's claim in his translation with this rendering: 'natural selection is not an omnipotent God who governs human society. Attacking my theory is equal to rejecting an author speaking of the attraction of gravity as ruling the movement of planets'.<sup>91</sup> On the other hand, Ma personified natural selection, in his poetic language, as a 'ruler':

On massive plains, there are various organic beings. The learned naturalists cautiously inspect their transformation, and find the survivors are the ones that are good at variation and fitted to their environment; the inferior have been eliminated. It seems there are laws for judging and a ruler who is supervising. What is the cause? Say, Natural Selection [*tianze* 天擇] or the Survival of the Fittest [*zuiyizhe cun* 最宜者存]. Natural selection works quietly. This one is superior, that one is inferior: natural selection selects them one by one. This great principle, which is ubiquitous, dominates all organic beings. Although there are numerous inferior species, they will be destroyed by this principle. The surviving ones are the species that are good at making variation.<sup>92</sup>

In this translation, Ma greatly changed the meaning of the corresponding text in the *Origin*.<sup>93</sup> Natural selection, interpreted here as a judge, becomes a forceful impulse in Ma's teleological speculation: 'natural selection forces species to make progress. All that wish to survive have to be firmly aware of the warning of natural selection'.<sup>94</sup> Ma wrote in the Chinese *Origin*, 'natural selection navigates around the world, permanently eliminating the inferior, and preserving the superior. Albeit its effect is hard to detect, it works permanently. Hence species have to progress all the time'.<sup>95</sup> Nonetheless, Ma assured his fellow Chinese that natural selection is an 'amiable' arbitrator, and that 'the ones that are willing to progress should not feel afraid of natural selection'. He went on, 'Although natural selection is relentless, it could not hurt the

90 Schwartz, op. cit. (44), pp. 95–96.

91 Ma, op. cit. (58), p. 2.

92 Ma, op. cit. (62), p. 105. The original text is: 莽莽平原，生物繁蕪。好學之士深察其變，見夫變動不居、與地相宜者莫不保存，其劣者莫不消亡。若有法律以判之，司法者以監之者。然其故維何？曰天擇 [natural selection] 或曰最宜者存 [survival of the fittest]。天擇之本然固不覺。此一種為優，彼一種為劣，而一一擇也。大理流行，為生於其中者所不能自外。世間劣種雖繁，莫不為此理所消，其餘存者，惟寥寥然變動不居之種。

93 See Darwin, op. cit. (58), pp. 62–63. The original text is: 'We may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favourable individual differences and variations, and the destruction of those which are injurious, I have called Natural Selection, or the Survival of the Fittest. Variations neither useful nor injurious would not be affected by natural selection, and would be left either a fluctuating element, as perhaps we see in certain polymorphic species, or would ultimately become fixed, owing to the nature of the organism and the nature of the conditions'.

94 Ma, op. cit. (62), p. 107.

95 Ma, op. cit. (62), p. 109.

ones that make variation', and 'if an individual is born with an innate capability of seeking progress, its viability must be more consolidated'.<sup>96</sup>

Like Yan Fu, Ma urged that the Chinese should unite and propel the nation's social development, or else face racial extinction. In 'On the deterioration of Chinese morality and its solutions', published four months after *Tianze pian*, Ma blamed the Chinese for not being united.<sup>97</sup> Natural selection, under Ma's pen, became a sacred cause of racial unification, in order to succeed in the international struggle.

Darwin's diagram in Chapter 4 comprehensively demonstrates his concept of descent from a common progenitor, the role of variation, the struggle for existence, the principle of divergence, the Darwinian interpretation of taxonomy, and the working of natural selection. The diagram itself is precisely reproduced in the Chinese *Origin* (Figure 4). Nonetheless, the explanation of this diagram 'evolved':

Let A, B, C, D, E, F, G, H, I, K, and L represent eleven species; their positions are exemplified in the diagram by the letters standing at unequal distances. Species live together, there must be evolving ones and non-evolving ones, and there must be winners and losers. Let A be a representative of the winners, who has abundant descendants. The branching and diverging dotted lines of unequal lengths proceeding from A may represent its varying offspring ... In the diagram, I have assumed that a second species I is also good at transforming and well preserves itself. After fourteen thousand generations, six new species, marked by n14, v14, y14, w14, x14, and z14, are supposed to have been produced. Those are the ones who could evolve and survive in the struggle. Nine species, like B, C, D, G, H, K, L, could not transform; therefore, most of them rapidly go extinct, albeit E and F live slightly longer.<sup>98</sup>

This is, indeed, an astonishing reinterpretation of Darwin's diagram, and it alters Darwin's own explanation.<sup>99</sup> Ma had also reduced the text of Darwin's original

<sup>96</sup> Ma, op. cit. (62), pp. 108, 117.

<sup>97</sup> Ma Junwu, 'On the deterioration of Chinese's morality and its solutions', in Ma, *Ma Junwu Ji*, op. cit. (85), pp. 128–135, 128.

<sup>98</sup> Ma, op. cit. (62), pp. 139–141. The original Chinese text is: 以A、B、C、D、E、F、G、H、I、K、L代十一物種；其所據之位，如圖字相離之位。諸種錯居，必有變者，有不變者，有勝者，有敗者矣。今以A代變則勝者，於是其種大增。圖中由A發出之虛線，其長不等者，皆甲乙所傳之種...又設如圖中之I，亦善變而能自保之種。歷一萬四千代而傳至n14, v14, y14, w14, x14, z14諸種，是皆能變以自爭存者也。B、C、D、G、H、K、L九種不能變。多間時而滅亡，惟E、F傳種稍久耳。

<sup>99</sup> The corresponding text of the rest of Ma Junwu's translation is: 'Let A to L represent the species of a genus large in its own country; these species are supposed to resemble each other in unequal degrees, as is so generally the case in nature, and is represented in the diagram by the letters standing at unequal distances ... Let (A) be a common widely diffused, and varying species, belonging to a genus large in its own country. The branching and diverging dotted lines of unequal lengths proceeding from (A), may represent its varying offspring [Darwin, op. cit. (58), p. 90] ... In the diagram I have assumed that a second species (I) has produced, by analogous steps, after ten thousand generations, either two well-marked varieties (w10 and z10) or two species, according to the amount of change supposed to be represented between the horizontal lines. After fourteen thousand generations, six new species, marked by the letters n14 to z14, are supposed to have been produced [Darwin, op. cit. (58), p. 93] ... Species (A) being more nearly related to B, C, and D, than to the other species; and species (I) more to G, H, K, L, than to the others ... We may suppose that only one (F), of the two species (E) and (F) which were least closely related to the other nine original species, has transmitted descendants to this late stage of descent [Darwin, op. cit. (58), p. 94] ... It is worthwhile to reflect for a moment on the character of the new species F14, which is supposed not to have diverged much in character, but to have retained the form of (F), either unaltered or altered only in a slight degree [Darwin, op. cit. (58), p. 95].'

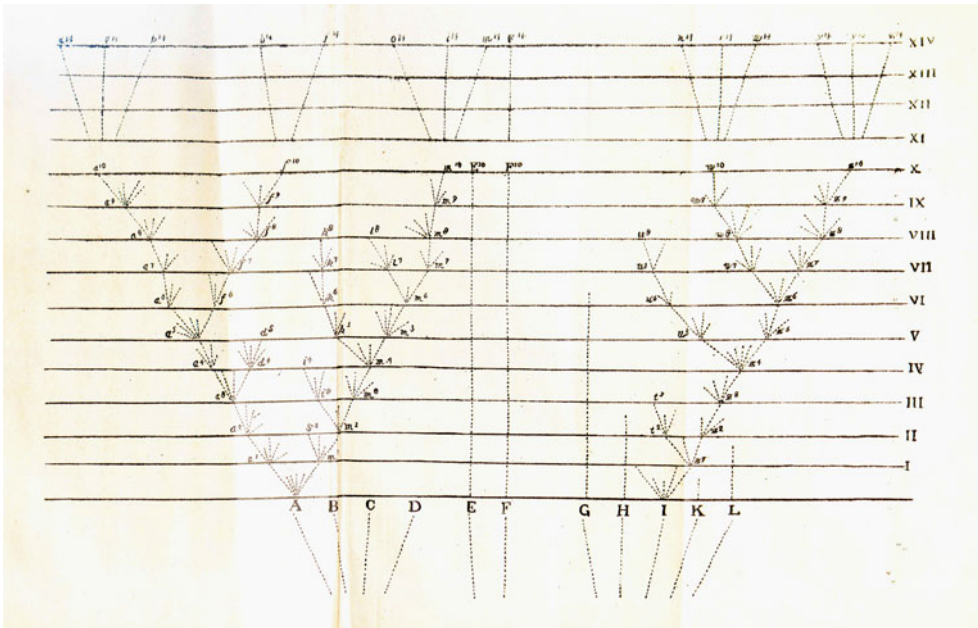


Figure 4. The diagram in the *Daerwen wuzhong youlai*, vol. 1 (1906). © 2018 Trustees of the Australian National University Library.

description in Chapter 4 – ‘The probable effects of the action of natural selection through divergence of character and extinction’ – by nearly four-fifths. He simply divides species into two categories: the winners, like A and I, each of which has multiple branches of offspring; and the rest as losers, which perish sooner or later. Ma never conveyed Darwin’s intended claim that all species derived from a common progenitor. Nor did he explicate how a fairly well-marked variety came into being under the action of the principle of divergence and isolation speciation, or how the struggle for existence and natural selection carry on their work. Nor, lastly, did he explain why some species, such as F in Darwin’s diagram, either persist unaltered or are altered only to a slight degree.<sup>100</sup> Meanwhile, F, for Darwin, is not a ‘loser’ (as Ma stated), but a ‘living fossil’. Seeing so many extinct species in Darwin’s diagram, Ma expressed himself sentimentally: ‘the past ones ceased to survive; memorializing their ancient living times; we cannot stop crying’.<sup>101</sup> Perhaps we see here a hint of Ma the classical Chinese poet, who later (in 1909) became a member of the conservative Chinese literature association, the Southern Society (Nan she 南社).

The most substantial concern for Ma, like that for Yan Fu, was the social development and power of his nation. Although Darwin indicated in the *Origin* that ‘much light will be thrown on the origin of man and his history’, he famously did not discuss in that book

100 Darwin, op. cit. (58), p. 95.

101 Ma, op. cit. (62), pp. 141–142.

humans or their society.<sup>102</sup> Nevertheless, Ma took great pains to apply the evolutionary principles to human society in his translation, altering Darwin's text to read as follows:

People from different countries struggle with each other; the surviving nations must have the equivalent forces to counter foreign invasions and insults. Slight modifications in the structure or habits of one species would give them the power to combat the invaders; transformations continue to happen without an ending, adding profits for their own group, self-supporting and self-defending. No country can be named in which the native inhabitants are perfectly adapted to their physical condition, and none of them could not be improved and thus become perfect. What is the reason? No countries can avoid interaction with others, because the increasing immigration of new species is unavoidable, and wars are continuous. The natives must evolve in order to resist the intruders without fear.<sup>103</sup>

Darwin did not say anything about human society in the original text.<sup>104</sup> Yet Ma strove to convey that China, 'the secluded country surrounded by barriers', had been invaded by new and better species, and that the Chinese must evolve in order to escape natural elimination. Like Yan Fu and Spencer, Ma was concerned to apply the principle of evolution to the social realm, and as a consequence turned the *Origin* into a treatise for saving China's chaotic social and political environment at the beginning of the twentieth century.

By transforming the central Darwinian notions of variation, adaptation, the struggle for existence, and natural selection, Ma effectively presented to unsuspecting Chinese audiences an amended Darwinian system through his progressive mindset. This legitimized China's pre-existing paradigm of evolutionary progressivism encoded in *Tianyan lun*, and justified Ma's own conception of social evolution, with Spencerian (or Lamarckian) consciousness and progressiveness coexisting in the Chinese *Origin*. Darwin, through the effort of Ma, was converted into underwriter rationale for revolutionizing the 'obsolete' political forms of the late Qing Dynasty, a rescuer of racial survival and a prophet denoting the secret of national power.

102 Darwin, op. cit. (58), p. 429.

103 Ma, op. cit. (62), p. 108. The original Chinese text is: 各國之居民相聚競爭，其能自存而不敗者，必有相等之力以抵禦外侮。其種類之構造、習俗自微變矣適於與他種相戰爭。變而愈變，無有止期，增己種之利益，以自養以自衛。今天下之國，未有一國能謂其居民已變化盡善而與其地之生活情形咸宜，遂不需改良以進於善也。何以故？無一國可不與他國相交通者，新種之遷來日繁而不可禁，則戰爭無日可止。本土之種而能變新自利乎，可以抵制遷入之新種而無懼矣。

104 Darwin, op. cit. (58), pp. 63–64. The original text is: 'For as all the inhabitants of each country are struggling together with nicely balanced forces, extremely slight modifications in the structure or habits of one species would often give it an advantage over others; and still further modifications of the same kind would often still further increase the advantage, as long as the species continued under the same conditions of life and profited by similar means of subsistence and defence. No country can be named in which all the native inhabitants are now so perfectly adapted to each other and to the physical conditions under which they live, that none of them could be still better adapted or improved; for in all countries, the natives have been so far conquered by naturalised productions, that they have allowed some foreigners to take firm possession of the land. And as foreigners have thus in every country beaten some of the natives, we may safely conclude that the natives might have been modified with advantage, so as to have better resisted the intruders'.

## Conclusion

A translator's linguistic strategies involve deliberations on the character of language and the nature of 'science' itself.<sup>105</sup> This was certainly the case in Ma's translation. Ma's transformation of the *Origin* was shaped by such geopolitical factors as anti-colonial nationalism in China at the turn of the twentieth century. By amending Darwin's text, Ma succeeded in bridging the distance between Darwin's theory of 'descent with modification' and the prevailing progressive evolutionary 'paradigm' established by Yan Fu's sensational *Tianyan lun*. Ma's translation of *Origin* legitimized a version of progressive evolutionism in its broadest sense and offered a perfect framework for political reformers and revolutionaries at the dawn of the twentieth century.

Yan Fu never displayed any intention of translating the *Origin*, since Darwinian principles, like the variation of Galapagos finches, could neither resolve China's immediate sociopolitical conundrum nor even, necessarily, be understood by an audience lacking scientific schooling. The progressive evolutionary code, expressed by Yan Fu and Ma Junwu, through their creative readings of Spencer, Huxley and Darwin, compelled the Chinese to realize that the principle of evolution was the sacred cause for China's national strength, social reform and indeed necessary path if the Chinese were to avoid natural elimination. Ma instructed the Chinese, under the name of Darwin, that the stimulation of a struggle for existence would be of service in facilitating the long-lasting development of the ancient, complex and backward Chinese nation. The ultimate goal of the Chinese *Origin* was to solidify the previous progressive evolutionary code and to supply Chinese readers with the desiderata for continued existence, and ultimately prosperity.

Evolution, in China, was more than biology, for it also served as the force shaping history itself. A cacophony of references to 'evolution', 'struggle for existence' and 'the survival of the fittest' flooded the newspapers and magazines of China at the turn of the twentieth century. Darwin, when his actual texts became available in translation in subsequent decades, could be read at once by political reformists and revolutionaries as justifying the 'survival of the strongest', and simultaneously by the Communists as being in support of mutual aid and Marxian class-struggle theory. The progressive evolutionary programme attracted reformists, revolutionaries and Marxists, and became their apparatus for preserving the race, strengthening the nation and justifying their own political agenda.

105 Marwa Elshakry, 'The cultural politics of modern science translations in Arabic', *Isis* (2008) 99, pp. 701–730, 701.