Self-Strengthening: An Analysis Based on Some Recent Writings

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Ch'ing-shih wen-t'i, Volume 3, Number 1, November 1974, pp. 3-35 (Article)

Published by Johns Hopkins University Press

SELF-STRENGTHENING: AN ANALYSIS BASED ON SOME RECENT WRITINGS*

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Self-strengthening (tzu-ch'iang), most scholars of the subject would agree, originated in the changed circumstances (pien-chih) which prevailed in China following the Taiping invasion of the Yangtze delta and the signinf of the Peking Conventions in late 1860. Certain Chinese leaders urged the adoption of selected elements of foreign civilizations (yang-wu), sometimes termed new policies (hsin-cheng), by the government as a means to increase the wealth and power (fu-ch'iang) of the empire. Although this movement stressed military, industrial and diplomatic modernization, it was not limited to this. Furthermore, it involved a degree of intellectual awakening which led to the advocacy of change in the institutions (pien-fa), such as governmental structure and education, that lay at the basis of the empire. The period in which self-strengthening provided the foremost motivation for reform in China is usually understood to have come to a close with the Sino-Japanese War (1894-1895).[1] Beyond these agreed points, however, there are important questions which must be understood if we are to fathom the significance of self-strengthening in relation to the sweep of modern Chinese history; several of these will be explored here.

First, against whom was China strengthening itself? Or, stated as it appears in the literature, was this primarily a class movement in which feudal elements - bureaucrats, landlords and compradors - in league with foreign imperialists strengthened themselves in order to subdue the righteous uprisings of the Chinese masses as scholars of the People's Republic such as Fan Wen-lan, Mou An-shih, Sun Yü-t'ang, members of the Hupeh University Political and Economic Research Institute, and the Editorial Committee of the China Modern History Series contend?[2] Or, was self-strengthening directed primarily against the growth of foreign influence as it is seen by such Western scholars as Kwang-Ching Liu and historians from the Institute of Modern History in the Republic of China such as Wang Erh-min?[3] The position held by Fan, Mou, Sun, the Institute and the Committee seems to be based on a specious type of reasoning which assumes that because self-strengthening failed against foreign foes its authors never intended that it should succeed. Proceeding from the fact of failure to impute the motives of collusion with the imperialists, these historians brush away a plethora of personal testimony of self-strengthening leaders as to their anti-imperialist motives to arrive at what appears to be a preconceived conclusion.[4] Although the anti-imperialist testimony of self-strengthening leaders is cited frequently in the works of Wang Erh-min and others, documented statements of patriotic

intentions such as these have a certain self-serving ring whether they are attributed to the pen of Prince Kung or a customs intendant from Shanghai.[5] A more convincing case can be made for the anti-imperialist nature of the movement from substantive data which is readily available. For example, the stepped-up emphasis on naval development and the shift to production of coastal defense and naval weapons after 1875, and the priority given to strategic rather than commercial railroad development after 1890, are clear indications that the sustaining motivation of self-strengthening moved away from the provision of tools for rebellion suppression which admittedly played an important part in the origins of the movement in the 1860's.[6]

Secondly, was self-strengthening primarily national or regional in its orientation? unifying or diverse to the empire? The definitive argument for regionalism has been advanced by Professor Franz Michael in his introduction to Stanley Spector's Li Hung-chang and the Huai Army: A Study of Nineteenth Century Regionalism.[7] Both Michael and Spector contend that, with the weakening of the imperial government in the mid nineteenth century, gentry leaders with a strong local orientation began to assume the functions and exercise some of the authority of the central government. The driving force of self-strengthening was actually the urge of competing regional leaders to strengthen themselves, not the em-

pire, a position which is also apparent in the writing of Fan Wen-lan.[8] Furthermore, this argument infers that the regional regimes which developed at this time were the forerunners of twentieth century warlordism. This thesis has been rebutted by the studies of David Pong, Kwang-Ching Liu and Wang Erh-min which examine the relationship of the so called regional leaders with the imperial government in painstaking detail and find that, for the most part, it was supportive.[9] On balance, the case for regionalism as it is made by Michael and Spector will not stand in light of the evidence presented by Pong, Wang and Liu. Liu has concluded that "If by 'Regionalism' is meant the administrative leeway enjoyed by the governors-general and governors . . . over their provinces, this trend had continued since the early T'ung-chih period (until the early 1870's). But the imperial authority over armies . . . revenue . . . and provincial appointments, at least at the higher levels, had not diminished. The court's support was plainly still the key to the success of any new policy."[10] Wang would agree with the advocates of regionalism that the private armies of the self-strengthening era were antecedents of the warlord factions of the twentieth century, but he has pointed out the importance of intervening factors, such as the decline in gentry influence, which by the early twentieth century had changed the nature of Chinese armies substantially.[11]

Furthermore, it must be asked: Was self-strengthening merely an attempt to modernize China's military-industrial complex and diplomatic machinery so as to gird the ruling Dynasty against domestic insurgency and foreign aggression? Or, did it look beyond these high priority military-diplomatic changes to broader types of economic change and the social and political adjustments necessary to support them? In short, was it entirely supportive of the status quo or progressive in outlook? This question is especially important because of the relationship which it bears to our understanding of traditional Chinese civilization as it had evolved in the late nineteenth century and to our view of the relative importance of various historical forces at work in China at that time. Specifically, it has been suggested in a number of major works that the narrowness of the self-strengthening concept embraced by China's leaders grew from the Sino-centric view of the world and the static concept of society and the economy which were axiomatic to nineteenth century Confucianism; and that this narrow focus was primarily responsible for the painfully slow and ultimately unsuccessful progress of reform during self-strengthening which contributed, in no small measure, to the build up of revolutionary pressures resulting in the end of the Ch'ing Dynasty.[12] The chief concern of this paper is to examine this point of view in the light of some recent studies.

Research into the conceptual basis of the self-strengthening movement has sought to uncover the intellectual processes used to rationalize the departure in aims and methods of state policy adopted by some Chinese leaders after 1860. Some historians have associated intellectual development during the years from 1860-1895 with the t'i-yung rationalization for the introduction of Western methods - that intellectual formula which attempted to integrate certain functional aspects of Western industrialization with traditional Chinese civilization by analogizing the relationship to that of means and ends, outer and inner, function and essence inter alia.[13] This idea first alluded to by Feng Kuei-fen around 1860 was sloganized by Chang Chih-tung in 1898 with the famous phrases Chung-hsüeh wei-t'i, hsi-hsüeh wei-yung (Chinese learning for the essentials and Western learning for practical application). But, as Wang Erh-min has pointed out, the t'i-yung formula was by no means the sole, or perhaps even the predominant, ideology employed to rationalize reform along Western lines during the self-strengthening years. In fact, it was chiefly after the war with Japan (1894-95) that t'i-yung thinking flourished as the basis for China's modernization.[14]

In contrast to Wang's view, the late Joseph Levenson, writing a decade earlier, emphasized the widespread use of the t'i-yung formula during the self-strengthening period as an intellectual disguise under which Western industrialism could be smuggled into

China without disturbing traditional social values. He spotted an apparent logical fallacy in t'i-yung thinking: essence and function are interrelated attributes of a single entity and the effort to combine the essence of Confucian civilization with the functions of Western industrialism was logically impossible and doomed from the start. Furthermore, Levenson observed that the syncretic t'i-yung approach to modernization brought the antagonistic forces of Western industrialism and Chinese Confucianism into direct opposition. Though the t'i-yung modernizers hoped to preserve Confucian civilization, the Western industrialism which they introduced eroded its social values and the Confucian values they sought to preserve undermined industrialization. It is not surprising then, Levenson observes, that t'i-yung modernization projects more often than not resulted in a shambles and that they culminated in the fiasco of China's defeat by Japan in 1894-95.[15]

At the heart of Levenson's argument lies the assumption that Western industrialism and Confucian civilization were essentially antithetical; only after the old society had been swept away or gravely altered could the business of modernization proceed uninhibited. Slightly variant forms of Levenson's assumptions regarding the irreconcilability of Chinese civilization and Western industrialism inform the accounts of late nineteenth century reform ideology found in such influential and widely read studies as East

Asia Tradition and Transformation and Mary C. Wright's The Last Stand of Chinese Conservatism.[16] It is appropriate then to examine some recent works which call this assumption into question.

Wang Erh-min contends that there is considerable evidence to refute the notion that Confucian thought posed an important obstacle to China's modernization. He finds that Chinese intellectuals of the self-strengthening era, basing themselves on Confucian thought, argued for contemporary Western scientific principles over a broad range of issues and with widespread influence. Confucianism and Chinese traditions provided the basic thrust for modernization, supplying both the intellectual courage and the theoretical basis for the acceptance of Western learning. Wang traces the development of the t'i-yung idea among various Chinese intellectuals covering ground that is essentially untouched by Levenson. He agrees with Levenson that the central concern of the t'i-yung thinkers was the preservation of Chinese learning in coexistence with the new Western knowledge. However, Wang also has cited a number of examples of t'i-yung thinking which go much further than this, showing a genuine willingness among Confucian intellectuals to reconcile Western and Chinese learning on an equitable basis. This leads him to identify a stream of thought which he calls East-West conciliatory thinking. Hsüeh Fu-ch'eng, writing in 1893, exemplified this school when he observed that traditional morality

and literature should be cherished but that, in practical concerns of the day, men skilled in machinery, mathematics, military science and foreign languages should be employed. A forceful and well-documented English language presentation of this same thesis has been advanced independently by Kwang-Ching Liu who concludes that "Neither Cheng (Kuan-ying) nor Wang (T'ao) ever questioned Confucian moral principles. They believed that the Chinese heritage held the Ta-tao ('Great Truth'). But they urged their readers to learn the 'substance' (t'i) of the Western civilization as well as its 'application' (yung)."[17]

An essentially similar view of Confucian openmindedness and willingness to modify aspects of Chinese civilization is held by Wang's colleague at the Institute of Modern History, Lü Shih-ch'iang. Lü's study of Feng Kuei-fen shows Feng to have been a creative synthesizer who applied basic notions from classical thought to the current situation and came up with fresh ideas. His creativity was uninhibited by the t'i-yung formulation of ideas. In fact, Lü would would not place Feng with this school at all. He concludes that the writings of Feng show that Confucian thought in no way hindered China's modernization. Indeed, the converse is true. Confucianism positively promoted progress. This point of view is apparent in Lü's analysis of Wang T'ao's thought as well.

Furthermore, there was a constant evolution throughout

the thirty-five year period from the narrow limits of military industrial reform toward a broader concept of institutional reform. Professor Onogawa Hidemi sees this as a progression from Feng Kuei-fen's interest in excellent ships and fine weapons to Hsüeh Fu-ch'eng's call for the production of weapons and ships and the development of the wealth and resources necessary for such production, to Wang T'ao's balanced emphasis on military industrial reforms derived from foreign models and the reform of institutions involving both a change in mental outlook and changes in the system. As one author has put it, "at least a few men of the Kuang-hsü period experienced a transvaluation of values before the disaster of the Sino-Japanese War . . ."[19] Lloyd Eastman's study of political reformism in the decade prior to the Sino-Japanese War presents further data in support of this thesis. Eastman shows how the failure of self-strengthening and the prolonged exposure to foreign influences in the years between the Sino-French and the Sino-Japanese Wars led certain Confucian intellectuals to advocate a broadening of the areas of reform to include even the establishment of a parliament. He concludes that this was a decade of growing nationalism and a search for political solutions to ills which earlier self-strengthening policies could not solve.[20]

Wang Erh-min sees this willingness to compromise and

conciliate Western and Chinese learning among Confucian intellectuals as the potential vehicle for the acceptance of Western learning during the self-strengthening era. This view as well as those of the other authors cited challenge Levenson's conclusion that China's bureaucratic structure with its anti-scientific anti-capitalist intellectual aura did not provide the proper conditions for the reception of industrialism. Collectively, Wang, Lü, Liu, Onogawa, and Eastman are more persuasive because their contentions are substantiated with profuse citations from the writings of Chinese officials and intellectuals. Levenson, on the other hand, has based most of his analysis on the writings of Chang Chih-tung and the redoubtable conservative Wo-jen. Furthermore, reading between the lines of Levenson's arguments, one can detect a preconception that the encounter between Chinese and Western ideas would inevitably be destructive to traditional Chinese thought and civilization, whereas Wang suggests that the intellectual conditions were favorable for the gradual acceptance of Western industrialism. On the basis of evidence far broader than Levenson's but still quite limited, Wang implies that the essential aspects (t'i) of Chinese civilization as understood by Chinese intellectuals of the self-strengthening period were such that they could be adapted to provide the basis for new Western style functions (yung). The logical fallacy Levenson saw in the association of Chinese t'i and Western yung is not

there in Wang's perception.[21] If Wang is correct, one is left with the difficult question: "What went wrong?" for there is no arguing with Levenson's assertion that in many instances the results of self-strengthening efforts were a shambles.

"What went wrong?" Studies of the self-strengthening period published during the first half of this century were frequently preoccupied with this question. They dwelled on the disastrous failure of many of the projects undertaken and emphasized the epoch-making significance of China's humiliating defeat in the Sino-Japanese War. In explaining the inadequacy of China's war preparations, they typically attached great importance to factors such as faulty leadership, governmental corruption, and similar problems traditionally associated with the phenomena of dynastic decline. Almost invariably they pointed to the disastrous example of the use of naval funds to refurbish the Summer Palace in preparation for the Empress Dowager's sixtieth birthday celebration in 1894, as a result of which no new vessels were acquired after 1888.[22] During the half century following the war this was widely accepted as an important reason for China's defeat. The corollary, of course, was that had the transfer of funds not taken place and had naval acquisitions proceeded as scheduled, China would not have been defeated. A host of embarrassing historical questions were thus swept handily under the 'oriental rug.'

This position was persuasively presented in an article by Lo Erh-kang first published in 1948 in which he concluded that over 10,000,000 taels had been diverted from naval funds to work on the palace. However, Professor Wu Hsiang-hsiang in a carefully researched article published in the 1950's challenged Lo's figures and cast considerable doubt on the importance of these funds. While conceding that provincial levies for maritime defense were used for the palace beginning in 1891, Wu contends that the major work on the palace was done after the war and paid for from opium tax revenue. More importantly, Wu's article pointed out that the crucial reasons for China's defeat lay not in the state of material readiness of the navy but in the sorry state of naval morale and training, thus emphasizing the effect of institutional and ideological factors on self-strengthening. This point had been made by others but never so forcefully as when accompanied by Wu's revisionist attack on Lo.[23] Although the question of "What went wrong?" continues to preoccupy students of self-strengthening even to the present, the areas of investigation have broadened to include a vast range of institutional, intellectual, political, economic and diplomatic issues. Moreover, most recently the focus of research has begun to shift again. Perhaps the prolonged failure to answer conclusively the question, "What went wrong?" has prompted the current interest in the study of evolutionary and

developmental trends during the self-strengthening era in an effort to relate them to subsequent developments in the twentieth century.

A characterization of self-strengthening as a dynamic period in which the interest in reform and its implementation grew steadily into new areas is conveyed by the studies of Onogawa Hidemi and Mou An-shih, both of whom periodized the movement on the basis of substantially different types of reform activity noted during successive phases. Onogawa saw the steady broadening of the interest in military related types of reform spilling over into the new areas of political and governmental institutions during the years from 1884 to 1893. Mou An-shih has derived a more precise periodization which, while emphasizing the substantive rather than the conceptual growth, gives an even more dynamic view of the period. Mou's first subperiod, 1860-72, is characterized as a time of establishment of military related industries. The second subperiod, 1872-75, he sees as a time in which new types of industries, some only marginally related to the military such as mining, communications and textiles, were established. The final subperiod, 1885-94, witnessed the attempt to modernize the naval establishment and to inaugurate a modern iron and steel industry.[24] The inference is clear from these studies that the self-strengthening movement as it developed led naturally to modernization in areas of the economy which were only remotely related to strategic

requirements and to an interest in reforms in the political arena as well as in military affairs.

Some of the most recent studies which focus on the 1860's and early 1870's even suggest that self-strengthening, at its inception, carried some of these broad implications for reform. Liu Shih-ch'iang's recent biography of Ting Jih-ch'ang, for example, suggests that the early advocates of self-strengthening put equal emphasis on both economic modernization measures and on the reform of government administration. They regarded yang-wu and nei-cheng (domestic administration) as related aspects of one thing deserving of equal attention. Tseng Kuo-fan, Tso Tsung-t'ang, Li Hung-chang, and Ting Jih-ch'ang even felt that governmental reform should be preliminary to self-strengthening, a view which is consistent with Kwang-Ching Liu's analysis of Feng Kuei-fen's concept of self-strengthening. Liu concludes "Feng's idea of self-strengthening was plainly more than the adaptation of Western technology. In the tradition of the 'school of statecraft,' he believed that by improving on existing institutions, China could make greater use of her human talents and economic resources, (and) increase the communications between monarch and people." Furthermore, Liu's study of Li Hung-chang's first five years in the governor generalship of Chihli (1870-75) shows that Li expanded the programs of self-strengthening to include shipping,

mining, expansion and improvement of arms production, purchase of foreign vessels, and overseas education. Li also proposed other measures avant garde for their day which were not implemented, such as institutional changes in military organization and civil service examinations.[25]

Our understanding of what areas of Chinese civilization fell within the scope of self-strengthening efforts is clearly changing. The field is broadening to include areas which earlier studies inferred were largely isolated from change. This impression is borne out by studies of the 1870's, 1880's and 1890's as well. No doubt the most striking development in the 1870's was the institution of the kuan-tu shang-pan (government supervision of commercial enterprise) system. Beginning with the establishment of the China Merchant Navigation Company, this organizational format was employed to bring together the resources of the government and the emerging capitalist sector in the treaty ports to aid in the establishment of modern communications, mining and textile industries. Since it was the primary institutional adaptation through which self-strengthening was expanded beyond the armies, governmental arsenals and schools of the 1860's, it pertains fundamentally to the nature and range of self-strengthening efforts in Chinese society and, as such, has been the subject of considerable research. The landmark study of this device is Albert Feuer-

werker's China's Early Industrialization Sheng Hsuan-huai (1844-1916) and Mandarin Enterprises. Feuerwerker concludes that government supervision of commercial enterprise was a compromise with rather than a departure from the bureaucratic institutions of the traditional agrarian empire; not the clear break which he feels was needed to spur economic modernization. Most of the firms were controlled by a few men and operated on a limited amount of venture capital. Though they represented an effort to break the strictures which traditional society placed on the merchant, the possibilities for growth were limited by foreign pressure, official indifference, and the greed of managerial personnel. Government monopolies granted to these firms nurtured complacency; insuring profits and protecting capital of official investors, they foreshadowed twentieth century bureaucratic capitalism.[26]

Some Chinese authors have held a similar view of the baleful influence of bureaucratic control in the kuan-tu shang-pan enterprises. Fan Wen-lan, for example, observed that bureaucrats monopolized the management, relegating the merchants to the status of yes men. The development of the private sector, which he implies was a necessary first step for industrialization, was blocked by the bureaucrats. This view is shared by Sun Yü-t'ang and Mou An-Shih. Li Kuo-ch'i writing from the Institute of Modern History of the Academia Sinica in Taiwan, in his carefully

researched monograph on the early history of China's railroad development, points out that it was extremely difficult to obtain commercial capital for the Tientsin-Taku and the Taiwan Railroads, both kuan-tu shan-pan enterprises, because of the officials' arbitrary attitude toward management; the merchants deep seated distrust of the government; and the general lack of rapport and understanding between the bureaucrats and the merchant community. Into this communications gap stepped clever intermediaries such as Sheng Hsuan-huai who used bureaucratic influence to funnel government capital into companies and then milked them through high dividend payments (Sheng's management of the construction of the Peking Hankow Railroad after the war being the best case in point). The pattern of high profits and low investment of capital once established signaled disaster for such industries.[27]

Each of these studies has attempted to answer the question, "What went wrong?" and each has laid a heavy measure of responsibility at the feet of the official managers. Feuerwerker's interpretive framework which is somewhat broader than the others seems to hint that traditional bureaucratic control, and the institutions and attitudes associated with it, would inevitably have to be swept away entirely before industrialization could succeed. This view is based on an extremely negative assessment of the potential of China's governing bureaucracy to adapt to the responsibilities

of modern industrial and business management, a position which, though qualified considerably, is shared by Kwang Ching Liu.[28]

Another view of the kuan-tu shan-pan system emerges from Lü Shih-ch'iang's study of the early history of steamship enterprise in China in which he deals with the establishment of the first officially supervised commercial enterprise, the China Merchant Steam Navigation Company (also studied by Feuerwerker). Lü sees the kuan-tu shan-pan system as a marriage of convenience between government and the merchants. Initially, Li Hung-chang, Tseng Kuo-fan and the Tsungli Yamen all favored complete merchant control of the steamship business. Only after court reactionaries, in 1872, moved to eliminate the further use of steamships did the Tsungli Yamen come up with the idea of the government renting steamships to merchants. Even then, Tseng Kuo-fan favored complete control by the merchants with the government merely facilitating their activities. After Tseng's death, Li Hung-chang held out for minimal official interference in the China Merchant Steam Navigation Company until the very last draft of the regulations. However, hampered by the privileged position of foreign competitors operating under the protection of the unequal treaties, Chinese merchants preferred to consign shipments to foreign firms rather than risk venture capital in an environment unfavorable for investment. In short, government assurances and

outright protection were needed to attract available private Chinese capital to industries such as shipping which were essential to the maintenance of China's economic independence.[29] The inference of Lü's work is that the kuan-tu shang-pan system was a defensive innovation inspired primarily by the need to mobilize expertise and capital from wherever it could be found in China to combat the growing foreign control of the economy. As such, it should be judged not simply as a measure of China's capability to undertake modern business enterprise on the Western model, but as an example of the excessive demands for change which foreign pressure forced upon the Chinese economy.

Whether the kuan-tu shan-pan enterprises are viewed as an indicator of the traditional bureaucratic empire's inability to support rapid modernization as Feuerwerker suggests, or an innovative attempt to respond to the impossible situation which was not of China's making, the inference of Lü's study, the conclusion is inescapable that they broadened the scope of self-strengthening only slowly and not sufficiently to keep abreast of the mounting pressures on the empire. The important companies established prior to 1894 though large in scale were few in number. In addition to the China Merchant Steam Navigation Company they reached into the areas of mineral development (the Kaiping Coal Mines and the Han Ho Gold Mines), communications (the Tientsin Telegraph

Administration, the Tientsin-Taku and the Taiwan Railroads), and textiles (the Shanghai Cotton Cloth Mill).[30]

Moreover, at the same time there was a proliferation and diversification of purely government owned self-strengthening enterprises and the initiation of the first privately operated modern businesses in China. Pursuant to the maritime defense crisis of 1874-75 and the subsequent campaign against the Mohammedan insurrection in the northwest 1862-78, most provinces hastened to establish their own arsenals employing steam powered machinery for the production of ammunition and, in some instances, ordnance. A total of thirteen new plants were established between 1875-94 in such far-flung corners of the empire as Kirin, Sinkiang and Szechuan. The practice begun in the 1860's of establishing technical institutes, military academies and translation centers in connection with the arsenals continued with schools being established at the Kirin, Tientsin, Kwangtung, and Hanyang arsenals. (However, as Biggerstaff has shown, the 1860's remains the decade of greatest accomplishment in establishing Western style education.) Biggerstaff and Wang conclude that the educational institutions established prior to 1894 carried out, with surprising success, the function for which they were created, making a substantial contribution to the modernization of China in such diverse areas as supplying personnel for the diplomatic services, providing translations

from Western languages into Chinese, paving the way for the introduction of new types of education, and the training of military and engineering personnel. However, the impact of the modern schools established prior to 1894 on Chinese society was severely circumscribed; general education remained entirely in the traditional schools; and, as long as the traditional learning held the key to prestige and bureaucratic position through the civil service examinations, it was difficult for the modern schools to attract ambitious and intelligent young men.[31]

In addition to the schools, the armament industry spawned other types of self-strengthening enterprises such as the first Western style coal mine, established in Taiwan in 1875 to supply the needs of the Foochow Shipyard; lead mines which Li Hung-chang established in Hopei in the 1880's to supply the Tientsin Arsenal; and the short lived Ching-ch'i iron refinery (1886-93) established to supply the Kweichou Arsenal.[32]

Meanwhile the machine production methods employed in the strategic self-strengthening industries were introduced in privately owned firms in non-military sectors of the economy from as early as 1872. During the 1870's about twenty private firms engaged in machine production were established. This number increased during the 1880's. But the firms were, for the most part, very small. It was not until just prior to the Sino-Japanese

War that large scale firms began to make their appearance. By 1894 privately owned establishments numbering about one hundred and including silk reeling, cotton textiles, machine building, match production, flour milling, paper making, printing, and mining enterprises had been established. Although this represented considerable progress from the base line of zero, many of the firms were only partially modernized. Furthermore, investment was limited; hemmed in by foreign competitors, the total impact of these plants on the economy was minimal. On balance, self-strengthening in the private sector was dwarfed by the activity in the government operated and the kuan-tu shan-pan enterprises.[33]

Aside from the ill-fated attempt at naval modernization, the most striking aspect of the expansion of self-strengthening activities in the decade between the Sino-French and the Sino-Japanese Wars was the drive for balanced industrialization. Jarred by the outcome of the Sino-French War, officials such as Chang Chih-tung looked back over the first twenty-five years of self-strengthening and perceived the cart-before-the-horse aspect of earlier efforts when viewed nationally. Arsenals and dockyards had been established before the extractive industries necessary to supply them and the communications infrastructure essential to the development of modern industrial production had come last. Absorbing lessons from the past, Chang devised a rational and

comprehensive plan for balanced industrial development calling for munitions production, extraction and refining of raw materials and personnel development. To this, eventually was added a plan for railroad development. In the decade prior to the war, he struggled to realize this scheme first in Kwangtung and, after 1890, in Hupeh through the establishment of a military academy in Kwangtung, a government owned arsenal, iron and steel works and a school in Hanyang, and officially supervised commercial enterprises in the mining, railroad and building supply industries. However, beset by a variety of difficulties, the most serious of which was the diversion of capital to strategic railroad development in Manchuria, the iron and steel works did not commence operations until late 1893, and the arsenal had still not begun production when the war broke out with Japan in 1894. Elsewhere, success was greater. The Kiangnan Arsenal, China's oldest and largest modern industry, began production in 1891 with a Siemens Martin refining furnace, a rolling mill and associated equipment to produce three tons of steel and one hundred rifle barrels per day. Although unit cost was high because of initial delays in operation and the need to import both fuel and raw materials, tests revealed Kiangnan steel the equal of high grade foreign gun steel. However, the arsenal was not able to produce enough steel to supply its own needs.[34]

On balance, the literature consulted suggests that China's leaders were guided, to an important degree, by both realism and practicality in determining the range of self-strengthening activities. The changes which had begun by 1894 were far more comprehensive and farsighted than earlier studies infer. Aside from the military, industrial and diplomatic changes inspired by purely defensive motives, broader changes were stimulated in education, in the economy, and in the institutional structure by the need to supply military industries, the demonstrable superiority of foreign counterparts, and the need to counter growing foreign control of the Chinese economy. The problem one encounters in attempting to characterize the nature and the range of this movement can be likened to the problem of describing a glass partially filled with water -- or, is it partially empty? The same self-strengthening enterprises that have been viewed by some historians as woefully inadequate when measured against the progress of Japan or the norms of the Western world have been viewed by others as notable accomplishments when measured against the base line of China's traditional system. This difference in perspective results, I believe, from an inherited preoccupation among some authors with the problem of "What went wrong?" For these scholars, because of China's defeat in the war, the self-strengthening movement, ipso facto, was a failure. For others, however,

the war was no more than an early example of foreign interference in China's lumbering progress toward modernization; it had imposed a timetable for self-strengthening which the traditional regime could not meet.

Further research is needed to refine the general observations advanced here and define, with more precision, the nature and the range of self-strengthening efforts. Perhaps the most obvious lacuna in the existing studies lies in the area of imperial leadership policy with respect to self-strengthening. In view of the revised estimates of major provincial self-strengthening leaders, which appear in recent studies, suggesting that some were quite capable of farsighted and innovative leadership, it is imperative that the crucial imperial stratum of leadership also be carefully examined. There is need not only for in depth studies of the careers of key individuals but also for research into the workings of the bureaucratic machinery of the imperial government in matters pertaining to self-strengthening. The latter topic separates naturally into two problem areas: First, the internal functioning of the imperial bureaucracy (e.g., how a decision was made with respect to the allocation of imperially-controlled resources to a self-strengthening project); and, secondly, the susceptibility of the imperial stratum of leadership to outside suggestion on self-strengthening matters (e.g., how an imperial decision was made

on a given self-strengthening proposal advanced by a provincial leader). Samuel C. Chu has given some thought to these problems and suggested a methodology through which data on imperial decisions could be analyzed. Though Chu's conclusions are extremely tentative, they point to the possibility that imperial level leadership may have been a critical trouble spot in the formulation and implementation of self-strengthening policy[35] -- underscoring the need for further intensive research in this area.

There is also much work to be done on individual self-strengthening enterprises. The limited number of monographic studies of industries, schools, communications facilities, military organizations and diplomatic agencies limits correspondingly the validity of general observations about the nature and extent of the movement such as those which I have attempted to reach here. Only through further detailed studies of the problems, successes and failures experienced in the operation of individual projects can we generate the factual data needed to support definitive analysis of the movement, a necessary first step in any attempt to clarify its relationship to subsequent developments in twentieth century China. Although a beginning has been made in the study of individual undertakings, the hiatuses in the historical literature are vast. This is particularly disappointing in view of the excellent collections of documentary materials which have been published during

the past several decades and which, so far, have been only minimally exploited.[36] Hopefully, the interpretations advanced here -- preliminary as they necessarily are -- will serve as a base line against which future research will make adjustments, particularly in those areas suggested, toward a more accurate understanding of self-strengthening and a clearer appreciation of the movement's place in the continuum of China's history.

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FOOTNOTES

*I am indebted to Professor Ramon Myers, University of Miami, Professor Kwang-Ching Liu, University of California, Davis, and Professor Samuel C. Chu, Ohio State University, for criticism and suggestions on the initial draft of this article. The accuracy of all factual data and the validity of all conclusions included here are the sole responsibility of the author.

[1]Wang Erh-min, Wan-Ch'ing cheng-chih ssu-hsiang-shih lun (Taipei: Hsüeh-sheng shu-chü, 1969, pp. 8-9, 24, 28; Mou An-shih, Yang-wu yun-tung (Shanghai: Jen-min ch'u-pan-she, 1961), pp. 1-2; Kwang-Ching Liu, "Nineteenth Century China," in Ping-ti Ho and Tang Tsou, eds., China in Crisis (Chicago: University of Chicago Press, 1968), I, Book one, 126; Onogawa Hidemi, "Shimmatsu yōmuha no undō," Toyōshi Kenkyū, X, 6 (Feb. 1950), pp. 429-466, esp. 430-431; and "Shimmatsu hempōron no seiritsu," Tōhō gakuhō, Kyōto, XX (March 1951), pp. 153-184, esp. 153.

[2]Fan Wen-lan, Chung-kuo chin-tai-shih (Peking: Jen-min ch'u-pan-she, 1962), Shang, p. 210; Mou An-shih, 216-217; Sun Yü-t'ang, ed., Chung-kuo chin-tai kung-yeh-shih t'zu-liao, Ti-i-chi, shang (Peking: K'e-hsueh ch'u pan-she), p. 26; Hu-pei ta-hsueh cheng-chih ching-chi hsueh-chiao yen-shih, ed., Chung-kuo chin-tai kuo-min ching-chi-shih chiang-i (Peking: Kao-teng chiao-

yu ch'u-pan-she, 1958), p. 244; Chung-kuo chin-tai-shih ts'ung-shu, pien-hsieh-tsu, ed., Yang-wu yun-tung (Shanghai: Jen-min ch'u-pan-she, 1973), p. 90.

[3]Liu, "Nineteenth Century China," 126-129; Wang Erh-min, Ch'ing-chi ping-kung-yeh te hsing-ch'i (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1963), p. 67.

[4]See Sun, 27; Mou, 217; and Hu-pei ta-hsueh . . . 207, for examples of this type of reasoning.

[5]See Wang, Ping-kung-yeh, pp. 39-72, for some examples.

[6]John L. Rawlinson, China's Struggle for Naval Development 1839-1895 (Cambridge: Harvard University Press, 1967), pp. 96-108; Li Kuo-ch'i, Chung-kuo tsao-ch'i te t'ieh-lu ching-ying (Taipei: Chung-yang yen-chiu yuan chin-taishih yen-chiu-so, 1961), pp. 85-88; see also Thomas L. Kennedy, "Industrial Metamorphosis in the Self-Strengthening Movement: Li Hung-chang and the Kiangnan Shipbuilding Program," Journal of the Institute of Chinese Studies of the Chinese University of Hong Kong, IV, 1 (1971), pp. 207-228; and Kwang-Ching Liu, "Li Hung-chang in Chihli: The Emergence of A Policy, 1870-75," Albert Feuerwerker et al., eds,, Approaches to Modern Chinese History (Berkeley: University of California, 1967), pp. 68-104, for substantive data on the development of Li Hung-chang's maritime defense strategy.

[7](Seattle: University of Washington Press, 1964), pp. xxi-xliii, 101, 152-3, 318-20.

[8]Fan, 206-207.

[9]David Pong, "The Income and Military Expenditure of Kiangsi Province in the Last Years (1860-1864) of the Taiping Rebellion," The Journal of Asian Studies, XXVI, 1 (Nov. 1966), pp. 49-66; Wang Erh-min, Huai Chün Chih (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1967, pp. 374-385; Kwang-Ching Liu, "Li Hung-chang in Chihli . . . ," pp. 69-104; for a recent comprehensive statement of this position, see Kwang-Ching Liu, "The Limits of Regional Power in the Late Ch'ing Period: A Reappraisal," The Tsing Hua Journal of Chinese Studies, New Series X, 2 (July, 1974), pp. 176-223.

[10]Liu, "Li Hung-chang in Chihli . . .," 104.

[11]Wang, Huai Chun Chih, pp. 212-213.

[12]Mary C. Wright, The Last Stand of Chinese Conservatism: The T'ung-chih Restoration 1862-1874 (New York: Atheneum, 1966), pp. 196-221; Albert Feuerwerker, China's Early Industrialization Sheng Hsuan-huai (1844-1916) and Mandarin Enterprise (New York: Atheneum, 1970), pp. 31-57, 242-251; John K. Fairbank et al., East Asia Tradition and Transformation (Boston: Houghton Mifflin, 1973), pp. 558-560, 585-592.

[13]Fairbank, East Asia, 629; Joseph Levenson, Modern China and its Confucian Past: The Problem of Intellectual Continuity (New York: Anchor Books, 1964), p. 102.

[14]Wang, Ssu-hsiang-shih, 24, 55; see also Li Kuo-ch'i, Chang Chih-tung te wai-chiao cheng-t'se (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1970), pp. 19-38.

[15]Levenson, Modern China, 82-102.

[16]Fairbank, East Asia, 619-622, 628-633; Wright, 196, 220-221; see also John K. Fairbank, The United States and China, 3rd edition (Cambridge: Harvard University Press, 1971), pp. 173-174.

[17]Wang, Ssu-hsiang-shih, 21, 51-71, 80-81, 99; Kwang-Ching Liu, "Nineteenth Century China," 142.

[18]Lü Shih-ch'iang, "Feng Kuei-fen te cheng-chih ssu-hsiang," Chung-hua wen-hua fu-hsing yueh-k'an, IV, 2, pp. 1-8, esp. p. 7; "Wang T'ao p'ing chuan," Shu Ho Jen (Kuo-yü jih-pao fu'k'an) 61 (July 1, 1969), pp. 1-8.

[19]Onogawa, "Shimmatsu yōmuha no undō," 440-442; Kwang-Ching Liu, "Nineteenth Century China," 139.

[20]Lloyd E. Eastman, "Political Reformism in China before the Sino-Japanese War," Journal of Asian Studies, XXVII, 4 (Aug. 1968), 695-710.

[21]Wang, Ssu-hsiang-shih, 1-30, 51-81, esp. 17, 21, 63, 81; Levenson, Modern China, 83-87, 97, 102.

[22]Hosea Ballou Morse, The International Relations of the

Chinese Empire, III, The Period of Subjection 1894-1911 (Shanghai: Kelly and Walsh, 1918), pp. 55-56; Li Chien-nung, The Political History of China 1840-1928 (New York: Van Nostrand, 1956), Chinese edition (Shanghai: Commercial Press, 1948), pp. 140-143.

[23]Lo Erh-Kang, "Ch'ing hai-chun ching-fei i-chu i-hoyung k'ao," Tung-nan jih-pao wen-shih chou-k'an, No. 103 (Shanghai, Aug. 25, 1948); the same article may be found in Talu tsa-chih, IV, 10 (Taipei: June 1952); Wu Hsiang-hsiang, Chin-tai shih-shih lun tsung (Taipei: Book World Co., 1964-1965) I, pp. 151-170; Pao T'sun-p'eng, "Ch'ing-chi hai-chun ching-fei k'ao-shih," in Chung-kuo li-shih hsüeh-hui chi-k'an, No. 1, takes a position midway between Wu and Lo on the importance of the diversion of naval funds to palace construction. A related problem raised by Wang Chia-chien, "Ch'ing-chi te hai-chun ya-men (1885-1895)," in Chung-kuo li-shih hsüeh-hui shih'hsüeh chi-k'an, No. 5, p. 31, notes 83 and 84, is the importance of the funds used for the three lakes construction project, 700,000 taels of which he estimates were borrowed from the Navy Yamen. Wu discusses this diversion, which took place between 1885 and 1888, primarily as a background development to the subsequent fund raising for the Summer Palace project and indicates that 400,000 taels of this were probably repaid to the Navy Yamen.

[24]Onogawa, "Shimmatsu yōmuha no undō," 430-431; Mou, 2-3.

[25]Lü Shih-ch'iang, Ting Jih-ch'ang yu tzu-ch'iang yun-tung (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1972), p. 2; Kwang-Ching Liu, "Nineteenth Century China," 128; "Li Hung-chang in Chihli . . .," 82-104.

[26]Feuerwerker, Industrialization, 242-251.

[27]Fan, 216-218; Sun, 36-39; Mou, 116; Li Kuo-ch'i, Tieh-lu, 180-183.

[28]Kwang-Ching Liu, "Nineteenth Century China . . .," 134-138.

[29]Lü Shih-ch'iang, Chung-kuo tsao-ch'i te lun-ch'uan ching-ying (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1962), pp. 259-265.

[30]For individual studies of some of these enterprises, see Ellsworth C. Carlson, The Kaiping Mines (1877-1912), Second edition (Cambridge: Harvard University East Asian Research Center, 1971); Wang Hsi, Chung-Ying k'ai-p'ing k'uang-ch'uan chiao-she (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1962), Chaps. 1-3; Li Kuo-ch'i, Tieh-lu; Feuerwerker, Industrialization, Chap. 6; Mou, pp. 91-113.

[31]Wang Ehr-min, ping-kung-yeh, 93-100, 111-120, 149-156; Yang Chia-lo, Yang-wu yun-tung wen-hsien hui-pien (Taipei: shih-chieh shu-chu, 1963) 8 vols., IV, 401; William Ayers, Chang Chih-tung and Educational Reform in China (Cambridge: Harvard University Press, 1971), pp. 100-136; Knight Biggerstaff, The Earliest Modern Government Schools in China (Ithaca: Cornell University Press, 1961), pp. 70-93, Spector, 163.

[32]Huang Chia-mu, Chia-wu chan-ch'ien chih t'ai-wan mei-wu (Taipei: Chung-yang yen-chiu-yuan chin-tai-shih yen-chiu-so, 1961); Hu-pei ta-hsueh . . . , 217-218.

[33]Hu-pei ta-hsueh . . . , 235-246; Sun, 39-54; Mou, 164-188.

[34]Wang Erh-min, ping-kung-yeh, 79-80, 93-100; Thomas L. Kennedy, "Chang Chih-tung and the Struggle for Strategic Industrialization: The Establishment of the Hanyang Arsenal, 1884-1895," Harvard Journal of Asiatic Studies, Vol. 33 (1973), pp. 154-182; and The Establishment and Development of the Kiangnan Arsenal, 1860 to 1895 (Ph.D. Dissertation, Columbia University, 1968), pp. 216-218; Daniel H. Bays, "The Nature of Provincial Authority in Late Ch'ing Times: Chang Chih-tung in Canton, 1884-1889," Modern Asian Studies, 4, 4 (1970), pp. 325-347, esp. 333-338; Ch'uan Han-sheng, "Ch'ing chi te chiang-nan chih-tsao-chü," Kuo-li chung-yang yen-chiu-yuan, li-shih yü-yen yen-chiu-so chi-k'an, XXIII (1951), pp. 145-160, and Han Yeh P'ing Kung-ssu shih-lueh (Hong Kong: The Chinese University, 1972).

[35]Samuel C. Chu, "On the Capacity of the Ch'ing Government to Effect Modernization during the Early Kuang-hsü Period," Ch'ing-shih wen-t'i, I, 10 (February 1969), pp. 23-44.

[36]Among the most important such collections are: Kuo T'ing-yee et al., ed., Hai-feng Tang (Taipei: Chung-yang yen-chiu-yuan chin-tai-chih yen-chiu-so, 1957), 5 vols.; Yang Chia-

lo, ed., Yang-wu yun-tung wen-hsien hui-pien (Taipei: Shih-chieh shu-chü, 1963), (originally published in the People's Republic of China), 8 vols.; Sun Yü-t'ang, ed., Chung-kuo chin-tai kung-yeh-shih t'zu-liao, 1840-1895 (Peking: K'e-hsüeh ch'u-pan-she, 1957), 2 vols.