Between Command and Market

Economic Thought and Practice in Early China

Edited by

Elisa Levi Sabattini
Christian Schwermann

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Contents

CHAPTER 1

Economic Cycles and Price Theory in Early Chinese Texts

Paul R. Goldin

Natural cycles informed the rhythm of life in early China.[1] One such cycle, self-evident to anyone living in an agrarian society, was the year, with its recurring sequence of seasons.[2] Another, no less obvious to anyone observing the sky, was the progression from new moon to full moon (through crescent and gibbous moons) and back again. Calendographers struggled to coordinate these two cycles, but could not find a simple solution, since the roughly 365¼ days of the tropical year cannot be divided neatly into lunations of roughly 29½ days each.[3] Therefore farmers, who needed to be sure of the right time to begin planting, looked to the stars for guidance. Just as surely as the sun rises and sets over the course of the day, asterisms follow predictable paths across the visible sky through the year. With experience, it is possible to tell sidereal time very precisely, sometimes even to the correct day.[4] (The ancient sky, moreover, was unblemished by today's photopollution.) Such observations,

1 The most famous account of cyclical time in Chinese culture is probably Marcel Granet (1884–1940), *La pensée chinoise*, Bibliothèque de "L'Évolution de l'Humanité" (Paris: La Renaissance du Livre, 1934), 77–99. The Shang 商 dating system, with its sexagenary sequence (*jiazi* 甲子, *yichou* 乙丑, etc.), was cyclical. See David N. Keightley, *The Ancestral Landscape: Time, Space, and Community in Late Shang China* (*ca. 1200–1045 B.C.*), China Research Monograph 53 (Berkeley: Institute of East Asian Studies, University of California, 2000), 50, for the absence of linear time. In later periods, both cyclical and linear conceptions of time are attested, but scholars have not agreed as to which predominated. A full bibliography would be too large to list here, but for representative views, see Derk Bodde, *Chinese Thought, Society, and Science: The Intellectual and Social Background of Science and Technology in Pre-Modern China* (Honolulu: University of Hawai'i Press, 1991), 122–133; and Joseph Needham, *The Grand Titration: Science and Society in East and West* (London: Allen & Unwin, 1969), 218–298.

2 For the Shang agricultural schedule, see Keightley, *The Ancestral Landscape*, 10–13.

3 Cf. Thomas S. Kuhn, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (Cambridge, Mass., and London: Harvard University Press, 1957), 47; and Joseph Needham, *Science and Civilisation in China* (Cambridge: Cambridge University Press, 1954), vol. 3, 390.

4 For some examples across antiquity, see Bryan E. Penprase, *The Power of Stars: How Celestial Observations Have Shaped Civilization* (New York: Springer, 2011), 154–161.

which undoubtedly go back to the Stone Age,[5] form the basis of the traditional Chinese conviction that proper conduct should be coordinated with patterns discernible in nature.

As anywhere else, observation was always accompanied by theory.[6] Though there must have been prehistoric astronomical theories, without direct information, they remain beyond the purview of the historian. By Warring States times, however, Chinese theories of nature are well documented. The sequence of seasons was understood not only as supervening on the progression of asterisms, but also as a manifestation of the regular interplay of *yin* 陰 and *yang* 陽, two complementary aspects of matter (*qi* 氣). The two were thought to rise and fall in an endless sine curve, with *yang* attaining its maximum at the summer solstice, *yin* its maximum at the winter solstice, and the two in perfect equilibrium at the two equinoxes.[7] By dividing the year into quarters around these four cardinal dates, one can demarcate precise seasons,[8] with spring being regarded as the time of surging *yang*, and autumn as the time of surging *yin*.[9] Moral inferences were readily drawn. Actions running counter to the seasonal trends would be regarded as self-defeating at best, since no human being could possibly override these mighty cosmic pressures. One does not wisely stand in the way of surging *yin* or *yang*.

There were also multi-year cycles,[10] notably the orbital period of Jupiter (nearly twelve years, more precisely 4,332 days) and its postulated antithesis,

5 An observation platform at the Neolithic site of Taosi 陶寺 seems to have been built for the purpose of measuring solstices. See David W. Pankenier, *Astrology and Cosmology in Early China: Conforming Earth to Heaven* (Cambridge: Cambridge University Press, 2013), 20–29.

6 Einstein's memorable formulation was: *Erst die Theorie entscheidet darüber, was man beobachten kann*. See Werner Heisenberg, *Der Teil und das Ganze: Gespräche im Umkreis der Atomphysik* (Munich: R. Piper, 1969), 70.

7 The best discussion in English remains Nathan Sivin, *Traditional Medicine in Contemporary China*, Science, Medicine, and Technology in East Asia 2 (Ann Arbor: Center for Chinese Studies, University of Michigan, 1987), 59–70.

8 There were other annual cycles with different bases, such as the rotation of the handle of the Big Dipper over the course of a year. See, e.g., Marc Kalinowski, "The Notion of '*shi*' 式 and Some Related Terms in Qin-Han Calendrical Astrology," *Early China* 35–36 (2012–2013), 341–349; also Li Ling, "The Zidanku Silk Manuscripts," in *Books of Fate and Popular Culture in Early China: The Daybook Manuscripts of the Warring States, Qin, and Han*, ed. Donald Harper and Marc Kalinowski, Handbuch der Orientalistik IV.33 (Leiden and Boston: Brill, 2017), esp. 271–274.

9 Note that the precise date of Chinese New Year in a traditional calendar is affected by the presence or absence of leap months (*runyue* 閏月). Usually it falls near the midpoint between the winter solstice and the vernal equinox, i.e. the first week of February.

10 The number of years between sage kings was also a matter of concern. Mencius famously opined (2B.13) that it should be five hundred (but also lamented that five hundred years

variously named Taisui 太歲 and Taiyin 太陰. (Joseph Needham called it "an invisible 'counter-Jupiter.'")[11] By dividing the sky into equal sections associated with different parts of the Chinese world, and tracing Jupiter's sojourns in each plot over the course of its twelve-year cycle, one could, according to a divination technique known as "field allocation" (*fenye* 分野), determine which of China's contending kingdoms would have a temporary military advantage.[12] Some other systems add yet another set of cycles governed by the Five Powers (*wude* 五德) or Five Phases (*wuxing* 五行).[13] In such cosmologies, not only does the year go through each phase (spring is Wood, summer is Fire, etc.),[14] but entire dynasties can be construed as periods when one of the Five Powers predominates, to be followed – slowly, perhaps, but inexorably – by the next in turn, until the cycle is complete and begins again.[15]

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had already elapsed without one); "[Kept] Inside the Pillow" ("Zhenzhong" 枕中), a text discussed below, suggested three thousand years instead. For the latter, see Li Bujia 李步嘉, *Yuejue shu jiaoshi* 越絕書校釋 [*Documents on the Excellence of Yue*, Collated and Annotated], Zhongguo shixue jiben dianji congkan 中國史學基本典籍叢刊 (Beijing: Zhonghua shuju, 2013), 13.16.340.

11 Needham, *Science and Civilisation in China*, vol. 3, 402. See also Tao Lei 陶磊, Huainanzi *"Tianwen" yanjiu: Cong shushu shi de jiaodu* 《淮南子・天文》研究：從數術史的角度 [A Study of the "Tianwen" Chapter of *Huainanzi*: From the Perspective of the History of Divinatory Techniques], Shandong Daxue Zongjiao, Kexue yu Shehui Wenti Yanjiusuo chengguo xilie 山東大學宗教、科學與社會問題研究所成果系列 (Ji'nan: Qi-Lu, 2003), 73–97; and John S. Major, *Heaven and Earth in Early Han Thought: Chapters Three, Four, and Five of the* Huainanzi, SUNY Series in Chinese Philosophy and Culture (Albany: SUNY Press, 1993), 74 *et passim*. For a criticism of the term "counter-Jupiter," see Marc Kalinowski, "The *Xingde* 刑德 Texts from Mawangdui," tr. Phyllis Brooks, *Early China* 23–24 (1998–1999), 154, no. 69.

12 Cf. Pankenier, *Astrology and Cosmology in Early China*, 265–288; and John B. Henderson, *The Development and Decline of Chinese Cosmology*, Neo-Confucian Studies (New York: Columbia University Press, 1984), 61–64. Timing military campaigns according to planetary cycles, including those of Venus, Jupiter, and Saturn, was a feature of Mayan civilization as well. See Linda Schele and David Freidel, *A Forest of Kings: The Untold Story of the Ancient Maya* (New York: William Morrow, 1990), 130–164.

13 Gu Jiegang 顧頡剛 (1893–1980), "Wude zhongshi shuo xia de zhengzhi he lishi 五德終始說下的政治和歷史 (1930) [Politics and History under the Doctrine of the Succession of the Five Powers]," in *Gushi bian* 古史辨 (rpt., Shanghai: Shanghai guji chubanshe, 1982), vol. 5, 404–617, remains one of the fullest studies in any language.

14 For the ingenious attempts to resolve the difficulty that there are normally thought to be four, not five, seasons, see W. Allyn Rickett, *Guanzi: Political, Economic, and Philosophical Essays from Early China*, 2nd edition (Boston and Worcester, Mass.: Cheng & Tsui, 2001), vol. 1, 151–166.

15 For the most famous such example, see Chen Qiyou 陳奇猷, *Lüshi chunqiu xin jiaoshi* 呂氏春秋新校釋 [*Springs and Autumns of Mister Lü*, Newly Collated and Annotated], Zhonghua yaoji jishi congshu 中華要籍集釋叢書 (Shanghai: Shanghai guji chubanshe, 2002), 13.683 ("Yingtong" 應同). Cf. John Louton, "Concepts of Comprehensiveness and

Most people today may not believe in *yin*, *yang*, and invisible counter-Jupiters, but these concepts were not simply irrational. They represented some of the best available theories to explain repeatedly observed phenomena, and are therefore most productively understood not as vile superstitions, as Matteo Ricci (1552–1610) declared them,[16] but as paradigms different from our own.[17] The movements of the heavenly bodies (called *tianwen* 天文, "the patterns of the sky") manifestly affected the pattern of life on earth, as anyone who produced grain could attest. Thus comets, shooting stars, and even eclipses could be imbued with prodigious significance.[18] The real question was not *whether* astronomical phenomena coincide with phenomena on earth, but *which* do so, and *why*. Pre-modern Chinese culture answered these questions only partially, just as we today have answered them only partially ourselves.

What do these cycles have to do with economic theory? They have two salient features: they are foreseeable and they affect prices.[19] One basic example is

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Historical Change in the Lü-shih ch'un-ch'iu," in *Explorations in Early Chinese Cosmology: Papers Presented at the Workshop on Classical Chinese Thought Held at Harvard University, August 1976*, ed. Henry Rosemont, Jr., Journal of the American Academy of Religion Thematic Studies 50.2 (Chico, Calif.: Scholars Press, 1984), 106ff; and He Lingxu 賀凌虛, *Lüshi chunqiu de zhengzhi lilun* 呂氏春秋的政治理論 [The Political Theory of *Springs and Autumns of Mister Lü*] (Taipei: Shangwu yinshuguan, 1970), 156–163.

16 *China in the Sixteenth Century: The Journals of Matteo Ricci, 1583–1610*, tr. Louis J. Gallagher, S.J. (1885–1972) (New York: Random House, 1953), 82–92.

17 Following the concept of "paradigm" in Thomas S. Kuhn, *The Structure of Scientific Revolutions*, second edition, International Encyclopedia of Unified Science, vol. II, n. 2 (Chicago: University of Chicago Press, 1970), esp. 10–22. For more on the rationality of early Chinese divination, see, e.g., Jue Guo, "Divination," in *The Wiley-Blackwell Companion to Chinese Religions*, ed. Randall L. Nadeau, Wiley-Blackwell Companions to Religion (Chichester, U.K., 2012), 419–440. It should be noted that *Lüshi chunqiu* repeatedly argues for a rational basis of divination, e.g., Chen Qiyou, *Lüshi chunqiu xin jiaoshi*, 13.683 ("Yingtong" 應同) and 20.1423 ("Guanbiao" 觀表); by contrast, according to Jean Levi, "Pratiques divinatoires, conjectures et critique rationaliste à l'époque des Royaumes Combattants," *Extrême-Orient Extrême-Occident* 21 (1999), esp. 73–75, other traditions, such as *Sunzi* 孫子 and *Han Feizi* 韓非子, deny this.

18 See Needham, *Science and Civilisation in China*, vol. 3, 409–436; more briskly, Feng Shi 馮時, *Zhongguo tianwen kaogu xue* 中國天文考古學 [Chinese Archaeoastronomy] (Beijing: Zhongguo shehui kexue chubanshe, 2007), 97–106.

19 It should be noted that there were unrelated methods of trying to predict prices. For example, the daybooks (*rishu* 日書) from Kongjiapo 孔家坡 include hemerological passages forecasting the price of grain on the basis of the date and the weather rather than postulated natural cycles. See *Suizhou Kongjiapo Hanmu jiandu* 隨州孔家坡漢墓簡牘 [The Bamboo Manuscripts from the Han Dynasty Tomb at Kongjiapo in Suizhou], ed. Hubei sheng wenwu kaogu yanjiusuo, Suizhou shi kaogu dui 湖北省文物考古研究所、隨州市考古隊 (Beijing: Wenwu chubanshe, 2006), 183–184 (strips 447–451). I am indebted to Marc Kalinowski for this reference.

frequently repeated in relevant texts: over the course of a year, grain will always be cheapest right after the harvest. A ruler who can take advantage of this inescapable fact will be able to derive huge profits from it, and he is frequently reminded that military power is predicated on robust income.[20]

The redoubtable Hu Jichuang 胡寄窗 observed as early as 1988 that two chapters in *Yuejue shu* 越絕書 (*Documents on the Excellence of Yue*), namely "Jini neijing" 計倪內經 ("The Boy Reckoner") and "Zhenzhong" 枕中 ("[Kept] inside the Pillow"), contain some of the best early examples of this kind of thinking.[21] Both are impossible to date, but they might go back to the late Warring States period; in particular, their lack of references to coinage and state finance institutions suggests a pre-imperial context. (Regardless of their origin, they were probably edited into their present form no earlier than the Eastern Han, because *Yuejue shu* did not exist before then.)[22] *Yuejue shu* being almost completely neglected,[23] Hu's observation was not widely appreciated until Olivia Milburn's recent studies of the text, which culminated in a full translation in 2010. Even today, it remains largely unexplored.

The significance of the two chapter titles has to be inferred. My supposition is that "The Boy Reckoner" is a fictional character who has been assigned

20 E.g., Li Bujia, *Yuejue shu jiaoshi* 4.5.109 ("Jini neijing" 計倪內經). Compare Li Xiangfeng 黎翔鳳, *Guanzi jiaozhu* 管子校注 [*Guanzi*, with Collation and Commentary], ed. Liang Yunhua 梁運華, Xinbian Zhuzi jicheng 新編諸子集成 (Beijing: Zhonghua shuju, 2004), 23.80.1403 and 1437 ("Qingzhong jia" 輕重甲). For a general study, see Wang Zijin 王子今, *Qin Han shehui yishi yanjiu* 秦漢社會意識研究 [A Study of Social Consciousness in the Qin and Han Dynasties], Zhongguo shanggu shehui he zhengzhi yanjiu congshu 中國上古社會和政治研究叢書 (Beijing: Shangwu yinshuguan, 2012), 432–454.

21 Hu Jichuang 胡寄窗, *A Concise History of Chinese Economic Thought*, China Knowledge Series (Beijing: Foreign Languages Press, 1988), 29–41. (Hu wrote this masterpiece in English, and it is not adequately described as an English translation of his *Zhongguo jingji sixiangshi jianbian* 中國經濟思想史簡編 [A Concise History of Chinese Economic Thought], because it contains extensive revisions). See also Feng Ze 馮澤 and Lu Zhaofeng 路兆豐, "Fan Li he Bai Gui de jingji sixiang 范蠡和白圭的經濟思想 [The Economic Thought of Fan Li and Bai Gui]," in *Xian-Qin jingji sixiangshi* 先秦經濟思想史 [History of Pre-Qin Economic Thought], ed. Wu Baosan 巫寶三 (Beijing: Zhongguo shehui kexue chubanshe, 1996), 297ff.

22 For overviews of the textual history, see Olivia Milburn, *The Glory of Yue: An Annotated Translation of the* Yuejue shu, Sinica Leidensia 93 (Leiden and Boston: Brill, 2010), 37–64; and Li Bujia 李步嘉, Yuejue shu *yanjiu* 《越絕書》研究 [A Study of *Documents on the Excellence of Yue*], Zhongguo dianji yu wenhua yanjiu congshu 中國典籍與文化研究叢書 (Shanghai: Shanghai guji chubanshe, 2003), 226–310.

23 For example, Rickett, *Guanzi*, vol. 2, 339, does not list it among "the major sources of information about *qing zhong* policies prior to the Han."

a wittily appropriate name,[24] as one commonly finds in early economic literature.[25] (Other examples are Kuidu 癸 [= 揆] 度, "Calculation and Measurement," and an anti-exemplar called Yitian 佚田, "Idle Fields.")[26] He is clearly a youth or adolescent, because King Goujian of Yue 越王勾踐 (r. 496–465 BCE) marvels that he has uncommon wisdom for someone so young.[27] The title "[Kept] inside the Pillow" refers to a moment in the text when King Goujian is so impressed by an answer from his minister Fan Li 范蠡 (d. after 473 BCE) that he has it recorded in red ink and thereafter keeps it in his pillow as a state treasure.[28] (Fan Li is sometimes said to have been a

24 Milburn, *The Glory of Yue*, 146–160, translates the title as "The Young Master of Accountancy" and discusses the traditional attribution to Ji Ran 計然 (alive after 496 BCE), a name that is no less meaningful ("Calculating Correctly"), and therefore also likely to be fictitious. At one point, Milburn makes a serious mistake: she writes that according to Ma Zong 馬總 (d. 823 CE), "Ji Ran was also known by the epithet Yufu 魚父 (Fish-Elder), though the reasons for this were not given" (147). In fact, the text says not Yufu 魚父, but Yufu 漁父, "old fisherman," as I have verified by checking several editions, e.g., Wang Tianhai 王天海 and Wang Ren 王韌, *Yilin jiaoshi* 意林校釋 [*The Forest of Meanings*, Collated and Annotated], Xinbian zhuzi jicheng xubian 新編諸子集成續編 (Beijing: Zhonghua shuju, 2014), 1.14.95 ("Fanzi shier juan" 范子十二卷). Thus Ma may have been suggesting that the mysterious fisherman who approaches Confucius and his disciples in a memorable episode in *Zhuangzi* 莊子 is none other than Ji Ran. See the narrative in Guo Qingfan 郭慶藩 (1844–1896), *Zhuangzi jishi* 莊子集釋 [*Zhuangzi*, with Collected Annotations], ed. Wang Xiaoyu 王孝魚, Xinbian Zhuzi jicheng 新編諸子集成 (Beijing: Zhonghua shuju, 1961), 10A.31.1023–1034 ("Yufu" 漁父). An "old fisherman" also approaches the figure of Qu Yuan 屈原 in Chuci 楚辭; see Jin Kaicheng 金開誠 et al., *Qu Yuan ji jiaozhu* 屈原集校注 [The Works of Qu Yuan, with Collation and Commentary], Zhongguo gudian wenxue jiben congshu 中國古典文學基本叢書 (Beijing: Zhonghua shuju, 1996), 758–768 ("Yufu" 漁父). At the end of the encounter, the fisherman sings a ditty that, intriguingly, is identified as "the song of a child" (*ruzi ge* 孺子歌) in *Mencius* 4A.8. But if Ma Zong had this episode in mind, the chronology would be hard to explain. Many fishermen in Chinese literature turn out to be hidden savants (presumably because they like to be close to water); cf. Kirill Ole Thompson, "What Is the Reason of Failure or Success? The Fisherman's Song Goes Deep into the River: Fishermen in the *Zhuangzi*," in *Wandering at Ease in the* Zhuangzi, ed. Roger T. Ames, SUNY Series in Chinese Philosophy and Culture (Albany: SUNY Press, 1998), 15–34.

25 On Chinese euonyms more generally, see Paul R. Goldin, *After Confucius: Studies in Early Chinese Philosophy* (Honolulu: University of Hawai'i Press, 2005), 6–11.

26 Cf. Tamara T. Chin, *Savage Exchange: Han Imperialism, Chinese Literary Style, and the Economic Imagination*, Harvard-Yenching Institute Monograph Series 94 (Cambridge, Mass., and London: Harvard University Press, 2014), 41. For Kuidu, see *Guanzi jiaozhu* 24.81.1446 and 24.83.1481 ("Qingzhong yi" 輕重乙 and "Qingzhong ding" 輕重丁, respectively); for Yitian, see *Guanzi jiaozhu* 22.71.1243 ("Shiyu" 事語). Note that "Kuidu" 揆度 is also the title of Chapter 78 of *Guanzi*.

27 Li Bujia, *Yuejue shu jiaoshi* 4.5.112 ("Jini neijing").

28 Li Bujia, *Yuejue shu jiaoshi* 13.16.341 ("Zhenzhong").

student of "The Boy Reckoner," but reliable facts about Fan Li are very hard to come by too.)[29]

"The Boy Reckoner" emphasizes that economic cycles coincide with natural cycles such as the movements of *yin* and *yang*:

> 陰陽萬物，各有紀綱。日月、星辰、刑德，變為吉凶，金木水火土更〔相〕勝，月朔更建，莫主其常。順之有德，逆之有殃。[30]
>
> *Yin*, *yang*, and the Myriad Things all have their particular guidelines. The sun, moon, stars, asterisms, and "recision and accretion"[31] alternate between auspiciousness and inauspiciousness. [The Five Powers of] Metal, Wood, Water, Fire, and Earth overcome one another in turn; one new moon makes a month after the previous one; no [single power]

29 For studies of Fan Li, see, e.g., Meng Xiangcai 孟祥才, *Xian-Qin Qin Han shilun* 先秦秦漢史論 [A Historical Treatise on the Pre-Qin, Qin, and Han Periods] (Ji'nan: Shandong daxue chubanshe, 2001), 67–82; Robert Eno, "Selling Sagehood: The Philosophical Marketplace in Early China," in *Constructing China: The Interaction of Culture and Economics*, ed. Kenneth G. Lieberthal et al., Michigan Monographs in Chinese Studies 78 (Ann Arbor: Center for Chinese Studies, 1997), 69–70; and Wei Qipeng 魏啓鵬, "Fan Li jiqi tiandaoguan 范蠡及其天道觀 [Fan Li and His View of the Way of Heaven]," *Daojia wenhua yanjiu* 道家文化研究 [Studies on Daoist Culture] 6 (1995): 86–101. In addition, Wang Zijin has published a series of studies, for which see his *Qin Han shehui yishi yanjiu*, 438, no. 5. Recently, several East Asian scholars have, on questionable historical footing, identified Fan Li as a central figure in the development of Chinese philosophy, e.g., Asano Yūichi 淺野裕一, *Kō-Rō dō no seiritsu to tenkai* 黄老道の成立と展開 [The Establishment and Unfolding of the Huang-Lao School], Tōyōgaku sōsho 東洋学叢書 40 (Tokyo: Sōbunsha, 1992), 18–48 and 119–182, regards what he calls "thought of the Fan Li type" (Han Rei *gata shisō* 范蠡型思想) as a primary component of Huang-Lao 黄老 philosophy. See also Li Xueqin 李學勤, *Jianbo yiji yu xueshu shi* 簡帛佚籍與學術史 [Lost Documents on Bamboo and Silk, and the History of Scholarship], Ehu xueshu congshu 鵝湖學術叢書 (Nanchang: Guangxi jiaoyu chubanshe, 2001), 307–315; and Wang Zhenchuan 王振川, *Laozi yu Fan Li* 老子與范蠡 [Laozi and Fan Li] (Beijing: Zongjiao wenhua chubanshe, 2004), who tries to prove that Fan Li was a student of Laozi (whom he takes as a historical personage). Part of the interpretive problem is that Fan Li's speeches in *Guoyu* 國語 are very different from those in *Yuejue shu* and *Shiji* 史記 [Records of the Scribes]. See Xu Yuangao 徐元誥 (1876–1955), *Guoyu jijie* 國語集解 [*Discourses of the States*, with Collected Explanations], ed. Wang Shumin 王樹民 and Shen Changyun 沈長雲 (Beijing: Zhonghua shuju, 2002), *juan* 21, 579–589 ("Yueyu xia" 越語下).

30 Li Bujia, *Yuejue shu jiaoshi* 4.5.112 ("Jini neijing").

31 On this concept, see John S. Major, "The Meaning of *hsing-te*," in *Chinese Ideas about Nature and Society: Studies in Honour of Derk Bodde*, ed. Charles Le Blanc and Susan Blader (Hong Kong: Hong Kong University Press, 1987), 281–291.

dominates permanently.[32] Those who accord with [these cycles] will be powerful; those who oppose them will be ruined.[33]

The text goes on to discuss the consequences of the changing position of Jupiter:

從寅至未，陽也。太陰在陽，歲德在陰，歲美在是。聖人動而應之，制其收發。常以太陰在陰而發。陰且盡之歲，亟賣六畜貨財，以益收五穀，以應陽之至也。陽且盡之歲，亟發糴，以收田宅、牛馬，積斂貨財，聚棺木，以應陰之至也。此皆十倍者也，其次五倍。天有時而散，是故聖人反其刑，順其衡，收聚而不散。[34]

From Yin to Wei (i.e. the first six of the twelve stations of Jupiter) is *yang*. When Taiyin is in *yang*, the power of Jupiter is in *yin*; this is what leads to handsome harvests. Sages act in response to this [principle], regulating when they buy and sell. One should always sell when Taiyin is in *yin*. When Jupiter is about to end its sojourn in *yin*, quickly sell the Six Domesticated Animals and other goods in order to buy more of the Five Cereals, thereby according with the arrival of *yang*. When Jupiter is about to end its sojourn in *yang*, quickly sell the grain you acquired in order to buy land, dwellings, oxen, and horses, stockpiling goods and gathering timber, thereby according with the arrival of *yin*. If you do all of this, you will make a tenfold profit, or at least fivefold. [Stores] are depleted in conformity with the heavenly seasons; therefore sages counteract this

32 Cf. Yang Bing'an 楊丙安, ed., *Shiyi jia zhu Sunzi jiaoli* 十一家注孫子校理 [Eleven Commentaries on *Sunzi*, Collated and Rationalized], Xinbian Zhuzi jicheng 新編諸子集成 (Beijing: Zhonghua shuju, 1999), B.124–126 ("Xushi" 虛實): "None of the Five Phases constantly prevails; none of the four seasons has constant standing. The days grow shorter and longer; the moon dies and is reborn" (故五行無常勝，四時無常位，日有短長，月有死生。).

33 Compare the translation in Milburn, *The Glory of Yue*, 155–156.

34 Li Bujia, *Yuejue shu jiaoshi* 4.5.112 ("Jini neijing"). Many of the same ideas are attributed to Ji Ran (see n. 24, above) in *Shiji* 史記 [Records of the Scribes] (Beijing: Zhonghua shuju, 1959), *juan* 129, 3256 ("Huozhi liezhuan" 貨殖列傳): the relevance of the position of Jupiter; the six years of plenty followed by six years of drought; and the importance of buying cheap and selling dear as prices oscillate. Cf. Yü Ying-shih, *Chinese History and Culture*, ed. Josephine Chiu-Duke and Michael S. Duke, 2 vols., Masters of Chinese Studies (New York: Columbia University Press, 2016), vol. 1, 226.

> recision[35] and, in accordance with the proper balance [of prices],[36] they buy and hold rather than disperse [their assets].[37]

The last line is difficult (and variously understood in the few Chinese commentaries on this text), but the meaning seems to be that at times when most people are apt to sell – whether by necessity or through ignorance of the recurring cycles – the Sage should act contrarily and buy. Elsewhere, "The Boy Reckoner" calls this "cutting the long and extending the short" (*duanchang xuduan* 斷長續短).[38] This strategy, known as "contrarian investing" in today's financial parlance,[39] follows directly from the assumption that six years of bumper harvests will reliably be followed by six years of infecundity.[40] Under such conditions, it makes sense to hoard grain when it is plentiful, so that you can sell it at a profit once it has become scarce. The key premise is that the scarcity of a commodity affects its price.[41]

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35 Here I interpret *xing* 刑 once again in the sense of *xingde* 刑德 (see n. 31, above). Another possibility is that this 刑 is to be read as 型/形, *xing*, "mold, model"; thus "sages act contrary to common practice" for *shengren fan qi xing* 聖人反其型.

36 *Heng* 衡 (literally "balance beam" or "steelyard") is a *terminus technicus* meaning "balance among prices of various goods," as we know from *Guanzi* (cf. Rickett, *Guanzi*, vol. 2, 449, no. 17; also Chin, *Savage Exchange*, 33).

37 Compare the translation in Milburn, *The Glory of Yue*, 156, which I think is incorrect in several places. (For example, she does not seem to be aware of the distinction between Jupiter and counter-Jupiter.) I am indebted to Nathan Sivin and Christopher Cullen for reviewing my translation of this challenging passage.

38 Li Bujia, *Yuejue shu jiaoshi* 4.5.111 ("Jini neijing").

39 As far as I can tell, the first author to use this term was David Dreman in *Contrarian Investment Strategy: The Psychology of Stock Market Success* (New York: Random House, 1979), with multiple best-selling sequels. Dreman focuses on taking advantage of overreactions by investors (which are often driven by psychological factors) rather than business cycles, though he does discuss the latter.

40 Incidentally, this pattern of six years of fertility followed by six years of infertility contradicts an earlier statement in "The Boy Reckoner" that the periods last three years each, though the crucial lesson that one should buy when others are selling, and *vice versa*, is identical (Li Bujia, *Yuejue shu* 4.5.111; cf. Needham, *Science and Civilisation in China*, vol. 3, 402). Perhaps the received edition of the text contains strands from distinct, if allied, traditions.

41 The word that we would use is "supply," but I am reluctant to adopt such terminology because I am not aware of anything like a Marshallian cross in classical Chinese literature. Repeated references to the value of rare goods in *Laozi* (Chapters 3, 12, and 64) do suggest an awareness of the effect of supply. There are also numerous passages attesting to the understanding that demand drives up prices, e.g., "sandals are cheap but prosthetics [for convicts who have had their feet amputated] are expensive" (*ju jian yong gui* 屨賤踊貴), a mordant comment on the cruel administration of Lord Jing of Qi 齊景公

One final implication of this passage is that grain is the cardinal commodity.[42] Although every commodity has some value, grain trumps all, for when people are starving they will eventually have to sell their possessions, at ruinous prices if necessary, in order to buy food. This point will become especially important in later texts, as we shall see.

If "The Boy Reckoner" seems surprisingly modern despite its hoary diction (and counter-Jupiters), it is because the text relies on a concept that lies at the heart of modern financial planning: the business cycle. Everybody knows that there are economic cycles; the problem is figuring out what causes them. Economists of the so-called Austrian School stress the role of central banks in bringing about boom-and-bust cycles by mismanaging interest rates,[43] but that can only be part of the answer, because there is solid evidence of boom-and-bust cycles before central banks even existed.[44] In the wake of the financial crisis of 2007–2008 and the Great Recession that followed, there has been renewed interest in the work of the late Hyman P. Minsky. Although he accepted that well-meaning monetary authorities can, regrettably, exacerbate a crisis, Minsky insisted that economic cycles are caused by the very "internal dynamics of capitalist economies,"[45] because prolonged periods of prosperity are conducive to unstable financial structures. That is to say, boom-and-bust

(r. 547–490 BCE). Text in Yang Bojun 楊伯峻, *Chunqiu Zuozhuan zhu* 春秋左傳注 [*The Zuo Tradition of the Springs and Autumns*, with Commentary], revised edition, Zhongguo gudian mingzhu yizhu congshu 中國古典名著譯注叢書 (Beijing: Zhonghua shuju, 1990), IV, 1236 (Zhao 昭 3 = 539 BCE).

42 Hence it was no coincidence that eighteenth-century European economists inspired by Chinese models, such as François Quesnay (1694–1774) and Pierre Poivre (1719–1786), emphasized agricultural production. On these topics, Guy Basil, *The French Image of China before and after Voltaire*, Studies on Voltaire and the Eighteenth Century 21 (Geneva: Institut et Musée Voltaire, 1963), 341–361; and Lewis A. Maverick (1891–1973), *China a Model for Europe* (San Antonio: Paul Anderson, 1946), vol. 1, 33ff, and vol. 2, 115ff, remain unsurpassed. (Lewis A. Maverick, incidentally, was a grandson of the eponymous Samuel A. Maverick [1803–1870].)

43 E.g., Jesús Huerta de Soto, *Money, Bank Credit, and Economic Cycles*, tr. Melinda A. Stroup (Auburn, Alabama: Ludwig von Mises Institute, 2006). The name "Austrian" alludes to figures such as Ludwig von Mises (1881–1973) and Friedrich August Hayek (1899–1992). Not all "Austrian" economists are Austrian (and *vice versa*). On "un-Austrian Austrians," see, e.g., Janek Wasserman, *The Marginal Revolutionaries: How Austrian Economists Fought the War of Ideas* (New Haven: Yale University Press, 2019), 233–258.

44 See, e.g., Carmen M. Reinhart and Kenneth S. Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton: Princeton University Press, 2009).

45 Hyman P. Minsky, "The Financial Instability Hypothesis," Levy Economics Institute of Bard College Working Paper 74. Published May 1992 (http://www.levyinstitute.org/pubs/wp74.pdf), 8. See, more generally, Hyman P. Minsky, *Stabilizing an Unstable Economy* (New Haven and London: Yale University Press, 1986).

cycles are an inherent feature of capitalism. In the view of Paul McCulley, our recent "Minsky moment" was due in part to the rise of "shadow banking," i.e. financing ventures that deliberately operate outside the realm of bank regulation.[46] (McCulley coined both of these popular terms.)[47]

This is, of course, very different from the idea in "The Boy Reckoner" that economic cycles are caused by the regular movements of Jupiter, but what they have in common is the conviction that economic cycles are inescapable and last several years. If our understanding of economic cycles is still incomplete today, despite decades of specialized research – and there may well be *multiple* interlocking cycles, systematically skewing economic data in ways that we are just beginning to perceive[48] – we can appreciate that associating such cycles with the movements of Jupiter would have been as attractive a theory as any in the last few centuries BCE. Merely recognizing the persistence of multi-year boom-and-bust cycles would have been a significant insight in itself.[49]

"[Kept] Inside the Pillow" agrees with "The Boy Reckoner" that the price of grain is cyclical, but, rather than referring to the long cycle of Jupiter, focuses on the vagaries of *yin*, *yang*, and the Five Powers within the shorter cycle of the year:

> 越王曰:「請問三表。」
> 范子曰:「水之勢勝金，陰氣蓄積大盛，水據金而死，故金中有水。如此者，歲大敗，八穀皆貴。金之勢勝木，陽氣蓄積大盛，金據木而死，故木中有火。如此者，歲大美，八穀皆賤。金、木、水、火

46 GE Capital is a good example of a shadow banking institution. See, e.g., Michael J. de la Merced and Andrew Ross Sorkin, "G.E. to Retreat from Finance in Post-Crisis Reorganization," *The New York Times*, April 10, 2017.

47 Paul McCulley, "The Shadow Banking System and Hyman Minsky's Economic Journey," in *Insights into the Global Financial Crisis*, ed. Laurence B. Siegel and Rodney N. Sullivan (N.p.: Research Foundation of CFA Institute, 2009), 257–268. This indispensable book (ISBN 978-1-934667-27-9) is currently available on the CFA Institute website (https://www.cfapubs.org/doi/pdf/10.2470/rf.v2009.n5.18), but is not held in many libraries.

48 E.g., Glenn D. Rudebusch et al., "The Puzzle of Weak First-Quarter GDP Growth," *Federal Reserve Bank of San Francisco Economic Letter 2015–16*, May 18, 2015.

49 The recognition of boom-and-bust cycles, without an attempt to time them or associate them with celestial bodies such as Jupiter, is also evident in the "Interpreting *Laozi*" ("Jie *Lao*" 解老) chapter of *Han Feizi* 韓非子: "The Myriad Things must prosper and decline; myriad affairs must be drawn and released [like a bow]" (萬物必有盛衰，萬事必有弛張). Text in Chen Qiyou 陳奇猷, *Han Feizi xin jiaozhu* 韓非子新校注 [*Han Feizi*, with New Collation and Commentary], Zhonghua yaoji jishi congshu 中華要籍集釋叢書 (Shanghai: Shanghai guji chubanshe, 2000), 6.20.421. Compare also the aphorism attributed to Li Si 李斯 (d. 208 BCE) in *Shiji*, *juan* 87, 2547 ("Li Si liezhuan" 李斯列傳): "When things reach their pinnacle, they decline" (*wu ji ze shuai* 物極則衰).

更相勝，此天之三表者也，不可不察。能知三表，可為邦寶。……諦審察陰陽消息，觀市之反覆、雌雄之相逐，天道乃畢。」[50]

The King of Yue said: "I wish to ask about the Three Gnomons."[51]

Master Fan said: "When Water predominates, it overcomes Metal; *yin qi* has accumulated to its greatest capacity. But once Water displaces Metal, it [too] dies; thus within Metal, there is Water. If [the situation] is like this, the harvest will fail hugely, and the Eight Cereals will all be expensive. When Metal predominates, it overcomes Wood; *yang qi* has accumulated to its greatest capacity. But once Metal displaces Wood, it [too] dies; thus within Wood, there is Fire. If [the situation] is like this, the harvest will be hugely auspicious, and the Eight Cereals will all be cheap. Metal, Wood, Water, and Fire all overcome one another in a sequence; these are the Three Gnomons of Heaven, and one cannot fail to examine them. If you can know the Three Gnomons, you can become a treasure of the state.... Carefully examine the tidings of *yin* and *yang*; observe the rise and fall [of prices] in the market and the circumvolution of Female and Male (i.e. *yin* and *yang*?), and the Way of Heaven will be complete."[52]

This passage is probably somewhat corrupt; it not only diverges from the commonly known mutual conquest cycle of the Five Phases,[53] but also seems to contradict itself when it says that there is Fire – and not Metal – within Wood. Moreover, it is far from clear how Master Fan has explained the *Three* Gnomons when his *two* examples have to do with extremes of *yin* and *yang* (and he goes on to list *four*, not *Five*, Powers). For these reasons, diverse emendations have been suggested, though none really solves the textual problems.[54] Regardless of the confusing details, however, the conclusion is unambiguous:

50 Li Bujia, *Yuejue shu* 13.16.338 ("Zhenzhong").

51 Note that these Three Gnomons are entirely distinct from the more famous Three Gnomons in the *Mozi* 墨子, for which see, e.g., A.C. Graham, *Disputers of the Tao: Philosophical Argument in Ancient China* (La Salle, Illinois: Open Court, 1989), 36–39.

52 Compare the translation in Milburn, *The Glory of Yue*, 336–337.

53 This is not in itself an insurmountable problem. Wolfram Eberhard, "Beiträge zur kosmologischen Spekulation Chinas in der Han-Zeit," *Baessler Archiv* 16.1 (1933): 1–100, observed long ago that there were diverse sequences of succession. See, more recently, Aihe Wang, *Cosmology and Political Culture in Early China*, Cambridge Studies in Chinese History, Literature and Institutions (Cambridge: Cambridge University Press, 2000), 93–95.

54 E.g., Qian Peiming 錢培名 (fl. 1852–1878) suggested that "Water" (*shui* 水) is an error for "Fire" (*huo* 火), but Li Bujia, *Yuejue shu jiaoshi* 13.16.347, no. 27, notes that every extant edition has "Water."

a wise king should observe the interplay of the various aspects of *qi* in order to anticipate the quality of the harvest and, inevitably, the price of grain. The relationship between distortions in *yin* and *yang* and the ensuing price of grain is "like the relationship between a body and its reflection or a sound and its echo" (*pi you xing ying, sheng xiang xiang wen* 譬猶形影，聲響相聞).[55]

Toward the end, "The Boy Reckoner" touches on a theme that would go on to become crucial in later texts: armed with his knowledge of cycles, a ruler can stabilize prices for the benefit of the overall economy, making sure that they are not so high as to harm consumers, but not so low as to harm producers. The ability to avoid disruptive price swings is constructive for any economy.

> 糴石二十則傷農，九十則病末。農傷則草木不辟，末病則貨不出。故糴高不過八十，下不過三十，農末俱利矣。故古之治邦者本之，貨物官市開而至。[56]
>
> If the cost of grain is twenty cash per picul, then farmers are harmed; if it is ninety cash, then those in "branch" occupations (i.e. craftsmen, mechanics, etc.) are impaired. If farmers are harmed, grass and trees are not cleared; if those in "branch" occupations are impaired, then goods are not produced. Thus if the cost of grain does not rise above eighty or drop below thirty, both farmers and those in "branch" occupations will profit. Thus those who governed states in antiquity based themselves [on this principle], and official marketplaces for goods and products were opened.[57]

This passage is remarkable for two reasons. First, for recognizing the legitimacy of occupations other than farming, "The Boy Reckoner" deserves to be ranked far above certain contemporaneous texts, such as *Shangjunshu* 商君書 (The Book of Lord Shang), which regards anyone other than a farmer as a social parasite.[58] (See Yuri Pines's contribution to this volume.) "The Boy

55 Li Bujia, *Yuejue shu jiaoshi*, 13.16.341 ("Zhenzhong"). Because of the evident lack of parallelism, Li Bujia, *Yuejue shu jiaoshi*, 354, no. 75, would insert *xiangsui* 相隨 after *xingying* 形影, yielding: "as a body and its reflection accompany one another and a sound and its echo are heard together."

56 Li Bujia, *Yuejue shu jiaoshi*, 4.5.113 ("Jini neijing"). A similar idea is once again attributed to Ji Ran in *Shiji*, *juan* 129, 3256 ("Huozhi liezhuan").

57 Compare the translation in Milburn, *The Glory of Yue*, 157.

58 Cf. Ye Shichang 葉世昌, *Gudai Zhongguo jingji sixiangshi* 古代中國經濟思想史 [History of Economic Thought in Ancient China], Fudan boxue: Jingjixue xilie 復旦博學：經濟學系列 (Shanghai: Fudan daxue chubanshe, 2003), 66–73; Yu Zuyao 虞祖堯, "Fajia de jingji sixiang (er) – Shang Yang ji *Shangjunshu* de jingji sixiang 法家的經

Reckoner" understands that "goods" (*huo* 貨 – unspecified, but presumably including tools, weapons, and so on) are necessary too, and craftsmen, rather than farmers, are needed to produce them. In the language of the day, what are needed are both "root" (*ben* 本) and "branch" (*mo* 末) occupations, rather than just the "root" occupations of agriculture and sericulture.[59] Presumably, merchants are not included among the "branch" occupations, since the term seems to refer here to producers of goods other than grain. Later texts do acknowledge that merchants are necessary to distribute the wares that craftsmen have produced.[60]

Second, "The Boy Reckoner" only hints at the mechanism by which the government can stabilize prices – opening official marketplaces – but this paved the way for more technically detailed texts in the received *Guanzi* 管子 (*Master Guan*, named in homage to the statesman Guan Zhong 管仲, d. 645 BCE). These are often called the *qingzhong* 輕重 chapters of *Guanzi*, because they expatiate on methods of taking advantage of low (*qing* – literally "light") and high (*zhong* – literally "heavy") prices. Although they are all found in the same collection today, they do not advocate identical positions[61] and

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濟思想（二）—— 商鞅及《商君書》的經濟思想 [The Economic Thought of the Legalists (Part Two): The Economic Thought of Shang Yang and the *Shangjunshu*]," in *Xian-Qin jingji sixiangshi* 先秦經濟思想史 [History of Pre-Qin Economic Thought], ed. Wu Baosan 巫寶三 (Beijing: Zhongguo shehui kexue chubanshe, 1996), esp. 547–550; Wu Yunsheng 吳運生, *Zhongguo gudai jingji sixiang yanjiu* 中國古代經濟思想研究 [A Study of Ancient Chinese Economic Thought] (Changsha: Yuelu Shushe, 1995), 10ff; and Hu Jichuang, *A Concise History of Chinese Economic Thought*, 193. Similar opinions are found in chapter 48 of *Guanzi* ("Zhiguo" 治國). This text also states that the Former Kings required all their subjects to undertake all economic tasks equally, instead of permitting specialization (Li Xiangfeng, *Guanzi jiaozhu* 15.48.926). Cf. Roel Sterckx, "Ideologies of the Peasant and Merchant in Warring States China," in *Ideology of Power and Power of Ideology in Early China*, ed. Yuri Pines et al., Sinica Leidensia 124 (Leiden and Boston: Brill, 2015), 238. *Mencius* 3A.4 is the foremost ancient refutation of the egalitarian fantasy that a society can function without a division of labour.

59 Supporting both "root" and "branch" industries became an important plank in the dynastic ideology of the Han; e.g., Wang Liqi 王利器, *Yantie lun jiaozhu* (*dingben*) 鹽鐵論校注（定本） [*Discourses on Salt and Iron*, with Collation and Commentary (Definitive Edition)], Xinbian Zhuzi jicheng 新編諸子集成 (Beijing: Zhonghua shuju, 1992), 1.1.3 ("Benyi" 本議). See, generally, Michael Loewe, "Attempts at Economic Co-Ordination during the Western Han Dynasty," in *The Scope of State Power in China*, ed. S.R. Schram (New York: St. Martin's, 1985), 244–245. I am grateful to Elisa Levi Sabattini for this observation.

60 E.g., Wang Liqi, *Yantie lun jiaozhu*, 1.1.3 ("Benyi"): "They await merchants to distribute them just as they await craftsmen to complete them" (待商而通，待工而成).

61 For example, Li Xiangfeng, *Guanzi jiaozhu*, 22.74.1297 ("Shan guogui" 山國軌) recommends imposing a special tax (*zu* 租) on wood, but most other chapters stress that such practices are more damaging in the long run than controlling the prices of key

may have diverse origins; nor do we have any knowledge of how they were redacted. Consequently, they are difficult to date.[62] I can offer only the impressionistic judgment that, to my ear, they sound later than "The Boy Reckoner" and "[Kept] Inside the Pillow," but the effort to date any of these texts precisely is complicated by their tendency to archaize by placing their theories in the mouths of renowned ministers of the past, such as Fan Li and Guan Zhong. Because the *qingzhong* texts often refer to government intervention in the salt and iron markets, which was a hallmark of Western Han administration, they are often assigned to this period.[63] (See the chapter by Hans van Ess in this volume.) Some Chinese scholars, by contrast, still interpret them as the work of Guan Zhong himself.[64]

The most important *qingzhong* text, "The National Storehouse" ("Guoxu" 國蓄),[65] explains the essence of what would today be called a buffer stock scheme:[66]

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commodities (see below). In Li Xiangfeng, *Guanzi jiaozhu*, 22.75.1303–1304 ("Shan quanshu"), Guan Zhong strangely urges the ruler to store equal amounts of grain after good and bad harvests; this would seem antithetical to the very concept of *qingzhong* and is not repeated, as far as I know, in any other *qingzhong* text.

62 Piet van der Loon, "On the Transmission of *Kuan-tzŭ*," *T'oung Pao* 41.4–5 (1952): 373ff, argues that they were not even furnished with commentary before Du You 杜佑 (735–812). I am indebted to Christian Schwermann for suggesting this reference.

63 Rickett, *Guanzi*, vol. 2, 346–357, remains a judicious overview of the competing theories; see also Hu Jiacong 胡家聰, *Guanzi xintan* 管子新探 [A New Investigation of the *Guanzi*], Sheke xueshu wenku 社科學術文庫 (Beijing: Zhongguo shehui kexue chubanshe, 2003), 369–389.

64 E.g., Zhao Jing, "*Fu Guo Xue* and the 'Economics' of Ancient China," in *The History of Ancient Chinese Economic Thought*, ed. Cheng Lin et al., Routledge Studies in the History of Economics 162 (London and New York: Routledge, 2014), 69–70.

65 Cf. Hu Jiacong, *Guanzi xintan*, 162. Kanaya Osamu 金谷治, *Kanshi no kenkyū: Chūgoku kodai shisōshi no ichimen* 管子の研究:中國古代思想史の一面 [A Study of Guanzi: One Aspect of the History of Thought in Ancient China] (Tokyo: Iwanami, 1987), 158, regards "The National Storehouse" as the oldest of them; in response, Rickett, *Guanzi*, vol. 2, 377, expresses doubts that it could be the work of a single author – but the two positions are not mutually exclusive.

66 Two twentieth-century American buffer stock schemes were influenced by Chinese precedents: Henry A. Wallace's (1888–1965) "ever-normal granary" and Benjamin Graham's (1894–1976) more complex proposal, which included provisions for a commodity-backed currency, in *Storage and Stability: A Modern Ever-Normal Granary* (New York and London: McGraw Hill, 1937). "Ever-normal granary" is patently a translation of the Chinese phrase *changping cang* 常平倉, which is first attested in *Hanshu* 漢書 [Documents of the Han] (Beijing: Zhonghua shuju, 1962), *juan* 24A, 1141–1142. ("Shihuo zhi shang" 食貨志上); Wallace stated that he learned of it by reading Ch'en Huan-chang (1881–1931), *The Economic Principles of Confucius and His School*, 2 vols., Studies in History, Economics, and Public Law 44–45 (New York: Columbia University, 1911), vol. 2, 568–577. See Derk

故善者委施於民之所不足，操事於民之所有餘。夫民有餘則輕之，故人君斂之以輕。民不足則重之，故人君散之以重。斂積之以輕，散行之以重，故君必有什倍之利，而財之櫝〔＝衡〕[67] 可得而平也。[68]

Thus those who are adept will accumulate and then distribute reserves of whatever the people lack, and invest[69] in whatever the people have in abundance. If the people have [some commodity] in abundance, they will think it "light"; thus the lord of men collects it because it is "light." If the people lack [some commodity], they will think it "heavy"; thus the lord of men disperses it because it is "heavy." By collecting and holding what is "light," and dispersing and circulating what is "heavy," the lord will certainly have a tenfold profit, and the balance of commodity prices can be made level.[70]

The text goes on to use the keyword *qingzhong* in characteristic fashion:

夫物多則賤，寡則貴。散則輕，聚則重；人君知其然，故視國之羨不足而御其財物。穀賤則以幣予食，布帛賤則以幣予衣；視物之輕重而御之以准。故貴賤可調，而君得其利。[71]

When a thing is plentiful, it is cheap; when it is scarce, it is expensive. If it is [widely] dispersed, it is "light"; if it is hoarded, it is "heavy." The lord of men knows that this is so; thus he monitors his country's surpluses and shortages, and controls its goods. When grain is cheap, he exchanges money for food; when textiles are cheap, he exchanges money

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Bodde, *Essays on Chinese Civilization*, ed. Charles Le Blanc and Dorothy Borei (Princeton: Princeton University Press, 1981), 218–233; also Li Chaomin, "The Influence of Ancient Chinese Thought on the Ever-Normal Granary of Henry A. Wallace and the Agricultural Adjustment Act in the New Deal," in *The History of Ancient Chinese Economic Thought*, ed. Cheng Lin et al. (London and New York: Routledge, 2014), 210–224.

67 Following Ikai Hikohiro 猪飼彦博 (i.e. Ikai Keisho 猪飼敬所, 1761–1845) and others, Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1270, no. 5. See also Rickett, *Guanzi*, vol. 2, 362, no. 61.

68 Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1269 ("Guoxu").

69 *Caoshi* 操事 in *Guanzi* means "to pursue an occupation," "to engage in a business venture," etc.; here the effective meaning is "to invest." For other examples, see Li Xiangfeng, *Guanzi jiaozhu*, 6.16.301 ("Fafa" 法法); 22.73.1272 ("Guoxu"); and 22.75.1306 ("Shan quanshu" 山權數).

70 Compare the translation in Rickett, *Guanzi*, vol. 2, 381.

71 Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1274–1275. ("Guoxu").

> for clothing. He monitors which things are "light" and "heavy" and controls them so that they attain level [prices]. Thus the expensive and the cheap can be attuned, and the lord obtains profit from this.[72]

Such ideas are repeated throughout the *qingzhong* chapters.[73] A standard technical vocabulary appears to have arisen since the time of "The Boy Reckoner" and "Inside the Pillow," but the two basic insights evinced here are not original: contrarian investing can not only yield huge profits, but also help the government stabilize prices. Nevertheless, the *qingzhong* texts extend the inquiry in previously unattested directions. For instance, whereas "The Boy Reckoner" did not provide many details as to how the ruler can stabilize prices, now this unique power is attributed to the state's nearly monopsonistic ability to buy and store goods. (Perhaps a new imperial milieu, with a correspondingly aggressive state administration, is reflected in this trend.) "The National Storehouse" regards the stabilization of prices as so basic to the regime's functioning that if it *fails* to intervene in the market appropriately, private speculators can only be expected to fill the vacuum, with deleterious consequences:[74]

> 然而人君不能治，故使蓄賈游市，乘民之不給，百倍其本。[75]
>
> However, if the lord of men is unable to govern [prices], he will cause there to be hoarding merchants roving about the marketplace; they will take advantage of the people's needs and increase their principal a hundredfold.[76]

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72 Compare the translation in Rickett, *Guanzi*, vol. 2, 384.

73 Ye Shichang, *Gudai Zhongguo jingji sixiangshi*, 137–139; Wu Baosan 巫寶三, "Fajia de jingji sixiang (san) – *Guanzi* de jingji sixiang 法家的經濟思想（三）——《管子》的經濟思想 [The Economic Thought of the Legalists (Part Three): The Economic Thought of the *Guanzi*]," in *Xian-Qin jingji sixiangshi* 先秦經濟思想史 [History of Pre-Qin Economic Thought], ed. Wu Baosan 巫寶三 (Beijing: Zhongguo shehui kexue chubanshe, 1996), esp. 577–578; and Wu Yunsheng, *Zhongguo gudai jingji sixiang yanjiu*, 171ff.

74 Cf. Sterckx, "Ideologies of the Peasant and Merchant in Warring States China," 236–237; Liu Jiapeng 劉甲朋, *Zhongguo gudai liangshi chubei tiaojie zhidu sixiang yanjin* 中國古代糧食儲備調節制度思想演進 [The Intellectual Evolution of the System for the Regulation of Grain Reserves in Ancient China] (Beijing: Zhongguo jingji chubanshe, 2010), 40–47; and Hu Jiacong, *Guanzi xintan*, 168.

75 Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1264 ("Guoxu").

76 Compare the translation in Rickett, *Guanzi*, vol. 2, 378.

A passage in a different *qingzhong* text warns that the lord's own grandees may conspire with grain speculators to corner the market and thereby reduce their sovereign to a figurehead.[77] The more commonly heard criticism of merchants in classical Chinese literature is that they profit from other people's labour without producing anything themselves;[78] the objection here is more subtle (though no less severe): large-scale speculators threaten socioeconomic stability.

The *qingzhong* texts also discuss an entirely different means of driving up prices: specifying how taxes and levies are to be rendered. For example, if the price of fish is too low, simply declare that fish must be used in official sacrifices.[79] Or if gold is too cheap, simply declare that taxes must be paid in gold.[80] Another text, which might have been intended as a parody, proposes the so-called "*jingmao* ploy" (*jingmao mou* 菁茅謀): mandating the use of a certain plant called *jingmao* in state sacrifices[81] so that the price of gold relative to *jingmao* drops precipitously, permitting the sovereign to hoard it

77 Li Xiangfeng, *Guanzi jiaozhu*, 22.76.1327 ("Shan zhishu" 山至數).

78 Cf. Victor Cunrui Xiong, "The Four Groups (*simin*) and Farmer-Merchant Antithesis in Early Imperial China," *Chinese Historians* 8 (1995): 85–144.

79 For this disarming example, see Li Xiangfeng, *Guanzi jiaozhu*, 23.80.1413 ("Qingzhong jia"). A Qin ordinance from 212 BCE, quoted in a document recently excavated at Liye 里耶, demanded rare fish as tribute: Chen Wei 陳偉 et al., *Liye Qin jiandu jiaoshi* 里耶秦簡牘校釋 [The Qin-Dynasty Bamboo Manuscripts from Liye, Collated and Annotated] (Wuhan: Wuhan daxue chubanshe, 2012), vol. 1, 222 (strip 8–769). Cf. Fujita Katsuhisa 藤田勝久, "Liye Qinjian de jiaotong ziliao yu xian shehui 里耶秦簡的交通資料與縣社會 [Materials on Communication and County-Level Society in the Qin-Dynasty Bamboo Manuscripts from Liye]," *Jianbo* 簡帛 [Bamboo and Silk] 10 (2015): 173–174; and Anthony J. Barbieri-Low and Robin D.S. Yates, *Law, State, and Society in Early Imperial China: A Study with Critical Edition and Translation of the Legal Texts from Zhangjiashan Tomb No. 247*, Sinica Leidensia 126 (Leiden and Boston: Brill, 2015), vol. 1, 73.

80 Li Xiangfeng, *Guanzi jiaozhu*, 23.80.1413 and 1423 ("Qingzhong jia"). Is there some connection to the notorious affair of 112 BCE, when Emperor Wu of Han 漢武帝 (r. 141–87 BCE) mandated that the customary levy of alcohol for state sacrifices be rendered in gold (*Hanshu*, *juan* 6, 187, and *juan* 24B, 1173)?

81 The use of *jingmao* in royal sacrifices is implied in Zhong Wenzheng 鍾文烝 (1818–1877), *Chunqiu Guliang zhuan buzhu* 春秋穀梁傳補注 [The Guliang Tradition of the Springs and Autumns, with Supplementary Commentary], ed. Pian Yuqian 駢宇騫 and Hao Shuhui 郝淑慧, *Shisan jing Qingren zhushu* 十三經清人註疏 (Beijing: Zhonghua shuju, 1996), *juan* 9, 263: "The tribute offering of *jingmao* did not arrive; thus the House of Zhou did not hold sacrifices" (菁茅之貢不至，故周室不祭) (Xi 僖 4 = 656 BCE). Commentators suggest that strained liquor was made from *jingmao*.

cheaply.[82] Limiting the number of producers of a certain commodity is also recommended as a way of raising prices.[83]

Another noticeable difference between the *qingzhong* texts and "The Boy Reckoner" or "[Kept] Inside the Pillow" is that the former refer very frequently to coins,[84] recognizing that the value of money can be manipulated just like the price of grain and other commodities. This has long been identified as an ancient example of the quantity theory of money.[85]

> 彼幣重而萬物輕，幣輕而萬物重。彼穀重而穀輕，人君操穀幣金衡，而天下可定也。此守天下之數也。[86]
>
> If money is "heavy," the myriad goods are "light"; if money is "light," the myriad goods are "heavy." Regardless of whether grain is "heavy" or "light,"[87] if the lord of men manages the balance of prices among grain, money, and gold, the world can be stabilized. This is the technique for securing the empire.[88]

82 Li Xiangfeng, *Guanzi jiaozhu*, 24.83.1473 ("Qingzhong ding"). Cf. Roel Sterckx, "The Economics of Religion in Warring States and Early Imperial China," in *Early Chinese Religion, Part One: Shang through Han (1250 BC–220 AD)*, ed. John Lagerwey and Marc Kalinowski, Handbuch der Orientalistik IV–21, vol. 1 (Leiden and Boston: Brill, 2009), vol. 2, 869–870. "Qingzhong ding" and "Qingzhong wu" 輕重戊 contain many whimsical illustrations of principles more soberly advanced elsewhere in the corpus, and one has to suspect that they were supposed to be humorous. (How else can one interpret the intricate narrative involving the brocade drumstick market in Li Xiangfeng, *Guanzi jiaozhu*, 24.83.1474–1475?) Another example is discussed in Chin, *Savage Exchange*, 36–40.

83 Li Xiangfeng, *Guanzi jiaozhu*, 23.80.1421 ("Qingzhong jia").

84 For surveys of Chinese coinage, see Wu Liangbao 吳良寶, *Zhongguo Dong-Zhou shiqi jinshu huobi yanjiu* 中國東周時期金屬貨幣研究 [A Study of Chinese Metal Coins in the Eastern Zhou Period], Jilin daxue zhexue shehui kexue xueshu wenku 吉林大學哲學社會科學學術文庫 (Beijing: Shehui kexue wenxian chubanshe, 2005); and François Thierry, *Les monnaies de la Chine ancienne: Des origines à la fin de l'Empire* (Paris: Les Belles Lettres, 2017); also the more succinct treatment in Zhou Ziqiang 周自強, *Zhongguo jingji tongshi: Xian-Qin jingji juan* 中國經濟通史：先秦經濟卷 [A General History of Chinese Economy: The Pre-Qin Period], 3 vols. (Beijing: Jingji ribao chubanshe, 2000), vol. 3, 1627–1655. I am grateful to Yuri Pines for the first reference.

85 E.g., Huang Han 黃漢, *Guanzi jingji sixiang* 管子經濟思想 [The Economic Thought of the *Guanzi*], Baike xiao congshu 百科小叢書 (Shanghai: Shangwu chubanshe, 1936), 51, translated by Wen Kung-wen, *Economic Dialogues in Ancient China: Selections from the Kuan-tzu, a Book Written Probably Three Centuries before Christ*, ed. Lewis Maverick (Carbondale, Illinois: N.p. 1954), 282. Cf. also Chin, *Savage Exchange*, 32–34; and Hu Jichuang, *A Concise History of Chinese Economic Thought*, 133–135.

86 Li Xiangfeng, *Guanzi jiaozhu*, 22.76.1342 ("Shan zhishu").

87 Following the commentary of Li Xiangfeng, *Guanzi jiaozhu*, 22.76.1345, no. 8.

88 Compare the translation in Rickett, *Guanzi*, vol. 2, 417.

Nevertheless, historians have somewhat overemphasized this point, because the *qingzhong* texts state repeatedly that the key to an indomitable economy is controlling the grain supply, not the money supply. (In this respect, they are not quite as modern as is often said.) Money is convenient because it can be used to buy things even though its inherent value could be virtually nil.[89] But an amply provisioned state or manor could still survive without it. Grain, however, is in a completely different category because people need to eat:[90]

> 三幣，握之則非有補於煖也，食之則非有補於飽也。先王以守財物，以御民事，而平天下也。[91]
>
> Even if you clutch the three forms of money (i.e. gems, gold, and coins), it is not the case that they would help you feel warm; if you eat them, it is not the case that they would help you feel satiated. The Former Kings merely used [money] in order to secure [the price of] goods, control the people's activities, and pacify the world.[92]

A series of fanciful stratagems in "*Qingzhong*, No. 5" ("Qingzhong wu" 輕重戊) is to be read against this backdrop: one induces neighbouring states to abandon agricultural production by paying them cash for useless products; then they are bankrupted when, predictably, their food runs out and they must pay catastrophic prices for grain.[93] It is doubtful that financial planners in any real country would have been so feebleminded; like "The *jingmao* ploy," these vignettes are probably supposed to elicit a smile.

More earnestly, the sovereign is advised to lend money to peasants, but then require them to repay their debt in grain:[94]

> 百畝之夫子之筴:「率二十七日為子之春事，資子之幣。」春秋子穀大登，國穀之重去分，謂農夫曰:「幣之在子者，以為穀而廩之州里。」國穀之分在上，國穀之重再十倍，謂遠近之縣、里、邑百官皆當奉器

89 Cf. Wu Baosan, "Fajia de jingji sixiang (san) – *Guanzi* de jingji sixiang," 579–580. The *qingzhong* texts state repeatedly that there are three forms of money: gems, gold, and coins. The first two surely had significant commodity value; coins might have had some intrinsic value for their metal, but were mostly factitious.

90 Cf. Sterckx, "Ideologies of the Peasant and Merchant in Warring States China," 236; and Hu Jiacong, *Guanzi xintan*, 170ff.

91 Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1279 ("Guoxu").

92 Compare the translation in Rickett, *Guanzi*, vol. 2, 386.

93 Li Xiangfeng, *Guanzi jiaozhu*, 24.84.1514–1527.

94 Cf. Hu Jiacong, *Guanzi xintan*, 177–178.

械備，曰:「國無幣，以穀准幣。」國穀之櫝，一切什九。還穀而應穀，國器皆資，無藉於民。此有虞之箴乘馬也。[95]

> Herewith the policy for men with a hundred *mu* of land: "You will be allowed twenty-seven days for your spring duties, and you will be lent money." When the seasonal harvests have been fully registered and the price of grain in the country has dropped by half, announce to the husbandmen: "The money that has been allocated to you – [repay it] in grain to be stored in the districts and villages." When [the state's] share of the grain in the country has thus risen by half and the price of grain in the country has increased twentyfold, announce to the many officials in counties, villages, and cities near and far that they must all supply implements and munitions. Tell them: "Since the state has no money, we will [pay] a commensurate amount in grain." The price of grain in the country, can, under extraordinary circumstances, [provide] margins of 90% (?).[96] By using grain as a currency whose value one manipulates,[97] the implements [needed by] the state can all be purchased without imposing [taxes] on the populace. This was Shun's policy of *chengma*.[98]

If the details of this very difficult passage remain uncertain, the main point is clear: control the price of grain, and you control the price of everything else. Or perhaps the "The National Storehouse" states it best: grain is the people's "Director of Destiny" (*siming* 司命), the god of life and death:[99]

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95 Li Xiangfeng, *Guanzi jiaozhu*, 21.68.1227–1228 ("Chen chengma" 臣乘馬). Compare Li Xiangfeng, *Guanzi jiaozhu*, 22.74.1294 ("Shan guogui"), as well as the elaborate scheme, earlier in the same chapter (1284), to drive the price of grain up and then back down again.

96 I have not found any commentary that explains this sentence satisfactorily (and it might be corrupt). Surely the *profit* would be much higher than 90%, since we have just been told that the price of grain rose twentyfold, so perhaps here the *margin* is intended. For *yiqie* 一切 in the sense of "extraordinarily," see the lengthy commentary by Li Xiangfeng, *Guanzi jiaozhu*, 21.68.1230, no. 9.

97 This practical rather than literal translation of *huan gu er ying gu* 還穀而應穀 follows the commentary of Guo Moruo 郭沫若 (1892–1978) in Li Xiangfeng, *Guanzi jiaozhu*, 21.68.1231, no. 10, but perhaps this clause is corrupt too.

98 Yet another opaque term, discussed in Rickett, *Guanzi*, vol. 2, 357–359.

99 On this god, see, e.g., Mark Csikszentmihalyi, "Allotment and Death in Early China," in *Mortality in Traditional Chinese Thought*, ed. Amy Olberding and Philip J. Ivanhoe, SUNY Series in Chinese Philosophy and Culture (Albany: SUNY Press, 2011), 178–180.

> 五穀食米，民之司命也；黃金刀幣，民之通施也。故善者執其通施，以御其司命。故民力可得而盡也。[100]
>
> The Five Grains and edible rice are the people's Director of Destiny; gold and coins are their medium of exchange. Thus one who is adept takes hold of their medium of exchange in order to control their Director of Destiny. Thus the people's energies can be obtained and maximized.[101]

Other *qingzhong* texts identify two other commodities that the people cannot live without: salt and iron,[102] the best preservative for food and the strongest material for tools, respectively. The government can force the people to pay virtually any price for them – generating revenues that vastly outstrip any targeted tax.[103] This is the outstanding insight of "The King of the Sea" ("Haiwang" 海王):[104]

> 桓公問管子曰:「吾欲藉於臺雉，何如？」
> 管子對曰:「此毀成也，」
> 曰:「吾欲藉於樹木。」
> 管子對曰:「此伐生也。」
> 曰:「吾欲藉於六畜。」
> 管子對曰:「此殺生也。」
> 曰:「吾欲藉於人，何如？」
> 管子對曰:「此隱情也。」
> 桓公曰:「然則吾何以為國？」
> 管子對曰:「唯官山海為可耳。」
> 桓公曰:「何謂官山海？」
> 管子對曰:「海王之國，謹正鹽筴。」
> 桓公曰:「何謂正鹽筴？」
> 管子對曰:「十口之家，十人食鹽；百口之家，百人食鹽。終月大男食鹽五升少半，大女食鹽三升少半。吾〔＝牙〕[105] 子食鹽二升少半。此

100 Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1259 ("Guoxu"); cf. 24.81.1451 ("Qingzhong yi").

101 Compare the translation in Rickett, *Guanzi*, vol. 2, 377f.

102 For early examples of state involvement in the iron industry, see Donald B. Wagner, *Iron and Steel in Ancient China*, Handbuch der Orientalistik IV, vol. 9 (Leiden: Brill, 1993), 259–261.

103 On the diverse types of tax, see, e.g., Zhou Ziqiang, *Zhongguo jingji tongshi: Xian-Qin jingji juan*, vol. 3, 1349–1375 and 1672–1685.

104 The title is misunderstood by Maverick, *Economic Dialogues in Ancient China*, 113, as "Financing a Maritime State." The sea is the source of salt.

105 Thus Yu Yue 俞樾 (1821–1907) and others, *Guanzi jiaozheng* 22.72.1249n.4; see also Bernhard Karlgren, *Loan Characters in Pre-Han Texts* (Stockholm: Museum of Far Eastern

其大曆也。鹽百升而釜。今鹽之重升加分彊〔＝鏹〕[106]，釜五十也；升加一彊，釜百也；升加二彊，釜二百也。鍾二千，十鍾二萬，百鍾二十萬，千鍾二百萬。」萬乘之國，人數開口千萬也。禺〔＝偶〕[107]筴之商，日二百萬，十日二千萬，一月六千萬。」[108]

Lord Huan [of Qi 齊, r. 685–643 BCE] asked Master Guan: "I wish to impose a tax on terraces and crenellated walls – how would that be?"
Master Guan replied: "That would harm construction."
[Lord Huan] said: "I wish to impose a tax on timber."
Master Guan replied: "That would be an assault on life."
[Lord Huan] said: "I wish to impose a tax on domesticated animals."
Master Guan replied: "That would be killing life."
[Lord Huan] said: "I wish to impose a poll tax – how about that?"
Master Guan replied: "That would lead to concealment of the truth [about how many people live in the same dwelling]."
Lord Huan said: "In that case, how shall I run my state?"
Master Guan replied: "The only acceptable way is to establish commissioners of mountains and seas."
Lord Huan said: "What is meant by 'commissioners of mountains and seas'?"
Master Guan replied: "The state of one who is King of the Sea carefully rectifies its salt policy."
Lord Huan said: "What is meant by 'rectifying the salt policy'?"
Master Guan replied: "In a family with ten mouths, ten people eat salt; in a family with a hundred mouths, a hundred people eat salt. Each month, an adult male consumes 5⅓ *sheng* of salt,[109] an adult female

Antiquities, 1967), §1961. The suggestion by Chen Huan 陳奐 (1786–1863) that 吾子 should be read *ezi* 蛾子 (lit. "moth," hence "child") is not implausible linguistically: according to the system in William H. Baxter and Laurent Sagart, *Old Chinese: A New Reconstruction* (Oxford: Oxford University Press, 2014), *wu* 吾 is Old Chinese *ŋˤa, while *e* 蛾 is *ŋˤaj.

106 Following Yasui Kō 安井衡 (i.e. Yasui Sokuken 安井息軒, 1799–1876) in Li Xiangfeng, *Guanzi jiaozhu*, 22.72.1251, no. 7, though not all commentators agree.

107 Following Ikai Hikohiro in Li Xiangfeng, *Guanzi jiaozhu*, 22.72.1251, no. 8.

108 Li Xiangfeng, *Guanzi jiaozhu*, 22.72.1246–1247 ("Haiwang"). Compare the opening with Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1272 ("Guoxu"); compare the figures pertaining to salt consumption with Li Xiangfeng, *Guanzi jiaozhu*, 23.77.1364 ("Dishu" 地數).

109 In this period, a *sheng* was approximately 200 ml. See, e.g., Qiu Guangming, *The History of Ancient Chinese Measures and Weights*, tr. Zhang Yanming (Hefei: Anhui kexue jishu chubanshe, 2012), 191. (I am grateful to Nathan Sivin for suggesting that I add this information.) Thus an adult male, according to this passage, would consume about a liter of salt per month – a figure several times higher than the CDC's current recommended intake

> consumes 3⅓ *sheng*, and a child that has teethed consumes 2⅓ *sheng*. These are rough figures. One hundred *sheng* of salt is one *fu*. Now if the price of salt rises by half a copper coin per *sheng*, this will be fifty [coins] per *fu*; if it rises by a whole coin, this will be one hundred per *fu*; if it rises by two coins, this will be two hundred per *fu*. For each *zhong* (i.e. ten *fu*), it will be two thousand [coins]; for ten *zhong*, twenty thousand; for a hundred *zhong*, two hundred thousand; and for a thousand *zhong*, two million. In a country of ten thousand chariots, the population will be ten million. If you add up the revenue from this policy, in one day there will be two million [coins]; in ten days, there will be twenty million; in one month, there will be sixty million."

The arithmetic, though by no means easy to follow, is sound. The calculation that sixty million coins will be collected each month by raising the price of salt by two coins per *sheng* implies (assuming a population of ten million) that each person consumes three *sheng* of salt per month. This is not irreconcilable with the earlier estimate that an adult male consumes 5⅓ *sheng* per month, an adult female 3⅓ *sheng*, and a child 2⅓ *sheng*, though it does suggest that there was a large proportion of children (or a shortage of adult males). At any rate, the text concedes that it is merely using "rough figures" (*dali* 大曆); the point is that the potential revenues from controlling the salt market are immense, because each man, woman, and child must consume it daily.

Master Guan goes on to calculate the potential revenue from iron, with similarly spectacular results, since, once again, the entire population is reliant on it.[110] Special levies, which Lord Huan was initially considering, cannot even come close to matching these sums. The *qingzhong* texts state repeatedly – one might almost say tirelessly – that cornering the market in the inelastic commodities of salt, iron, and grain is far more lucrative than raising taxes.[111] I have not encountered the objection that forcing the people to pay exorbitant prices for staple goods is just as onerous as forcing them to pay a corresponding sum in tax;[112] the assumption seems to be that ordinary people

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of roughly one teaspoon of salt per day (cdc.gov/salt). (There are approximately 203 teaspoons in one liter.)

110 Li Xiangfeng, *Guanzi jiaozhu*, 22.72.1255–1256 ("Haiwang").

111 E.g., Li Xiangfeng, *Guanzi jiaozhu*, 22.73.1279 ("Guoxu"), 22.74.1290–1291 ("Shan guogui"), and 23.77.1362 ("Dishu"). Cf. Ye Shichang, *Gudai Zhongguo jingji sixiangshi*, 141–143; Hu Jiacong, *Guanzi xintan*, 182ff; and Hu Jichuang, *A Concise History of Chinese Economic Thought*, 149–151.

112 In Wang Liqi, *Yantie lun jiaozhu*, 1.1.5 ("Benyi"), in response to the statesmen's claim that they intend to bring about "level prices" (*pingzhun* 平準) rather than enrich the state, the literati complain that prices soar when the government constrains supply.

will be too ignorant to perceive that the state is gouging them. The sovereign is frequently reminded, however, that with such fabulous revenue streams in place, he can afford to curry favour with the populace through calculated acts of charity. Describing such exhibitions as "humane" (*ren* 仁) and "righteous" (*yi* 義),[113] these texts may have been responding to the standard Confucian criticism that the purpose of government is to provide moral instruction rather than intervening in financial affairs.[114]

And this objection brings us, finally, to *Yantie lun* 鹽鐵論 (*Discourses on Salt and Iron*), which contains the most passionate expressions of it. This text purports to record debates held in response to the establishment of government monopolies in salt, iron, and liquor[115] under Sang Hongyang 桑弘羊 (152–80 BCE) and others.[116] But it is unquestionably embellished.[117] An analysis of this extensive – but likewise neglected – material is beyond the scope of the

113 Li Xiangfeng, *Guanzi jiaozhu*, 22.75.1306–1307 ("Shan quanshu") and 22.76.1334 ("Shan zhishu"); compare also 23.80.1398 and 1404 ("Qingzhong jia").

114 For the Mencian formulation of this viewpoint, see, e.g., Paul R. Goldin, *The Art of Chinese Philosophy: Eight Classical Texts and How to Read Them* (Princeton and Oxford: Princeton University Press, 2020), 98–99.

115 For attempts by the government to control alcohol production before and after Sang Hongyang, see Roel Sterckx, "Alcohol and Historiography in Early China," *Global Food History* 1.1 (2015): 14ff.

116 For overviews of these policies, see, e.g., Wang Zijin, *Qin Han shehui yishi yanjiu*, 446–450; Lin Jianming 林劍鳴, *Qin Han shi* 秦漢史 [The History of the Qin and Han Dynasties], Zhongguo duandai shi xilie 中國斷代史系列 (Shanghai: Shanghai renmin chubanshe, 2003), 353–357; Ye Shichang, *Gudai Zhongguo jingji sixiangshi*, 157–166; Wu Yunsheng, *Zhongguo gudai jingji sixiangshi yanjiu*, 95–112; Nishijima Sadao, "The Economic and Social History of Former Han," in *The Cambridge History of China*, vol. I: *The Ch'in and Han Empires*, ed. Denis Twitchett and Michael Loewe (Cambridge: Cambridge University Press, 1986), 582–585 and 602–607; Hu Jichuang, *A Concise History of Chinese Economic Thought*, 255–280; and Michael Loewe, *Crisis and Conflict in Han China: 104 BC to AD 9* (London: George Allen & Unwin, 1974), 72–73. Hu Jichuang, *A Concise History of Chinese Economic Thought*, 266, points out that the iron monopoly was a true monopoly, whereas the salt monopoly was merely "a monopoly of circulation" because the state was still not a producer. Incidentally, it is evident from passages such as Wang Liqi, *Yantie lun jiaozhu*, 1.4.57 ("Cuobi" 錯幣) that the state regarded its crackdown on counterfeit coinage as congruent with its newly established monopolies in salt and iron, as the state now presented itself as the sole body authorized to issue currency. The literati objected that everyone was content in the past, when diverse currencies flourished. The problem of counterfeiting is discussed in Chin, *Savage Exchange*, 252–255; and Walter Scheidel, "The Monetary Systems of the Han and Roman Empires," in *Rome and China: Comparative Perspectives on Ancient World Empires*, ed. Walter Scheidel, Oxford Studies in Early Empires (Oxford: Oxford University Press, 2009), 146–150.

117 For a recent study of the circumstances of composition, see Wang Yong 王永, Yantie lun *yanjiu*《鹽鐵論》研究 [A Study of *Discourses on Salt and Iron*] (Yinchuan: Ningxia renmin chubanshe, 2009), 1–52.

present study, but I would like to close with a brief assessment of its place in the history of price theory in China.

It is generally accepted that the *qingzhong* texts of *Guanzi* presume monopsonistic power on the part of the government; what seems to be less widely understood is that they do not refer to government monopolies.[118] That is to say, the government is conceived as such a huge purchaser of goods that it can control prices by choosing what to buy and when (monopsony), but I see no evidence in *Guanzi* of the notion that the government should become the sole producer (monopoly). "The King of the Sea," examined above, prescribes the establishment of "commissioners of the mountains and seas" to further the state's interests in the iron and salt markets, but, crucially, private individuals are not categorically debarred from producing either one.[119] Only with the implementation of such restrictions can one speak of true monopolies.

The voices represented in *Yantie lun* refer to the *qingzhong* tradition (which they associate explicitly with Guan Zhong),[120] but the dissenting literati (*wenxue* 文學)[121] perceive that state monopolies still represent a major expansion of these ideological resources. Even for subjects who were accustomed to state incursions in the salt and iron markets, enforced monopolies were new – and must have rankled. But from the point of view of statist bureaucrats, monopolies were only the logical conclusion of a trend that had been gaining steam for centuries. What better way to control prices than to control the entire industry? Chinese governments, then as now, believed that the greater good is served by wielding a very visible hand.[122] While modern libertarians sometimes claim to be inspired by classic Chinese texts, especially *Laozi* 老子,[123]

118 E.g., Rickett, *Guanzi*, vol. 2, 344: "Another critical aspect of *qing zhong* economic policies involves the institutions of state monopolies, especially salt and iron."

119 In Li Xiangfeng, *Guanzi jiaozhu*, 23.77.1364 ("Dishu") and 23.80.1423 ("Qingzhong jia"), Master Guan recommends that "the multitudes of the Northern Sea" (Beihai *zhi zhong* 北海之眾) be forbidden to produce salt during the first month of spring (*mengchun* 孟春); Hu Jichuang, *A Concise History of Chinese Economic Thought*, 157, misinterprets this as a general restriction.

120 Wang Liqi, *Yantie lun jiaozhu*, 1.2.28 ("Li geng" 力耕) and 3.14.178 ("Qingzhong" 輕重). Cf. Chin, *Savage Exchange*, 198–199.

121 Anatoly Polnarov, "Looking Beyond Dichotomies: Hidden Diversity of Voices in the *Yantielun* 鹽鐵論," *T'oung Pao* 104.5–6 (2018): 465–495, points out important differences between the positions of the literati and the so-called "worthies" (*xianliang* 賢良). The strongest objections to monopolies are placed in the mouths of the former.

122 Cf. Adrian Wooldridge, "The Visible Hand," *The Economist* 402.3 (Jan. 21, 2012).

123 E.g., David Boaz, *The Libertarian Reader: Classic and Contemporary Writings from Lao-tzu to Milton Friedman* (New York: Free Press, 1997), 207; and Murray N. Rothbard, *An Austrian Perspective on the History of Economic Thought*, 2 vols. (Cheltenham, U.K.: Edward Elgar, 1995), vol. 1, 23–27. The phrase *laissez-faire* is sometimes said to derive from *wuwei* 無爲:

such ideas were never applied to market economics in Chinese sources, and there is certainly no ancient Chinese ideology corresponding to the libertarian notion of self-regulating markets that spontaneously generate optimal prices. Rather, the texts are keenly sensitive to what modern economists call market power, and fearful of social disruption due to runaway markets.[124]

One of the literati's main arguments against the salt and iron monopolies is that they were unnecessary and hence unknown in antiquity:

> 古者，尚力務本而種樹繁；躬耕趣時而衣食足；雖累凶年而人不病也。故衣食者民之本；稼穡者民之務也。二者修，則國富而民安也。《詩》云:「百室盈止，婦子寧止」也。[125]
>
> In antiquity, physical labour was exalted; "root" occupations were the people's task; and crops were planted copiously. One tilled at the right season, and clothing and food were plentiful. Even if there were successive baleful harvests, no one would fall ill. Thus clothing and food are the people's "root," sowing and reaping the people's tasks. When both are promoted, the state is rich and the people secure. It is said in the *Odes*:[126] "The hundred houses are flush; the wife and children are placid."[127]

Such convictions are mythic in the sense that they are impervious to empirical refutation: this is how things were in antiquity because it is written in the canons. At various junctures, the administrators respond, with evident frustration, that not everybody lived in such blissful simplicity in the past; indeed, one of their own arguments is that by stabilizing the supply of goods throughout the empire, they have relieved poverty and suffering in the countryside.[128] And thus the deal that was struck was that the literati were permitted to retain their mythic past, indeed to enshrine it in the books for future generations to recite

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e.g., J.J. Clarke, *Oriental Enlightenment: The Encounter between Asian and Western Thought* (London and New York: Routledge, 1997), 50.

124 Cf. Yü Ying-shih, *Chinese History and Culture*, vol. 1, 223–225. For a modern perspective on market power, see Paul Krugman and Robin Wells, *Microeconomics*, 3rd edition (New York: Worth, 2013), 547.

125 Wang Liqi, *Yantie lun jiaozhu* 1.2.28 ("Ligeng" 力耕). Compare the harangue in Wang Liqi, *Yantie lun jiaozhu*, 6.29.349–356 ("San buzu" 散不足).

126 Mao 291, "Liangsi" 良耜 ("The Good Plowshares").

127 Compare the translation in Esson M. Gale (1884–1964), *Discourses on Salt and Iron: A Debate on State Control of Commerce and Industry in Ancient China*, Sinica Leidensia 2 (Leiden: Brill, 1931), 13.

128 E.g., Wang Liqi, *Yantie lun jiaozhu*, 3.15.190 ("Weitong" 未通).

in school, but the government kept its monopolies, with few interruptions, down to the present day. Both sides could live with that.

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