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Language and Logic in China: A Guide for Argumentation Scholars

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In this essay I'll be commenting on a book that should be of special interest to scholars who are interested in argumentation and informal logic in non-Western contexts, that being Christoph Harbsmeier's *Language and Logic in China* (Cambridge: Cambridge University Press, 1998). Harbsmeier notes that China deserves special attention as the only non-Indo-European culture that preserves extensive records of argumentation and of reflections on logic, language, and reasoning, and thus deserves serious study.. Harbsmeier comes highly recommended as a guide here; a professor of Chinese at Oslo University who has written on the Chinese language, he is comfortable with symbolic logic and also is familiar with the Classical Greek philosophical tradition. However, even though Harbsmeier announces on p. 1 that one of his central questions will be "What (if any) were the strategies of argumentation and proof employed by the ancient Chinese?" his approach is actually much narrower, and it will help the sinologically innocent reader to understand why this is so.

This book appears as part of the ongoing series *Science and Civilisation in China*, a collaborative project that began in Cambridge in 1954. The many volumes that have appeared over the last four decades, written by specialists in their respective fields, have covered such areas as mathematics, geology, engineering, chemistry, and textiles. The title of the series suggests one of the questions motivating and worrying at the enterprise, especially in the earlier years: why didn't China develop science? Historians of China have claimed that during some historical periods China's cultural accomplishments, technological development, and material life were significantly more advanced than those of Europe. Yet by the early twentieth century even Chinese intellectuals were wondering why China had not developed science as the imperializing West had. A number of factors have been adduced to account for this deficiency; "oriental despotism," the lack of a robust middle class, no source of power outside the state, Confucian lack of interest in the natural world, and so on.

One seemingly inexhaustible source for explaining this failure is "language and logic in China"; that is, the blame is laid on the Chinese language, the Chinese writing system, or Chinese reasoning patterns. The claim is that a certain kind of reasoning is necessary for the evolution of science and that something about the Chinese language, writing or thinking mitigates against this kind of reasoning. Harbsmeier begins his work with a historical overview of the most popular of these contentions: the writing system is pictographic, thus discouraging abstract thought; the language has no grammar, thus inhibiting analytic reasoning; the language lacks counterfactuals or abstractions, thereby hindering speculative thought; the Chinese had no concepts of truth, the sentence, or class relations, making logical reasoning impossible; the Chinese reason analogically, rather than deductively or hypothetico-deductively; or, most simply, the Chinese think poetically, holistically, and organically rather than analytically and logically.

Harbsmeier agrees with the position that a certain kind of reasoning is necessary (though certainly not sufficient) for the development of science, and on his view logic is crucial for the evolution of scientific thought, though he never really clarifies what the exact relationship is.

However, he disagrees with the notion that the Chinese did not or could not think logically. Building on the accumulated research of China scholars, which he augments through his analyses and examples, Harbsmeier explores and definitively disproves the misconceptions that these claims are based on.

After refuting the notion that Chinese characters are pictographic, Harbsmeier turns to the Classical Chinese language, the written language that was the *lingua franca* of the educated elite in China for over two millennia. He asks whether Classical Chinese had the terms and structures that would allow expression of the operations of symbolic logic, such as various kinds of negation, implication, counterfactuals, inference, disjunction, conjunction, and quantifiers, and he answers with a resounding affirmative. Harbsmeier then considers logical and grammatical explicitness and complexity and here he arrives at a more mixed judgment; while Classical Chinese sentences could for the most part be made as specific as desired, other languages such as Greek and Latin allow (encourage?) greater logical and grammatical complexity (172). (With this latter judgment Harbsmeier flies in the face of the accepted wisdom in linguistics that "all languages in principle provide equally powerful means of communication" (163), as he himself admits.) As for the concepts that underlie logic, such as meaning, truth, necessity, contradiction, class, and property, Harbsmeier concludes that these are all presents in the Chinese materials, though with some interesting variations.

When Harbsmeier treats what he calls "logical practice" and "logical theory," he takes rather more of an interpretive leap across the cultural divide. The Chinese did not practice logic or develop the discipline in the contemporary sense of the term—a deductive process that employs abstract variables, works with analytic truths, and tests the necessary truth of its propositions in all possible worlds. What, then, does Harbsmeier look for when it comes to "logical practice" in China? "Informal logic" might be a good summation of what he includes in this section; structures of reasoning expressed in natural language, most of which are structurally parallel to the deductive modes of logic. Harbsmeier gives representative examples of syllogistic, *modus ponens*, *modus tollens*, sorites, and *a fortiori*. He also notes in passing the Chinese predilection for some forms of reasoning that do not quite meet this standard; correlational reasoning, example, and analogy, about which more below.

In the section "Logical theory" Harbsmeier pulls together early Chinese reflections on language and reasoning. The cast of characters here ranges from the Later Mohists, who elaborated systematic procedures for disputation about topics in ethics, descriptions, and elementary physics, to Teng Hsi-tzu, a legal advocate notorious for arguing both sides of issues; the texts range from complete works to chapters to scattered remarks. Harbsmeier's criteria for inclusion here seem perhaps too generous; to categorize Hui Shih, a persuader famous, among other things, for his fondness for argument by analogy, as a "logician" is potentially misleading. Teng Hsi-tzu, Hui Shih, and even Kung-sung Lung-tzu might be more accurately described as sophists who sometimes engaged in rudimentary logical investigations. The Later Mohists, on the other hand, with their concern for necessary relations, reliance on deduction, meticulous distinctions, and rigorous organization, do come much closer to logic in the contemporary sense, and their works merit much greater attention from Western scholars.

The final section of Harbsmeier's book is a detailed summary and analysis of the Chinese Buddhist texts on logic. These consist of translations of Indian Buddhist works and the Chinese commentary and explication of them, which were produced during the great ascendancy of Buddhism in the seventh and eighth centuries. Strictly speaking, these texts concern *yinming*

(Sanskrit *hetuvidya*), which, as Harbsmeier notes, is not logic, but rather the rules governing a specific kind of disputation over general theses that was widely practiced in India. In *yinming* the thesis must be contested by the parties, disputants may uses premises acceptable to the opponents whether they themselves believe them or not, and the minor premise must be substantiated by examples, both positive and negative. Harbsmeier not only performs a heroic labor in pulling together the primary sources and secondary scholarship on *yinming*, he also provides a careful and comprehensive analysis of their concepts and theories. Although the exegesis of such dry and demanding materials is inevitably somewhat dry and demanding itself, this overview is an invaluable resource for scholars of disputation and argumentation.

I must confess that despite the many virtues of Harbsmeier's book, I remain uneasy about his handling of the term "logical." Harbsmeier acknowledges that "relativists will argue that in arriving at the answers outlined above I impose our categories on the Chinese texts" (262). For a category such as *modus tollens* the dangers of the imposition seem trivial. However, the evaluative force of the adjective "logical" creates greater risks of invidious comparison when some patterns of reasoning or argument in another culture are labeled "logical" while others are not and, by implication, are less than logical, or even illogical. Harbsmeier concedes that what he calls "logical argumentation" actually "is only one aspect of ancient Chinese intellectual culture and most not be taken for the whole" (265). In fact, it turns out that "logical argumentation" was not even the most common or popular kind of argumentation. To quote Harbsmeier again, "[w]e must emphasize that logical argumentation was not the preferred way of justifying or supporting one's thesis in ancient China" (267).

What did the Chinese use instead of "logical argument"? They used forms of argument that Harbsmeier calls "plausible reasoning." These include argument from historical examples (which he contrasts to "logical argumentation" on p. 267), arguments by analogy (contrasted to "logical argumentation" on p. 265), argument from authority (contrasted on p. 274), and correlational reasoning (contrasted on p. 265).

Let me pause for a moment to explain correlational reasoning. In its Chinese manifestation correlational reasoning assumes, first, a world-view based on an initial categorization of all entities, processes, and materials into comprehensive categories, and second, causation according to resonance within and between categories. For instance, the category "wood" includes spring, green, east, sour, Jupiter, wheat, the spleen, the eye, anger, the wind, and the number eight. Therefore, successful action undertaken in the springtime should incorporate, rely on, or capitalize on these entities and avoid their opposites. More complex arguments developed based on analogy between categories, principles of attraction and repulsion, and cycles of changes.

Consistent with his focus on "logical argumentation," Harbsmeier only devotes some dozen or so pages to the Chinese use of "plausible reasoning," and his attitude toward it is less than enthusiastic. Although he admits that when the cultural presuppositions underlying, say, correlative explanation are reconstructed such arguments could be considered "rational," they still do not qualify as "logical" for him. Indeed, he betrays some impatience with them, remarking with some perplexity that it seemed that "a thesis or point of view counted as plausible to the ancient Chinese to the extent that it could be 'exemplified' by historical anecdotes and episodes. If a point was unsusceptible to such exemplification, this raised a suspicion that it was either irrelevant to the conduct of human affairs or simply untrue" (268).

Despite their dubious status in Harbsmeier's eyes, these forms of "plausible reasoning" continued to be popular for centuries afterwards in China, in a virtually unbroken tradition into the twentieth century. *In other words, the Chinese could argue "logically," and sometimes they did argue "logically," but usually they preferred "plausible reasoning" to "logical reasoning."* This, although Harbsmeier has just spent 260 pages showing that there were no significant impediments to the Chinese thinking "logically." What's more, although Harbsmeier does not mention this interesting fact, the Chinese often used both the logical and the "plausible" forms of reasoning within the same argument, as if they regarded them as equally valid, although from the standpoint of logic they are not. My concern with this scenario is simply this: it creates the impression either that the Chinese chose the less logical forms of argument, or that they couldn't see the difference, or that they didn't care about the difference. On any of these interpretations, they don't look especially rational.

Harbsmeier does suggest that the prevalence of historical example may be because ancient Chinese philosophy was "predominantly social philosophy. It was concerned with the conduct of human affairs" (267). Harbsmeier himself comments that "arguments in non-technical Classical Chinese texts are in general designed not to *prove* a proposition but to *convince* a reader with plausible reasons of a proposition which the philosopher…knows to be true" (265). However, he does not draw out the implications of these observations.

Pragmatic and partisan, these early Chinese texts are more appropriately considered as rhetoric than as philosophy. Rather than representing a disinterested search for an abstract truth, they record polemics about and debates over issues of statecraft, such as taxation, war, legal penalties, and population control, and over issues of ethics and self-cultivation. From the standpoint of contemporary western argumentation theory, "plausible" argumentation on such topics falls into the category of practical reasoning. In practical reasoning arguments with a deductive structure cannot claim necessity, since their premises are usually more or less probable rather than absolutely true or false. Thus deductive forms lose their advantage over non-deductive forms. Where practical reasoning is concerned, there are no grounds for deeming historical example to be somehow less logical than syllogistic, or for regarding an enthymeme as logical while an analogy is not. It should not be surprising that the Chinese used all these forms of arguments when they debated social, political, and ethical topics, and it should hardly be a cause for any sort of disparaging assessment.

I would like to remark on another aspect of Harbsmeier's approach that also has significant consequences for how he portrays Chinese argumentation. Harbsmeier restricts himself mainly to texts from what he calls ancient or early China, by which he refers to roughly the fourth century B.C. E. to the third century C.E. (although he does draw selectively on later periods when such material supports his position). He defends this restricted scope on several grounds: much of his analysis is of the Classical Chinese language, for which this sample is sufficient; philosophically speaking, this was the formative period; and, this is the period he is most familiar with. The problem arises when he generalizes from this early period to the rest of Chinese history. For instance, Harbsmeier states that after the third century C.E. "[d]isputation never again became a widely significant force in Chinese intellectual history until the 20th century" (350). Elsewhere he declares "[t]he victory of Confucianism as state doctrine in the -2nd century also meant a battle won for the habit of reasoning from authority" (274). Taken together, these two statements might give the impression of an authoritarian, text-bound, consensus-based intellectual tradition, with little room for argument or debate.

But such an impression would be very far from the truth. Indeed, argument was built into the political system in at least two ways. First, Confucian scholars had a solemn duty to advise and, when necessary, remonstrate with the ruler, either orally or in writing. The written petitions contained not just the recommendation, but also the argument supporting it, and might also include refutation of opposing positions. Even a scholar in the remotest provinces could—and would--send in a petition expressing and supporting his proposal, if he were so moved. Even under the most autocratic of emperors some scholars still risked their lives—and some died-- to make these arguments. And despite their great power, emperors would often respond to these petitions with arguments of their own.

In addition, from the second century B.C.E. on, debates over policy issues were a common feature of court life. The emperor would summon leading advisors and scholars to debate an issue in front of him and other officials, ostensibly to inform his decision-making. Even after the emperor announced his decision, the debate often continued through petitions sent up to the court and through letters exchanged among the interested parties and then circulated more widely. Arguments on other topics also were freely carried on among the literati, sometimes in informal discussions or in written forms such as the *lun* (an essay of explanation and justification), argumentative essay). Topics could range from differences over criteria of literary criticism to philosophical quarrels to disputes over correct ritual procedure to questions of philological or historical investigation.

It is true that "reasoning from authority" was a very common strategy in all of these areas. However, this still allowed a fair amount of argumentative latitude. As is true in other traditions based on authoritative texts, the classical corpus took shape over a period of centuries. In the Chinese case, although Confucianism was institutionalized as the official state doctrine in the second century B.C.E., with the fall of the Han dynasty in 220 C.E. the authority of Confucianism was seriously undermined. In the succeeding centuries Buddhism eclipsed Confucianism and it was not until the Sung dynasty (960-1206) that Confucianism regained its intellectual preeminence. In addition, the classical corpus consisted of a variety of texts, often internally inconsistent as well as inconsistent with each other on various points, written in a language that, from the Han dynasty one, needed commentary by specialists. The unclearness and inconsistencies of the texts provided fertile ground for varying interpretations, disagreements over them, justifications of exegesis, and development of new schools of thought.

As for disputation, in the sense of debate over abstract theses, there was more of this than Harbsmeier describes and it had more historical influence than he grants it. For at least two hundred years before the translation of the *yinming* texts, Buddhist monks (and, very occasionally, nuns) engaged in disputation over the finer points of their doctrines. These events were public, and attended by laymen and laywomen as well as monks and nuns. In addition, during the Sui dynasty (605-618) and the Tang dynasty (618-906) the court sponsored formal interdoctrinal disputations. These were face-to-face, structured debates over religious theses, and the winners often were rewarded with increased state support for their religion. Less formally, Buddhists and Confucians argued over the merits of their doctrines in polemical treatises, petitions and counter-petitions to the throne, letters and counter-letters, and other genres, in a struggle that spanned centuries. It is a commonplace among scholars of Chinese intellectual history that the challenge Buddhism posed was crucial in raising Confucianism to new intellectual sophistication, in its development into Neo-Confucianism, and it is somewhat odd that Harbsmeier ignores this very important instance of disputation and debate.

Philosophical argumentation between the various Confucian schools also was a customary feature of intellectual life. True, these debates were not usually carried out face to face, and they are not as structured as the Buddhist disputations were. However, they involved clash over tenets of believe, reason-giving, evaluation of evidence, refutation, response to objections, and qualification of positions, all the features that go to make up arguments.

To summarize, readers of Harbsmeier's work must keep in mind that although he announces a concern with argumentation on the first page of his book, he construes this term extremely narrowly, that his discussion of argumentative practices is restricted to one early period of Chinese history, and that when he generalizes forward from this period the generalizations may be misleading or even incorrect.

Lastly, let me caution potential readers that although this book appeared in 1998, Harbsmeier did not revise the manuscript after he submitted it in 1989. The work is thus less up-to-date than one might expect. But despite this caveat and despite the reservations expressed above, I recommend this book. The synthesis of the research on *yinming* is an extremely valuable contribution, as is Harbsmeier's detailed and well-documented refutation of the many misapprehensions about the Chinese language, writing system, and reasoning processes. Many of these misconceptions continue to circulate in non-sinological circles, and anyone pursuing these topics would be well advised to make this book her first reference. It is an indispensable resource and one must hope that it will stimulate more research on argumentation and reasoning in traditional China.