The *HPM Tongxun* and the Tongxun Group in Taiwan

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Since October of 1998, I began to publish the *HPM Tongxun* in a monthly basis. In fact, we usually merge February and March issues in one issue, and similarly for July and August issues due to Spring and Summer vacations respectively. Therefore, the *Tongxun* has ten issues (both printed and electronic versions) each year and is circulated in printed form of 500 copies to local math teachers and historians of mathematics of the international Chinese community. My article, "The Circulation of the *HPM Tongxun* and Its Relevance to the Mathematics Teacher Community in Taiwan", appeared in the*HPM Newsletter* 50 (July 2002), and aimed to trace the short history of the *Tongxun*. Since then another four years have witnessed the venture taking its shape. By now the *Tongxun* has earned its due reputation among the local community, thanks to more experiments have been conducted by the young HPM activists in order to better serve its original aim; namely, to initiate more activities concerning the HPM as well as the history of mathematics (HM). In this brief report, I would like to add some comments on the articles appeared therein and some involved activities (cf. Appendix for a quick look at the contents of the first 6 issues of volume 9, 2006)

It should be noted that a special issue on the *Suan Shu Shu* (Han Bamboo Text on Calculation) was published in the November 2000 issue. The article is the first one ever appeared for a comprehensive annotation of the text which was carried out by the editorial board members of the *Tongxun* – all of them being (former) graduate students of mine. This may explain the reason why Joseph Dauben calls my study team on the *Suan Shu Shu* as the Tongxun Group. It is due to the regular publication of special issues on reviewing popular math books released in Taiwan at the December and January Issue. In addition, we also published a special issue on Arabic mathematics (Nos. 11-12, Vol. 4) after the September 11, 2001 tragic event happened in Twin Towers in New York City. Still, another special issue (No. 1, Vol. 8) was devoted to commenting the temporal senior high school math curriculum standards to be put in practices in 2006. On the other hand, we also invite editorial board members serving as guest editors of some special issues. For example, Tsang-Yi Lin was invited as the guest editor to publish a special issue on mathematical induction (Nos. 2/3, 4, Vol. 7); Jung-hong Su to edit a special issue on Heron's Formula (No. 4, Vol. 9).

As for merits of the publication of the *Tongxun*, a few things should be mentioned here. First, some of them would come to join my research project sponsored by the *National Science Council* (NSC) and *Ministry of Education* (MOE). In this connection, they were invited by their high school colleagues to present reflections on education reform issues. Second, due apparently to our concern with the popular mathematics

publications in Chinese version, my team members are invited to write for a column of *Science Monthly,* a major popular science magazine published in Taiwan. The theme of the column is, as I suggest, mathematics in culture. On the other hand, some of the team members have joined me to write a book on *Suan Shu Shu* which has been published in July 2006. To me some of them also add their force in writing collaboratively journal articles on the history of (Chinese or Korean) mathematics. In fact, they are encouraged to present their research papers to the conference on the related topics. For example, several of them were enthusiastic about their participation in the Asia-Pacific HPM 2004 Conference (May 24-28, 2004) held in Taichung. A few of them were invited to present their findings on the history of Chinese mathematics in the Conference on the History of Science on March 26-27, 2005. Some of them have been encouraged to present their comments to the annotation of the *Suan Shu Shu* in the Symposium on the *Suan Shu Shu* that took place in August 23-25 2006. Still, I also encourage my former graduate students, who are teaching at high school, to become local correspondents for the *Tongxun.* This cohesion is able to encourage them promoting the HPM activities once they got a chance to do so – some of them even become local leaders for both the HPM and mathematics teaching. They become very enthusiastic about HPM writing just to share their ideas and vision with their colleagues. As a concluding remark, I would like to mention that a total of about forty correspondents plus ten editorial members can assure the creation of a unique local HPM, in which several of the members act both as a teacher and a historian, despite the fact that a registered learned society is yet to be established, hopefully in the near future.

Appendix: Contents of Vol. 9 (1-6) of *HPM Tongxun*
(Cf. http://www.math.ntnu.edu.tw/~horng)
By Jia-ming Ying

Number 1 (20 pages):
• Report on Prof. Karen Parshall's visit; by Wann-Sheng Horng
• A Preface to *Qi Ling Fei Bi Ling* (*This Zero Is Not That* 0): *A Collected Essays on Mathematics, Culture, History and Education*; by Wann-Sheng Horng
• A Remark on *Suan Shu Shu* (II): Tomb Tunnels; by Tsang-Yi Lin[1]
• A Review of *Nine Chapters on Mathematical Art: Companion and Commentary*; by Min-Hao Chen[2]
• Abstract of a Master's Dissertation Thesis: *An HPM Perspective of Taiwan's Current Junior High School Geometry Material in Textbooks*; Yu-Fen Chen[3]

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[3] M.Sc. Graduate of National Taipei University of Education.

Number 2/3 (24 pages):

・ A Report of a Seminar on *Suan Shu Shu*; Wann-Sheng Horng

・ Welcome Board, Prof. Alex Volkov!; by Wann-Sheng Horng

・ On the Relations between Points and Circle/Sphere; by Jing-xiang You & Guo-li Liu[4]

・ Ch'in Chiu-shao's *Ta-yen* Rule; by C. Hsu, C. Li & C. Tsao[5]

・ Window on New Books:

  Math Paradise – Study Math Well from Patterns (in Chinese); by Wann-Sheng Horng

  Math Wonders to Inspire Teachers and Students (Chinese Edition); by Chuen-ting Chen[6]

Number 4:   *Special Issue on Heron's Formula* (56 pages)

・ Guest Editor's Foreword; by Jim-hong Su[7]

・ Heron's life, *Metrica* and the Original Proof of Heron's Formula; by Cheng-te Hu[8]

・ An Introduction to Ch'in Chiu-shao's *San Xie Qio Ji Method*; by Yi-wen Su[9]

・The Evolution of Heron' Formula: from Xu Guanqi to Mei Juecheng; by Chien-hsun Li[10]

・ How Did Li Shanlan Prove Heron's Formula?; by Chuen-ting Chen

・ Heron's Formula in *Ba Xien Bei Zhe*; by Jia-ming Ying[11]

・ Integrating the History of Mathematics into Mathematics Teaching: An Example of Heron's Formula; by Yi-Wen Su

・ Characteristics of Various Proofs of Heron's Formula; by Jim-hong Su

・ A Vertical Integration of Teaching Area of Triangles; by Hui-yu Su[12]

・ Reflections on Teaching Heron's Formula; by Min-hao Chen

・ The Relation between the Proof and Teaching of Heron's Formula in High School Textbooks; by Ting-hsun Wang[13]

・ Comments on Li Shanlan's Proof of Heron's Formula; by Ho-chin Chen[14]

Number 5 (16 pages):

・ Revisiting Mathematisches Forschungsinstitut Oberwolfach; by Wann-Sheng Horng

・ Area Formula of Rectangles and Volume Formula of Cylinders; by Wen-Da Hwang[15]

・ Yang Hui's Mathematical Texts and HPM: An Example of *Xi Suan Gan Mu*; byWen-pei

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[14] Teacher of Yung-feng High Schoo.l.
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・An Introduction of the New Book: *The Measure of All Things* (Chinese Edition); by Jim-hong Su

Number 6 (20 pages):

・A Postscript to *Shu Zhi Qi Yuan* (Origins of Chinese Mathematics): *The First Chapter of the History of Chinese Mathematics —Suan Shu Shu*; by Wann-Sheng Horng

・A Note of Siu Man Keung's Visit; by Wann-Sheng Horng

・On Parallel Chords in Ellipse; by Jing-xiang You & Guo-li Liu

・On Liu Hui and His Circle Measurement; by De-Zheng Lin & Huei-Zhi Wang

・Review on Youko Ogawa's *Formula which the Doctor Adores*; by Hui-yu Su

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