

The letter of Gabriel de Magalhães 2 January 1669:

An edited and annotated translation

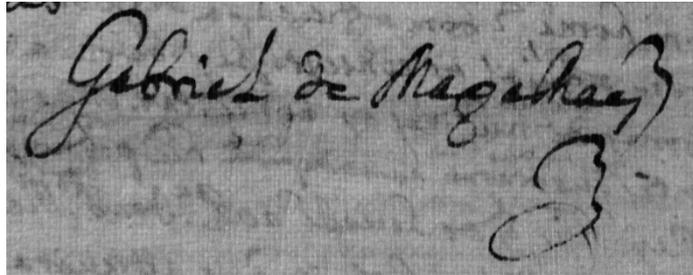
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2 January 1669:
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Introduction

This is an annotated English translation, paralleled by the original Portuguese, of a letter written from Beijing by the Jesuit missionary Gabriel de Magalhães (1609-1677), dated 2 January 1669, containing a detailed first-hand account of events that took place over the five days beginning on Christmas Day, 25 December 1668. During that time, the young Kangxi emperor (born 1654, r. 1661 – 1722) not only began to display the keen interest in ‘western learning’ that he was to retain during his lifetime, but also gave a foretaste of the political skills and determination that enabled him in the summer of 1669 to break the power of the regent Oboi, who had dominated the court since Kangxi had come to the throne.

For Magalhães and his fellow Jesuits, the events of those days marked a dramatic change in their fortunes by enabling them to regain the influence at court they had lost four years previously, as a consequence of the judicial condemnation in 1665 of the Jesuit missionary Johann Adam Schall von Bell (1591-1666) who had directed the imperial Astronomical Bureau *Qin tian jian* 欽天監 since the arrival of the Manchus in 1644. As a consequence of this condemnation, most Jesuits of the China mission had been exiled to Canton from their posts in various parts of the Qing empire. Schall’s accuser, Yang Guangxian 楊光先 (1597-1669) was, despite his protestations that he lacked technical competence, made Director of the Bureau in Schall’s place. By the time Magalhães wrote, Schall had died, and Yang had recruited as his Deputy Director the Muslim Wu Mingxuan 吳明烜, whom Schall had driven from office. Magalhães and his two remaining colleagues, Ferdinand Verbiest (1623-1688) and Ludovico Buglio (1606-1682), then superior of the group, were under house arrest in their Beijing residence, the Dong Tang 東堂, ‘Eastern Residence’, which consisted of a house and a church on the site now occupied by the Catholic church on Wangfujing 王府井 street..

The main text of the letter translated here recounts how on 25 December the Jesuits still in Beijing were unexpectedly summoned to appear at the palace early the following morning. On their arrival, they were first interviewed by high officials in the The *Nei Yuan* 內院 ‘Inner [=Palace] Academy’, and then by the 14 year old Kangxi emperor himself. In the days that followed, they went on to triumph over their adversaries in a series of tests of astronomical competence in which Verbiest played the principal role, with the result that they found themselves well on the way to regaining imperial favour.

Letter writing was a normal part of Jesuit routine. It was obligatory for Jesuits to send regular reports to superiors, in which they detailed their activities, circumstances, experiences and plans. These letters were systematically copied, distributed, and archived.¹ Other religious orders in China also maintained correspondence – see the example of the 17th century Franciscan Buenaventura Ibanez, who recounts a story about Schall’s winning imperial favour in 1644.² Magalhães had written three previous letters during the period of

¹ See: Paul Nelles (2018). "Jesuit Letters" ed. Županov in *The Oxford Handbook of the Jesuits*, Oxford, Oxford University Press: 44-72, also Joad Raymond and Noah Moxham (2016) *News networks in early modern Europe*. Boston and Leiden, Brill and Markus Friedrich (2008) "Circulating and Compiling the Litterae Annuae. Towards a History of the Jesuit System of Communication." *Archivum historicum Societatis Iesu: periodicum semestre a Collegio Scriptorum de Historia S. I. in urbe editum*. 77: 3-39.

² Buenaventura Ibañez (dated 3 February 1650, printed 1936). "Letter to P. Antonium" ed. Van Den Wyngaert in *Sinica Franciscana*, Rome, Quaracchi. 3: 19-23.

confinement in Beijing, one in 1666 and two in 1667; subsequent to the letter translated here, he went on to write two further letters in 1669. Buglio also wrote a letter in 1669.³ All these documents were addressed to the Jesuit groups in Canton, and in Macao, where the Jesuit Visitor for Japan and China was based, and such letters were themselves made the basis of ‘Annual Letters’ sent back to Europe. A letter sent by Verbiest to the Jesuit Adrien Greslon in April 1668 did not fall within this ‘reporting’ framework, being more of a private enquiry asking what observations had been made in Canton of a phenomenon (probably a comet) recently seen by Verbiest from Beijing.⁴

The background and details of the events described by Magalhães are examined in Cullen, Christopher and Jami, Catherine (2020), to which reference will be made from time to time in the notes to the translation given here. We have also made a detailed technical investigation of the methods of calculation likely to have been used by Verbiest in making the predictions of noon gnomon shadow lengths referred to in the following text, and our conclusions are set out in Cullen, Christopher and Jami, Catherine (2022). We have made a special examination of Verbiest’s attitude to the role of Yang Guangxian’s deputy, Wu Mingxuan, in Cullen, Christopher and Jami, Catherine (2023, forthcoming). Magalhães clearly hopes that what he writes will edify and encourage his fellow Jesuits. But where cross-checking with other sources is possible, they do not contradict Magalhães, and the events that are known to have taken place in Beijing subsequent to his letter in January 1669 are consistent with the story he tells of the events of late December 1668.

The original letter is no longer extant; our main source for the text is a contemporary copy, now preserved in Archivum Romanum Societatis Iesu (ARSI). It bears a handwritten colophon by the Visitor in Macao, Luis da Gama, dated 8 March 1669 certifying that it has been ‘taken faithfully from the original’.⁵ Folios in that manuscript are marked in the text thus: **(fol. 269r)**. My initial reading of the manuscript was made in the light of the transcription in Josson, Henri and Willaert, Leopold (1938: item XIV, 130-153). Pages in that work are marked in the text thus: **[130]**; I have however departed from Josson and Willaert’s readings at a number of points. The numbers **1^o, 2^o** etc. in the following contents list refer to the marginal numbers in the manuscript copy of the letter; we cannot tell whether these numbers were inserted by Magalhães, or by the copy clerk in Macao. The original is mostly unparagraphed; further paragraph divisions have been added here for ease of reading.

I am grateful for the help with Portuguese given by Luis Saraiva, who read and commented on a complete draft of my translation, and also by Angelina Victor Morando, Thomás Haddad, and Luis Ribeiro. Other specific acknowledgments are made in the course of the translation. Throughout my research and writing, I have as ever consulted closely with Catherine Jami, for whose constructive criticisms and suggestions I am most grateful. All remaining errors and confusions are entirely my own responsibility.

³ For all the letters of Magalhães, and the letter of Buglio, see the respective entries in the bibliography.

⁴ Noël Golvers (2014) "Ferdinand Verbiest’s 1668 observation of an unidentified celestial phenomenon in Peking, its lost Chinese description and some parallel observations, especially in Korea." *Almagest* 5, (1): 33-51 and Noël Golvers, Ed., (2017) *Letters of a Peking Jesuit: the correspondence of Ferdinand Verbiest SJ (1623-1688)*. Leuven, Ferdinand Verbiest Institute, KU Leuven, 166-173.

⁵ Gabriel de Magalhães (1669 January 2) Letter addressed to Luis da Gama, Father Visitor at Macao, 2 January 1669 (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 269-273v.

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Aos P^{es}. Visitador, Provincial, e V.
Provincial

de Japão, e China. Aos P^{es}. de Macão, e de
Cantão.

A toda Comp^a de Jesus.

Gratia et Pax Christi

Supponho 1^o que se lembrão Vs. Rs. do que
averá dous annos escrevi àcerca dos copos e
pucaros que o Adversario dizia erão
necessarios para se verem as exhalações da
Primavera, das quaes dependem a certeza e
conhecimento dos movimentos celestes, e
consequentemente toda a mathematica.

Supponho 2^o que sabem Vs. Rs. que o
Mouro chamado uming hiuen, que teve
antigamente contendas com o P. João Adão,
he agora mandarim dos grandes do tribunal
da mathematica. Porque conhecido o
adversario por ignorante, os do Governo
quizerão antes este mouro (que foi pello Rey
passado condenado a morte, e estando no
carcere, para ser justicado, por hum cazo
repentino deu o Rey hum perdão geral, *ex vi*
do qual ficou livre; e não só condenado a
morte, mas muitas vezes reprovado com
suas mathematicas pello mesmo Rey) que a
mathematica Europea; e isto para cobrirem e
defenderem as maldades e erros passados.
Introduzido pois o mouro, prometeo de fazer
hum kalendario de novo, para o que, pedio
dez annos, mas concederão lhe só quatro. E
o Rey para o provar (posto que estava já
feito, impresso e publicado outro pello
adversario) lhe mandou fizesse o kalendario
do 8^o anno deste Rey, que he o do anno do
Senhor de 1669.

To the Fathers Visitor and Provincial, and
the vice Provincials

of Japan and China. To the Fathers of
Macao, and of Canton.

To the whole Company of Jesus:

The grace and peace of Christ.

I submit (1st)⁶ that Your Reverences will
recall what I wrote two years ago, about the
cups and vases that the Adversary⁷ said
were needed to observe the spring
exhalations, on which [he claimed] depend
the certainty and knowledge of the heavenly
motions, and consequently the whole of
mathematics.⁸

I submit (2nd) that Your Reverences know
that the Moor called Wu Mingxuan, who
previously disputed with Father John Adam
[Schall von Bell], is now one of the great
mandarins of the Tribunal of Mathematics.
Because the Adversary is known to be
ignorant, those of the Government preferred
this Moor (who had been condemned to
death by the previous King, and was in
chains ready to be executed, when suddenly
the King found reason to give a general
pardon, by the effect of which he was freed;
and [this although] he had not only been
condemned to death, but was [also]
frequently criticised for his mathematics by
the same King)⁹ to European mathematics,
and this in order to hide and defend their
past cruelties and misdeeds. Once this Moor
had been brought in, he promised to make a
new calendar, for which [task] he asked for
ten years, but was only given four. And to
test him (since another had already been
made, printed and distributed by the
Adversary) the King ordered him to make

Supponho 3º que terá chegado a carta commũa do P^e Superior Luis Buglio, e outras, que pello correyo, mandamos aos 2 de Dezembro, na qual carta contava o P^e algumas acçõis, e historias do adversario e do mouro.

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Supponho 4º que da dita carta terão Vs. Rs. alcançado, que o mouro, se não he tão ignorante comó o adversario nas mathematicas, he quazi quazi e té de mais: que he na materia muito atrevido, facil e grande embaralhador.

Supponho 5º que averá dous mezes teve o adversario rebate da mesma doença, de que morreo o P^e. João Adão, ficando com o pé, mão e toda a parte direita tolhida e a lingua

the calendar for the King's eighth year, which is that of the year of the Lord 1669.¹⁰

I submit (3rd) that you will have received the common letter from the Father Superior Luis Buglio, and others which we sent by the courier on the 2nd of December, in which letter the Father told of certain events, and stories about the Adversary and the Moor.¹¹

I submit (4th) that your Reverences will have gathered from the said letter that the Moor, while not quite as ignorant in mathematics as the Adversary, is almost as bad and in some ways worse: he jumps to conclusions without justification, and tends to muddle things up.

I submit (5th) that two months ago the Adversary had an attack of that illness from which Father Johann Adam died, resulting

⁶ Seven numbered points are made in this way before the main narration begins. The first four involve things that the writer is pointing out that his readers already know, and in those cases the usual translation of 'supponho' as 'I suppose' is possible. In the last three, however, new information is conveyed, and translation in that way is obviously inappropriate. I am therefore very grateful to Professor Helder Macedo for suggesting 'submit' as a possible rendering for all seven instances: Magalhães is setting out to his superiors the points they need to bear in mind to understand the full context of the narrative that follows.

⁷ This is the term commonly used by the Jesuits for Yang Guangxian at this period; Wu Mingxuan appears as 'the Moor'. See Christopher Cullen and Catherine Jami (2020) "Christmas 1668 and after: how Jesuit astronomy was restored to power in Beijing." *Journal for the History of Astronomy* 51, (1): 3-50, 15.

⁸ See Irène Pih (1979) *Le père Gabriel de Magalhães: un jésuite portugais en Chine au XVIIe siècle (Father Gabriel de Magalhães: a Portuguese Jesuit in 17th century China)*. Paris, Fundação Calouste Gulbenkian, Centro Cultural Português, 193-196, and Cullen and Jami (2020), 14. The correspondence referred to dates from April 1667. Although I translate the Portuguese 'mathematica' as 'mathematics' throughout, in this context the word refers to the mathematics of astronomy; where Magalhães' text is paralleled in Chinese, the corresponding term is *li* 曆 '[astronomical] systems': see note 25.

⁹ This had taken place in 1657, when Wu Mingxuan had been proved wrong in a dispute with Schall von Bell in relation to the calendar for 1657, in particular on the subject of the appearance of Mercury. Wu been condemned, but was then released in consequence of a general pardon on the recovery of the Empress Dowager from smallpox. See Johann Adam Schall von Bell (1672) *Historica relatio de ortu et progressu fidei orthodoxae in regno Chinensi per Missionarios Societatis Jesu ab anno 1581. usque ad Annum 1669: novissime collectae ex litteris eorundem patrum societatis Jesus ... editio altera et aucta*. Ratisbone, Typis Augusti Hanckwitz, chapter XXI, 279-294, and for the pardon page 289.

¹⁰ Wu Mingxuan complained of the faults in the old system on Kangxi 7, 7th month 15th day, renzi.49, 22 August 1668, see *Da Qing li chao shi lu* 大清歷朝實錄 (*Veritable records of the successive reigns of the Great Qing dynasty*). (1937). Anon., Xinjing 新京 (Changchun 長春), Da Manzhou di guo guo wu yuan 大滿洲帝國國務院, 26, 16b-17a, and requested new instruments to make observations to correct the astronomical system. In the 8th month, day 30, bingshen.33, 5th October 1668, the Board of Rites recommended that observations for this purpose should be conducted over four years: see *ibid.*, 26, 25b-26a.. On the same date, however, the emperor, perhaps less patient than his advisers, commanded Wu to prepare a daily calendar and a planetary calendar for Kangxi 8, and to submit them for inspection.

¹¹ This letter does not appear to have been preserved.

impedida, o que foi publico a toda esta Corte, que louvava os divinos juizos do grande Deos dos christãos. Mas já o adversario está bem, posto que muito cahido, e com grandes temores de 2º rebate. No tempo pois em que elle estava com o accidente, o mandarim tartaro, seu companheiro no officio, temendo que depois da morte do adversario, o Rey entendesse com elle, Má húm (assy se chama este Tartaro) por não dar conta das exhalaçõis que não tinham succedido, obrigou ao

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emfermo que lhe desse hum extracto do que sentia na materia, para que Má húm, o puzesse em hum memorial, e o desse ao Rey. Bem contra sua vontade deu o adversario o extracto que dizia :

« He verdade que fiz gastos do Rey para fazer huma sala, para experimentar as exhalaçõis que em tres annos nunca sahirão. Pelo que, me resolvo que a regra de as fazer sair, ha já mil e duzentos annos que se perdeo. Corno eu ficar melhor, buscarey hum homem que sayba a tal regra. »

Emfadarão-se todos os mandarins do Nui uên (que he tribunal dos assessores e Colao do Rey); enfadarãose principalmente os mandarins tartaros dizendo, que o adversario enganava ao Rey, e a todos elles estimava

in paralysis of his foot, hand and the whole of his right side, and his speech impeded, which was known throughout the court, which praised the divine judgements of the great God of the Christians. But the Adversary has already recovered, although much fallen, and in great fear of a second attack. In the period while he was ill, the Tartar Mandarin, his companion in office, fearing that after the death of the Adversary the King might understand that he, Mahu ¹² (for so this Tartar is called) had not given an account of the exhalations which had not happened, obliged the

sick man to give him a note of what he felt in this matter, so that Mahu might put it in a memorial and give it to the King. Much against his will, the Adversary gave him a note that said:

“It is true that at the expense of the King I had a room made to make experiments about the exhalations, which never appeared over three years. Because of that, I have decided that the rule for making them come forth has been lost for one thousand two hundred years.¹³ When I am better, I shall look for someone who knows such a rule.”

All the mandarins of the *Nei yuan* (which is the Tribunal of the Assessors and Colaos of the King) ¹⁴ were angered [by this]; the

¹² This is Mahu 馬祜 (also written 瑪祜), *jin shi* 1652, d.1676, the Manchu co-president *jian zheng* 監正 of the tribunal of mathematics with Yang Guangxian. For his career, see *Qing shi gao* 清史稿 (*Draft history of the Qing dynasty*). (1977). Zhao Erxun 趙爾巽 (1844-1927), Beijing, Zhong hua press 中華書局 273, 10041-10042. He was a member of the Jebe Hala clan (Sinicized: 哲伯氏).

¹³ The reference here is to the supposedly successful observations of ‘the exhalations’ by Xindu Fang 信都芳 (fl. 6th century CE). See Yi-Long Huang and Chih-ch’eng Chang (1996) “The Evolution and Decline of the Ancient Chinese Practice of Watching for the Ethers.” *Chinese Science*, (13): 82-106, 83-84, also *Kangxi Shilu* 7, 10th month, 23rd day, wuzi.25, 26 November 1668, *Da Qing li chao shi lu*, 27, 18a, where Yang’s reference to this person is recorded.

¹⁴ The *Nei Yuan* 內院 ‘Inner [=Palace] Academy’ refers to a major organ of imperial deliberation. In 1658 the highest formal council of the Qing government, previously known as the *Nei San Yuan* 內三院 ‘Three Palace Academies’ was renamed as the *Nei Ge* 內閣 ‘Palace Secretariat’, normally called the ‘Grand Secretariat’ in English: see Charles O. Hucker (1985) *A dictionary of official titles in imperial China*. Stanford, Stanford

senão como tolos, como meninos; e querião concluir com o adversario, dando lhe seu merecido castigo. Mas os dous govèrnadores, lhe perdoarão, dizendo

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que lhe esperasse dous mezes, depois de melhorar da doença, e que nelles buscasse o homem, que prometia.

Porém os tataros vendo o tribunal da mathematica perdido, e impatientès com as sem rezões, e injustiças na materia, dous dos governadores secretamente avizarão ao Rey, do que adiante se dirá. Não sabemos ainda quem foi o que falou ao Rey, posto que cuidamos, com fundamento provavel, que foi por via do 4º regulo, de quem os Padres, que estão em Cantão tiverão bastante noticia, quando estiverão nesta corte; o qual nos aconselha com grande amor, e favorece quanto pode no negocio.

Tartar mandarins were the ones most angered, saying that the Adversary deceived the King, and was treating them all if not as fools, then as children; and they wished to have done with the Adversary, giving him his deserved punishment. But the two governors pardoned him, saying

that they would wait two months after his illness had improved, and that in them he would look for the [expert] man that he had promised [to find].¹⁵

But the Tartars seeing that the Tribunal of Mathematics was in confusion [lit.: ‘lost’], and impatient with the lack of reason and unjustness in this matter, two of the governors secretly informed the King, of which we shall speak later. We do not know which of them it was who spoke to the King, but we believe with good reason that it happened through the 4th Regulo,¹⁶ of

University Press, 83-85. However, at the time of the accession of the young Kangxi emperor in 1662, the regents had changed the name back from *Nei Ge* to *Nei San Yuan* (*Qing shi gao*, 6, 166), and this would have been the title in use when Magalhaes wrote. The shorter version *Nei Yuan* is well attested: see for instance *Xi chao ding an* 熙朝定案 (*Cases decided during the [Kang]xi reign*). (after 1669). Nan Huairan 南懷仁 (Ferdinand Verbiest), Rome, National Central Library, 72 C530.1, 1, 1a, abbreviated as XCDA, quoted in Han Qi 韓琦 and Wu Min 吳旻 (2006) *Xi chao chong zheng ji; Xi chao ding an (wai san zhong)* 熙朝崇正集; 熙朝定案; (外三種) (*Collection of documents from the reign of the Kangxi emperor*). Beijing, Zhonghua shu ju, 49-50, where the Grand Secretary Li Wei 李蔚 (1625—1684) is referred to as *Nei Yuan da xue shi* 內院大學士 ‘Grand Secretary of the *Nei Yuan*’ in a description of the events referred to in Magalhaes’ letter. The previous name *Nei Ge* was restored in 1670: *Qing shi gao*, 6, 180. The informal term for members of the staff of the Grand Secretariat *Ge Lao* 閣老 ‘Secretariat Elder’ is the origin of the term ‘Colao’ frequently used by Magalhaes.

¹⁵ Magalhaes seems not to be aware that the excuse given by Yang Guangxian for not completing his project had been discussed at court on the 21st day of the 11th lunar month – which in the Gregorian calendar was December 24th, the day before the four mandarins visited the Jesuit house to enquire about calendrical matters. This discussion is recorded in the *Shi lu* 實錄 (‘veritable records’ the day-by-day account of imperial activities compiled after the end of each reign) for that day, when the Ministry of Rites had submitted a memorial recommending that despite his illness Yang Guangxian should not be allowed to escape his responsibilities, and that the search for capable people should be continued: *Da Qing li chao shi lu*, 27, 18a, and an earlier (but identical) text in *Dong hua lu* 東華錄, *Dong hua xu lu* 東華續錄 (*Records from the Eastern Gate, Continuation of Records from the Eastern Gate*). (Preface 1884; first six reigns compiled after 1765). Jiang Liangqi 蔣良騏 (1723-1789) and Wang Xianqian 王先謙 (1842-1917), 8, 14a-14b. It does not seem likely to be a coincidence that the mandarins made their visit to the Jesuits at dawn on the next day.

¹⁶ ‘Regulo’ (‘minor king’) is the term usually used by Jesuits to refer to an imperial prince, *qin wang* 親王. In this case it is possible to identify this ‘4th Regulo’ (said elsewhere in this letter to be favourable to the Jesuits, see paragraph 97ff) as the Manchu prince Yolo 岳樂 (1625-1689), fourth son (hence his number) of Abatai (1589-

Supponho 6 que vespera do Natal, depois de nossa pobre consoada, todos tres *ad invicem* como sempre fazemos, nos consolamos, e animamos à paciência, e longanimidade, e determinamos que suppostas as couzas que viamos, nos deixassemos estar, sem por agora procurar que o Rey soubesse de nos; por que temiamos, e assy no lo aconselharão os Regulos e outros amigos: por temerem que, se nos manifestassemos ao Rey, os dous governadores lhe dessem tais tintas, que fecharião a porta, para nunca mais se abrir.

Supponho 7 que estamos occupadissimos, como Vs. Rs. podem conhecer do que adiante se dirá. E assy não posso ser tão diffuzo como dezejo; mas *per summa capitum* darey as noticias necessárias.

O que supposto os Padres Luis Buglio, Ferdinando Verbiest, et ego Gabriel, non tamen Angelus, sed maximus peccator,

Evangelizo vobis gaudium magnum

whom the Fathers who are in Canton heard a lot when they were in this court, who advises us with much love, and favours us as much as he can in business.

I submit (6th) that on Christmas Eve, after our poor Christmas supper,¹⁷ all three of us ‘one to another’, as we always do, consoled ourselves, and encouraged ourselves to patience, and forebearance, and decided that given the way we saw things to be, we should let things be, without for the present seeking for the King to know about us, for we feared (and so the Regulos and other friends advised us) that if we showed ourselves to the King, the two governors would give such colours to it, that the door would close, and never open again.

I submit (7th) that we are extremely busy, as Your Reverences will be able to tell from what will be said later. So I am not able to be as diffuse as I would wish, but I shall give the necessary information under its main headings.

[All] which having been submitted, the Fathers Luis Buglio, Ferdinand Verbiest, and I Gabriel, no angel but a great sinner, ‘Tell you glad tidings of great joy’.¹⁸

1646), the seventh son of Nurhaci, founding father of what was to become the Qing dynasty. Jean-Baptiste Du Halde (1735) *Description géographique, historique, chronologique, politique, et physique de l’Empire de la Chine et de la Tartarie chinoise, Enrichie des cartes... et ornée d’un grand nombre de figures et de vignettes* (A geographical, historical, chronological, political and physical description of the Empire of China, and of Chinese Tartary. Enriched with maps ... and adorned with a great number of figures and vignettes). Paris, P.-G. Le Mercier, vol. 4, 159 describes part of Yolo’s funeral ceremonies taking place on 22 April 1689: ‘Le 22 nous accompagnâmes le convoy d’un Régulo, qui nous avoit temoigné beaucoup d’amitié pendant sa vie, & qui étoit mort depuis environ un mois. ... Les enfants du quatrième Régulo ... marchaient immédiatement devant le corps à pied ...’. This is the second day of the third lunar month of the 28th year of Kangxi, and thus Du Halde is suggesting that he died in the second month, which is indeed when Yolo died, as noted in *Qing shi gao*, 217, 9007.

¹⁷ The Portuguese term ‘consoada’ (consolation) refers to a meal taken at the end of a day of fasting, in this case the last day of the Advent fast in preparation for Christmas. Traditionally this should include cod (‘bacalhau’), though it is unlikely that the Jesuits were able to procure any in Beijing, hence perhaps the description ‘poor’.

¹⁸ Magalhaes quotes the Vulgate Latin text of the Gospel of Luke, 2:10, where an angel announces the birth of Jesus to shepherds on the hillside near Bethlehem.

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Dia de Natal, antes de nascer o sol, baterão a porta 4 mandarins grandes que são os 2^{os} depois dos Colaos. Tres erão tartaros, e hum da provincia de Liao-tong, filho do Tân Colao. Baterão a porta dizendo que vinhão para nos notificar huma ordem

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do Rey, que *facie ad faciem* lhes ordenara. Deu o porteiro o recado ao Padre Superior que começou com muita alegria a chamar, e dizer ao Padre Gabriel de Magalhães : « Graças a Deos, tudo está acabado, já

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o Rey sabe de nós »

Saimos a receber os grandes do Rey que logo nas primeiras vistas nos fizeram muita festa e cortezia dizendo que vinhão por ordem do Rey fazer nos algumas perguntas; que escolhessemos algum lugar retirado, para que se não ouvisse, e menos soubesse o que elles perguntassem. Escolhemos o cubiculo do Padre Superior, que fechado por dentro, mandando elles primeiro afastar da saleta a todos, assy seus criados, como os da igreja, nos mandarão por de joelhos para ouvir a ordem do Rey.

Ajoelhados nos, nos perguntarão da parte do Rey se sabiamos Mathematica? Respondeo o Padre Superior

« Nos os dous velhos, não sabemos mathematica, mas em tudo o mais estamos aparelhados para server a sua Magestade. O Padre Ferdinando Verbiest he insigne

(POINT 1)

On Christmas Day [25 December 1668], before the rising of the sun, there knocked at the door four great mandarins who were second [in rank] after the Colaos. Three were Tartars, and one from the province of Liaodong, son of the Colao Fan [Wencheng].¹⁹ They knocked at the door, saying that they came to notify us of an order

of the King, who had ordered them ‘*face to face*’ to do this. The porter gave the message to the Father Superior who began with great joy to cry out, and to say to Father Gabriel de Magalhães: "Thanks be to God, everything is finished,

the King already knows about us.”

We went out to receive the King’s grandees, who as soon as they saw us treated us with much joy and courtesy, saying that they had come by order of the King to put some questions to us; and that we should choose some retired place, so that none should hear and even less know what they would ask. We chose the Father Superior’s room, which was enclosed within [the building], and they first told everyone to leave the parlour, both their servants and those of the church, and ordered us to our knees in order to hear the order of the King.

We having knelt down, they asked us on behalf of the King if we understood mathematics. The Father Superior replied

“We two old men do not understand mathematics, but we are ready to serve His Majesty in everything else. Father Ferdinand Verbiest is a distinguished

mathematico, assy na especulativa, como na praxe. »

O que ouvido nos mandarão levantar, e todos assentados, tirarão do kalendario que o adversario fez para o anno 8° do Rey Cam hy que he o que agora governa, e he, como já acima dissemos, o anno do Senhor de 1669, em que estamos. E disserão que

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trazião ordem do Rey para que o Padre Verbiest dissesse e descubrisse seus erros. Mostrou lhé o Padre alguns, com tanta presteza e clareza, que ficarão admirados e sumamente contentes e satisfeitos. Dos quaes porey só dous que são gravissimos para com a China:

1° Que accressenta o adversario no dito kalendario hum mez intercalar, avendo de o accressentar no anno seguinte, ainda conforme a regra de sua antiga mathematica.

2° Que apontava no mesmo kalendario duas Primaveras, e dous outonos, dentro de hum anno, que he o mesmo que dizer que ha dous Equinotios Vernos, e dous authunaes. Porque aos 19 da 2ª lua do dito anno (como

mathematician, as much in the theory as in the practice.”

Which having heard, they ordered us to rise, and all having sat down, they took out the calendar which the Adversary had made for the 8th year of King Kangxi, he who now governs, and which is, as I have already said, the Year of the Lord 1669, in which we now are.²⁰ And they said that

they brought an order from the King that Father Verbiest should state and reveal its mistakes. The Father showed some to them, with such speed and clarity that it astonished them, and made them extremely pleased and satisfied.²¹ Of these I shall give only the two which are most serious in China:

(1) That the Adversary had added to the said calendar an intercalary month, which he should have added to the following year, which would have been in conformity with the rule of his old mathematics.²²

¹⁹ In the copy of Magalhaes' letter made in Macao, 'Tan' is clearly written. However we know from another source that the Chinese official from Liaodong who came with his three Manchu colleagues was Fan Chengmo 范承謨 (1624 - 1676) son of Fan Wencheng 范文程 (1597 - 1666): see *Qin ding xin li ce yan ji lue* 欽定新曆測驗紀略 (*A summary of observations in accordance with the new astronomical system, imperially commissioned*). (1669). Nan Huairan 南懷仁 (Ferdinand Verbiest), 2a (hereafter abbr. *CYJL*), and for the father and son see the former's biography in *Qing shi gao*, 232, 9350 - 9359. Fan Wencheng became a Grand Secretary under Hong Taiji from 1636 (ibid., 232, 9351.), so would have been referred to as a 'Colao'. He protected Schall during the Manchu takeover of Beijing in 1644, and there were Christians in his family. See Cullen and Jami (2020), 41, note 54. It is thus very probable that Magalhaes wrote 'Fân Colao', and the Macao copy clerk mistakenly took a hurriedly written capital F for a capital T. The handwritten forms of the two letters differ only slightly in Magalhães' own script: see e.g. in his letter of April 1667, ARSI Jap-Sin 162 folio 173r lines 44 and 57.

²⁰ Although Magalhães was writing in 1669, he was not yet in Kangxi 8, whose first lunar month did not begin until 1 February.

²¹ The calendar prepared by Yang Guangxian for the 8th year of Kangxi had been promulgated on the first day of the 10th month of Kangxi 7, 4 November 1668. Verbiest could thus already have had a copy of this document for about 6 weeks, leaving him plenty of time to examine and check it: see *Da Qing li chao shi lu*, 27, 9a.

²² It was indeed the case that the official calendar for Kangxi 8 had an intercalary twelfth month. After Verbiest was given control of such matters later in 1669, this month was deleted. Instead, an intercalary second month was inserted in the calendar for Kangxi 9. See Cullen and Jami (2020), 42, note 57.

os Padres em Cantão podem ver) diz que as noutes e dias são iguais; e depois aos 21 da mesma 2^a lua, diz que he o equinotio verno.

Os 4 mandarins depois de o Padre os fazer capazes, rirão muito, e zombarão da estupenda e estolida crassidade deste erro. Outros muitos tem que deixo por brevidade e por que depois averá lugar de fallar nelles.

Muito contentes e supra modum satisfeitos da sciencia do Padre, voltarão para o paço, e informarão ao Rey do que virão na igreja.

Depois do sol posto, tornarão com ordem do Rey, que todos tres ao outro dia que era 26 de Dezembro muito cedo fossemos ao paço. Fomos e os mesmos 4 mandarins nos levarão ao tribunal dos Assessores e Colao do Rey, onde achamos hum Colao China, o adversario, o mouro, e todos os mais mandarins grandes, assy Tartaros como Chinas, do tribunal da mathematica. Juntos todos, nos fizerão por de joelhos

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(2) That he had put two springs in the same calendar, and two autumns, within one year, which is the same as saying that there are two vernal equinoxes, and two autumnals. Because on the 19th of the 2nd month of the said year (as the Fathers in Canton can see) it says that the nights and days are equal. And afterwards on the 21st of the same 2nd month, it says that it is the vernal equinox.²³

The 4 mandarins, once the Father had made them understand, laughed a lot, and mocked the stupidity and stolid crassness of this error. There were many other [errors] which I omit for brevity, and because I shall have occasion to speak of them later.

Greatly contented, and extremely satisfied by the science of the Father, they returned to the palace, and told the King what had taken place in the church.

After sunset, they returned with an order of the King that all three [of us] should go to the palace very early the next day, which was the 26th December. We went, and the same 4 mandarins took us to the Tribunal of the Assessors and Colaos of the King, where we found a Chinese Colao,²⁴ the Adversary, the Moor, and all the other great mandarins, Tartars as well as Chinese, of the Tribunal of Mathematics. Having assembled, we were made to kneel down

²³ This was in fact common calendrical practice, resulting from the fact that equinoxes, like other divisions of the solar cycle from one solstice to the next, were marked at mean positions: see *ibid.*, 42, note 58. A similar criticism is made in the second point of the memorial giving the views of Schall on the calendar for 1644 produced by the *Qin tian jian*, dated Shunzhi 1/7/25, 26 August 1644: see Tang Ruowang 湯若望 (Johann Adam Schall von Bell) (after 1660, 1993 repr.). "Zou shu 奏疏 (Memorials)" ed. Bo Shuren 薄樹人 et al. in *Zhong guo ke xue ji shu dian ji tong hui: tian wen* 中國科學技術典籍通彙: 天文 (*Comprehensive collection of classic texts of Chinese science and technology: astronomy*), Zhengzhou, Henan Educational Press. 8: 857-964, 868-869.

²⁴ The 'Tribunal' in question was the *Nei Yuan* 內院 'Inner [=Palace] Academy': see footnote 14. The 'Colao' they met there was the Grand Secretary (*Da xue shi* 大學士) Li Wei 李蔚 (1625—1684): see *XCD*A, 1a, and Han Qi 韓琦 and Wu Min 吳旻 (2006), 49-50, also *CYJL*, 2a.

e hum dos 4 mandarins Tartaros, que nos chamarão e vierão a nossa caza, leo a ordem do Rey, que dizia :

« Eu Rey vos ordeno a todos, que deixadas a esquecidas questões, injurias e malevolencias antigas, com coração verdadeiro e limpo, escolhais e determineis huma regra mathematica, que não tenha duvidas, nem erros; mas seja verdadeira, e a melho que possa aver. »

Lida a ordem do Rey, nos mandarão levantar, e assentados todos os 4 mandarins acima ditos, que já estavam grandemente afeiçoados à verdade, e a nos: perguntarão ao adversario pellos erros sobreditos e por outros muitos, a que elle respondia, já com nomes feyos com que nos honrava, já com grandes despropositos que todos os mandarins recebião com rizadas, e as vezes com boas reprehensões.

Veyo

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o jantar (e a nós nos puzerão com o adversario, *Lupus et Agnus*, em huma meza) que acabado, se tornou a disputar. Então o mandarin Tartaro cabeça e presidente do tribunal da mathematica, levantou o voz e disse : « Senhores, para que nos cansamos em disputar o que pella mayor parte não entendemos? Sigamos a ordem do Rey, e concluiremos o negocio depressa, e com successo. Ordena o Rey, que lhe determinemos huma regra limpa, e sem magoa. A verdadeira regra da mathematica he aquella, cujos eclipses, que vemos com nossos olhos são justos, e certos, e cujos movimentos dos planetas, de que dependem todas as mais operações mathematicas, são

and one of the 4 Tartar mandarins who had summoned us and had been to our house, read the order of the King, which said:

“I, the King, order all of you that you shall leave behind all old issues, insults and ill will and with a truthful and pure heart, you shall chose and determine a mathematical rule, which is free of doubt, or errors, but which is true, and the best that there can possibly be.”²⁵

The King’s order having been read, they ordered us to rise, and all the above mentioned four mandarins being seated, who had already been friendly to truth, and to us, [they] questioned the Adversary on the aforementioned errors, and about many others, to which he responded on the one hand with ugly names with which he honoured us, or on the other with great nonsense, that all the mandarins received with laughter, and sometimes with good reprimands.

There came dinner (and they put us together with the Adversary, ‘*wolf and lamb*’, at one table), which having been concluded, the argument began again. Then the Tartar mandarin who was head and president of the Tribunal of Mathematics [Mahu] raised his voice and said ‘Gentlemen, why tire ourselves by arguing about matters which for the most part we do not understand? Let us follow the order of the King, and we shall finish our business quickly, and successfully. The King has ordered that we should determine for him a clear rule, free

²⁵ This is a fairly accurate summary of the imperial injunction that was read to those taking part in this meeting: compare *XCDA*, 1a, and *CYJL*, 5a. This is clear evidence that Magalhaes is a good witness for what took place during the various encounters at which he was present, and on which he reports. His letter contains a number of similar instances. In the Chinese text ‘mathematical rule’ is *li fa* 曆法.

certos, e verdadeiros. Todas estas excellencias tem a regra europea. E assy para que cansamos

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em disputer, e buscar outra que não poderemos achar? »

Todos ouvirão e todos aprovarão a sentença do presidente da mathematica, e assy perguntarão ao P. Verbiest : se se atrevia de seguir, publicar e defender a regra europea, sem erro algum?

Respondeo o Padre que de boa vontade defenderia a regra europea, pois era unica, e verdadeira.

Ao adversario não perguntarão pella sua antiga, por que está já antiquada, e condenada per ordem do Rey. Perguntarão ao mouro se se atrevia a defender a sua?

Respondeo, que elle ainda a não tinha feita nem emendada.

Perguntarão-lhe mais se o kalendario que fizerão pera o 8^o anno estava bem?

Respondeo, que bastante.

« Bastante? tornou hum dos 4 Mandarins que nos chamarão; vede bem o que dizeis: tem erros, ou não tem erros? »

Respondeo o mouro:

« Ainda tem alguns erroszinhos que necessitão emenda. »

« Pois, instou outro mandarim, e vós sois tão atrevido, que dais ao Rey por certo hum kalendario errado? »

Por fim concluirão, que se seguisse a regra europea.

of error. A true rule in mathematics is one of which the eclipses we see with our own eyes are correct and certain, and of which the movements of the planets, on which most mathematical operations depend, are certain and true. The European rule has all these excellencies. So why are we tiring ourselves

by arguing. and looking for something else that we shall be unable to find?’

All heard and approved of what the president of mathematics had said, so he asked Father Verbiest: whether he would venture to follow, publish and defend the European rule, [as being] without any error?

The Father answered that he would willingly defend the European rule, because it was unique, and true.

They did not ask the Adversary about his rule, since it was already [considered] outdated, and had been condemned by order of the King.²⁶ They asked the Moor if he would venture to defend his?

He answered, that he had not yet finished making it nor correcting it.

They asked him further if the calendar that he had made for the 8th year was good?

He answered, that it was adequate.

‘Adequate?’ replied one of the 4 mandarins who had summoned us’ ‘Mind what you say: does it have errors, or does it not have errors?’

The Moor replied:

‘It still has some minor errors that need to be corrected.’

‘So’, put in another mandarin, ‘you really dared to give the King an erroneous calendar as if it was correct?’

²⁶ Wu Mingxuan’s criticisms of the ‘old system’ used by Yang Guangxian had been supported by the Board of Rites on October 5th 1668, and accepted by implication in the imperial rescript that followed: see note 10.

Resistência a esta resolução o adversario, mouro e hum Colao China, que em todas as acções se mostrou nossoa adversario.

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Porem os mandarins Tartaros fizerão tal conceito da sciencia, respostas e argumentos do Padre Verbiest (que por tres ou quatro vezes, pôs em talas, e meteo no sacco ao mafamede, què se elle tivera sangue no rosto, e não fora tão deslavado, nunca mais appareceria, nem se atreveria a falar em mathematicas) que alegres, e contentes persuadirão ao Colao, que facilmente levado da rezão que via, approvou a regra europea. E *tandem* fizerão o mesmo o mouro e o adversario, ainda que bem contra sua vontade.

E feito assento do que se determinara em letras Sinicas e Tartaras, fomos todos para o paço. O Colao, e os 4 mandarins Tartaros entrarão a informar o Rey do que passara, e nós com os mais ficamos fora da porta do paço da sala real, esperando a ordem do Rey.

In the end they concluded, that the European rule should be followed.

This decision was opposed by the Adversary, the Moor and a Chinese Colao, who in all matters showed himself to be our adversary.²⁷

But the Tartar mandarins had such admiration for the science, answers and arguments of Father Verbiest (who had three or four times caught the infidel in a trap and silenced him, so that if he had any capacity for shame and had not been so bold, he would never again have appeared or dared to talk about mathematics), so that being pleased and contented they persuaded the Colao, who having easily been moved by the reason he saw, approved the European rule. And at length, the Moor and the Adversary did the same, though very much against their will.

And having made an account of what they had decided in Chinese and in Tartar writing, we all went to the palace. The Colao, and the four Tartar mandarins went in and informed the King of what had taken place, and we and the others remained outside the door of the palace which contained the royal chamber, waiting for the orders of the King.

²⁷ Presumably this was Li Wei 李燾, the only 'Chinese Colao' known to have taken part in these deliberations: see note 24.

2º

Que informado, mandou entrar o adversario, o mouro com os mais do tribunal da mathematica, e a nós com elles. Todos por suas fileiras e preminencias se puzerão de jóelhos diante do Rey, e nós tres detras de todos.

Perguntou então qual de nós era o mathematico?

Respondemos que era o Padre Verbiest.

Então o Rey, com grave, e alegre rosto, chamou o Padre para diante de sy, e lhe fez varias perguntas da mathematica, e a ultima, como poderemos saber qual seja a verdadeira, qual a falsa mathematica?

« Facilmente se poderá averiguar, respondeo o Padre. Assinem

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os mandarins de V. Magestade hum estilo, da grandeza e altura que quizerem, ao adversario, e ao mouro outro, e a mim outro, hum dia, ou dous, ou quantos quizerem, antes que se faça a experiencia e apontemos todos, e digamos antes o comprimento da sombra que deve deitar o estilo no tal dia ao meio dia em ponto, e quem mais errar, se julgará por mais errada sua mathematica. »

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Approvarão a proposta com aplauso, o Rey e todos os presentes. O Rey fez perguntar ao adversario e ao mouro, se sabião elles tão bem aquelle modo de medir a sombra, e se aceitavão o concerto?

(POINT 2) Who, having received this information, ordered that there should enter the Adversary, the Muslim and the rest of the Tribunal of Mathematics, and we with them. All knelt in front of the King in the order of their affiliations and ranks, and we three behind all of them.

Then he asked which one of us was the mathematician?

We answered that it was Father Verbiest.

Then the King, with a grave and cheerful expression, called the Father before him, and asked him various questions about mathematics, of which the last was how we could know which was true mathematics, and which false?

That can easily be found, replied the Father. Let there be assigned

to the Adversary, to the Moor and also to me, by the mandarins of Your Majesty a gnomon, of [whatever] size and height they wish, and on one day, or two days, or as many as are desired, let us all predict and say before the experiment is made, the length of the shadow that the gnomon will cast on that day at the moment of noon, and he who errs the most shall be judged to have the most mistaken mathematics.

The King and all present approved this proposal with applause. The King caused the Adversary and the Moor to be asked if they too understood that method of

Responderão que sabião, e que o aceitavão.

Perguntou então o Rey ao adversario se estava pela regra europea, na conformidade que tinham assentado?

Respondeo o seguinte:

« V. Magestade não pode uzar destes homens, por que não tratão de outra couza, se não de rebellião. Primeiro tomarão Japão, e depois as Philipinas; agora nestes annos tratarão de tomar vosso imperio, fazendo com a prata e sangue dos pobres muitas igrejas, que erão fortalezas contra V. Magestade; e se eu os não descobrira, já seus perversos intentos terião o efeito que pretendião. Sua ley hé diabolica, e como tal, só professa rebellião, como aquelles que adorão hum homem que por rebelde foi crucificado em huma cruz (o que dizendo estende os braços) e nella a puros tormentos morto em castigo de seu peccado ».

E queria dizer muito mais, mas foi impedido dos 2 governadores, que tambem estavam presentes O Rey mostrou assim nos gestos, como no rosto, que se alterava, e agastava; mas como he tão prudente, brando e benigno (he para admirar tanto sizo e capacidade em 14 annos de idade) se reprimio; mas com tudo não deixou de dar ao embusteiro com severo e magestoso rosto huma grave reprehensão, que foi desta maneira:

Ordenou a Ma-hum dissesse em lingua china ao adversario o que segue : « Ordeney oje a vós, e a todos, que esquecidos das contendas e desgostos, com coração limpo, só tratasseis de determinar huma regra da verdadeira mathematica; e vós diante de mym fazeis o contrario? Não he isto manifestamente resistir a minhas ordens?

measuring the shadow, and if they accepted the agreement?

They replied that they understood, and that they accepted it.

The King then asked the Adversary if it was the European rule in accordance with which he had agreed?

He responded as follows:

"Your Majesty cannot use these men, because what they are trying to do is nothing other than to make rebellion. First they took Japan, and then the Philippines; now in these years they will try to take your empire, making many churches with the silver and blood of the poor, which are strongholds against Your Majesty; and if I had not revealed them, their perverse plans would have the effect they intended. Their law is diabolical, and as such, it professes only rebellion, as [would be expected of] those who worship a man who was crucified for rebellion on a cross (in saying which he extended his arms) and died in torment in punishment of his sin. "

And he wanted to say much more, but was stopped by the two governors, who were also present. The King showed by his gestures as well as in his facial expression, that he was provoked and moved to anger; but because he is so prudent, gentle and benevolent (and such wisdom and capacity at the age of 14 is admirable), he held himself back; but all the same he did not fail, with a severe and majestic countenance, to give the deceiver a grave rebuke, which he did in the manner following:

He ordered Mahu to say to the Adversary in the Chinese language what follows: "Today I ordered you, and everybody else, to forget all contentions and dislikes, and with a pure heart, only to concern yourselves with determining a rule of true mathematics –

Perguntei-vos agora da mathematica, e vós respondeis que os homens de Europa são rebeldes. Como pode ser que 25 homens que estão repartidos pella China tomassem hum império tão grande? Mandeiv-vos que me buscaseis homens sabios, e doutos na mathematica para me servirem, já que vós nem sabeis, nem prestais para isso. E sabeis que Fernando Verbiest, homem de tantas partes e letras estava nesta corte, e não só não mo propuzestes, mas o encobristes. Daqui se collige e claramente se vê, que sois hum mao, vil e baixo homen ».

Todos sabem, e todos dizem, que se o Rey não respeitara aos 2 governadores, que logo então avia de mandar matar, e estrangular o adversario. E não ha duvida, pois este cazo he raro, e jámais ouvido na China, pois não se lê que jámais algum se atrevesse a falar tão atrevidamente diante de seu Rey.

Acabada esta acção mandou o Rey a todos para fora; e passado meio quarto de ora, nos chamou os 3 Padres em particular e tratou com muita benevolencia, perguntando muitas couzas de Europa.

Per-

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-guntou mais qual de nós era o que tinha habilidade de mãos.

Respondeo o governador, *cui lumen adeptum*, em Tartaro: *Tare tu lintá*; que quer dizer: aquelle que está no meio, apontando com o dedo para mym.

Ultimamente ordenou ao Padre Verbiest, que

but to my face you do the opposite? Is this not a clear resistance to my orders? I have just asked you about mathematics, and you answer that the men from Europe are rebels. How could it be that 25 men who are scattered throughout China should take such a great empire? I ordered you to seek out for me men of understanding learned in mathematics for my service, given that you neither understand nor can offer anything in that regard. And you knew that Ferdinand Verbiest, a man of such parts and learning, was in this court, and not only did you not bring him forward, but you concealed him. From this it is evident and clearly visible, that you are a bad, vile and lowly man.”²⁸

Everybody knows, and everybody says, that if the King had not had respect for the two governors, that he would have at once ordered the Adversary to be killed by strangulation. And there is no doubt about this, for a case like this is rare, and never heard of in China, nor may one read of it, that anyone should dare to speak so boldly before his King.

This matter having been dealt with, the King ordered everybody to leave; and after a half a quarter of an hour had passed, he called in the three Fathers in particular, and treated us with much kindness, asking us many things about Europe.

He asked

further which of us was the one who has skilled with his hands.

²⁸ In the shorter Chinese version of this rebuke found in *CYJL*, 4a-4b the term *xiao ren* 小人 ‘petty, immoral person’ is used.

<p>Ihe fizesse hum pronostico, para o anno que vem China, dos effeitos naturais dos quatro tempos do anno, a que o China chama <i>tien siam</i>.</p> <p>[143]</p> <p>Saydos para fora nos ordenarão da parte do Rey que ao outro dia, que era dia de S. João, viessemos muito cedo ao paço. Viemos e nos foi ordenado o seguinte.</p>	<p>There answered the governor, the one who had lost an eye,²⁹ in Tartar: <i>Tare tu lintá</i>; which means ‘the one in the middle’,³⁰ pointing to me with his finger. Finally he ordered Father Verbiest to make a forecast, for the coming year in China, of the natural effects of the four seasons of the year, what they call in Chinese <i>tien siam</i>.³¹</p> <p>When we had gone out, we were ordered on the King’s behalf that on the next day, which was St John’s day [27 December 1668, Kangxi 7 month 11 day 24] we should come very early to the palace. We came, and were ordered as follows.</p>
<p>3^o</p> <p>Primeiro fora da porta do patio da sala do Rey nos assentamos, todos os mandarins</p>	<p>(POINT 3) First we were all seated at the gate of the courtyard in front of the royal chamber, with all the aforesaid mandarins</p>

²⁹ This was evidently Oboi, who was one-eyed. See Olfert Dapper (1670) *Gedenkwaardig bedryf der Nederlandsche Oost-Indische maetschappye, op de kuste en in het keizerrijk van Taising of Sina....* Amsterdam, Bey J. von Meurs, 349, who notes that on the 21st June 1667, before the 13 year old Kangxi emperor viewed a present of livestock offered by a Dutch embassy, ‘Aldaer waeren de Paerden en osjes eerst door den eersten Zoutaizin of Raedsheer bezichtigd. Een bruine Tartar was dees, met een oog en witte knevel, ruim zestig jaren oudt, die men zeide, door zijn aenzien, ontzagh en vernuft byna het gansch Rijk bestierde’ (‘There the horses and small oxen were first checked by the first Zoutaizin or Counsellor. He was a brown Manchu, with one eye and a white moustache, more than 60 years old, who - according what they said - governed almost the entire Empire by his prestige, authority and intelligence’: I am grateful to Noel Golvers for help with this translation.). Given the date of this event, this person could only have been Oboi. The Latin reference is to the one-eyed monster Polyphemus in Greek mythology, whom the Roman Poet Virgil (70-19 BCE) describes as ‘Monstrum horrendum, informe, ingens, cui lumen ademptum’ (‘A horrible monster, deformed and huge, whose light [i.e. vision] had been taken away’) *Aeneid* III. 658.

³⁰ This is a fairly accurate transcription and translation of what was probably said by Oboi in Manchu ‘*Tere dulinde*’. I am grateful to Nicola di Cosmo and Catherine Jami for help on this point. As they have both indicated, the fact that Magalhaes splits the word ‘*dulin*’ (here followed by the dative-locative ending ‘*de*’) may suggest that he had only a spoken knowledge of the language. Or perhaps the Macao clerk miscopied.

³¹ Although ‘*tien siam*’ almost certainly represents *tian xiang* 天象, a general term for celestial phenomena, the reference to ‘the natural effects of the four seasons’ suggests that this may have been a request for meteorological predictions for the year ahead. In June of that year the emperor had complained about the failure of the *Qin tian jian* to submit prognostications based on the baleful daytime appearance of Venus, and had ordered his high ministers to deliberate on the unseasonable weather that was threatening the harvests for that year: (see *Shi lu* for Kangxi 7, 5th month, 16th day, *guichou*.50, 24th June 1668, *Da Qing li chao shi lu*, 26, 4a-4b, and Kangxi 7, 5th month, 18th day, *yimao*.52, 26 June 1668, *ibid.*, 26, 4b-5b.). The European tradition of astrology included meteorological predictions, so Verbiest would not have found this an unreasonable request: see for instance Jennifer C. Mori (2016) "Popular Science in Eighteenth Century Almanacs: The Editorial Career of Henry Andrews of Royston, 1780–1820." *History of science* 54, (1): 19–44. However, we have no record that he actually supplied what was asked for.

<p>sobreditos e de novo dous sumos presidentes de tribunal das cortezias (a quem está sojeito o tribunal da mathematica) hum Tartaro, e outro China.</p>	<p>and once again the two high presidents of the Tribunal of Rites (to which is subject the Tribunal of Mathematics), one a Tartar and the other a Chinese.³²</p>
<p>Perguntarão de novo ao P^e Verbiest pella sombra do estilo?</p>	<p>They asked Father Verbiest again about the shadow of the gnomon?</p>
<p>Respondeo o Padre estava aparelhado para fazer a experencia não só ao meyo dia, mas em qualquer ora, e lugar, e com qualquer estilo, grande ou pequeno que lhe assinassem</p>	<p>The Father answered that he was ready to make the experiment not only at noon, but at any time and place, and with any gnomon, large or small, that they should assign to him.</p>
<p>Pois replicarão: « He ordem do Rey, que vamos à torre das observações, e com o estilo que aly esta façais oje experencia».</p>	<p>Then they replied: “We have an order from the King, that we should go to the tower of observations,³³ and do the experiment today with the gnomon that is there.”³⁴</p>
<p>Perguntarão ao adversario se estava aparelhado para fazer o mesmo.</p>	<p>They asked the Adversary if he was ready to do the same.</p>
<p>Tergiversou sem jámais querer dizer, que sabia ou não sabia.</p>	<p>He equivocated, without ever wanting to say whether he understood or not.</p>
<p>Perguntarão ao mouro, que redondamente disse que não sabia taes medidas. Então <i>supra modum</i> se enfadarão os mandarins, dizendo «Diante do Rey dizeis que sabeis, e aceitais o concerto, e ao pé da obra dizeis o contrario, e confessais vossa ignorancia?».</p>	<p>They asked the Moor, who said roundly that he did not know how to do such measurements. Then the mandarins became extraordinarily annoyed, saying “In the King’s presence you said that you knew, and accepted the agreement, and now the work is afoot you say the contrary, and confess your ignorance?”</p>
<p>Por fim forão de novo ao Rey, perguntando-lhe que supposto o adversario e o mouro confessavão que não sabião fazer os computos da sombra e do estilo, se avia o Padre Verbiest de fazelos?</p>	<p>In the end they went in again to see the King, and asked him, given that the Adversary and the Moor had confessed that they did not know how to do the calculation of the shadow of the gnomon, whether he would have Father Verbiest do it?</p>
<p>Respondeo o Rey que sy.</p>	

³² These were Buyan 布顏 and Hao Weina 郝惟納, the first of whom was a Manchu, and the second a Han. See *CYJL*, 4b-5a. Both of these are mentioned as being in office as *Li bu shang shu* 禮部尚書 Secretaries of the Board of Rites in summer of 1668: see *Qing shi gao*, 180, 6385 and 6387, in which Hao’s name is written as 郝惟訥. It was customary for Boards to be headed jointly by a Manchu and a Han.

³³ I.e. the Observatory, *Guan xiang tai* 觀象臺

³⁴ This order took the form of an edict, issued the previous day, December 26th, and recorded in *CYJL*, 4b-5a.

<p>[144]</p> <p>Partimos logo para a torre da mathematica, onde chegamos quasy as 11 horas. Em tão breve tempo concertou o Padre o estilo que estava torto, e fez os computos cercado de tanta gente, que todos falavão e gritavão. E com tudo socederão as medidas, como dezejavamos. O que todos os mandarins Tartaros festejarão, e admirarão grandemente, dizendo muitos louvores do Padre, e das sciencias europeas.</p> <p>Só o adversario, e o mouro, e o Colao China, começarão maliciosamente a calumniar a acção, para todos tão rara, maravilhosa e nunca vista. Calumniavão elles, e como ignorantes do que o Poeta</p>	<p>The King answered yes.</p> <p>So we left at once for the tower of mathematics, where we arrived almost at 11 o'clock. In a short time the Father fixed the gnomon, which was twisted,³⁵ and made the calculations surrounded by many people, all talking and shouting. And in spite of everything, the measurements were made, as we wished. At which all the Tartar mandarins rejoiced, and were greatly amazed, uttering many praises of the Father, and of European sciences.</p> <p>Only the Adversary, and the Moor, and the Chinese Colao began maliciously to calumniate what had taken place, [which appeared] to everybody so rare, marvellous</p>
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³⁵ I.e. it was no longer vertical: as Verbiest himself put it, *erat inclinata* ('it was at an angle'); see Ferdinand Verbiest and Noël Golvers (1993) *The Astronomia Europaea of Ferdinand Verbiest, S.J. (Dillingen, 1687): text, translation, notes and commentaries*. Nettetal, Steyler Verlag, 62 and Noël Golvers and Efthymios Nicolaidis, Eds., (2009) *Ferdinand Verbiest and Jesuit science in 17th century China: an annotated edition and translation of the Constantinople manuscript (1676)*. Athens and Leuven, Institute for Neohellenic Research and Ferdinand Verbiest Institute, 118. It is also mentioned in *CYJL*, 5b, where the gnomon was said to be *wai xie bu he fa* 歪斜不合法 ('at an angle, contrary to the rule'), and Verbiest asks how Yang Guangxian and his colleagues could have used such a faulty instrument. It possible that this gnomon was put out of alignment during the earthquake on the 2nd day of the 3rd month of Kangxi 4 (16 April 1665), which is said in an imperial edict of the 5th day of the 8th month (13 September) to have caused damage to another astronomical instrument at the observatory: Chen Zhanshan 陈占山, Ed., (2000) *Bu de yi, fu er zhong* 不得已, 附二种 ('I cannot do otherwise' [by Yang Guangxian 楊光先, 1597-1669] and two other works). Hefei, Huang shan shu she 黄山书社, 91. What is meant by saying that Verbiest 'concertou' ('fixed') the twisted gnomon is explained thus (Golvers and Nicolaidis, Eds., (2009), 118): *ad caput prae-fatae columnae affixi transversam tabellam ligneam, cuius supremum latus erat exacte parallelum horizonti, et elevatam iuxta dati styli altitudinem* ('at the head of the said gnomon, I fixed a transverse plate of wood, whose upper edge was exactly parallel to the horizon, and was at a height corresponding to the height of the specified gnomon': I have slightly modified the English version of the editors). The bronze gnomon Verbiest found on the observatory platform was about 8.3 *chi* 尺 in height, but the emperor had specified that Verbiest was to predict the shadow length for a gnomon of 8.49 *chi*. Hence he needed to make the top of the effective gnomon about 0.2 *chi* higher (ibid.). The length unit *chi* (often rendered as 'foot' in English) was close to 32 cm in Ming and Qing times, so 8.49 *chi* was equivalent to 2.7 metres, and 0.2 *chi* was 6.4 cm. In the original Chinese texts, the subdivisions of the *chi* are expressed in decimal fractions – tenths as *cun* 寸 (often rendered as 'inch'), and hundredths as *fen* 分. Verbiest goes on to say that he dropped a perpendicular line from the upper edge of the wooden plate, and counted his predicted shadow length from where that line met the graduated scale on the horizontal base at one end of which the gnomon was fixed. The obliquity of the gnomon was thus irrelevant. Although Verbiest does not say so, he had presumably satisfied himself that this scale was close enough to the horizontal so that no corrective measures were needed. There is a historical irony in Verbiest's complaints about the use of a 'twisted' gnomon, given that on 11 July 1665 Yang Guangxian had complained of the use of a misaligned (*xie* 斜) instrument by Schall for timing an eclipse: see Chen Zhanshan 陈占山, Ed., (2000), 87

<p>disse: <i>Confinia lucis et umbrae</i>; e do que os mathematicos dizem: <i>umbragem</i> ou <i>penumbram</i>, fazião sombra verdadeira e falsa que he o mesmo que <i>umbrago</i> ou <i>penumbra</i>. E ao outro dia o mostrou na paço ao Colao, e aos 4 que o Rey mandara a nossa caza e que sempre assistirão a todas as acções referidas, e por referir.</p> <p>Destes o principal vendo o mapa, e sua explicação disse em alta voz, e em lingua Tartara : « <i>Amba supi</i>. Temos hum grande mestre ».</p> <p>Acabada a acção do estilo, voltamos ao paço, e informado o Rey do que passara, ordenou que ao outro dia que era festa dos Sanctos Innocentes, em hum pateo do paço se levantasse hum estilo, cuja medida se desse primeiro ao Padre, para que elle ao</p>	<p>and never before seen. They calumniated, ignorant of what the poet said of ‘<i>the borders between light and dark</i>’;³⁶ and of what mathematicians call the umbra or the penumbra, making true and false shadows which are the same as the umbra and penumbra.³⁷ And the next day, he showed this in the palace to the Colao, and to the 4 [mandarins] that the King had sent to our house, and who were always present during the events referred to, or [to which I] shall refer.</p> <p>The principal of whom, when he saw the diagram and its explanation, said in a loud voice in the Tartar language “<i>Amba supī</i>” (“We have a great master”).³⁸</p> <p>This business of the gnomon having been concluded, we returned to the palace, and the King, having been informed of what had taken place, ordered that the next day, which was the feast of the Holy Innocents [28 December 1668, Kangxi 7, month 11,</p>
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³⁶ Noel Golvers [private communication, May 2018] suggests that this quotation is likely to be a reminiscence of Ovid, *Metamorphoses* VII, 705 ‘quod teneat lucis, teneat confinia noctis’ (‘as [dawn] holds the portals of the day and night’). Given Magalhães’ reference to ‘the Poet’ (obviously a well known one), this origin is perhaps more likely than the exact parallel I have found from the early 17th century poet Lodovico Scapinelli, of Modena, Italy; see Lodovico Scapinelli (1801) *Opere del Dottore Lodovico Scapinelli: soprannominato Il Cieco (The works of Doctor Lodovico Scapinelli, surnamed ‘The Blind’)*. Parma, Reale Tipografia, 130, in the line ‘Jam Libra aequavit confinia lucis et umbrae’ (‘Now [at the autumnal equinox] the zodiacal sign *Libra* (the Scales) balances that which lies between light and shadow’).

³⁷ The Jesuit practice was to calculate the ‘true shadow’ as being the umbra, the darkest part of the shadow, in which no light from the sun shines directly onto the horizontal scale. The end of the umbra is where a line drawn from the upper edge (‘limb’) of the sun strikes the scale: see the diagram in Xu Guangqi 徐光啟 (1562-1633) ed., *Chong zhen li shu 崇禎曆書 (Texts on astronomical systems [compiled in] the Chongzhen reign)*. (Submitted to the throne between 1630 and 1635, repr. 2009). ed. Pan Nai 潘鼐, Shanghai, Shanghai Gu ji chu ban she 上海古籍出版社, vol.2, page 1447. This diagram is reproduced, with a discussion of the issues to which Magalhães refers in in Cullen and Jami (2020), Figure 1 and 22-24. The ‘penumbra’ (partial shadow, which Magalhaes calls ‘the false shadow’) continues past the point defined above, growing ever fainter until it disappears altogether. The ‘calumny’ of ‘the Adversary and the Moor’ was no doubt to point this out, since in another account of this incident in Chinese, giving the report of the officials who supervised the test, Yang Guangxian and Wu Mingxian are stated to have claimed respectively that the shadow was really 9 分 *fen* (9/100 *chi*, 2.9 cm) and 6 *fen* (6/100 *chi*, 1.9 cm) longer than the 16.66 *chi* that Verbiest had predicted, and which he stated had been observed: see *XCDA*, 1a-3a, quoted in Han Qi 韓琦 and Wu Min 吳旻 (2006), 49-50. The total length of the penumbra in geometrical terms was about 20 *fen*, 6.4 cm, – but to the naked eye the shadow would have been impossible to perceive at a considerably smaller distance from the end of the umbra. The diagram ‘mapa’ to which de Magalhaes refers, and which Verbiest used in his explanation, was no doubt similar to that given in the *Chongzhen lishu* (reference above). For further detailed discussion, see Cullen and Jami 2022.

³⁸ In Manchu, ‘great teacher’ would be *amba sefu*. The slight difference may be due to miscopying by the Macao clerk, or to a dialectal variation. Once I again I thank Nicola di Cosmo and Catherine Jami for help.

meyo dia o levantasse, e primeiro assinasse
o termo onde avia de

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chegar a sombra. Recebemos a medida que
erão dous covados duas decimas, e nos
recolhemos para caza.

day 25], a gnomon should be set up in one
of the squares of the palace, whose
measurement should first be told to the
Father, so that it should be set up at mid-
day and he should beforehand assign the
limit to which the

shadow would reach. We received the
length, which was two cubits and two
tenths, and returned to the house.

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4º

O Padre Fernando Verbiest fez de noite as contas, e computos, e eu com hum carpinteiro fiz o estilo e o puz em huma taboa comprida que bastasse e ainda sobijasse para a sombra, e fiz tres parafuzos de pao que puz hum em huma ponta da taboa, e os dous na outra, para que a taboa com hum nivel e perpendicular que aplicamos ao estilo por beneficio dos parafusos, levantando a, ou abaixando a, respondesse na planura e igualdade ao horizonte.

Em rompendo a alva fomos ao paço, onde já achamas a mor parte dos mandarins no lugar assinado. Já o Padre tinha deitada a linha sobre a taboa, a qual linha a sombra avia de tocar no ponto do meyo dia. Tudo entregou ao 4 mandarins, que vierão a nossa caza.

E hum delles diante do Colao, do adversario, e do mouro, medio o estilo, e achou ser o mesmo que nos dera de antes; e perguntou ao Padre se era aquella linha atravessada, o termo a que avia de chegar a sombra ao meyo dia?

Respondendo que sy, a mostrou ao Colao, ao adversario, mouro, e mais mandarins, que erão muitos.

Aplicou se o estilo e a taboa ao horizonte; e no tempo a que o sol chegou ao pino de meyo dia, a sombra se unio com a linha assinada de tal sorte que nem admitia entre huma e outra espaço de hum cabelo.

Não se pode explicar o gosto, a alegria e aplauzo de todos os que estravão presentes, que serião cem pessoas, mas sobre todos, os mandarins Tartaros que se desfazião em jubilos e contentamento.

(POINT 4) That night Father Verbiest did the reckoning and the calculations, and I, with a carpenter, made the gnomon and fixed it on a long table of more than sufficient length for the shadow, and made three screws of wood, of which I placed one at one end of the table, and two at the other, so that the table (with a level and a perpendicular that we applied to the gnomon) could benefit from the screws lifting it or lowering it, so as to correspond in its plane and its levelness to the horizon.

At the break of dawn we went to the palace, were we already found the greater part of the mandarins in the assigned place. The Father had already drawn a line on the table, to which line the shadow had to touch at the moment of noon. We delivered everything to the 4 mandarins who had come to our house.

And one of them, in front of the Colao, the Adversary and the Moor, measured the gnomon, and found it to be the same that had been previously given to us, and asked the Father if it was the transverse line, to the limit of which the shadow had to reach at noon?

He answered yes, and showed it to the Colao, the Adversary, the Moor, and the rest of the mandarins, who were many.

The gnomon and the table were adjusted to the horizon; and at the time when the sun reached its peak at mid-day, the shadow joined with the assigned line so that the space between the one and the other could not admit the width of a hair.

It is not possible to express the pleasure, the happiness and applause of all those present, who were about a hundred persons, but above all of the Tartar mandarins, who were besides themselves in joy and contentment.

E o principal delles, virando se para o Colao, disse :

« Pois tem V. M. alguma couza que dizer? ». Respondeo, não por vontade, mas por não falar contra todos, e contra o sol, respondeo:

« Esta muito bem feita, e muito justa esta acção ».

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O mesmo perguntarão os Tartaros, ao adversario e ao mouro, os quaes não puderão deixar de confessar a verdade.

Acabado este acto logo aly nos avizarão, que ao outro dia que erão 29 de Dezembro, por ordem do Rey, fossemos à torre das observações mathematicas, e no estilo que ali está de bronze, fizesse o Padre a mesma observação; mas por que o estilo estava torto fossemos naquella tarde concerta-lo, como nos parecesse, e o sellassemos com nosso sinete, e por elles mandarins mandarão gente de guarda, para que os inimigos comuns não fizessem das suas. Assy se fez.

E ao outro dia, assinando primeiro o Padre com huma linha o lugar onde avia de chegar a sombra, chegada o meyo dia, como se o Padre a tivera na mão, e a cortara com huma tizoura assy se ajustou com a linha. Louvado seja nosso grande Deos que tal saber e tal poder dá a seus servos, para confusão do demonio, e de seus sequazes e ministros.

Se as duas primeiras acções forão festejadas, esta 3^a o foi *supra modum*, em grande

And the principal one of them, turning towards the Colao, said:

“But does your Excellency have anything to say?” He answered, not willingly, but so as not to speak against everybody, and against the sun, and replied:

“This action was very well done, and very exact.”

The Tartars asked the same of the Adversary, and of the Moor, who were unable to refrain from confessing the truth.

This affair being concluded, we were at once told that the next day, which was the 29 December, by order of the King, we should go to the tower of mathematical observations, and the Father should make the same observation with the gnomon of bronze which was there; but because the gnomon was twisted we went there that evening to fix it,³⁹ as it seemed to us, and we sealed it with our signet, and as for the mandarins, they sent some guards, so that our common enemies could not play tricks. So it was done.

And the next day, the Father having first marked with a line the place where the shadow had to reach, it reached there at mid-day, just as if the Father had held it in his hand and cut it with scissors, so well it fitted the line. Praised be our great God, who gives such knowledge and power to his servants, to the confusion of the demon, and of his followers and ministers.

If the two first events were celebrated, the third was celebrated extraordinarily, and in

³⁹ According to Verbiest, the ‘fixing’ was done as on the first day, by fixing a plate of wood to the to the top of the same (misaligned) gnomon as before, but at the height specified for that day’s observation: Golvers and Nicolaidis, Eds., (2009), 124.

maneira. E assy todos, particularmente os Tartaros, e destes os 4 mandarins acima referidos, que são, não juizes, mas nossos patronos, e defensores, com elles os dous presidentes da mathematica, e todos os mais Tartaros daquelle tribunal, não só nos davão os parabens, mas entre sy os davão, e reci-

(fol. 272v)

-bião com grande festa e alvoroço.

E porque *ex ore infantium et lactentium Deus perfecisti laudem*, estando todos os mandarins juntos à parte, conferindo e consultando a resposta que avião de dar ao Rey do sucedido, veyo correndo hum menino de 14 annos, pagem do supremo mandarin das cortezias, e em alta voz nos disse : « Padres, Padres, alegrem-se, que todos os senhores mandarins estão contentissimos e dizem de vós grandes louvores,

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que sois grandes homens e letrados, e assy o hão de dizer ao Rey ». Atras deste veyo outro de idade de dez annos, que tambem em voz alta, e em presença de muita gente disse : « Fizestes bellissimamente, e todos estão pasmados de vosso saber e partes !»

5º

Voltamos para o paço. Entrarão os mandarins ao Rey e o informarão

the grand manner. And so all, particularly the Tartars and the 4 of them who were the mandarins aforementioned, who are not our judges but our patrons, and defenders, together with the two presidents of Mathematics,⁴⁰ and all the remaining Tartars of that Tribunal, not only gave us compliments, but gave them to one another, and

received them with great rejoicing and enthusiasm.

And since ‘*Out of the mouth of babes and sucklings hast thou perfected praise, O God*’,⁴¹ while all the mandarins were gathered together apart [from us], conferring and consulting on the answer that they had to give the King on what had taken place, there came running a boy of 14 years, page⁴² of the chief mandarin of [the Board of] Rites, and said to us in a loud voice “Fathers, Fathers, rejoice, for all the mandarin lords are extremely pleased, and are saying great things in praise of you,

that you are great and learned men, and so they will tell the King.” Behind him came another one, of ten years, who also said in a loud voice in the presence of many people: “You have done beautifully, and all are astonished at your knowledge and parts!”

(POINT 5) We returned to the palace. The mandarins went in to the King and told him of everything in detail, and he was

⁴⁰ Since this would have been Mahu and Yang Guangxian, this seems unlikely. Perhaps ‘mathematicas’ here is an error for ‘cortezias’, so that the reference is to the two Secretaries of the Board of Rites (mentioned a few lines later), which was above the Tribunal of Mathematics: see note 32.

⁴¹ This is a quotation from the Vulgate version of Psalm 8:2.

⁴² This boy, and his younger colleague mentioned a little later, were presumably what were called *baitang*’a 柏唐啊 (Manchu *baitangga*, ‘useful’ hence by extension ‘messenger boy’). A son of the eminent imperial bondservant Tang Ying 唐英 (1682-1756) joined the emperor’s household in a post of this kind: see Bing Zhao (2017). “Knowledge and locality: the case of Tang Ying and Jingdezhen” ed. Jami in *Individual itineraries and the spatial dynamics of knowledge: science, technology and medicine in China, 17th - 20th centuries*, Paris, Collège de France: Institut des Hautes Études Chinoises.: 137-171, 167.

miudamente de tudo, e elle se alegrou *supra modum*, e maneira; quiz ver o estilo com a taboa, e parufuzos, e dous mappas, hum em que o Padre mostrava claramente como a terra he redonda, e outro da sombra falsa e verdadeira de que acima faley. Os mappas deixou o Rey em seu poder. O estilo e taboa nos mandou entregar, com ordem que a guardassemos. E logo em presença de mais de 200 homens, mandarins, gentishomens do Rey, e outros, nos mandarão pôr de joelhos, e levantando hum delles a voz disse: « O Rey vio o vosso estilo e os mappas; estes deixou, e aquelle vos manda entregar, e que o guardeis *xim xam xim hum hin* ».

Formais palavras que querem dizer: o imperador folgou profundamente. Frazi China que elles dizem ou usam quando querem explicar o summo da cousa, ou acção.

Acrecentou : « O Rey vos manda a vós, Fernando Verbiest, que vejais estes dous livros que fez o mouro, hum he calendario, e

extraordinarily pleased; he wanted to see the gnomon with the table, and the screws, and the two diagrams, in one of which the Father showed clearly how the earth is round,⁴³ and in the other the false and true shadows of which I have already spoken. The King kept the diagrams in his possession. The gnomon and the table he ordered to be handed over to us, with the order that we should keep them. And then in the presence of more than 200 men, mandarins, gentlemen of the King, and others, they ordered us to kneel, and one of them said, raising his voice: “The King has seen your gnomon and the diagrams; He keeps these, and the other he orders to be handed to you, and that you should keep it *xim xam xim hum hin*.”⁴⁴

These are formal words meaning ‘The Emperor is very pleased’ a Chinese phrase that they say or use when they want to express the utmost of some thing, or action.

He added: “The King orders you, Ferdinand Verbiest, that you shall read these two books made by the Moor, one the calendar and the other the movements of the planets,

⁴³ Objections to the idea of the earth as a sphere had played a part in the attack on Jesuit teachings launched by Yang Guangxian (‘the Adversary’) in his book *Bu de yi* 不得已 of 1665. The diagram referred to may have been one of those later published by Verbiest in his detailed refutation of Yang’s objections, in his treatise *Bu de yi bian* 不得以辨 probably brought to final form in 1669. See Nan Huai ren 南懷仁 (Ferdinand Verbiest) (completed 1669) *Bu de yi bian* 不得已辯 (*Refutation of [the book by Yang Guangxian] Bu de yi*). Beijing, 47b-52b, discussed in Grete Moortgat (1993). “Verbiest et la sphericité de la terre” ed. Jami and Delahaye in *L’Europe en Chine*, Paris, Collège de France, Institut des Hautes Études Chinoises: 171-204. This was apparently the first occasion on which Verbiest raised this matter before the emperor.

⁴⁴ Henri Josson and Leopold Willaert (1938) *Correspondance de Ferdinand Verbiest de la Compagnie de Jésus*. Bruxelles, Palais des académies, 1938., 147 n15 suggests the transcription *Kin chang kin hoang nenn* (Pinyin perhaps: *qin shang qin huang en*), which they say means ‘Nous remercions respectueusement les grands bienfaits impériaux’; but what Chinese characters might be represented in the original *xim xam xim hum hin* they do not say. Some help may be obtained from the treatment of this incident in Adrien Greslon (1671) *Histoire de la Chine sous la domination des Tartares, ou l'on verra les choses les plus remarquables qui sont arrivees dans ce grand Empire, depuis l'annee 1651 ... jusqu'en 1669*. Paris, Jean Henault, 348. Greslon, who knew Chinese, transcribes as ‘Chim, Chàm, Chìn, Hùm, Hì, c’est à dire: le saint Roy a recue un tres-grand plaisir’. Greslon includes in the ‘Avertissement’ (part IV) with which his book begins a detailed discussion of how Chinese is to be pronounced on the basis of his romanisation, and hence it is possible to suggest, as has Catherine Jami (private communication, May 2018), that this represents the words *Sheng shang xin hong xi* 聖上心鴻釐 ‘The heart of the Sage Emperor [feels] great happiness’. *Sheng* ‘Sage’ does of course also bear the idea of ‘holy’, i.e as Greslon puts it in French ‘*saint*’.

<p>o outro os movimentos dos planetas, do anno que vem. Apontados os erros e explicados, com hum memorial vosso, entregay tudo ao supremo tribunal das cortezias, para que o entregue ao Rey ».</p> <p>Isto he o que até agora passou. Na verdade he cousa grande, mas mayor he o que esperamos, que</p> <p>[148]</p> <p>he a publicação da santa ley. Nem a boa fe, e esperança, como cuidado, nos engana, porque alem das misericordias do Senhor, nosso grande bem e grande Deos, que tem a faca e o queijo, que tem vontade e poder, todos os regulos, todos os grandes, todos este povo, assy o dizem, assy o pronosticão, que a ley de Deos se ha de publicar neste imperio.</p> <p>Fiat! Fiat!</p>	<p>for the coming year.⁴⁵ Having pointed out the errors and explained them, submit everything in a memorial to the supreme Tribunal of Rites, so that they can pass it on to the King.”⁴⁶</p> <p>This is what has happened so far. In truth it is a great thing, but what we hope for is greater, which</p> <p>is the publication of the holy law. Nor are we deceived by good faith or hope, I am careful [to say], since apart from the mercies of the Lord, our highest good and great God, who has the means to decide, and who has will and power, all the princes, all the great men, and all this people say and foretell that the law of God must be published in this empire.</p> <p><i>‘Let it be! Let it be!’</i></p>
<p>6^o</p> <p>Ainda que o portador está com o pé no estribo, e nós cansadissimos e occupados, não posso deixar de contar a Vs. Rs. huma cousa que muito nos consolou.</p> <p>Entre os grandes inimigos, que na perseguição passada tivemos, foi hum Tartaro velho, que então era mandarin do tribunal das cortezias, a quem o tribunal da mathematica está sojeito, como já acima disse. Era tão inimigo, que elle recebeo a</p>	<p>(POINT 6) Although the bearer has his foot in the stirrup, and we are extremely tired and busy, I cannot omit recounting to Your Reverences one thing that has consoled us greatly.</p> <p>Amongst the great enemies that we had during the past persecution was an old Tartar, who was then a mandarin of the Tribunal of Rites, to which the Tribunal of Mathematics is subject, as I have already said.⁴⁷ He was such an enemy, that he</p>

⁴⁵ These are the documents that Wu Mingxuan had been ordered to prepare in October: see note 10.

⁴⁶ This instruction is referred to in *CYJL*, 6b-7a, where he agrees with Magalhaes that it was issued verbally on 29th December 1668.

⁴⁷ It is not possible to come to a definite conclusion as to the identity of this person. But given the leading role attributed to him by Magalhães in the prosecution of Schall and his colleagues, and given that he is identified as a Tartar (i.e. Manchu), holding what was evidently senior office in the Board of Rites *Li bu* 禮部, the choices are limited. A strong possibility is that this person is Buyan, who was the Manchu President of the Board of Rites in late 1668 (see note 32), and was the most senior Manchu present on December 27th when ‘the mandarins’ became

petição do adversario contra o Padre João Adão, e contra nós dizendo então muitas maldades contra o Padre João Adão e muitas blasfemias contra a ley de Deos; e quando nos prenderão, por suas mãos nos lançou as cadeas ao pescosso, e nas mãos; acção indecente á sua pessoa e officio, mas a paixão cega tudo traga, em nada repara. Este pois, conhecida a verdade, de Saulo se converteo em Paulo, e he o mayor amigo e defensor

(fol. 273r)

que temos, como mostrou em todas as acções acima referidas, dando boas reprehensões ao adversario e mouro, quando elles por sua inveja, malevolencia, e maldade dizião desproposi

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tos; dizendo sempre de nós muitos louvores, que eu bastantemente entendia.

E ao Padre Verbiest continuamente dizia em Tartaro : *Mam Mam*; que quer dizer homem raro e exquisito e milagroso.

received the petition of the Adversary against Father John Adam, and against us, saying many cruelties against Father John Adam, and many blasphemies against the law of God; and when we were arrested, he threw the chains on our necks and on our hands with his own hands; an action unworthy of his person and office, but blind passion devours everything and makes no amends. But later, when the truth was known [to him], he changed from Saul to Paul, and is the best friend and defender

that we have, as shown in all the actions already referred to, giving good rebukes to the Adversary and the Moor, when through their envy, ill-will and wickedness they talked nonsense;

always saying much in praise of us, which I fully understood.⁴⁸

And to Father Verbiest he continually said in Tartar: *Mam Mam*; which means a rare, exquisite and wonderful man.⁴⁹

When Yin Ta Ye, whose saint's name is Lourenço,⁵⁰ and who all the Fathers of

'extraordinarily annoyed' after realizing that Yang Guangxian and Wu Mingxuan had made misleading statements about their abilities: see section 66 above. On that occasion Buyan might certainly have been said to have given them 'good rebukes' as Magalhães says. In 1665 he was *zuo shi lang* 左侍郎 'left assistant (to the President of the Board of Rites)', i.e. Deputy President of the Board: see *Qing shi gao*, 180, 6380. He was therefore in office when the Board of Rites received Yang Guangxian's 'petition' as Magalhães calls Yang's submission to that Board in September 1665, and thus could certainly have taken the actions against the Jesuits of which Magalhães complains. Another possibility is that this is Kecibe (chinese: Qichebai 祁徹白), who was the Manchu President (*shang shu* 尚書) of the Board of Rites from 1662 to 1667, and again briefly in 1671. See Shu-Jyuan Deiwiks (2003) "The secret Manchu archives on the trial of Jesuit missionary Johann Adam Schall (1592-1660) before the supreme court of Peking." *Monumenta Serica* 51: 641-648, 642, where he is noted as having submitted no less than twelve memorials during the trial, also *Qing shi gao*, 180, 6375 and 180, 6392, and Pih (1979), 173-176

⁴⁸ Here Magalhães seems to be claiming that he can follow spoken Manchu – which is consistent with his translations of Manchu words earlier in this letter.

⁴⁹ So far it has not been possible to identify and translate the Manchu phrase here represented.

⁵⁰ If we read the 'Ta Ye' part of this appellation as *da ye* 大爺, a respectful reference to an older person, then it is possible that this is Yin Kai 殷鑑. He was a disciple of Schall in the astronomical bureau, but was purged when Schall was dismissed: see Ping-Ying Chang (2022) *The Chinese Astronomical Bureau, 1620-1850: lineages, bureaucracy and technical expertise*, London: Routledge, chs 2 and 3, also the reference to his promotion on 26 February 1663 recorded in a document preserved in the Academia Sinica Grand Secretariat archives *Nei ge da ku*

<p>O que ouvindo o Yin ta ye, cujo santo nome he Lourenço, que os Padres de Cantão todos conhecem, com os olhos arrazados e agora, e com as mãos levantadas ao Ceo exclamou e disse : « Reverendos Padres, nossos pays spirituaes, grande he o poder de nosso Deos, que foi servido de mudar este homem, que era tão grande inimigo da ley santa, e de seus pregadores! Mayor milagre he para mim, accrescentou o bom christão, mudar N. Senhor o coração de hum peccador, de hum mau, e dispolo a que conheça, e ame a verdade e o bem, que antes aborrecia, que criar hum e muitos mundos ».</p>	<p>Canton know, heard this, then with his eyes full of tears and his hands raised to heaven, exclaimed saying “Reverend Fathers, our spiritual parents, great is the power of our God, who has been able to change this man, that was such a great enemy of the holy law, and of its preachers! It is a greater miracle for me” added that good Christian, “that the Lord changes the heart of a sinner, by one hand, and makes him disposed to know and love the truth and the good, which before he abhorred, than to create one and many worlds.”</p>
<p>7º</p> <p>Já acima disse, que tinhamos alguma probabilidade que por via do 4º regulo soubera o Rey de nós. Oje nos disserão em muito segredo, que fora o 2º mandarim do tribunal das cortezias, Tartaro de grandes partes, e que de novo entrou neste tribunal. Tambem podemos cuidar que foi hum parente de Lourenço Yin ta-ye, de que immediate acima faley, que he menino da camara do Rey, ao qual Lourenço Yin ta-ye tinha bem informado e industriado. Como soubermos de rays, com o mais que soceder procuraremos avizar a Vs. Rs. O que pedimos são instantes orações para que Nosso Senhor dê felizes fins a tão excellentes principios, para gloria sua, e salvação das almas.</p>	<p>(POINT 7) I have already said that we believe there to be some probability that it was by way of the 4th Regulo that the King knew of us. Today we were told in great secrecy that it was the second mandarin of the Board of Rites, a Tartar of great parts, and who is newly entered into this Tribunal.⁵¹ We may also have to bear in mind that it might have been a relation of Lourenço Yin ta ye, of whom I have just spoken, who is a page of the King’s chamber, who Lourenço Yin ta ye had well informed and instructed. When we know for sure what else is to happen, we shall try to warn Your Reverences. What we ask are instant prayers that Our Lord should give a happy end to such excellent beginnings, for his glory and the salvation of souls.</p>

dang an 內閣大庫檔案, item 091306: I am grateful to Catherine Jami for helping me make this identification. Search via <https://newarchive.ihp.sinica.edu.tw/mcttp/>.

⁵¹ Pih suggests that this ‘Tartar of great parts’ might not in fact have been someone newly entered into the ‘Tribunal of Ritual’ *Li bu* 禮部, but instead may have been Songgotu 索額圖 (1636-1703), who in 1668 was given the second ranking post in the similarly named *Li bu* 吏部, the Board (‘Tribunal’ as Magalhaes terms it) of Civil Office: see Pih (1979), 214. It is possible that Magalhaes confused the two titles. Songgotu gave important support to Kangxi in the coup that overthrew Oboi in 1669: see Robert B. Oxnam (1975) *Ruling from horseback: Manchu politics in the Oboi Regency, 1661-1669*. Chicago, University of Chicago Press, 169, and 187-188.

8^o

O 4^o regulo nos mandou chamar, e dia de S. Sylvestre, nos deu huma lamina de Nossa Senhora

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de S. Lucas. Aos pés da Senhora, de huma, e outra banda, nossos santos Padres Ignacio e Francisco Xavier, pintura muito fina, excellente e primorosa fasquias de pao preto muito bem feitas, obra Europea; e por fora outras fasquias de cú-tán (não sey o nome deste pao em portugues) obra China, mas muito perfeita. O regulo nos disse:

« Eu queria adorar e reverenciar a Senhora, mãy do Ceo, em meu paço. Porem pôr tão grande Senhora entre os pagodes não me atrevo, adora-la em particular tenho medo, que erre no culto e no obrar. Pello quê, me resolvy a vos pedir que leveis a santa imagem para vossa caza, e que em meu lugar, agora occultamente, e passados alguns dias, como a igreja se abrir, a venereis publicamente. A cera do altar, e o azeite da alampada ficará à minha conta ».

Bom pronostico por certo que em dia de S. Sylvestre a Senhora e seu Unigenito Filho se manifeste ao mayor regulo desta corte. Já pode ser para se manifestar algum dia ao imperador da China, que se chamara Constantino. *Fiat! fiat!*

(POINT 8) The 4th Regulo asked us to call, and on St Sylvester's day [31 December 1668], he gave us a plate of Our Lady

of St Luke. At the feet of Our Lady were, on both sides, our holy Fathers Ignatius and Francis Xavier, a very fine, excellent and exquisite painting, [on] very well made sheets of black wood, European work, and on the exterior other sheets of cú-tán (I do not know the word in Portuguese), Chinese work, but very perfect.⁵² The regulo said to us:

“I wanted to worship and reverence the Lady, mother of Heaven, in my palace. But I do not dare to place such a great lady amongst the pagodas,⁵³ and I was afraid to worship her in private, lest I should err in the ritual and work. Because of that, I resolved to ask you to take the holy image into your house, and on my behalf, to worship her in hiding at first and when your church opens in a few days, publicly. The candles for the altar, and the oil for the lamp, shall be at my charge.”

Certainly a good omen that on St Sylvester's day the Lady and her Only-begotten Son should show themselves to the greatest prince of this court. It may be one day that she should show herself to the emperor of China, who shall be called Constantine. *'Let it be! Let it be!'*

This holy image was sent to the 4th regulo by the *cim nam Vam*,⁵⁴ who is in the

⁵² I am grateful to Georges Métaillé (private communication, July 2018) for the suggestion that this may be 紫檀 *zi tan*, identified as *Pterocarpus indicus* Willd., a wood known in French as ‘santal rouge’ (red sandalwood), and in English as ‘narra’, or ‘amboyna’ amongst other names. This is a fine-grained hardwood, highly suitable for delicate panel-making of the kind to which Magalhães refers.

⁵³ Here used in the sense of “images of deities”, rather than referring to the building in which they were worshipped. See for example the usage of the word ‘pagode’ in the Portuguese account of travels in India and Tibet written by Francisco de Azevedo SJ. (1578 – 1660), transcribed in C. Wessels (1924) *Early Jesuit travellers in Central Asia : 1603-1721*. The Hague, Nijhoff, 311, where a ruler is said to have built a magnificent temple ‘ao seu Pagode’ (for his idol).

⁵⁴ Jossion and Willaert (1938), 150 insert the possible romanisation ‘[*Tsin nan wang?*]’ after these words. It seems likely that the original Chinese term was Jing Nan Wang 靖南王 (‘Prince pacifying the south’). This title was

<p>Esta santa imagem mandou o <i>cim nam Vam</i> que está na provincia Fo Kien ao 4^o regulo. Deos sabe se a furtou da igreja. O Padre Antonio de Gouvea pode resolver a duvida.</p>	<p>province of Fujian. God knows if it was a theft from a church. Father Antonio de Gouvea will be able to resolve any doubts.</p>
<p>9^o</p> <p>Pedimos a Vs. Rs. os pontos seguintes.</p> <p>a) Que em todo caza se vão preparando hum ou dous Padres para a mathematica; por que o Padre Fernando Verbiest unico, e homem, e como tal sojeito às leys de Lybytinia; e dous, ou hum, para a lima e martello. Nem se desprezem Vs. Rs. de mecanicos e de serem serralheiros; quando o espozo da Raynha do Ceo e terra, da mayor Senhora do mundo, da Virgem e Mãe de Deos, foi mecânico e carpinteiro. Saybão que estimo mais huma lima, e huma serra, que as mitras, e coroas dos Pontifices, e Reys, e Emperadores. Grande he minha honra, grande minha gloria, pois sou serralheiro de Deos, e official de Christo.</p> <p>b) Que os Padres que estão em Cantão, tenham muito resguardo no falar contra nossos</p> <p>(fol. 273v)</p> <p>inimigos.</p> <p>c) Pedimos ao P^e Visitador e mais superiores e o todos os Padres que nos queirão ajudar com o que puderem de peças e brincos, por</p>	<p>(POINT 9) We make the following requests to Your Reverences.</p> <p>(a) That in every house one or two Fathers should be trained in mathematics, since Father Ferdinand Verbiest is just one single man, and as such subject to the laws of Lybytinia;⁵⁵ and two or one for the file and the hammer. And let not Your Reverences look down on mechanics, and on being locksmiths; when the husband of the Queen of Heaven and Earth, the greatest Lady in the world, the Virgin and Mother of God, was a mechanic and a carpenter. Know that I esteem a file and a saw more than mitres and crowns of Popes and Kings and Emperors. Great is my honour, and great my glory, since I am God's sawyer, and servant of Christ.</p> <p>(b) That the Fathers who are in Canton should take great care not to speak against our enemies.</p> <p>(c) We request the Father Visitor, and those in higher positions, and all the Fathers in Canton who are willing, to help us as far as they can with toys and trinkets, because it is</p>

held at the time of Magalhães' letter by Geng Jimao 耿繼茂 (d. 1671), a ruthless supporter of the Qing conquest of the south, who had massacred the adult population of Canton in 1650: see Arthur William Hummel (1943) *Eminent Chinese of the Ch'ing period, 1644-1912*. Washington, D.C., U.S. Government Printing Office, Vol. 1, 415, where it is noted that he was transferred to Fujian in 1660. His portrait is given in Johannes Nieuhof (1665) *Het Gezantschap der Neêrlandsche Oost Indische Compagnie, aan den grooten Tartarischen Cham, den tegenwoordigen Keizer van China ... sedert den jare 1655 tot 1657: Beneffenseen naukeurige Beschrijving der Sineesche Steden, Dorpen, Regeering. Wetenschappen*, 49. We know too that Antonio de Gouvea was active as a missionary in Fujian around this period: see Donald F. Lach (1993) *Asia in the making of Europe: Vol 3: a century of advance; Book 1: Trades, missions, literature*. Chicago, University of Chicago Press, 357.

⁵⁵ The reference here is presumably to Libitina, Roman goddess of funerals – hence, by extension, he is saying that Verbiest is only mortal.

<p>que não he creyvel quanto se faz, e quanto se acquire com estas couzas; e agora vão a olhos vistos e aos pares cada dia cressendo, os amigos, e obrigações.</p> <p>Tanto que o Rey resolver e determinar a mathematica, e dar o cuidado della ao Padre, daremos o presente ao Rey, que está já aparelhado; e daremos muitos presentes a todos os benemeritos, e defensores que são muitos, e ficaremos de todo limpo desse pouco que temos, e pello tempo adiante he força que aja novas occaziões e obrigações. Pello quê, he necessario socorrerem Vs. Rs. a seus irmãos com semelhantes virtualhas, e munições, para que possão conti</p> <p>[152]</p> <p>nuar a conquista, e aplinar o caminho aos Padres de Cantão para suas igrejas, o que com a graça divina parece será muito cedo; e aos Padres de Macao, Goa, e toda Europa, para todo o imperio da China.</p>	<p>incredible how much is done, and how much can be gained with these things; and now we can clearly see before our eyes that our friends and our obligations grow more every day.</p> <p>As soon as the King comes to a decision about mathematics, and gives the care of it to the Father, we shall give the present to the King which is already prepared;⁵⁶ and we shall give many presents to all the benefactors, and to our defenders who are many, and so we shall use up all the little we have, and in the time to come we shall surely have new occasions and obligations. Because of which, it is necessary that Your Reverences should help your brothers with such supplies and munitions, so as to enable them to continue</p> <p>the conquest, and smooth the way for the Fathers of Canton for their churches, which with divine grace will be very soon; and for the Fathers of Macao, Goa, and the whole of Europe, for the whole empire of China.</p>
<p>10º</p> <p>Aos 17 de Dezembro passado fomos chamados pello tribunal das corteziyas, onde per ordem dos assessores do Rey e dos dous governadores vertemos em China a carta do governador de Jacatra, com ordem do presidente para o Cùm tò 1º Geral dessa provincia de Cantão.</p> <p>Vertemos mais outros papeis e petições que os Olandezes derão aos mandarins nesse Cantão, tudo afim de lhes conceder o Rey o</p>	<p>(Point 10) On the 17th December past, we were summoned to the Tribunal of Rites, where by order of the King’s Assessors and the two governors we translated into Chinese the letter of the governor of Jacarta, with the order of the president [of the Tribunal] for the <i>Zong du</i>,⁵⁷ the leading officer in charge of the province of Canton.</p> <p>We also translated other papers and petitions that the Dutch had given to the mandarins at Canton, all with the aim that</p>

⁵⁶ On the preparation of gifts for the emperor, see Gabriel de Magalhães (1667 October 12) Letter addressed to the Father Visitor at Macao, 12 October 1667 (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 194r-195v.

⁵⁷ *Zong du* 總督, the term evidently represented by Cùm tò is normally translated in English as ‘Governor General’ or ‘Viceroy’. From 1668 to 1670, the ‘*Zong du* of Canton’ was Zhou Youde 周有德, who was in overall charge of the provinces of Guangdong 廣東 and Guangxi 廣西, the ‘Two Guangs’ *liang guang* 兩廣.

<p>commercio. Porem Deos quer bem a Macao e não lhes quiz acressentar este trabalho. Antes, depois de tão mortificados lhes ha de fazer muitas mercês, e em breve, como rogo a N. Senhor, ha de restituir àquella cidade a sua antiga paz e felicidades; que emfim nosso Deos he nosso Pay, e Macao he cidade do nome de Deos, emporio e amparo de tantas christandades. Pello quê, oje soubemos como hia despacho, e ordem do Rey que não sejam os Olandezes admittidos, nem seu commercio. E mais huma reprehensão ao Cùm tò, 1 géral da provincia de Cantão, pellos admittir, e por que logo os não mandou quando chegarão.</p>	<p>the King should allow them to trade. But God wishes Macão well, and did not want this effort to succeed. Rather, after such mortifications he will give them many favours, and soon, as I have asked Our Lord, he will restore that city to its former peace and tranquillity; for in the end God is our Father, and Macão is a city of the name of God, an emporium and shelter of so many Christians. For this reason, today we heard that there had been a dispatch, and an order of the King that the Dutch should not be admitted, nor should their trade. And further, a rebuke to the <i>Zong du</i>, the leading officer in charge of the province of Canton, for admitting them [i.e. the Dutch], and then for not having sent them back when they arrived.</p>
<p>11º</p> <p>No mesmo dia 17 de Dezembro soubemos como avia 20 e mais dias que tinha partido desta corte hum correyo com despacho do Rey para que pudesse o Senhor embaixador vir para Pekim corn sua embaixada. Estão os mandarins e grandes com notavel expectação, esperando o embaixador pella grande fama, que tem nesta corte, de pessoa principal em</p> <p>[153]</p> <p>seu reyno, de explendido e grandiozo em seu trato, de prudente e cortezão nos negocios. Deos o traga com felicidade para gloria sua e bem de Macao e christandades. Tudo Deos faz por melhor. Se viesse logo quando chegou, fria e seccamente seria recebido. Agora <i>altera rerum facies</i>, outros ares, outro mundo.</p>	<p>(POINT 11)</p> <p>On the same day of 17th December, we learned that it was 20 days and more since a courier had left the court with a dispatch from the King by which the Lord ambassador should come to Beijing with his embassy. The mandarins and great ones are in exceptional expectation of the ambassador, by reason of his great renown that he has in this court, as a principal person in</p> <p>his kingdom, and of his splendid and gracious manner of dealing, and of his prudence and courtesy in business. May God lead him happily, for his glory and for the good of Macão and of the Christians. God does everything for the best. If [the ambassador] had come [to Beijing] shortly after his arrival [in Macão] his reception would have been cold and dry. But now <i>'things have a different appearance'</i> - another atmosphere and another world.</p>
<p>Perdoem Vs. Rs. os erros e inconcinas frases deste borrão, que foi feito com muito pressa e de noite, sem ordem e disposição.</p>	<p>May Your Reverences pardon the errors and prolixities committed in this rough draft, which was done in a great hurry and at night, without order or disposition. With</p>

<p>Na benção e santos sacrificios de Vs. Rs., etc. Pekim, 2 de Janeiro de 1669</p> <p>De Vs. Rs. em o Senhor filho, subdito e servo</p> <p>GABRIEL DE MAGALHÃES LUIS BUGLIO • FERDINANDO VERBIEST</p> <p>Este traslado está tirado fielmento do original que me mandou o Padre Gabriel de Magalhães de sua letra.</p> <p>Macao, 8 de Março de 1669</p> <p>LUIS DE GAMA</p>	<p>the blessing and holy sacrifices of Your Reverences, etc., Beijing, 2 January 1669.</p> <p>Of Your Reverences, in the Lord I am son, subject and servant.</p> <p>GABRIEL DE MAGALHÃES LUIS BUGLIO • FERDINANDO VERBIEST</p> <p>[Handwriting of Father Luis da Gama:] This transcription was taken faithfully from the original of his letter sent to me by Father Gabriel de Magalhães.</p> <p>Macão, 8th March 1669</p> <p>LUIS DA GAMA</p>
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Abbreviations:

CYJL: See *Qin ding xin li ce yan ji lu*.

XCDA: See *Xi chao ding an*.

Bibliography

Buglio, Ludovico (1669 June 17) Letter addressed to Father Luis da Gama, the Visitor, Father Provincial and to all the Fathers likewise, 17 June 1669 (manuscript). Biblioteca da Ajuda, Lisbon, Jesuitas na Ásia 49-IV-62, ms. 1643 folio 545v-548

Chang, Ping-Ying (2022). *The Chinese Astronomical Bureau, 1620-1850 : lineages, bureaucracy and technical expertise*, London : Routledge.

Chen Zhanshan 陈占山, Ed., (2000). *Bu de yi, fu er zhong* 不得已, 附二种 (*I cannot do otherwise* ' [by Yang Guangxian 楊光先, 1597-1669] and two other works). Hefei, Huangshan shu she 黄山书社.

Cullen, Christopher and Catherine Jami (2020). "Christmas 1668 and after: how Jesuit astronomy was restored to power in Beijing." *Journal for the History of Astronomy* **51** (1): 3-50.

Cullen, Christopher and Catherine Jami (2022). "Prediction and politics in Beijing, 1668: A Jesuit astronomer and his technical resources in a time of crisis." *Journal for the History of Astronomy* **53** (4): 422-474.

Cullen, Christopher and Catherine Jami (2023, forthcoming). Ferdinand Verbiest and the 'Muslim astronomical system' of Wu Mingxuan, 1669. *Tanshi qiuxin: Qingzhu Guo Shuchun xiansheng bashi huadan wenji* 探史求新：庆祝郭书春先生八十华诞文集 (*Festschrift for the 80th birthday of Professor Guo Shuchun*). Zou Dahai, Guo Jinhai and Tian Miao, Eds. Harbin, Harbin Gongye Daxue Chubanshe 哈尔滨工业大学出版社 (Harbin Institute of Technology Press).

Da Qing li chao shi lu 大清歷朝實錄 (*Veritable records of the successive reigns of the Great Qing dynasty*). (1937). Anon., Xinjing 新京 (Changchun 長春), Da Manzhou di guo guo wu yuan 大滿洲帝國國務院

Dapper, Olfert (1670). *Gedenkwaerdig bedryf der Nederlandsche Oost-Indische maetschappye, op de kuste en in het keizerrijk van Taising of Sina....* Amsterdam, Bey J. von Meurs.

Deiwiks, Shu-Jyuan (2003). "The secret Manchu archives on the trial of Jesuit missionary Johann Adam Schall (1592-1660) before the supreme court of Peking." *Monumenta Serica* 51: 641-648.

Dong hua lu 東華錄, *Dong hua xu lu* 東華續錄 (*Records from the Eastern Gate, Continuation of Records from the Eastern Gate*). (Preface 1884; first six reigns compiled after 1765). Jiang Liangqi 蔣良騏 (1723-1789) and Wang Xianqian 王先謙 (1842-1917)

Du Halde, Jean-Baptiste (1735). *Description géographique, historique, chronologique, politique, et physique de l'Empire de la Chine et de la Tartarie chinoise, Enrichie des cartes... et ornée d'un grand nombre de figures et de vignettes* (*A geographical, historical, chronological, political and physical description of the Empire of China, and of Chinese Tartary. Enriched with maps ... and adorned with a great number of figures and vignettes*). Paris, P.-G. Le Mercier.

Friedrich, Markus (2008). "Circulating and Compiling the Litterae Annuae. Towards a History of the Jesuit System of Communication." *Archivum historicum Societatis Iesu: periodicum semestre a Collegio Scriptorum de Historia S. I. in urbe editum*. 77: 3-39.

Golvers, Noël (2014). "Ferdinand Verbiest's 1668 observation of an unidentified celestial phenomenon in Peking, its lost Chinese description and some parallel observations, especially in Korea." *Almagest* 5 (1): 33-51.

Golvers, Noël, Ed., (2017). *Letters of a Peking Jesuit: the correspondence of Ferdinand Verbiest SJ (1623-1688)*. Leuven, Ferdinand Verbiest Institute, KU Leuven.

Golvers, Noël and Efthymios Nicolaidis, Eds., (2009). *Ferdinand Verbiest and Jesuit science in 17th century China: an annotated edition and translation of the Constantinople manuscript (1676)*. Leuven Chinese studies. Athens and Leuven, Institute for Neohellenic Research and Ferdinand Verbiest Institute.

Greslon, Adrien (1671). *Histoire de la Chine sous la domination des Tartares, ou l'on verra les choses les plus remarquables qui sont arrivees dans ce grand Empire, depuis l'annee 1651 ... jusqu'en 1669*. Paris, Jean Henault.

Han Qi 韩琦 and Wu Min 吴旻 (2006). *Xi chao chong zheng ji; Xi chao ding an (wai san zhong)* 熙朝崇正集; 熙朝定案; (外三种) (*Collection of documents from the reign of the Kangxi emperor*). Beijing, Zhonghua shu ju.

Huang, Yi-Long and Chih-ch'eng Chang (1996). "The Evolution and Decline of the Ancient Chinese Practice of Watching for the Ethers." *Chinese Science* (13): 82-106.

Hucker, Charles O. (1985). *A dictionary of official titles in imperial China*. Stanford, Stanford University Press.

Hummel, Arthur William (1943). *Eminent Chinese of the Ch'ing period, 1644-1912*. Washington, D.C, U.S. Government Printing Office, 2 vols.

Ibañez, Buenaventura (dated 3 February 1650, printed 1936). Letter to P. Antonium. *Sinica Franciscana*. Anastase Van Den Wyngaert, Ed. Rome, Quaracchi. **3**, 19-23.

Josson, Henri and Leopold Willaert (1938). *Correspondance de Ferdinand Verbiest de la Compagnie de Jésus*. Bruxelles, Palais des académies, 1938.

Lach, Donald F. (1993). *Asia in the making of Europe: Vol 3: a century of advance; Book 1: Trades, missions, literature*. Chicago, University of Chicago Press.

Magalhães, Gabriel de (1666 October) Letter addressed to the Fathers in Canton, October 1666: Relação em que se conta o sucedido na corte de Pe Kim, depois que os Padres della partirão (An account in which is recorded what happened at the court of Beijing, after the Fathers departed from thence) (manuscript). Real Academia de la Historia, Madrid, Jesuitas, ms. Legajo 22 folio 204r-209v

Magalhães, Gabriel de (1667 April) (Draft) Letter addressed to the superiors at Macao and Canton (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 169r-174v

Magalhães, Gabriel de (1667 April 24) Letter to the Father Superior at Canton, Antonio da Gouvea (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 164r - 165v

Magalhães, Gabriel de (1667 October 12) Letter addressed to the Father Visitor at Macao, 12 October 1667 (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 194r-195v

Magalhães, Gabriel de (1669 April 16) Letter addressed to the Provincial Visitor for Japan and China, and to all the Fathers at Macao and Canton (manuscript). Biblioteca da Ajuda, Lisbon, Jesuitas na Ásia 49-IV-62, ms. 1641 folio 538v-543v

Magalhães, Gabriel de (1669 December 31) Letter addressed to the Provincial Visitor for Japan and China, and to all the Fathers of Japan and China (manuscript). Biblioteca da Ajuda, Lisbon, Jesuitas na Ásia 49-IV-62, ms. 1615a folio 403-404v

Magalhães, Gabriel de (1669 January 2) Letter addressed to Luis da Gama, Father Visitor at Macao, 2 January 1669 (manuscript). Archivum Romanum Societatis Iesu, Japonica-Sinica, ms. 162 folio 269-273v

Magalhães, Gabriel de and Adrien Greslon translator (1669 2 January Beijing; translated 6 March 1669 Canton) Lettre des Reverends peres de Pequin envoyée au Reverend pere Visiteur et au R.P. Provincial de la Province de Japon et au R.p. Vicepal. de la province de la Chine, et a nos peres missionaires en Canton. (manuscript). Bibliotheque nationale de France, Francais ms. 14688 folio 153r-164v

Moortgat, Grete (1993). Verbiest et la sphericité de la terre. *L'Europe en Chine*. Catherine Jami and Hubert Delahaye, Eds. Paris, Collège de France, Institut des Hautes Études Chinoises, 171-204.

Mori, Jennifer C. (2016). "Popular Science in Eighteenth Century Almanacs: The Editorial Career of Henry Andrews of Royston, 1780–1820." *History of science* 54 (1): 19–44.

Nan Huairan 南懷仁 (Ferdinand Verbiest) (completed 1669). *Bu de yi bian* 不得已辯 (*Refutation of [the book by Yang Guangxian] Bu de yi*). Beijing.

Nelles, Paul (2018). Jesuit Letters. *The Oxford Handbook of the Jesuits*. Ines G. Županov, Ed. Oxford, Oxford University Press, 44-72.

Nieuhof, Johannes (1665). *Het Gezantschap der Neerlandtsche Oost Indische Compagnie, aan den grooten Tartarischen Cham, den tegenwoordigen Keizer van China ... sedert den jare 1655 tot 1657: Beneffenseen naukeurige Beschrijving der Sineesche Steden, Dorpen, Regeering. Wetenschappen.*

Oxnam, Robert B. (1975). *Ruling from horseback: Manchu politics in the Oboi Regency, 1661-1669*. Chicago, University of Chicago Press.

Pih, Irène (1979). *Le père Gabriel de Magalhães: un jésuite portugais en Chine au XVIIe siècle (Father Gabriel de Magalhães: a Portuguese Jesuit in 17th century China)*. Paris, Fundação Calouste Gulbenkian, Centro Cultural Português.

Qin ding xin li ce yan ji lue 欽定新曆測驗紀略 (*A summary of observations in accordance with the new astronomical system, imperially commissioned*). (1669). Nan Huai ren 南懷仁 (Ferdinand Verbiest)

Qing shi gao 1 (*Draft history of the Qing dynasty*). (1977). Zhao Erxun 趙爾巽 (1844-1927), Beijing, Zhong hua press 中華書局

Raymond, Joad and Noah Moxham (2016). *News networks in early modern Europe*. Boston and Leiden, Brill.

Scapinelli, Lodovico (1801). *Opere del Dottore Lodovico Scapinelli: soprannominato Il Cieco (The works of Doctor Lodovico Scapinelli, surnamed 'The Blind')*. Parma, Reale Tipografia, 2 vols.

Schall von Bell, Johann Adam (1672). *Historica relatio de ortu et progressu fidei orthodoxae in regno Chinensi per Missionarios Societatis Jesu ab anno 1581. usque ad Annum 1669: novissime collectae ex litteris eorundem patrum societatis Jesus ... editio altera et aucta*. Ratisbone, Typis Augusti Hanckwitz.

Tang Ruowang 湯若望 (Johann Adam Schall von Bell) (after 1660, 1993 repr.). Zou shu 奏疏 (Memorials). *Zhong guo ke xue ji shu dian ji tong hui: tian wen* 中國科學技術典籍通彙: 天文 (*Comprehensive collection of classic texts of Chinese science and technology: astronomy*). Bo Shuren 薄樹人 et al., Ed. Zhengzhou, Henan Educational Press. **8**, 857-964.

Verbiest, Ferdinand and Noël Golvers (1993). *The Astronomia Europaea of Ferdinand Verbiest, S.J. (Dillingen, 1687): text, translation, notes and commentaries*. Nettetal, Steyler Verlag.

Wessels, C. (1924). *Early Jesuit travellers in Central Asia : 1603-1721*. The Hague, Nijhoff.

Xi chao ding an 熙朝定案 (*Cases decided during the [Kang]xi reign*). (after 1669). Nan Huairen 南懷仁 (Ferdinand Verbiest), Rome, National Central Library, 72 C530.1

Xu Guangqi 徐光啟 (1562-1633) ed., *Chong zhen li shu* 崇禎曆書 (*Texts on astronomical systems [compiled in] the Chongzhen reign*). (Submitted to the throne between 1630 and 1635, repr. 2009). ed. Pan Nai 潘鼐, Shanghai, Shanghai Gu ji chu ban she 上海古籍出版社

Zhao, Bing (2017). Knowledge and locality: the case of Tang Ying and Jingdezhen. *Individual itineraries and the spatial dynamics of knowledge: science, technology and medicine in China, 17th - 20th centuries*. Catherine Jami, Ed. Paris, Collège de France: Institut des Hautes Études Chinoises., 137-171.