Kundige inlanders – Indigenous Contributions to Jacob Breyne’s (1637–1697) Work

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Summary: During the seventeenth century, the Dutch East India Company employees often made it their task to collect rare exotic plants in the colonies that reached the botanical gardens in their native country and from there, the rest of the world. One of them was Willem ten Rhijne, a doctor and botanist, who acquired plants not only for the garden in Amsterdam but also for the scientist Jacob Breyne, a citizen of Gdańsk. A fracture of their correspondence is kept in the Gotha research library, encompassing five letters from Ten Rhijne, written between 1680 and 1686. Those documents draw attention to the titular kundige inlanders, indigenous experts on botany. Analyzing these documents, this article argues that indigenous scientific systems influenced the works of Breyne to a retraceable extent but also emphasizes that their impact was heavily mediated by his and Ten Rhijne’s understanding of themselves as European scientists and the latter’s association with the company.

Keywords: natural history, indigenous knowledge, botany, VOC
1. The **Vereenigde Oostindische Compagnie** as an Intermediary between Indigenous and European Botanists

Botany was without a doubt the “Big Science” of the so-called Dutch “Golden Age.” Two main arguments support this reasoning: The enormous interest in plant material through all layers of society, either on aesthetic, scientific, or economic grounds, and the trans-regional – if not global – exchange of knowledge and material it entailed. This essay will focus on the scientific aspect of this interest. It will begin introducing the **Vereenigde Oostindische Compagnie** (VOC) as the context for the influence of indigenous science on European natural history and sketch the characteristics of the European and Southeast Asian scientific systems. This background will provide the framework for showing that knowledge of Javan indigenous origin influenced the work of Gdańsk botanist Jacob Breyne (1637–1697). He acquired it from the company employee Willem ten Rhijne (1647–1700) who also had a mediating effect by having been exposed to the information first-hand and then writing it down for his friend. This can be deduced from their correspondence of which only Ten Rhijne’s part can still be found at the Gotha research library. With only five letters dating from 1680 until 1686, the basis for analysis is rather slim. Nonetheless, Breyne’s publications that were based on them communicated aspects of Southeast Asian expertise to scholars across the entire European continent. Thus, making visible the traces of those scientific systems or the associated scientists in the seeming monolith of continental science is worth the effort.

To accomplish this, the essay will elaborate on Ten Rhijne’s approach to the indigenous system of knowledge, followed by his attitude to the one that was specific to the company. Before coming to a conclusion, it will evaluate the importance of native experts for the acquisition of information and plant material. Special attention is drawn to the ambivalent esteem they were held in because of it – one that was characterized both by appreciation and marginalization.

Using the VOC as the frame for botanical efforts already hints at the close relation between economy and science in the seventeenth century. The company had been founded in 1602 to monopolize the trade and prices of much-desired products from Asia. Those were spices but also raw materials, fibers, and pharmaceuticals. Gathering knowledge about economically advan-

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1 Cook 2012, on 23.
2 The term “Golden Age” is widely used for the seventeenth-century Dutch Republic. In the light of recent discussions, its use seems questionable because it omits the Dutch involvement in slave trade, the atrocities committed against native peoples in Asia and South America and the widespread poverty in the Republic itself. Therefore, it is used here once to acknowledge the popularity of the term but not again because of the mentioned reasons. See Siegal 2021 and Van der Molen 2019.
3 Forschungsbibliothek Gotha, Gotha [henceforth FBG], Chart. A 790, fol. 95–111; Chart. B 857b, fol. 194–195.
4 Parthesius 2010, on 34.
tageous plants was thus equivalent to the later industrial research. Therefore, it comes as no surprise that European natural history mainly focused on indigenous expertise on local products that were sought out by traders, medics, and artisans. Breyne was a merchant of Dutch descent who had specialized in dyes but was focused on the Baltic trade. Even though he had connections to high-ranking VOC-associates like Nicolaas Witsen (1641–1717) or Herbert de Jager (1634–1694), they corresponded in their roles as lovers of natural history. The same applies to his exchange with Ten Rhijne whom Breyne either met in Franeker on his tour through the Dutch gardens, or in Leiden. When Breyne was apprenticed in his trade by relatives in the Netherlands, he took the time to follow medical and botanical lectures at Leiden university. Ten Rhijne, in turn, studied in both towns before he travelled to Batavia for the VOC in 1673. There he gave anatomy lessons to company surgeons. Then he moved to Japan for two years where he participated in the journeys to the emperor’s court and gathered information about the country. Back in Batavia, he held various offices in and around the city.

As many company employees did, Ten Rhijne turned his Asian places of residence into research stations. Those ventures were undoubtedly propelled by having the vegetative objects in proximity and the people who knew about their properties. Batavia on the island of Java was the most significant contact point. The city founded in 1619/1620 was a central post for the exchange of goods between Dutch merchants and their counterparts from all over Asia. Next to the Dutch inhabitants, the settlement housed various ethnic communities. The two largest groups were the so-called Mardijkers, free Christian citizens of Asian descent, whose military support the VOC depended on, and the Chinese, who were crucial to the industry. Enslaved people brought from within the Indonesian archipelago and the Indian subcontinent added on the workforce.

Other places of contact often took the form of trading posts. Those could be found in Deshima and Hirado in Japan to Tonking in North Vietnam, on the island of Formosa (Taiwan) and on the Malabar Coast in the Southwest of India. Many more were established, some for longer or shorter periods. They played a crucial role in making first connections to members of native communities who in turn could direct the European researchers to local experts. For this reason, the trading posts can be viewed as “biocontact zones.” The term helps embed the local interaction between Asian indigenous

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5 Brockway 1979, on 450–451.
6 Gascoigne 2015, on 134.
7 Römer 1933, on 861–863.
8 Muralidharan 2021, on 81.
9 For further information on Batavia, please consult Lademacher 2001. See also: Blussé 2008, on 37–44; Blussé 2013, on 356–360.
10 Blussé 2008, on 38.
11 Blussé 2008, on 34–35; Forrer and Kobayashi-Sato 2014; Joseph 1992, on 461–462; Parthesius 2010, on 48 and 145; Schnurmann 2003, on 481–484.
12 Schiebing 2007, on 124.
experts and European botanists in a global context of exchanging plants and their cultural uses. Native specialists were either independent or could be related to the company in some way. They could either belong to the seemingly endless but often surely involuntary suppliers of cash crops or could work in the company gardens either as employees or as enslaved workforce.

Upon close inspection, the relation between the VOC and different groups of indigenous people appears to be of great variation. Enslaved Southeast Asians depended on the company for life. Apart from instances like the occupation of the Banda islands in 1621, where the Dutch enslaved people directly, they purchased them in the archipelago in great numbers. The newly bought workforce was then distributed to the Dutch plantation owners on the Malay islands. The enslaved workers were often not only valued for their labor on the estates but also for their expertise in growing the types of crops the company wanted to raise there.

The fate of natives who were free by VOC distinction was also bound to the production of desired cash crops. Examples are provided by the Dutch’s treatment of Amboon with its clove production and the Banda Islands, where the coveted nutmeg trees grew plentifully. During their occupation, the office-holding governor-general Jan Pieterszoon Coen (1587–1629) nearly had the whole population eradicated, their villages destroyed, and the harvest burned. Of the few hundred survivors, a fracture remained on the Banda Islands to teach the oppressors how to grow and harvest nutmeg, thereby ensuring the monopoly. The Amboonese population suffered a similar fate when the Dutch forced them, after a number of rebellions, to settle along the island shore and took their leaders hostage. Those who attempted to raise cloves outside the VOC-controlled areas faced execution in the late 1640s and 1650s. The people on the islands might have been free nominally but were exposed to the company’s direct volition just the same.

The association of the Dutch East India Company with various Asian individuals could also rest on a voluntary basis. Local bankers and brokers were the main group of experts that merchants turned to as they were relevant to their enterprises. Botanists in high positions within the VOC could access equivalents in their own field. The most famous and well-researched example might be the Hortus Indicus Malabaricus (1678). The book was written by the governor of Cochin, Hendrik Adriaan van Rheede tot Drakenstein (1636–1691). Throughout his office, he established an influential relationship with

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13 Ibid.
14 Brockway 1979, on 454; Winterbottom 2019, on 246.
15 Cook 2007a, on 186.
16 For an example to comprehend the scale of the slave trade, see Taylor 2006, on 30.
17 Cook 2007a, on 187.
18 Winterbottom 2009, on 536.
19 Cook 2007a, on 186–189.
20 Nadri 2018, on 126 and 131–132.
21 On the Hortus Malabaricus, see: Binny 2015; Mohan Ram 2005; Muralidharan 2021.
His position and connections allowed him to assemble a group of native scientists on the coast of Malabar who helped him collect medical and botanical information about the indigenous flora. Many were physicians, some were spiritual authorities in addition to their medical profession. The latter being referred to as brahmins indicates this, together with high social standing. The knowledge they could provide Van Rheede tot Drakenstein with was rather erudite. It was complemented by that of their lower-caste servants who also seem to have been at the Dutchman’s disposal. The plant experts among them were sent into the forests to collect specimens for him. Van Rheede tot Drakenstein repaid his informants with a certain amount of prestige that transcended Southeast Asia by far. In the edition of the first book, he thanks his Asian colleagues by name in the introduction. The three following books of the *Hortus Indicus Malabaricus* were issued by the Amsterdam botanist Jan Commelijn (1629–1692) who made no further mention of the indigenous experts. This probably led to their contributions falling into oblivion for the preceding botanists in the VOC and effectively prevented a collaboration across cultures and generations.

The work of Jacob de Bondt (1592–1631), consisting of the publications *De Medicina Indorum* and *Historiae Naturalis Et Medicæ Indiae Orientalis*, demonstrates that a mere physician, not too different from Ten Rhijne, could draw from indigenous expertise, too, and proudly so. De Bondt explicitly stated that he had learned the distinction of medicinal, edible, and poisonous plants better from indigenous people – shedding special light on the Gujarati and on the Coromandel coast inhabitants – than from most expert botanists in his home country. In turn, he also chastised his European colleagues for their self-appointed superiority and defended his native informants against the increasingly pejorative images painted of them. Despite his best efforts, this prejudiced mindset together with the alterations made to De Bondt’s works by Willem Piso (1611–1678) likely clouded the strong emphasis of indigenous proficiency in the mind of the readers. It is only now that records of traditional plant knowledge by VOC members are being read and reread with the cultural heritage of the Asian botanical experts in mind. Thereby, ethnobotanists for example aim to reintegrate lost knowledge into the scientific systems of the original property holders. The examination of the letters between Breyne and Ten Rhijne is executed with the idea to highlight the traces of indigenous Southeast Asian botany in the documents at hand. Of course, this is too fragmental to make a contribution that is significant to the

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22 Maloni 2006–2007, on 276; Mohan Ram 2005, on 1673.
23 Cook 2012, on 31.
24 Grove 1996, on 137; Mohan Ram 2005, on 1672–1673.
25 Klemun 2006, on 212.
26 On Jacob de Bondt, see Cook 2007b.
27 Cook 2007a, on 203, 207, and 210.
28 Van Andel and Barth 2018, on 978 and 986.
descendants of the kundige inlanders. Western scholars, however, could benefit from another puzzle piece that shows the complexity of the scientific system commonly regarded as “European.”

2. The Characteristics of Indigenous and European Scientific Systems

The aforementioned “biocontact zones” did not only enable the contact between people of different backgrounds but also between various scientific systems. The term “science” in contexts as the one presented here is currently the subject of discussion. “Traditional knowledge” or “indigenous knowledge” in opposition to “European science” are still used widely. Gradually, however, Historians come to acknowledge that science in the general meaning of systematic knowledge was never uniquely European. It developed in several different forms in various cultures. Any dichotomy of European and “indigenous” scientific systems as presented in the following must therefore be overly simplified.

A problem for this essay lies in the fact that the relevant early modern Asian system that would be relevant for the analysis cannot be reconstructed from the letters. Neither can it be remodeled from other sources since there is little information given on the ethnic and social groups Ten Rhijne’s kundige inlanders belonged to. Even the presence of such evidence would not ensure success as some systems have disappeared, some are only known in fragments, and some involved sacred knowledge that would not have been shared with outsiders. In the seventeenth century and now, most indigenous scientific systems could only be uncovered by learning the relevant languages and by working in collaboration with native scholars, elders, and practitioners. There is no evidence of Ten Rhijne being able to speak the language of the people on the island of “Meuselaer” from whom he acquired knowledge on harvesting camphor. In this case, he most likely did not have to: Judging from the missing mention of a verbal exchange, he might only have observed them without any direct interaction. Also, pure observation cannot be equated with collaboration. Even so, Ten Rhijne was able to witness practical aspects of a local scientific system in action, filling in the gaps regarding botanical terms and categories himself when he put his observations into text for Breyne.

Ten Rhijne might have also come into a different kind of contact with indigenous botanical systems when he compiled his catalogue of Javan plants, 29 Willem ten Rhijne to Jacob Breyne, 5 March 1686, FBG, B 857b, fol. 194r (“knowledgeable indigenous people”). All English translations are the author’s. 30 Klemun 2006, on 213; Raj 2017, on 452. 31 Muralidharan 2021, on 5. 32 Chambers and Gillespie 2000, on 234. 33 According to Ten Rhijne’s letter, the island is close to the town of Baros, which is located on the Western coast of Sumatra. Willem ten Rhijne to Jacob Breyne, 26 November 1680, FBG, A 720, fol. 95r-v.
listing their names in the local language and in Latin.\textsuperscript{34} Another occasion could have been collecting plants and branches to send to Breyne, also labeling them with their regional names.\textsuperscript{35} Again, those systems and their specifications remain in the dark. A vague, general idea of indigenous taxonomies is given by Chambers and Gillespie who make a connection between the former and the European taxonomies recorded from antiquity to the early sixteenth century. All of them listed around eight hundred taxa at the level of genus or species. Genus and species were often not differentiated because most genera were monospecific in each environment. Where two or more species could be found, those were often different in morphology because they were applying different ecological strategies.\textsuperscript{36} This could result in different names whereas plants looking alike but not belonging to the same Linnean taxonomic species were named similarly.\textsuperscript{37} Therefore, taxonomic discussions were a frequent occurrence for Breyne’s and Ten Rhijn’s fellow natural historians. The controversy about the possible affiliation of some plants that were until now attributed to the genus \textit{Clitoria} with the genus \textit{Phaseolus} even found its way into their letters.\textsuperscript{38} Fundamental differences between European and indigenous scientific systems arose with the large numbers of specimens brought to the continent and their ordering as well as with the standards Western naturalists set for themselves.

The huge increases in taxa known to and recorded by European scientists led to problems of ordering and management. One attempt, among various others, to resolve them was made by Linnaeus, who introduced the higher categories of class and order above genus and species.\textsuperscript{39} These were abstract and far removed from the categories indigenous people used and that corresponded to their own experiences and needs.\textsuperscript{40} An example for those is provided by the categories Quechua farmers still apply to potatoes. \textit{Papa Tarpuy} consists of all cultivated potatoes which are used for human consumption while \textit{Araq Papa} encompasses a particular group of potatoes growing wild but being collected for consumption, nonetheless. A third category called \textit{Atoq Papa} (“fox potato”) includes wild potatoes that might be used in traditional medicine but are not consumed as food. It should be noted that the nourishment-based system is far from being the only one in use. Depending on the context, different categorizations are used for the purpose of communication, utilization, and environmental fit.\textsuperscript{41} This is a stark contrast to European scientific categorization that naturalists wanted to create a stable global system of nomenclature and a hierarchical structure with.\textsuperscript{42} It can be conjectured that Ten Rhijn included the indigenous Javan names for Breyne because of a genuine curiosity
for and appreciation of local science not only on his and his addressee’s side but also on that of other European scientists who might get a hold of the list. Further allusion to an indigenous botanical system being made on the document – which is not found among the papers in Gotha – is rather implausible because of the form of the record.

These small traces are the ones that can be found in the letters exchanged between Ten Rhijne and Breyne. They will be gathered and analyzed in the following chapter, considering both men’s status as European scientists. Ten Rhijne’s position as a naturalist working within the framework of the VOC will be examined in particular, as it provides him with access to Southeast Asian indigenous expertise but heavily shapes the access, too, alongside with the acquired information and its communication to Breyne.

3. Jacob Breyne’s Correspondence with Willem ten Rhijne – A Case Study

3.1 Ten Rhijne’s Observational Approach to Practical Aspects of the Indigenous Scientific System and Breyne’s Publication

Ten Rhijne wrote at least six letters to Gdańsk which are preserved in the Gotha research library, being one of Breyne’s chief contacts associated with the VOC. The first one dates to 26 November 1680 and relates to the topic that forms a recurrent topic: the camphor tree, the information gathered on harvesting and on the plant itself, and of course the collection and shipping of matching plant material. The letter contains a Latin language description of the camphor tree that makes a remarkably large amount of reference to indigenous expertise. Before Ten Rhijne provides new information, he refers to his previous letter from 12 March 1680, to which he had attached “Camphorae, imprimis Japonensis, descriptionem, differentiam, sublimandi modum &c una cum figuris siccisque foliis.”

43 Willem ten Rhijne to Jacob Breyne, 26 November 1680, FBG, A 790, fol. 95r (“description, species, outstanding qualities etc. of camphor, especially the Japanese, together with illustrations and dried leaves”).

44 Ibid. (“in relation to the arduous journey to this island”).
gummi hoc [...]."\(^{45}\) This procedure was apparently only valid for trees that carried benzoin. The people indigenous to “Meuselaer,” where the “praecipuus proventus” ("preferred place of growth") of camphor trees seemed to be located,\(^ {46}\) followed another approach. Ten Rhijne vouched for its authenticity by introducing it with the words “verum circa Sumatrensem Camphoram ita a me compertum est.”\(^ {47}\) The “insulani” ("islanders") appeared to acquire camphor by cutting a piece of bark out of an old tree, knocking on it, and also testing by smell if it contained any camphor. They would want to be extremely sure about this as the measures taken to extract the camphor affected the whole tree. The trunk then was felled, the bark peeled away, the wood split. Inside the wood, especially in places where there were nodes and creeks, camphor could be found in the form of smaller or larger flakes.\(^ {48}\) Ten Rhijne also remarked that this work did not leave the people who had performed it with a lot of gain: “haud magno lucro desidum[?] incolarum laborem pensans.”\(^ {49}\) He then went on to describe the harvest in further detail. The harvesters freed the camphor from the wood, using small iron tools, and the resin was scraped off ("'camphora, quam exiguis ferramentis a ligno liberant atque oblinitas gummate lacunas obrodunt’"). During the same observation, \textit{ipsa autopsia}, Ten Rhijne gathered that the resin would, should the camphor-bearing tree not be split, "in auras avolet"\(^ {50}\) and leave the axes odorless. Camphor would thus lose its characteristic smell.

By referring to his own observations of native specialization in action, Ten Rhijne connected the latter to autopsy as one of the basic modes that constituted “European” science. This can be read as a means to validate the gathered information not only for Breyne but also for the scientists reading the \textit{Prodromus}.\(^ {51}\) Neither Breyne nor other colleagues on the continent had the chance to go to Sumatra or “Meuselaer” to put themselves in contact with this particular indigenous scientific system. Even Ten Rhijne, as it seems, could not immerse himself in all the aspects of it either. He probably did not speak the language and did not have a long history of collaboration and therefore, the indigenous experts’ trust. This could have been impossible for him, as the journey to their area was too difficult, and as head of the leprosy ward in Batavia, supervisor of mining and curator of the local grammar school,\(^ {52}\) he would not have had the needed spare time to make it often. But he did manage to witness the practical aspect of the scientific system, recorded it, and

\(^{45}\) Ibid., fol. 95v ("It is reported incorrectly [I only recognized this by my own experience] that the inhabitants examined the camphor-carrying trees at a certain time of the year, if they [the trees; LDG] would emit a murmuring sound between the inner bark and the wood, if it was heard, they [the inhabitants; LDG] cut the bark and so the gummi would flow out all by itself").
\(^{46}\) Ibid., fol. 95r.
\(^{47}\) Ibid., fol. 95v ("but in regard to the Sumatra camphor, it has been experienced like this by me").
\(^{48}\) Ibid.
\(^{49}\) Ibid. The passage roughly translates to “barely paying the […] work of the inhabitants.” The transcription and translation of the adjective are to be discussed.
\(^{50}\) Ibid., fol. 96r ("fly away in the airs").
\(^{51}\) Leuker 2010, on 153 and 156.
\(^{52}\) Römer 1933, on 861–863.
transmitted it to Europe in a version adapted to the Western scientific system and did not obscure its Southeast Asian sources at the same time.

Breyne’s publication of the letter at hand made the delineated elements of indigenous medical and botanical expertise known to scientists all over Europe, who in turn cited it from Breyne to insert it into their works. Because of this, the knowledge local to East Asia reached a much broader audience than it would have otherwise. On the other hand, this could have contributed to veiling the origins. Botanists likely gave Breyne as the sole source and neglected to elaborate on the fact that they were actually relying on Breyne who himself got his information from Ten Rhijne who in turn had observed indigenous experts. The latter were probably not the first to invent the approach to harvesting camphor, but had it passed onto them over many generations. While the names of the original developers might have been lost even to the peer group of their own successors, neither Breyne nor Ten Rhijne made an effort to retrieve the names of the native harvesters and credit them in their later publications.

The indigenous camphor harvesters were not a group that could be equated with the board of experts Van Rheede tot Drakenstein met on a regular basis for the *Hortus Malabaricus*. But even if Ten Rhijne maybe only met the people once in order to observe them from afar, it would have been within his power as an esteemed employee of the VOC, to find the information in question.53 It might have been a matter of convention. Botanists conducting research in Europe did not mention the farmers and forest laborers as experts specialized plant knowledge either. An informant’s social position mattered in both Asia and Europe and could lead to marginalization just the same.54

In Asia, this could have especially been the case if the native experts were associated with the company in any way. If the indigenous experts were connected to the VOC, some of them even being enslaved, their standing in the hierarchy made any recognition as little more than useful contributors of the desired plant product problematic. Still, Ten Rhijne evidently had more confidence in his own observation that required contact and confrontation with indigenous agricultural expertise than he trusted any reports by fellow European scientists.55 Of course, to the readers of his account in Breyne’s *Prodromus*, he acted as the confidential European scientist and together with Breyne, had the last word in mediating the presented knowledge to their peers on the continent. Although this inserts another stage between reader and first-hand expert, this is not necessarily a sign of arrogance. Unlike other scientists, Ten Rhijne and by extension Breyne, did not display any trust issues regarding the local peoples of East Asia.56 A certain appraisal of their knowledge is evident, and both scientists made it their task to translate it for their fellow scholars as best they could. Thereby they considerably contributed to a cultural

53 Cook 2007a, on 206.
54 Forth 2017, on 189 and 192.
55 Willem ten Rhijne to Jacob Breyne, 26 November 1680, FBG, A 720, fol. 95r–v.
56 Klemun 2006, on 213.
exchange that would not have taken place otherwise – all with the ever-present underlying notion that the exchange was asymmetrical.

3.2 Handling Information Inside the VOC’s Specific Scientific System

In the letter published by Breyne, there is a vague clue that Ten Rhijne had paid some attention to sacred or spiritual aspects of the indigenous scientific system, too. When describing the “usus” of camphor, he referred to its role in the local burial rites and stated that “mortuorum cadavera eodem etiam condiant hi insulani.”\(^57\) Ten Rhijne did not provide further information on the spiritual background of the act. Assuming from the letter at hand, he must have merely observed the funeral on his short trip. In how far this might be connected to Ten Rhijne not having the necessary abilities or basis of trust with the islanders to ask for this information is not retraceable. Camphor trees were regarded as earthly versions of the heavenly Tree of Fate by the Sumatrans. The father god Mula Gadi was thought to reside near the tree and every earth-bound soul had to pass by to receive one of its leaves which had the soul’s destiny written on it. The resin flakes contained the essence of the heavenly tree according to Sumatran belief. They were supposed to bring the dead buried in them the spirit gift of power in the next world and associate them with the father god.\(^58\) Even if he had acquired that knowledge firsthand, Ten Rhijne in his letter might have dismissed it as largely irrelevant to the more hands-on botanical knowledge he had made the trip to “Meuselaer” for.

Additional insight on the acquired information is provided by Ten Rhijne’s message dated 17 December 1681. Here, Ten Rhijne showed himself to be overjoyed when seeing his letter on camphor published in Breyne’s *Prodromus Fasciculi Rarioarum Plantarum* which he started to read right on the street after its arrival in Batavia. But he also criticized that parts of his letter about the camphor were being left out. There was just one problem: “Ik heb UEd prodromum met myn geschreven brief geconfereert, en daer in defect gevonden, sonder dat ik weet of ik het selve aen UEd uitgelaten hebbe of niet.”\(^59\) This seems to be a somewhat feeble excuse. A comparison of Ten Rhijne’s previous letter on which Breyne based his publication and the present one does not cast a bad light on Breyne but Ten Rhijne. Breyne cannot be faulted for making editorial reductions to make a text publishable. Neither can Ten Rhijne be blamed for filling in the gaps his observational approach to the indigenous scientific system left with information communicated by another European researcher. The problem lies in the fact that Ten Rhijne did not

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\(^{57}\) Willem ten Rhijne to Jacob Breyne, 26 November 1680, FBG, A 790, fol. 96r (“these islanders also cover the bodies of the dead with the same [camphor; LDG]”).  
\(^{58}\) Schoff 1922, on 355 and 356.  
\(^{59}\) Willem ten Rhijne to Jacob Breyne, 17 December 1681, FBG, A 790, fol. 110r (“I have conferred [here to be understood as compared; LDG] your prodromus with my written letter and found a defect there without me knowing if I have omitted the same [in my letter; LDG] to you or not.”).
credit “D. Sylvius Mercator & vicepraefectus Sumatrensis” who supplied him with additional details on the Sumatran camphor tree—probably also with a note on its function in burial procedures, making Ten Rhijne aware of the spiritual aspect before his “peregrinatio.”

It is here that aspects specific to the European scientific system inside the VOC come into sight. Rules for sharing knowledge could already be found in the labor contract an employee entered with the company, the artykel-brief. It laid down that all notes on geography and navigation had to be handed over and that writing about the economic status of the company (this included information on goods such as spices) was prohibited. Moreover, it was forbidden to circumvent the official post-box for sending out private correspondence. This rule was connected to the company’s claim of the right to read and withhold all letters. All information gathered by company members was thought as legally belonging to the company. Those restrictions did not necessarily hinder scientific exchange. Letters and parcels could be smuggled easily in Asia and on the route between Asia and Europe. Nothing seems to have inhibited Sylvius’ communication of information on camphor to Ten Rhijne. Neither is there any indication of him having been in trouble with the directors for sending his own letter to Gdańsk and its subsequent publication. He must have been a “good employee,” not only by fulfilling all the administrative duty within the VOC but also by respecting its boundaries and aim for secrecy—at least sometimes. In his letter dated 10 December 1685, he asked Breyne “myn onmacht gelieven te excuseren, maer levende kruyden over te schiken is door onse E.E. Heeren Meesters, om gewichtige redenen, verboden, daer ik anders bij onse E.E. OpperRegenten om aengehouden hebbe.” His acceptance of this strict policy regarding scientific exchange evidently allowed him to bend others.

Rules made by the company were one aspect, those made by European scientists in Asia another. The rules of scholarly exchange were not written down but were still binding for all scientists. A balanced reciprocity of gifts was important, precision in naming their sources and acknowledging the achievements of their peers. In the “rapsodique beschryvinge” of the Sumatran camphor he sent to Breyne, Ten Rhijne might have honoured the indigenous experts in a way that was sufficient in European eyes but had broken the two rules previously explained. That must be why he predicts in his letter from 12 December 1681, for a possible publication: “soo sy int licht komt, niet sonder

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60 Willem ten Rhijne to Jacob Breyne, 17 December 1681, FBG, A 790, fol.110v (“D. Sylvius merchant and vice-prefect of Sumatra”).
61 Friedrich 2019, on 191–192 and 194.
62 On the use of that term, see ibid., on 199–201.
63 Willem ten Rhijne to Jacob Breyne, 10 December 1685, FBG, A 790, fol. 103v (“to excuse my powerlessness but sending living herbs is prohibited by our lords masters for serious reasons, otherwise I have asked our ‘opperregenten’ for it”).
64 Friedrich 2019, on 193 and 194.
65 Willem ten Rhijne to Jacob Breyne, 12 December 1681, FBG, A 790, fol. 106r (“rhapsodic description”).
The reason is an accusation of copying from another European scientist – not Sylvius but Andreas Cleyer – when writing his treatise on tea. Ten Rhijne explains that he was the one who sent Cleyer the information from Japan ("daer ik syn Ed. hetselve uit Japan heb [...] toegesonden"), a fact that Cleyer also confirmed to him ("tegen my rond uit bekende").

Evidently, Ten Rhijne feared the consequences of such an indictment. After reading Breyne’s publication, sent him “met seer groten haest” a letter to correct his accidental or deliberate omission of Sylvius’ name. He probably hoped that Breyne would insert the rectification in the errata, saving Ten Rhijne’s reputation from being tarnished. Proudly wanting to be credited as “Doct. & Camarae justitiae assessor ordinarius,” which connected the scholar and the VOC functionary, his worry must have been twofold as well. He wanted to be a “good employee” but also cared a lot about his peers’ opinion of him as an accomplished scholar with integrity. Unfortunately for Ten Rhijne, more stories of plagiarism regarding knowledge about camphor would catch up to him. In his letter of 10 December 1685, he now referred to a dispute with Andreas Cleyer “wegens de Thee en Camphor, ’t geen ik uit eygen experientie had aangetekent, daer hy by de Deensche ephemerides mee pronkt, doch geeft my de eernaem van gravissimus author, schoon hy myn naam niet uittukt [...].” Ten Rhijne emphasizes that he produced the knowledge by his own experience. This was, as previously stated, an important aspect of the European scientific system. Cleyer appeared to be on razor’s edge in his approach to another essential facet: he does give a source but not by name. The damage still fell on Ten Rhijne. He is widely accused “dat ik Cleyers plagiair sou syn” and feels the need to explain to Breyne that they were “eer-dieven […], die my nae geven, dat ik het minste van Cleyer ontleent hebbe, van ’t geen ik aen UEd hebbe overgeschikt of geschreven.” This is only logical. If Ten Rhijne was not able to function as a reliable European first-hand source anymore, this could have consequences for Breyne and his publication on camphor, too. Another erudite account containing traces of an indigenous scientific system was endangered to be of less credibility to European scholars, therefore tending to obliterate their contribution once again.
3.3 The Importance of Native Experts for the Acquisition of Plant Material

Breyne requested plant material to make Ten Rhijne’s information on camphor and other plants more haptic and to store a specimen copy in his collection. The transport to Gdańsk appears to have taken some time. Multiple hindrances to the procurement of plants are given in Ten Rhijne’s letter from 12 December 1681. He informed Breyne that he had never seen the camphor from Borneo, “dewyl de E. Comp. seer selden een schip derwaerts send, het volk gevaarlyk is, en de bomen diep landwaert in wasschen […].” And even though he had managed to bring a twig from Sumatra, there was no luck as it had “alle syne bladen verloren […].” This passage in the letter at hand demonstrates how acquiring plants could depend on both the company and the collaboration – or refusal – of native experts. Here, the greatest occasion for contact between the Southeast Asian and European scientific systems became evident, one that very often disappeared from the scholarly work based on it.

Concluding from his correspondence with Breyne, Ten Rhijne seems to have relied on the titular kundige inlanders as much as on his VOC contacts. In his letter from December 1685, he assured his friend that “Om de camphora sumatrana heb ik geschreven.” The addressee remains unclear. Deductions can be made from other letters. For example, in the one dating to 5 March 1686 Ten Rhijne informs Breyne about having written to various “buijten plaatsen.” The term describes a representative summer residence outside the bigger settlements that might include a lavish garden. Four years later, VOC-employee and amateur botanist Herbert de Jager (1634–1694) also wrote about wanting to send “particuliere ordres, aan-schrijvingen of verzoeken” to these places to gather plants for Breyne. This was evidently a common practice. Being acquaintances of Ten Rhijne and De Jager, the owners of the summer residences surely had an interest in botany, too. They might have gathered the desired vegetative material during trips to the surrounding forests, but delivering it to Breyne’s correspondents in Batavia without another occasion to travel there seems unlikely. This task might have been given to indigenous and/or enslaved staff – probably those, who worked in the gardens and knew …
how to preserve the plants during the tour. The decree from 1690, obliging
people native to the hinterland of Batavia to show a special permission upon
passing the posts surrounding the city ("dat niemand van dat volk zonder een
loodjen, of ander bescheid te vertoonen, onz’uiterste buiten-wachten passeren
en repasseren mag"), makes it more probable that VOC-dependent carriers
were sent. Their status, which was connected to especially close supervision,
ensured that the botanical material safely reached its destination.

Nominally free experts belonging to the indigenous population could as
well have been the immediate suppliers to turn to. De Jager would have wanted
to send some of them out "tot het op-speuren van planten" but saw no
chance of his plan working out. The obligation to Dutch permission for
passing through a territory that used to be theirs had caused a tense
atmosphere. De Jager was unable to persuade anybody of the native specialists,
"hoe veel ik aan dezelve ook zouden belooven." Apart from the administrative
circumstances, he faults the people’s character, which he describes as „een-
zinnig, wrevelachtig en in-accommodabel […].” This demonstrates how
autonomous experts withholding their cooperation could limit the gain of
European naturalists. It might show their agency to express their defiance
against yet another restriction of their freedom and their opposition to Dutch
rule.

As shown by the quote at the beginning of this subchapter, Ten Rhijne
clearly knew about difficulties establishing cooperation. Conversely, his letter
from March 1686 contains an anecdote of success. Ten Rhijne had "enige
kundige inlanders nae het bosch gesonden." It is not apparent if the
indigenous experts were related to the company in any function or if they were
independent otherwise and received any kind of compensation for their
services. It is plausible that they were not enslaved since Ten Rhijne indicated
this status in various other cases. In his letter from 12 December 1681, he
informs Breyne that "myn slaven tegen myn bevel het logement hadden
gesloten gehouden" – a mistake that caused "witte mieren," which appear to
be termites, to consume plants and a manuscript Ten Rhijne was working on.
A possible clue for the autonomy of the native specialists as well as for the
high regard Ten Rhijne held them in is the use of the adjective kundig. In his
letter from December 1685, he complained about "het gebrek van kundige

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80 Ibid. ("that nobody of that tribe may without showing a 'loodjen' [likely a small lead badge; LDG] or another document pass and repass our outposts").
81 Ibid., fol. 74r. ("for finding plants").
82 Ibid. ("no matter how much I would promise them").
83 Ibid. ("single-minded, irritable, and inadaptable").
84 Willem ten Rhijne to Jacob Breyne, 5 March 1686, FBG, B 857b, fol. 194r ("sent some knowledgeable indigenous people to the forest").
85 Willem ten Rhijne to Jacob Breyne, 12 December 1681, FBG, A 790, fol. 105v ("my slaves [had; LDG] against my orders kept the lodging closed").
86 Ibid., fol. 105r ("white ants").
87 Hart 1984, on 614.
88 Willem ten Rhijne to Jacob Breyne, 12 December 1681, FBG, A 790, fol. 105r–v.
liehebbers in dese gewesten" and named De Jager and Georg Eberhard Rumphius (1627–1702) as examples right away. Although indigenous plant experts were never “liehebbers,” calling both groups “kundig” equalizes their botanical expertise somewhat. And while the European scientists were the final recipients “van UEd. Centuria en prodromus,” the indigenous experts were the ones who made those publications possible in the first place. They supplied “al wat ik heb kunnen bekomen” for Ten Rhijne to send to Gdańsk, thus shaping the contents of the books by collaborating on conditions that were created by the specific contexts of VOC rule and their own scientific systems. In addition to that, the printed information, especially in the form of indigenous plant names, would help reiterate the cycle: readers who worked for the VOC or had the chance to travel to Asia otherwise would be able to seek out the plants with the assistance of native informants – no matter if they hired independent experts for a botanizing excursion or employed them as enslaved staff.

4. Conclusion: Appreciation and Marginalization

The source of the letters the VOC physician and botanist Ten Rhijne wrote as an informant to Breyne is minimal. Broadening the sample by including other correspondences between Breyne and naturalists in Asia would be helpful but still difficult as letters are lost or otherwise inaccessible. Furthermore, a more comprehensive range of documents would only marginally decrease the overall problem: indigenous botanical information and the scientific systems behind it are largely obliterated in the transfer process to Europe already. Making sense of the traces left in correspondences is unachievable without a certain amount of speculation.

Nevertheless, the letters are revealing in many ways. For one, it is possible to deduce that indigenous plant experts influenced Breyne’s botanical work. Them being the ultimate reference for the description of camphor harvest, stands out to the readers of both the letters and the respective chapter of the Prodromus. Though valued by both Breyne and his communicator in the East, they remain nameless. This anonymity is most likely a matter of convention as the names of informants of a lower social standing in Europe – such as farmers and forest laborers – are not cited in the works they contributed to either. The example of the first book of Van Rheede tot Drakenstein’s Hortus Malabaricus where his board of Malabar botanists is thanked by name could therefore not be followed by Breyne and Ten Rhijne. Van Rheede and the board of

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89 Willem ten Rhijne to Jacob Breyne, 10 December 1685, FBG, A 790, fol. 99r (“the lack of knowledgeable amateurs [of botany; LDG] in these areas”).
90 Ibid. (“of your Centuria and Prodromus”).
91 Willem ten Rhijne to Jacob Breyne, 5 March 1986, FBG, B 857b, fol. 194r (“everything I could get”).
92 For the transport of plant material over large distances, see Easterby-Smith 2014, on 229–234.
93 Leuker 2010, on 152.
Malabarian intellectuals seem to form an exception because of the scholarly and social position of the latter when it comes to indigenous Asian contributors in scientific publications of early modern Europe. As we have seen, this is also only true for the first book which Van Rheede tot Drakenstein issued himself. For Commelijn, the editor of the three following books, the subordinate position of native Asians in the asymmetrical relationship between them and the VOC as the colonialist power outweighed the Malabar experts’ prominent rank in their own society as well as their erudition. The developing colonialism appears to be the main marginalizing factor here.

Bearing this in mind, the label kundig that Ten Rhine attributed to indigenous Southeast Asian experts as well as European “liefhebbers” seems all the more remarkable. Marginalization by social standing and colonization still plays a major role. This must be the reason why Ten Rijnje made no effort to retrieve the names of the native experts he observed during his island trip. He did not consider them anywhere close to his own status as a naturalist or scientist. Him being a representative of the Dutch colonialist power emphasizes the imbalance in their relationship to an even greater extent. However, this does not mean that Ten Rijnje did not perceive the usefulness of specialized indigenous groups or individuals to the quest for desired plant material. Neither did it diminish his appreciation of their scientific systems to which his access was likely limited as an outsider. As Ten Rijnje makes clear in using the favorable term kundig, he valued their knowledge and expertise and was not ashamed to admit it to Breyne.

Breyne simply labelled the native Asian experts “incolae” in his *Centuria*. The factors described above also had a decisive impact on the use of this term. Added to them is the physical and personal distance Breyne had to the people who possessed the knowledge he presents in his publication. Sitting in his study in Gdańsk, Breyne occupied a considerable standing in European society as a merchant and was associated to the colonialist power in East Asia, through Ten Rijnje and other correspondents. He was also very far away from the scene of action. Not being able to access native Asian herbalists himself, he had to rely on the word and action of Dutch intermediaries to gather information and appraise its quality and that of the informants. Apart from convention dictating the terms, he simply could not know if an indigenous expert could be kundig in his eyes. And with observation forming the foundation of any scientific comment, he shied away from anything else than the most neutral term.

In the end, indigenous experts were a vital source for local botanical knowledge they shared with VOC factors, but European scientists appear to have taken over the benefits of these exchanges for themselves. The asymmetrical relationship between the colonialist power and the people claimed as colonized allowed them to. With very few exceptions that were chiefly based on their social position, the native experts could be valued and honored a certain way. Still, they could never reach the level of European naturalists who transformed the information into terms that were widely understood and published in books that could travel to the furthest corners of the globe. The matter that specialists from these corners only made Western botanic...
publications and therefore botany as a developing European science – in the narrow sense that is still often applied today – possible is pushed aside.

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