

EMPIRICISM AND SENSIBILITY IN THE AUSTRALASIAN JOURNAL
OF THÉODORE LESCHENAULT DE LA TOUR

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In reading the manuscript journal of the French botanist Théodore Leschenault de la Tour, who travelled with the Baudin expedition to Australasia in the years 1800 to 1803, a modern reader may be struck by what appear to be dramatic variations in tone. At one moment Leschenault may offer a detailed and precise description of a new plant he has encountered, in a voice that appears to strive for detachment and objectivity, and in the next supply a highly emotive depiction of the landscape, of his companions, of the indigenous peoples he has met, or of his own state of mind. The relations between empirical observation and the emotions in late eighteenth-century French scientific practice have in recent years attracted closer attention from historians of science, who have suggested that the adoption of Lockean sensationalist ideas in France supplied thinkers with the grounds for treating the emotions provoked by sensations as valid sources of knowledge. Leschenault was writing in a period, however, when some in France were starting to question whether it was consistent for works of scientific observation to continue to bear the imprint of an individual sensibility. In analysing the relations between empirical observation and the expression of sensibility in Leschenault's journal, I look firstly at the function that a naturalist's journal was expected to fulfil on the Baudin expedition, and the three different audiences for which Leschenault wrote: his family and friends, his fellow botanists, and government officials. I then place Leschenault's writings in the context of the Lockean sensationalist tradition in France, and the way in which different botanists, such as Buffon and Jussieu, interpreted this tradition. I conclude by considering the manner in which various modes of expression, such as the sentimental letter and literary nature-writing, may have influenced Leschenault's style.

The function of the journal

The French expedition of 1800 to 1804 to the southern lands was conceived by the botanist Antoine-Laurent Jussieu as a voyage of scientific discovery. In the wake of Nicolas Baudin's journey to the Caribbean of 1796-1798, in which large collections of natural history had been made, Jussieu, a professor at the Muséum d'Histoire Naturelle, urged Eustache Bruix, the Minister of the Navy and Colonies, to sponsor a more ambitious scientific voyage, also to be led by Baudin.¹

Subsequent draft proposals from various parties placed different emphases on scientific enquiry, the charting of unknown coasts, commercial gain and strategic interests. In April 1800 Napoleon endorsed a plan for the exploration of south-west New Holland, which would map new coastlines, and bring back botanical and zoological specimens which could be naturalised in France.² The formal instructions regarding the duties of the naturalists aboard the expedition came from two main sources: the Ministry of the Navy and Colonies, and a commission of the Institut National des Sciences et Arts, headed by Jussieu.

The instructions given to the botanists were for the most part general in nature. One set retained by Baudin supplied a list of rudimentary questions:

What are the main, dominant or rare species of tree which make up the forests? Are any types of fruit traded? What use do the natives make of the trees. What other uses can be made of the wood and fruits. Idem for shrubs and fruits.³

¹ See Frank Horner, *The French Reconnaissance: Baudin in Australia, 1801-1803* (Melbourne: Melbourne University Press, 1987), pp. 28-35, and Nicolas Baudin, *Journal du voyage aux Antilles de la Belle Angélique, 1796-1798*, ed. Michel Jangoux (Paris: Presses de l'Université Paris-Sorbonne, 2009).

² See the memorandum by Forfait of 29 April 1800, cited by Michel Jangoux, *Le Voyage aux terres australes du commandant Nicolas Baudin: genèse et préambule (1798-1800)* (Paris: Presses de l'Université Paris-Sorbonne, 2013), p. 162. (All dates have been converted from the Revolutionary Calendar to the Gregorian.)

³ 'Questions d'histoire naturelle', unsigned and undated memorandum, in Nicolas Baudin, *Mon voyage aux terres australes: journal personnel du capitaine Baudin*, ed. Jacqueline Bonnemaïn (Paris: L'Imprimerie Nationale, 2000), p. 50: 'Quelles espèces principales, dominantes ou rares, d'arbres qui [*sic*] forment les forêts? Quel usage font de ces arbres les naturels du pays? Y a-t-il des fruits dont on fasse commerce? Quels autres usages peut-on faire des bois et des fruits? Idem au sujet des arbustes et des fruits.'

Instructions given by the Académie des Sciences also emphasised utility, directing the naturalists' enquiries towards plants used by indigenous peoples 'as food, medicine or in relation to the productive arts'.⁴ The final instructions for the voyage, drawn up by the commission and endorsed in September 1800 by Alexandre Forfait, the new Minister of the Navy and Colonies, contained few explicit directions in the realm of botany, stating simply that Baudin should aim to collect plants that were capable of being preserved and grown back in France.⁵ For further details about the duties of the naturalists, Baudin was referred to the instructions given by Louis XVI to La Pérouse for the expedition which had set out in 1785:

He [La Pérouse] will examine the nature of the soil and the plants of different regions, and everything that is related to the physics of the globe. He will collect natural, terrestrial and marine curiosities; he will classify them by order, and will draw up a detailed description of each species in which he will record the places where they have been found, the use that the local natives make of them, and, where plants are concerned, the properties that the natives attribute to them.⁶

In most of the instructions for the botanists, the emphasis is on discovering useful plants that were capable of being transplanted to France and commercially exploited; apart from in the directions given to La Pérouse, the identification and classification of new species seems to be less important than utility. Leschenault received further directions from a fellow botanist, Augustin

⁴ 'Mémoire rédigé par l'Académie des Sciences pour servir aux savants embarqués sous les ordres de M. de La Pérouse', in Louis Antoine Milet-Mureau, *Voyage de La Pérouse autour du monde, publié conformément au décret public du 22 avril 1791*, 4 vols. (Paris: L'Imprimerie de la République, 1797), vol. 1, p. 174: 'soit pour la nourriture, soit en médecine, soit relativement aux arts'.

⁵ 'Mémoire pour servir d'instruction au citoyen Baudin, capitaine des vaisseaux de la République, commandant des corvettes *Le Géographe* et *Le Naturaliste* dans le voyage d'observations et de recherches relatives à la géographie et à l'histoire naturelle, dont la conduite et la direction lui sont confiées', in Jangoux, *Le Voyage aux terres australes*, p. 290.

⁶ 'Mémoire du roi pour servir d'instruction particulière au sieur de La Pérouse', in Milet-Mureau, *Voyage de La Pérouse*, vol. 1, pp. 48-49: 'Il fera examiner la nature du sol et les productions des différents pays, et tout ce qui est relatif à la physique du globe. Il fera recueillir les curiosités naturelles, terrestres et marines, il les fera classer par ordre, et fera dresser, pour chaque espèce, un catalogue raisonné, dans lequel il sera fait mention des lieux où elles auront été trouvées, de l'usage qu'en font les naturels du pays, et, si ce sont des plantes, des vertus qu'ils leur attribuent'.

Pyrame de Candolle, in the form of ‘a note on experiments to be performed on monocotyledons’,⁷ which were far more specific than anything supplied by the ministry or the commission to Baudin. While Leschenault, in the various writings he produced, does comment on the uses made by indigenous peoples of the plants he comes across, his first concern seems to be in describing, classifying and preserving plant samples, without particular regard for their possible utility; that is, he adopts a more academic botanical perspective than that which is advocated in the instructions.

Théodore Leschenault de la Tour was just under twenty-seven years old when he sailed out from Le Havre with the Baudin expedition. He had been born in 1773 into a prominent family from Chalon-sur-Saône, whose male ranks had generally practised law or medicine. During the Terror of 1794 he suffered imprisonment, and then in 1796 enrolled at the School of Medicine in Paris, where he studied botany, and undoubtedly attended lectures at the Muséum d’Histoire Naturelle. As part of his application to join the expedition as a naturalist, he sent Jussieu a long letter setting out the detailed botanical observations he intended to make, focusing on a plant’s environment, its root structure, stem, seed-leaves, leaf form, flowers and sexual organs. He concluded the letter with a description of his other skills:

I must warn you that in addition to my poor knowledge of botany I have had extensive practice in drawing [...], and have enough experience of writing that I may with ease describe a site or narrate an event. Aged twenty-seven, I have a well-developed character, and enough philosophy to support the monotony and hardship of a long and difficult voyage.⁸

Jussieu, in recommending Leschenault for the expedition, stated that this student of the Muséum had studied botany for several years, knew enough to be able to

⁷ Leschenault to Jussieu, 27 September 1800, cited in Jangoux, *Le Voyage aux terres australes*, p. 208: ‘une note des expériences à faire sur les monocotylédones’.

⁸ Cited by Jangoux, *Le Voyage aux terres australes*, p. 207: ‘Je dois prévenir que je joins aux faibles connaissances que j’ai en botanique, une longue pratique du dessin [...], une habitude d’écrire assez grande pour pouvoir, avec facilité, faire la description d’un site ou la narration d’un événement. Agé de 27 ans, j’ai le caractère formé, assez de philosophie pour supporter avec courage la longueur et les charges d’un voyage long et pénible’. (I have modernised the spelling and punctuation of Leschenault’s manuscript letters and journal throughout.)

name, draw and dry the specimens he would collect, and, furthermore, had 'a gentle, sociable nature', and had enjoyed a 'good upbringing'.⁹ Leschenault and Jussieu insist on the importance of empirical and practical skills, but also place emphasis on character and sensibility. And Leschenault, in drawing attention to his talent for narrative description, was invoking a skill which might not simply entail precise description but also the exercise of sensibility.

If the instructions for the naturalists seem mainly to demand empirical expertise, the formats in which members of the expedition recorded information nevertheless allowed for the expression of personal reflections. The types of written records made by members of the expedition were highly varied, and included logbooks, notes, tables, catalogues, journals, sketchbooks and labels for specimens. Among the sequential accounts, the ships' logbooks, kept by the naval officers, were generally stark in relation to personal sentiment: they simply record such things as wind directions, the ships' bearings, the disposition of sails, and brief general observations. It was also a requirement that all officers and scientists of the expedition should keep personal journals. As Margaret Sankey points out, the officers' journals commonly reproduce the information of the logbooks, offering few additional descriptions of the peoples and places encountered.¹⁰ There were exceptions, however, and the narratives of officers such as Baudin, Milius and Saint-Cricq range much more broadly. Baudin in fact kept two journals: an individual journal (called a *journal de mer* or *journal de bord*), and a second 'edited journal' (as he called it), adapted from the first, and embellished with additional documents, letters and illustrations, which was probably intended to form the basis of the official account of the voyage, to be published on his return to France. If, as Sankey observes, this second journal was to be the 'public face of the voyage', the first was partly also 'a personal, intimate journal in which Baudin could escape briefly [...] from his official role, and note his private thoughts and feelings, [...] his pleasure in being at sea' and supply 'poetic descriptions'.¹¹ As Odile Gannier notes, many different considerations

⁹ Cited by Jangoux, *Le Voyage aux terres australes*, p. 205: 'un caractère doux et très sociable', 'une bonne éducation'.

¹⁰ See Margaret Sankey, 'Writing the voyage of scientific exploration: the logbooks, journals and notes of the Baudin expedition (1800–1804)', *Intellectual History Review* 20/3 (2010), pp. 401–13.

¹¹ Sankey, 'Writing the voyage of scientific exploration', p. 407.

could converge in a shipboard journal of this period – it could serve an official function, being a record for the authorities, a collective function, documenting information for the benefit of the crew as a whole, a personal function, in the individual analysis or proposals that might be registered, and an intimate function, in the form of private reflections and commentaries.¹²

Something of a paradox, however, can be discerned in the way intimate thoughts were recorded in the journals of the Baudin expedition. The journals were not officially considered to be the property of their authors; in fact, it was stated that all written records (and objects collected) automatically became the property of the French government. Forfait asked Baudin to make this clear to the naturalists:

Before you leave, inform these people on my behalf that it is expressly forbidden for them, as it is for officers and midshipmen, to communicate to others the journals that they keep, or to make any collections for their personal account. It is the Republic that defrays all the expenses of the expedition, and it is she alone who must reap the rewards [...]. In accordance with these orders, I direct you, when you are on the point of re-entering our ports, to collect all the journals written aboard the two corvettes, and to allow no one to go ashore before you are certain that each has fulfilled his duty in this respect.¹³

Forfait no doubt felt obliged to be strict on this point in wake of problems that had arisen on previous expeditions. The naturalist Robert Paul de Lamanon had argued with La Pérouse over the boundaries between individual and state property, while Louis Ventenat, chaplain and naturalist of the d'Entrecasteaux

¹² Odile Gannier, 'La compilation et l'usage des journaux de bord dans l'histoire des idées et des sciences', in *Relations savantes: voyages et discours scientifiques*, ed. Sophie Linon-Chipon and Daniela Vaj (Paris: Presses de l'Université de Paris-Sorbonne, 2006), p. 71.

¹³ Forfait to Baudin, 29 September 1800, in Baudin, *Mon voyage aux terres australes*, p. 99: 'avant de partir, notifiez de ma part à ces personnes, comme aux officiers et aux aspirants, qu'il leur est expressément défendu de communiquer les journaux qu'ils tiendront, et de former aucune collection pour leur compte personnel. C'est la République qui pourvoit à toutes les dépenses de l'expédition, c'est elle seule qui doit en recueillir le fruit [...]. Par suite de ces ordres, je vous prescris de vous faire remettre, lorsque vous serez au moment de rentrer dans nos ports, tous les journaux tenus à bord des deux corvettes, et de ne laisser personne descendre à terre avant que vous vous soyez assuré que chacun a satisfait à son devoir sur ce point'.

expedition, questioned whether the state had ‘the right to take from individuals the fruit of their work’.¹⁴ Another naturalist of the d’Entrecasteaux expedition, Jacques-Julien Houtou de Labillardière, had managed, after various tribulations, to retain possession of his journal, notes and botanical collections. For all Forfait’s precautions, several officers of the Baudin expedition expressed discontent at having to submit their journals to their commander.¹⁵

The writings which Leschenault produced in relation to the Baudin expedition take a number of forms. It appears that he kept a journal for the majority of his travels, although only one section of it (comprising chapters labelled three, four and five) seems to have survived.¹⁶ The extant chapters cover the one-year period from April 1801 (departure from Ile de France¹⁷) to April 1802 (arrival in Sydney), and appear in the hand of a copyist, who made occasional errors in transcribing botanical names. The journal fills 196 pages, and consists of just under 38,000 words. Leschenault also wrote letters to Jussieu from the expedition’s ports of call, Tenerife, Ile de France, Timor and Sydney: of these, only the Sydney letter, composed on 11 November 1802, seems to have survived. When the *Naturaliste* sailed out of Sydney in November 1802, bound for France, it carried with it Leschenault’s journal, his letter to Jussieu, four of his notebooks (containing descriptions in Latin of forty new plant species along with drawings), and three cases of specimens. All his other notebooks, which by November 1802 contained descriptions of a further 150 new plants, appear to have been lost. The second ship of the expedition, the *Géographe*, continued to explore Australia, and Leschenault travelled aboard it for a further six months, until he was forced to leave the expedition at Timor in May 1803 due to ill-health. After recovering, he travelled independently in Java for several years, and only returned to France in July 1807. There he published two short

¹⁴ Cited in English by Carol E. Harrison, ‘Projections of the revolutionary nation: French expeditions in the Pacific, 1791–1803’, *Osiris* 24/1 (2009), pp. 33-52, at p. 47. See also Danielle Clode and Carol E. Harrison, ‘Precedence and posterity: patterns of publishing from French scientific expeditions to the Pacific (1785-1840)’, *Australian Journal of French Studies* 50/3 (2013), pp. 363-79.

¹⁵ See Harrison, ‘Projections of the revolutionary nation’, p. 47, who mentions Louis de Freycinet, François-Michel Ronsard and Léon Brèvedent in this regard.

¹⁶ ‘Extrait de la relation de l’expédition de découverte commandée par le citoyen Baudin, capitaine de vaisseau, du citoyen Théodore Leschenault, botaniste’, Paris, Archives Nationales, Série Marine, 5JJ56.

¹⁷ ‘Ile de France’ was the name given by the French to the island of Mauritius during the period they controlled it, from 1715 to 1810.

pieces relating to the expedition, one on the town of Kupang in Timor, and another on the vegetation of New Holland, which was reproduced in Péron and Freycinet's official account of the expedition (Baudin having died at Ile de France during the return journey).¹⁸ While short excerpts from Leschenault's journal were also incorporated into the official account, he never seems to have intended to publish his journal, or his plant descriptions (which were rendered partially redundant by the appearance of Robert Brown's *Prodromus Florae Novae Hollandiae et Insulae Van Diemen* in 1810). Leschenault contracted with the Imprimerie Impériale to publish a 'Malay dictionary' based on the vocabulary he had gathered on his travels, but these plans were frustrated by upheavals at the Imprimerie after the fall of Napoleon. Leschenault in fact published many more pieces on his Javanese travels and discoveries, and on his later botanising in India and Ceylon, than on his work with the Baudin expedition.

After the return of the *Géographe* to France, the new Minister of the Navy and Colonies, Denis Decrès, decreed that all the journals, charts and geographical drawings compiled by the expedition should be sent to the Ministry, while the scientific materials – specimens, notes and drawings – should be sent to the professors of the Muséum d'Histoire Naturelle.¹⁹ Accordingly, Leschenault's botanical notebooks were retained by the Muséum, while a copy of his journal was kept by the Ministry – Jussieu probably receiving the original. On 29 June 1803, Leschenault's brother Samuel, who resided in Chalon-sur-Saône, wrote excitedly to Jussieu to alert him to the journal's arrival in France: 'I have just this moment received a letter from my brother, and I hasten to inform you that you are to receive his *journal historique* – although I presume that it will have reached you before this letter'.²⁰ After being copied, the journal was probably then forwarded by Jussieu to the Leschenault family, in accordance with the young botanist's request: 'Once you have read my journal and passed on any

¹⁸ François Péron and Louis de Freycinet, *Voyage de découvertes aux terres australes, exécuté par ordre de sa majesté l'Empereur et Roi, sur les corvettes Le Géographe et Le Naturaliste et la goélette Le Casuarina pendant les années 1800, 1801, 1802, 1803, et 1804*, 6 vols. (Paris: L'Imprimerie Impériale, 1807-16).

¹⁹ See Bonnemains, 'Les relations écrites du « Voyage aux terres australes »', in Baudin, *Mon voyage aux terres australes*, p. 19.

²⁰ Samuel Leschenault de Rupt to Jussieu, 29 June 1803, Paris, Muséum National d'Histoire Naturelle, Fonds Phanérogamie, Fonds Jussieu: 'Je reçois à l'instant une lettre de mon frère, et je m'empresse de vous faire part que vous devez recevoir son journal historique, mais je présume qu'il vous sera parvenu avant cette lettre'.

information that you consider to be of use to the expedition, I ask you to forward it to my good mother, whom I have already notified'.²¹

The terminology used by Leschenault and his contemporaries in relation to the journal casts light on its perceived function. In his letter to Jussieu from Sydney, he states:

I have written to you from Tenerife, Ile de France and Timor in turn, and have given you a succinct account of my work. I am going a step further than that today, and am sending you my private journal [*journal particulier*], along with descriptions and drawings of forty plants which belong, I believe, to new genera.²²

Leschenault describes his journal as a *journal particulier*, a private (or personal) journal – private, presumably, by contrast with the notebooks containing his plant catalogue, which, written in Latin, and accompanied by technical drawings, had a more official or professional character. The minister, Forfait, also uses the term *journal particulier* to refer to the naturalists' journals: although for him, it is clear, a 'personal' journal does not imply private property.²³ Leschenault's journal is also, as Samuel Leschenault mentions, '*historique*', that is to say, structured as a chronological relation of events – once more, in contrast to the plant notebooks.

Neither the French government nor the scientific commission appears to have given the naturalists precise instructions about how events were to be recorded in either the journals they wrote or the catalogues of new species they compiled. Instructions for the earlier expedition of La Pérouse, however, indicated that naturalists were to compile a *catalogue raisonné* of species – a

²¹ Leschenault to Jussieu, Sydney, 11 November 1802, cited in Viviane Desmet and Michel Jangoux, 'Un naturaliste aux terres australes: Jean-Baptiste Leschenault de la Tour (1773-1826)', *Etudes sur le Dix-huitième Siècle* 38 (2010), pp. 226-30: 'Lorsque vous aurez pris lecture de mon journal et fait connaître ce que vous croirez utile à l'expédition, je vous prie de le faire passer à ma bonne mère à laquelle je l'annonce'.

²² Leschenault to Jussieu, 11 November 1802, cited in Desmet and Jangoux, 'Un naturaliste aux terres australes', p. 226: 'Je vous ai successivement écrit de Ténérife, l'Ile de France et Timor; je vous rendais un compte succinct de mon travail. Je fais plus aujourd'hui, je vous adresse mon journal particulier et quarante plantes décrites et dessinées que je crois appartenir à des genres nouveaux'.

²³ See Forfait's 'Mémoire', in Jangoux, *Le Voyage aux terres australes*, p. 296.

term which would adequately apply to Leschenault's plant notebooks. As to the format of the *journal historique* – the professors may simply have passed on oral instructions, or assumed that senior members of the expedition, some of whom had travelled with Baudin to the Caribbean, did not require direction in this area. For Baudin's previous expedition, Jussieu had in fact drawn up guidelines for the naturalists about the two types of written record that should be kept:

They [...] will keep a journal in which each object is described [*un journal de description de chaque objet*]. Separately from this journal, they are asked to make another in which they will daily record all the events and the history of their voyage, including observations of any type which they are inclined to make.²⁴

The '*journal de description de chaque objet*' is obligatory, and corresponds to the format of the *catalogue raisonné*, while the second type of journal is a less formal, apparently optional, narrative of events, in which the naturalist may record whatever reflections and digressions occur to him. Leschenault's journal corresponds in some respects to this second type of journal, the *journal historique*, while also combining features of the *catalogue raisonné*.

In his journal Leschenault integrates descriptions of the plants, animals, peoples and landscapes he observes with a personal narrative of the events that unfold during the voyage. In places he inserts general reflections on what he has witnessed: he muses, for example, on the natural forces that have shaped a region of New Holland, or on whether parts of New Holland could support agriculture. He offers his opinions on the morality of its peoples, the degree of their 'civilization', and their migratory history. He also offers judgements on his companions aboard the expedition and the decisions of its commander, Baudin.

²⁴ Antoine-Laurent de Jussieu, 'Instructions rédigées par M. de Jussieu pour les naturalistes de l'expédition', in André-Pierre Ledru, *Voyage aux îles de Ténériffe, La Trinité, Saint-Thomas, Sainte-Croix et Porto-Ricco, exécuté par ordre du gouvernement français, depuis le 30 septembre 1796 jusqu'au 7 juin 1798, sous la direction du capitaine Baudin, pour faire des recherches et des collections relatives à l'histoire naturelle*, 2 vol. (Paris: Arthus Bertrand, 1810), vol. 1, p. xvii: 'Ils [...] tiendront un journal de description de chaque objet. Indépendamment de ce journal, ils sont invités à en faire un autre dans lequel ils consigneront, jour par jour, tous les événements et l'histoire de leur voyage, en y joignant les observations de toute espèce qu'ils seront à portée de faire'.

If the plant descriptions Leschenault supplies in his journal are not generally as detailed as those he records in his notebooks, the language is often spare, sober and impersonal. Thus, in describing a species of grass tree found in south-west New Holland, he writes:

The trunk of this tree grows to seven or eight feet in height and often bifurcates; from the top of each part issues a thick clump of very brittle leaves, filled with pith, and resembling a clump of grass. These leaves have the form of diamond-shaped quadrangular prisms, broadening markedly towards their base.²⁵

This closely-observed description of the plant continues at length, and Leschenault also comments on the use made of the plant by the indigenous people, in line with official instructions, and attempts to classify it. After going ashore in Geographe Bay, Leschenault records that:

A species of creeping *Mesembryanthemum* with white flowers and thick triangular leaves grows there – might it be *edule*? Several species of undershrub are also found there, among which I observed one from the *Orache* family – an *Atriplex* whose leaves and stem are very downy, and which has a salty taste.²⁶

Using the evidence of his senses, taste as well as sight, Leschenault records the precise features of the plants he observes, and attempts to classify them. A personal note creeps into this method as Leschenault poses a question to himself about the species of *Mesembryanthemum* he has observed, creating a sort of internal dialogue which differentiates it from his notebook descriptions. Similar technical descriptions of natural phenomena occupy large parts of the journal.

²⁵ Leschenault, 'Extrait', p. 7: 'Le tronc de cet arbre s'élève de sept à huit pieds. Souvent il se bifurque, de chaque sommet sort une touffe épaisse de feuilles très cassantes remplies de moelle et ayant l'apparence d'une touffe de graminées. Ces feuilles ont la forme de prismes quadrangulaires en losange, s'élargissant beaucoup à leurs bases'.

²⁶ Leschenault, 'Extrait', p. 9: 'Là croit une espèce de *Mesembryanthemum* rampant dont les fleurs sont blanches, les feuilles épaisses et triangulaires, est-ce l'*edule*? On y voit aussi quelques sous-arbrisseaux parmi lesquels j'en ai remarqué un de la famille des *Aroche*. C'est un *Atriplex* dont les feuilles et la tige sont très cotonneuses, et d'une saveur saumâtre'.

This does not however mean that the journal is entirely impersonal or objective in tone: in fact, as will be discussed in the next section, Leschenault seems to view the emotions provoked in him by the phenomena he has witnessed or events he has experienced as equally worthy of careful record.

Observation and emotion

In the letter written to Jussieu from Sydney, Leschenault reflects at length on the process of writing his journal. He discusses the way in which his habits of observation have contributed to the construction of knowledge:

I have avoided the systematic mentality [*l'esprit systématique*], which I believe to be detrimental to observation, and have supplied only an account of phenomena [*faits*]. Sometimes, however, I have permitted myself a few reflections. But, often, later observations have made me aware that I was mistaken in my conjectures, and consequently you will find a great many crossings-out and added notes in my journal. There would have been a great many more if I had had the time to reread it closely and to meditate each of the sensations I felt in the act of observing.²⁷

The language Leschenault uses is revealing: *sensation* and *reflection* are key terms in empirical epistemology, as developed by Locke and adapted in France by the sensationalists, while the *systematic mentality* was a notion debated by Condillac, Locke's French champion, as well as by botanists concerned with methods of plant classification. It is clear from this letter that Leschenault approaches his journal-writing with a certain degree of sophistication: he is

²⁷ Cited in Desmet and Jangoux, 'Un naturaliste aux terres australes', p. 226: 'Eloignant de moi l'esprit systématique que je crois préjudiciable aux observations, j'ai seulement rendu compte des faits. Quelquefois, cependant, je me suis permis quelques réflexions. Mais souvent des observations postérieures m'ont fait connaître que je m'étais trompé dans mes conjectures, aussi vous trouverez dans mon journal un grand nombre de ratures et de notes ajoutées. Il y en aurait eu beaucoup plus si j'avais eu le temps de relire avec attention et de méditer chacune des sensations que j'ai éprouvées lors de l'observation'.

conscious of his own methodology, and is aware of some of the philosophical notions that underpin it.

During the eighteenth century, figures such as Voltaire and Condillac helped to fan the spread of Lockean empiricism in France, and French naturalists responded with interest to Locke's ideas. Buffon, for example, found in Locke the grounds by which he could reject Linnaean taxonomy, condemning it as an abstraction of the mind bearing no relation to reality.²⁸ His debt to Locke is clearly evident in the 'First Discourse' of his *Histoire naturelle*, in which he attempts to describe the way in which the mind distinguishes between different objects:

One does not imagine that in time one will reach the stage of recognising all these different objects [...]; however, as we grow familiar with these objects, seeing them often and, as it were, without design, they gradually form lasting impressions, which soon become linked within our minds in fixed and invariable relations, and from there we progress to more general views.²⁹

Called 'Locke's disciple' by one historian of science,³⁰ Buffon here adapts the Lockean conception of the way that ideas are formed in developing his own theory of classification.

The emotions occupied an important position in Locke's theory, and French scientists who adopted sensationalism at times placed an even greater emphasis on their epistemological function. Locke had posited in his *Essay on Human Understanding* (1690) that man did not possess innate ideas – the mind was like a piece of 'white paper', and all ideas came from sensation or reflection, which

²⁸ See Philip R. Sloan, 'The Buffon-Linnaeus controversy', *Isis* 67/3 (1976), pp. 356-75, and Emma C. Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago: Chicago University Press, 2000), pp. 195-96.

²⁹ Georges-Louis Leclerc, comte de Buffon, 'Premier discours: de la manière d'étudier et de traiter l'histoire naturelle', in *Histoire naturelle, générale et particulière*, 36 vol. (Paris: L'Imprimerie Royale, 1749-88), vol. 1, p. 5: 'On ne s'imagine pas qu'on puisse avec le temps parvenir au point de reconnaître tous ces objets différents [...]; cependant, en se familiarisant avec ces mêmes objets, en les voyant souvent, et, pour ainsi dire, sans dessein, ils forment peu à peu des impressions durables, qui bientôt se lient dans notre esprit par des rapports fixes et invariables; et de là nous nous élevons à des vues plus générales'.

³⁰ Jacques Roger, *Buffon: a Life in Natural History*, trans. Sarah Lucille Bonnefoi, ed. L. Pearce Williams (Ithaca: Cornell University Press, 1997), p. 83.

formed the basis for more complex forms of knowledge.³¹ For Locke, sensation and reflection also gave rise to the ‘simple ideas’ of pleasure and pain, which in turn shaped human emotions: ‘Pleasure and pain, and that which causes them, good and evil, are the hinges on which our passions turn’.³² French followers of Locke took these notions and went a step further, according to Jessica Riskin, and they classed ‘ideas and moral sentiments as expressions of sensibility, movements of the body’s parts in response to sensory impressions of the outside world’.³³ One of the later sensationalists, Antoine Destutt de Tracy, summed up the identity of idea and feeling in these terms: ‘it is clear [...] that our perceptions or our ideas [...] are things that we feel, and, consequently, that *to think is to feel*’.³⁴ Riskin argues that this current of thought strongly influenced French scientists in the latter half of the eighteenth century, who took the view that an understanding of nature did not derive solely from ‘sensory experience, but from a combination of sensation and sentiment’ – in a development she labels ‘sentimental empiricism’.³⁵ The naturalist Jean Senebier, who conducted early experiments into photosynthesis, gives an indication in *L’Art d’observer* (1775) of the way that sensibility and sensation were closely linked:

The observer is a man who [...] comes to nature with all his senses, and, using them, he examines it as it offers itself to him, he participates in all the sensations that exterior objects give rise to in his mind: he is a lover who avidly contemplates the object of his desire.³⁶

The process of observation for Senebier is not separate from the experiencing of emotion; on the contrary, emotional participation is central to the process.

³¹ John Locke, *An Essay concerning Human Understanding* (London: Eliz. Holt, 1690), book 2, ch. 1, §2, p. 37.

³² Locke, *An Essay concerning Human Understanding*, book 2, ch. 20, §4, p. 113.

³³ Jessica Riskin, *Science in the Age of Sensibility: the Sentimental Empiricists of the French Enlightenment* (Chicago: Chicago University Press, 2002), p. 2.

³⁴ Antoine Destutt de Tracy, *Eléments d'idéologie. Première partie: Idéologie, proprement dite*, 2nd edn (Paris: Courcier, 1804), p. 26: ‘il est clair [...] que nos perceptions ou nos idées [...] sont des choses que nous sentons, et que par conséquent *penser c’est sentir*’ (original emphasis).

³⁵ Riskin, *Science in the Age of Sensibility*, p. 4.

³⁶ Jean Senebier, *L’Art d’observer* (Geneva: Philibert and Chirol, 1775), p. 5: ‘L’observateur [...] se présente à la nature avec ses sens, il l’examine par leur moyen comme elle s’offre à lui, il se prête à toutes les sensations que les objets extérieurs font naître dans son âme: c’est un amant qui contemple avec avidité l’objet de son amour’.

In his letter to Jussieu from Sydney, Leschenault describes the emotions he experienced the first time he went collecting on the shores of New Holland:

the study of nature [...] is a source of great delight. It is only with difficulty that I may depict for you the sensations I felt the first time I went ashore on an unknown coast. I felt a confused pleasure which filled my mind, everything kindled my interest, pebbles, shells washed up on the beach, plants. I collected everything with incomparable eagerness but was soon obliged to abandon a portion of these riches I had recklessly amassed.³⁷

In this instance, as in many others he describes in his journal, observation of the natural world and the experience of emotion are closely paired, and he seems to conform to Senebier's notion of the 'philosophe sensible'. At the end of this paragraph, however, Leschenault sounds a note of warning: emotion has impaired his judgement as a collector. Is it possible to characterise this last line as a recognition of the need for something like the more modern notion of scientific objectivity? In a recent discussion of objectivity, Lorraine Daston and Peter Galison have drawn attention to its historical character. 'To be objective', as they assert, 'is to aspire to knowledge that bears no trace of the knower – knowledge unmarked by prejudice or skill, fantasy or judgement, wishing or striving'. They trace the origin of the concern with scientific objectivity to the middle of the nineteenth century, and observe that a naturalist of the eighteenth century might have 'ridiculed as absurd the notion that the kind of scientific knowledge most worth seeking was that which depended least on the personal traits of the seeker'.³⁸

Certainly Buffon was one naturalist who, while espousing empirical observation over Cartesian rationalism, nevertheless thought that the talent and temperament of the individual observer was of paramount importance: he

³⁷ Cited in Desmet and Jangoux, 'Un naturaliste aux terres australes', p. 229: 'l'étude de la nature offre [...] de grandes jouissances. Difficilement je vous peindrai mes sensations lorsque je descendis pour la première fois sur une côte inconnue. J'éprouvai un plaisir confus qui remplissait mon âme, tout alors m'offrait de l'intérêt, cailloux, coquillages roulés sur la plage, plantes. Je recueillis tout avec une avidité qui ne peut être comparée à rien mais bientôt je fus obligé d'abandonner une partie de ces richesses inconsidérément amassées'.

³⁸ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), pp. 17, 59.

believed that it was necessary for the naturalist to have ‘that first spark of genius, that seed of judgement’.³⁹ Other natural history writers in the late eighteenth and early nineteenth centuries, including Goethe and Alexander von Humboldt, also allot an important role to the individual response of the empirical observer. Goethe, in his essay *Empirical Observation and Science* (1798), argues that ‘the observer never sees the pure phenomenon with his own eyes; rather, much depends on his own mood, the state of his senses, the light, air, weather, the physical object, how it is handled, and a thousand other circumstances’.⁴⁰ Humboldt, who had initially applied to join Baudin’s expedition to Australasia,⁴¹ travelled instead in the Americas between 1799 and 1804 – and spent several decades publishing his prolific account of the journey. In Humboldt’s approach, as Nicholas Leask characterises it, ‘aesthetic and emotional responses to natural phenomena counted as data about these phenomena, in contrast to their rigorous exclusion from contemporary practices of naval and military surveying’.⁴² In the latter part of the eighteenth century, however, the methods of various scientists were starting to diverge: for example, experimental chemists, as Spary points out that, began to place their trust in instrumentation over the evidence of the senses, while naturalists ‘explicitly distinguished their enterprise from the art of experimentation by insisting that the possession of sensibility was a precondition for natural historical practice’.⁴³ If the naturalists of the Baudin expedition made use of instrumentation in recording air temperatures and sea temperatures, and even in testing the strengths of the Aborigines of Maria Island, they would not have rejected the assertion that the individual qualities of the naturalist were of the crucial importance.

In his letter to Jussieu from Sydney, Leschenault describes the emotions he experienced while collecting, but also insists that his principal concern in his journal was to record *faits* – in this context, ‘phenomena’, ‘events’ or ‘facts’. He claims to have avoided adopting the *esprit systématique*, or the ‘systematic

³⁹ Roger, *Buffon*, p. 83.

⁴⁰ Johann Wolfgang von Goethe, *Scientific Studies*, ed. and trans. Douglas Miller (New York: Surcamp Publishers, 1988), p. 24.

⁴¹ See Humboldt to Jussieu, 21 August 1798, cited in Jangoux, *Le Voyage aux terres australes*, pp. 28-29.

⁴² Nigel Leask, *Curiosity and the Aesthetics of Travel Writing, 1770-1840: ‘From an Antique Land’* (Oxford: Oxford University Press, 2002), pp. 248-49.

⁴³ Spary, *Utopia’s Garden*, p. 197.

mentality'; that is, Leschenault is stating that he worked as an empirical observer, recording his observations freely, unconstrained by any pre-existing, overarching system. This concern with avoiding the 'systematic mentality' reflected the view of his mentor Jussieu, who in his influential work of 1789, *Genera plantarum secundum ordines naturales disposita juxta methodum in Horto Regio Parisiensi exatarum*,⁴⁴ had sought to move away from Linnaeus's 'artificial' system of classifying plants on the basis of a small number of predetermined features – primarily the number and position of a plant's stamens and pistils. Jussieu insisted rather on the continuity of nature, and contended that all plant life was linked by small gradations in an unbroken chain.⁴⁵ He advocated not an 'artificial system' but a 'natural method' – by which plants were arranged into groups on the basis of a wide variety of features, according to relationships that appeared self-evident in nature.⁴⁶ If he placed emphasis on the seed (and in particular the number of seed leaves, or cotyledons), fruit and flower, other characteristics, such as the form of the root, stem and leaves, were also taken into account. In this movement away from a 'system' to a 'method', the classificatory relationships, as Emma Spary puts it, were considered not to be 'creations but discoveries, prior to any theoretical intervention, transparently present to the eye of the beholder'.⁴⁷

The term *esprit systématique* had also featured in contemporary philosophical debates about rationalism and empiricism: Condillac had distinguished between the *esprit systématique*, which he associated with the empirical approach, and the *esprit de système*, or the dogmatic mentality of the rationalist, system-building philosophers of the seventeenth century.⁴⁸ In the 'Preliminary discourse' of the *Encyclopédie*, D'Alembert, too, spoke favourably of the *esprit systématique*, classing it as an approach which favoured the

⁴⁴ 'The genera of plants, arranged in natural orders, according to the method demonstrated in the King's Garden of Paris' (Paris: Hérissant, 1789).

⁴⁵ See Alexandra Cook, *Jean-Jacques Rousseau and Botany: the Salutary Science* (Oxford: Voltaire Foundation, 2012), p. 181.

⁴⁶ See Peter F. Stevens, 'How to interpret botanical classifications – suggestions from history', *BioScience* 47/4 (1997), p. 243, and his book *The Development of Biological Systematics: Antoine-Laurent de Jussieu, Nature and the Natural System* (New York: Columbia University Press, 1994), pp. 23-62.

⁴⁷ Spary, *Utopia's Garden*, p. 198.

⁴⁸ See Jonathan Israel, *Enlightenment Contested: Philosophy, Modernity and the Emancipation of Man, 1670-1752* (Oxford: Oxford University Press, 2006), pp. 775-79.

simplification of scientific principles, in contrast to the *esprit de système*. The anonymous author of the article 'Philosophy' in the *Encyclopédie*, like Condillac, criticises the *esprit systématique* as being unempirical, since 'a true philosopher does not see with the eyes of others, he accepts only those convictions which are born of evidence'.⁴⁹ Leschenault, while using the term *esprit systématique* in a sense contrary to that of Condillac and D'Alembert, is in harmony with their views when he champions the liberation of observation from the constraints of an *a priori* system.

Leschenault owed his position on the expedition to Jussieu, and it is not surprising that the method he adopts in his plant classification should be that of his mentor. In their libraries, both vessels of the expedition carried copies of Jussieu's *Genera plantarum* and Etienne-Pierre Ventenat's adaptation of this work, the *Tableau du règne végétal selon la méthode de Jussieu* (1798), among other botanical works.⁵⁰ In rejecting Linnaean systematics, Jussieu could be said, like Buffon, to be endorsing Lockean empiricism over Cartesian rationalism, but Jussieu's arguments are not couched as explicitly as Buffon's in Lockean language. And, of course, the differences between the 'artificial system' of Linnaeus and the 'natural method' of Jussieu, are not always as large as were sometimes claimed, and, in practical terms, both relied heavily on empirical skills of close observation and comparison. Jussieu seems to have differed from Buffon, however, in the place that he allots to the temperament of the observer. As Emma Spary explains, Jussieu based his 'natural method' on the concept of *affinités* or *rappports*, a concept borrowed from chemistry, and which referred to the 'more or less powerful tendency for bodies to contract a union'. Jussieu suggested that plants present 'pretty much the same nuances, the same gradation' as these bodies analysed by chemists, and that 'they have characters in which they approach one another, and those by which they differ'.⁵¹ By

⁴⁹ See the *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers, par une société de gens de lettres*, 35 vol. (Paris, 1751-80): D'Alembert, 'Discours préliminaire', vol. 1, p. vi; anonymous author, 'Philosophie', vol. 12, p. 514: 'un vrai philosophe ne voit pas par les yeux d'autrui, il ne se rend qu'à la conviction qui naît de l'évidence'.

⁵⁰ See Jangoux, *Le Voyage aux terres australes*, p. 317, Baudin, *Mon voyage aux terres australes*, p. 90, and Jean Fornasiero and John West-Sooby, 'Baudin's books', *Australian Journal of French Studies* 39/3 (2002), pp. 215-49.

⁵¹ Jussieu, 'Examen de la famille des Renoncules', *Mémoires de l'Académie Royale des Sciences* (1773), p. 214, cited in English by Spary, *Utopia's Garden*, p. 198.

classifying plants according to ‘inherent’ properties, Jussieu instituted, as Spary suggests, ‘an uncompromising exclusion of subjectivity’, allowing naturalists ‘to claim that “particular wills” could not intervene in the transition from observing to knowing’.⁵² Writing his journal in 1801, Leschenault had to attempt to reconcile competing influences: the tradition of Buffon and other naturalists reserved a place for the sensibility of the naturalist, which was sometimes justified by reference to Locke, while another tendency, espoused by his mentor Jussieu, impelled him in a contrary direction. This might be one explanation for the slight hesitation that Leschenault displays when he reflects on his susceptibility to strong emotion.

Epistolary and literary sensibility

In composing his journal, Leschenault is conscious that he is addressing three different audiences: firstly, his family and close friends, secondly, Jussieu and other naturalists at the Muséum d’Histoire Naturelle, and, thirdly, the officials and functionaries of the Ministry of the Navy and Colonies. At times the material seems specifically intended for one of these three audiences: he directly addresses his mother, for example, when complaining of homesickness; the technical descriptions of plants appear to be primarily intended for professional botanists; while his reflections on the possibility of colonising New Holland or Van Diemen’s Land would principally have been of interest to the government. Leschenault is aware, however, that all three audiences will read the journal, and does not seem particularly concerned by distinctions that might be made between the private and the public sphere, and between technical observation and the expression of sensibility. It is important to bear in mind that in late eighteenth-century France the manifestation of sensibility was considered by many to be proper to the both public and private spheres – in certain strains of private correspondence as much in certain novels, and was also a feature of certain types of natural history writing.

⁵² See Spary, *Utopia’s Garden*, p. 199.

In the archives relating to the Baudin expedition, some of the surviving letters between the botanists display a highly emotive register, and provide insight into some of the epistolary conventions of the period. Few of Leschenault's personal letters remain, but a letter addressed to Jussieu by André-Pierre Ledru, a young priest who had previously filled the role of botanist on Baudin's expedition to the Caribbean, employs many terms characteristic of the language of sensibility. Having initially agreed to join the expedition to the southern lands, Ledru wrote to Jussieu explaining that he had been forced to withdraw out of consideration for his mother:

My very sensitive mother, who was not initially frightened by the thought of my voyage, was deeply affected when she read your latest letter. Since then she has scarcely stopped weeping, apprising me clearly enough that her heart is cruelly conflicted and that my sudden departure for an absence of three or four years would strike her a mortal blow. Torn between two imperious feelings, a son's pity and the desire to travel... Consider, Citizen, how distressing my situation is [...].⁵³

This letter, which is both a letter from one friend to another, but also an official letter of withdrawal, contains many terms of sentimental expression: *sensible*, *sentiments*, *sensibilité*, *larmes*, *cœur*, *sein*, *pitié*, *regrets*, *chagrin*, *consolations*, *peines* and so on. It is a terminology that is common to late eighteenth-century novels of sensibility – among which Rousseau's *Julie, ou la Nouvelle Héloïse* (1761), which Rousseau sought to pass off as a genuine collection of intimate letters, and Bernardin de Saint-Pierre's *Paul et Virginie* (1788), are two representative examples. A similar sort of language runs through Leschenault's journal, woven among his detailed observations of plants, peoples, animals and landscapes, and even features – rendered into Latin – in his plant notebooks.

⁵³ Ledru to Jussieu, 20 July 1800, cited in Jangoux, *Le Voyage aux terres australes*, p. 204: 'Ma très sensible mère que l'idée de mon voyage n'a point effarouchée d'abord, en a été extrêmement affectée à la lecture de votre dernière lettre. Depuis ce moment, ses larmes presque continuelles m'annoncent assez que son cœur éprouve le plus violent combat, et que mon départ précipité pour une absence de trois à quatre ans lui porterait le coup mortel. Balancé moi-même entre deux sentiments impérieux, la pitié filiale et le désir de voyager... Jugez, citoyen, combien ma position est pénible [...]'.

The opening line of the surviving section of Leschenault's journal in fact points to the way in which his sensibility pervades the text. Of his journey towards the uncharted coast, he writes:

We had a very favourable passage to New Holland and endured no discomfort apart from that occasioned by the absence of our friends who had remained at the Ile de France.

During our passage we saw a great many Cape petrel [...] ⁵⁴

After commenting on the feelings aroused by his separation from his friends, Leschenault moves seamlessly to a detailed description of the behaviour of a particular species of petrel. Throughout the journal Leschenault displays great concern for the health and welfare of his colleagues. After his vessel the *Géographe* had lost contact with its companion ship the *Naturaliste*, Leschenault writes:

Her delay left us in almost no doubt that she had been wrecked. Our unfortunate comrades were often in our thoughts: we imagined the harrowing scene of our friends perishing among the waves, or wandering a wild shoreline. These gloomy, wearying thoughts finally gave way to gladder sentiments when [...] a ship appeared in the west [...] and our hearts were filled to the brim with joy. ⁵⁵

It is clear that Leschenault conceives his journal not simply as a forum for the observation of natural phenomena and unfolding events, but as a means recording and communicating his emotional responses to what he observes and experiences. During the stay in Timor, where the gardener Anselm Riedlé and

⁵⁴ Leschenault, 'Extrait', pp. 1-2: 'Notre traversée jusqu'à la Nouvelle Hollande fut très heureuse et nous n'eûmes d'autres déplaisirs que celui que nous fit éprouver l'absence de nos camarades qui étaient restés à l'Ile de France. Pendant cette traversée, nous vîmes un grand nombre de damiers [...]'.

⁵⁵ Leschenault, 'Extrait', p. 117: 'Son retard ne nous laissait presque plus aucun doute qu'elle n'eût fait naufrage. Notre pensée nous rappelait nos malheureux compagnons, elle nous présentait le tableau déchirant de nos amis périssant au milieu des flots, ou errant sur une côte sauvage. Ces pensées fatigantes et sinistres furent enfin remplacées par des sensations plus douces [le jour où] on vit paraître à l'ouest un bâtiment [...] et la joie remplit entièrement nos âmes'.

other members of the crew died from disease, Leschenault suffers from an intense feeling of homesickness, which gives rise to this striking passage:

Mother, my brothers, friends – you for whom I chiefly write this account while I am so far away – your affection is no doubt clouded with anxiety when you ponder my fate; but may your tender concern find reassurance five thousand leagues from my homeland, as I recall just a small part of the love you always showed me... Mother... at this word my heart crosses the intervening distance and presses affectionately against your maternal breast.⁵⁶

Leschenault unconcernedly combines a wide range of registers in his journal, and does not seem to think any particular register unsuitable for any part of his audience. If the tenor of his journal at times resembles that of Ledru's letter to Jussieu, it may be contrasted with the tone which another visitor to New Holland, Joseph Banks, uses in recording his own thoughts. In an entry of 3 September 1770, Banks addressed the same topic, homesickness, as the *Endeavour* prepared to leave New Guinea:

The greatest part of [the crew] were now pretty far gone with the longing for home which the physicians have gone so far to esteem a disease under the name of nostalgia; indeed I can hardly find anybody in the ship clear of its effects but the captain, Dr Solander and myself, indeed we three have been in constant employment for our minds which I believe to be the best if not the only remedy for it.⁵⁷

Banks discusses this emotion as a detached observer, as though cataloguing the symptoms of a disease, while Leschenault records his own emotion employing

⁵⁶ Leschenault. 'Extrait', pp. 112-13: 'Ma mère, mes frères, mes amis, vous pour qui principalement j'écris cette relation, pendant que je suis éloigné de vous, votre tendresse s'inquiète sans doute sur ma destinée; mais que votre amitié se tranquillise à cinq mille lieues de ma patrie, je retrouve une partie des soins que vous me prodiguâtes toujours... Ma mère... à ce nom mon cœur franchit l'espace, il se presse affectueusement contre le sein maternel'.

⁵⁷ Joseph Banks, *The Endeavour Journal of Joseph Banks*, ed. J. C. Beaglehole, 2 vol. (Sydney: Angus and Robertson, 1962), vol. 2, p. 145.

the contemporary language of sensibility. The two young authors were influenced by markedly different cultures. Banks was indebted to that of the Royal Society which, holding to the legacy of Francis Bacon, abjured 'figured language',⁵⁸ and preferred a style of natural history writing that was plain and purposive, 'empiricist, uncontroversial and polite, intended to persuade readers that the writer was a reliable witness'.⁵⁹ Leschenault writes in obedience to a different set of conventions, which seem to encompass those of private correspondence, sentimental empiricism, and the novels of sensibility.

A great variety of printed prose works undoubtedly influenced Leschenault's narrative descriptions of nature. In the period prior to Leschenault's travels, there were many intersections between technical botanical writing, travel writing and works of fiction. An influential literary figure such as Rousseau spanned all three genres: he composed a botanical dictionary, recounted his botanising expeditions, and described both pastoral and wild scenery in his fiction. Bernardin de Saint-Pierre similarly practised both natural history writing and sentimental fiction, and served briefly as the head of the Jardin du Roi. And it was common for naturalist writers to express their sensibilities in praising nature and its beauties.⁶⁰ In describing his method in *Les Rêveries d'un promeneur solitaire* (1782), Rousseau insists on the intimate relation between close observation and sentimental expression:

I shall perform on myself [...] the experiments that physicians conduct on the air in order to learn its daily condition. I shall apply the barometer to my soul.⁶¹

⁵⁸ See Barbara Maria Stafford, *Voyage into Substance: Art, Science, Nature, and the Illustrated Travel Account, 1760-1840* (Cambridge, Mass.: MIT Press, 1984), p. 35.

⁵⁹ Tim Fulford, Peter Kitson and Debbie Lee, *Literature, Science and Exploration in the Romantic Era: Bodies of Knowledge* (Cambridge: Cambridge University Press, 2004), p. 94; see also John Gascoigne, 'The Royal Society, natural history and the peoples of the "New World(s)", 1660-1800', *British Journal for the History of Science* 42 (2009), pp. 539-62.

⁶⁰ See Spary, *Utopia's Garden*, p. 207.

⁶¹ Jean-Jacques Rousseau, *Œuvres complètes*, ed. Bernard Gagnebin and Marcel Raymond, 5 vol. (Paris: Gallimard, 1959-1995), vol. 1, pp. 1000-1001: 'Je ferai sur moi-même [...] les opérations que font les physiciens sur l'air pour en connaître l'état journalier. J'appliquerai le baromètre à mon âme'.

Leschenault, while offering detailed descriptions of natural phenomena in accordance with his instructions, also supplies an empirical record of his emotive responses and a measurement of his sensibility.

A number of critics have traced the way that a new 'feeling for nature' arose in eighteenth-century France, and developed in garden design, landscape painting and literature over the century.⁶² Writers initially adapted the classical tropes of pastoral writing, but gradually began to take greater interest in wild places, such as mountains, moving from the lower, unthreatening slopes to the high peaks in the last few decades of the century.⁶³ Rousseau's popular novel *Julie, ou la Nouvelle Héloïse* marked an important development: in it the main character Saint-Preux describes his impressions of the high mountains in different regions of Switzerland, which made a strong impact on the public imagination. As Donald Charlton points out, however, Rousseau was less concerned with the detail of the scenery he described than with the 'psychological impact' of the scenery on his characters – that is to say with 'les sentiments de la nature' ('the feelings evoked by nature').⁶⁴ Wild places – seascapes along with mountain peaks – could inspire various responses: a sense of beauty, harmony or moral purity, but also feelings of melancholy or horror.

The techniques Leschenault uses in his nature descriptions seem to vary according to his focus: when he works in close-up, describing the detailed features of a plant, he opts to employ terminology of the sort found in Jussieu's *Genera plantarum* or Ventenat's *Le Tableau du règne végétal*. When he widens his focus, however, and starts to describe his general impressions of a landscape, or the sights of land he sees from the deck of the ship, his model is no longer that of the botanists of the Muséum d'Histoire Naturelle, and his descriptions seems to derive more from the literary descriptions of nature that appeared in French literature in the latter part of the eighteenth century. Leschenault tends to describe Australasian landscapes in general and somewhat vague terms and, like

⁶² See Daniel Mornet, *Le Sentiment de la nature en France de J. J. Rousseau à Bernadin de Saint-Pierre* (Paris: Hachette, 1907) and Jean Ehrard, *L'Idée de nature en France dans la première moitié du dix-huitième siècle*, 2 vol. (Paris: Service d'Édition et de Vente des Publications de l'Éducation Nationale, 1967).

⁶³ See Paul Van Tieghem, *Le Sentiment de la nature dans le préromantisme européen* (Paris: Nizet, 1960), pp. 155-98.

⁶⁴ Donald G. Charlton, *New Images of the Natural in France: a Study in European Cultural History, 1750-1800* (Cambridge: Cambridge University Press, 1984), p. 35.

Rousseau, is concerned with his own aesthetic, emotional and moral reactions. The tropical landscapes frequently have a pleasing pastoral character, and he describes the shoreline of Timor as 'smiling' and the Semau channel as having a 'romantic aspect'.⁶⁵ At times, the scenery of New Holland provokes similar agreeable associations. His first glimpse of the interior of the south-west of the continent prompts this description: 'I gazed admiringly across a flat country which is covered with very large trees, forming a magnificent forest.'⁶⁶ A site on the north-east coastline of Van Diemen's Land reminds him of a classical ruin:

From a distance the sharp, scattered rocks look like rubble, and lend this tongue of land the appearance of an ancient ruined city [...]. Inland, a few isolated rocks can be seen, which fancy lends the form of ancient monuments. Smoke rising through the trees from native fires, clear skies and a tranquil firmament compose a scene that is both picturesque and imposing.⁶⁷

In a case such as this, in which the landscape appears tranquil rather than threatening, Leschenault views it through the prism of the classical pastoral tradition, fusing the old world, however, with the new. The southern coastline of the island strikes him as more dramatic and menacing, but is also considered worthy of the painter's brush:

The land around this cape is very different to the western coast of New Holland. Everything is uniform there, while here, on the contrary, the coast is steep and broken: tall basalt columns, which rise in needles and complete, in this region of the world, the final pieces in the structure of the globe; great masses of granite, which time and the frequent storms

⁶⁵ Leschenault, 'Extrait', pp. 117, 45: 'aspect romantique', 'riantes'.

⁶⁶ Leschenault, 'Extrait', p. 9: 'je contemplai avec admiration un pays plat, couvert de très gros arbres, qui formaient une forêt magnifique'.

⁶⁷ Leschenault, 'Extrait', p. 175: 'Les roches pointues et éparses semblables de loin à des décombres donnent à cette langue de terre l'aspect d'une ancienne ville ruinée [...]; dans l'intérieur des terres, quelques roches isolées, auxquelles l'imagination prête la forme d'anciens monuments; la fumée des feux des naturels s'élevant du milieu des arbres, un ciel pur, un atmosphère calme offrait un tableau pittoresque et imposant'.

of these parts have only gently furrowed. The inaccessible forests that crown this region offer a sight that is worthy of treatment by a skilful artist's crayon. Gloomy weather, but calm. Masses of cloud vapour swirling through the trees, whose withered crowns attest to their vast age, increase the majesty of the scene. We were about to pass into the southern seas, that stage for the great discoveries made one after the other across half a century by illustrious European navigators. In recalling the achievements of these great men, however, I am chilled to my soul as I retrace the terrible and tragic ends which several of them met! ... The immortals, Cook, La Pérouse, de Langle, d'Entrecasteaux, Marion, Lamanon, died far from their homelands, laid low by their own virtuous natures and their love of science!⁶⁸

The progression that occurs in this passage is somewhat characteristic of Leschenault's landscape descriptions. He begins with empirical observation, describing the types and forms of the rocks in this region, and then moves on to broader conjectures and theories, and finally expresses his emotional response to what he is witnessing. In both examples, Leschenault draws attention to his act of interpretation by suggesting that the scenes are suitable for treatment by an artist. In these two responses to the Australian landscape, Leschenault employs tropes of the pastoral and the natural sublime, which have become associated of course with literary Romanticism, and which bring in their train a great variety of emotions.

It is also worth noting that in his descriptions of the indigenous peoples of New Holland, Van Diemen's Land and Timor, Leschenault closely integrates

⁶⁸ Leschenault, 'Extrait', pp. 131-32: 'Les terres de ce cap sont bien différentes des côtes occidentales de la Nouvelle Hollande, là tout est uniforme, ici, au contraire la côte est abrupte et hachée, les hautes colonnes basaltiques qui s'élèvent en aiguilles et terminent en cette partie du globe l'édifice du monde, les masses énormes des granits que le temps et les orages habituels de ces contrées n'ont pu que faiblement sillonner. Les forêts inaccessibles qui les couronnent offrent une perspective digne d'exercer un crayon habile, un temps sombre mais calme, des masses de vapeurs nuageuses qui s'agitaient au travers des arbres dont les cimes desséchées attestaient l'ancienneté, ajoutaient à la majesté de ce spectacle; nous allions entrer dans les mers du Sud, théâtre des grandes découvertes faites successivement depuis un demi-siècle par d'illustres navigateurs européens, mais en se rappelant les travaux de ces grands hommes l'âme se retrace avec saisissement la fin funeste et tragique de plusieurs d'entre eux! ... Les immortels Cook, La Pérouse, de Langle, d'Entrecasteaux, Marion, Lamanon, périrent loin de leurs patries, victimes de leur humanité et de leur amour pour les sciences!'

detailed physical description with moral and sentimental judgement. At times he begins by describing the characteristics of the indigenous peoples in the same detached way that he might catalogue the features of a plant. He writes of the inhabitants of Bruny Island:

These people have the following general facial characteristics: a sunken brow, deep-set eyes, a nose which is large but not flattened, a wide mouth filled with strong teeth, and a prominent square jaw [...] the faces of the mature males were reflective of treachery and spite.⁶⁹

Physical descriptions of the indigenous peoples, however, inevitably modulate into moral reflections; empirical observation is accompanied by sentimental expression. After an incident on Bruny Island in which the locals threw spears at a retreating French longboat, Leschenault questions the sentimentalised image of the noble savage and the notion that man in a state of nature was inherently good. In this case, the theory cannot stand up to the evidence Leschenault has accumulated:

I admit that I am surprised, after all the instances of cruelty and betrayal reported in voyages of discovery, to hear sensible people say that men in their natural state are not in the least part malicious.⁷⁰

Leschenault is responding of course to Rousseau's contentions about man in a state of nature, set out in the *Discours sur l'origine et les fondements de l'inégalité parmi les hommes* (1755), and the ensuing debate around this question. In his journal Leschenault moves constantly between detailed descriptions of natural phenomena and his own sentimental and moral responses to what he has witnessed. In his journal Leschenault gives expression to his epistolary, literary,

⁶⁹ Leschenault, 'Extrait', p. 143: 'les caractères généraux de la figure de ce peuple sont un front couvert, des yeux enfoncés, le nez gros sans être écrasé, une bouche grande et bien meublée, le menton saillant et carré [...] le visage des hommes faits réfléchissait la méchanceté et la trahison'.

⁷⁰ Leschenault, 'Extrait', p. 143: 'j'avoue que je suis surpris après tant d'exemples de trahison et de cruautés rapportés dans tous les voyages de découvertes d'entendre dire à des personnes sensées que les hommes de la nature ne sont point méchants'.

naturalist and moral sensibilities: the line between these is not always distinguishable, and at times they seem to coalesce.

It might perhaps be thought that a catalogue of plant descriptions, of the type found in Leschenault's notebooks, would offer less scope than his journal for emotive expression. In the notebooks he supplies a precise description in Latin of each new plant he discovers. In the case of each shrub, he offers details about its wood, bark, branch structure, leaves, calyx, flowers, corolla, stamens, filament, anthers, and style, along with the number of its stigmas and pistils, and observations on where it was found growing. He provides drawings of significant features. Leschenault also adds information on the names he selects for the new plants. In the case of the shrub he calls *Piquetia tomentosa*, he explains: '*Piquetia* from the name of Piquet, physician in Chalon-sur-Saône, as a mark of friendship. I embrace you with all my heart, that it may cross the intervening distance and repose in joy among friends'.⁷¹ For each of the twenty-five plants he names, he offers a tribute to the person for whom it is named – with these figures including members of the government, scientists, colleagues aboard the expedition, and friends and family in France. As in his journal, the language of sensibility contrasts starkly here with more detached, impersonal description. The instructions given to the naturalists by the authorities had emphasised the importance of precise observation, making little allowance for the expression of private sentiments. But the notebooks, for Leschenault, like his journal, were not a simple catalogue of impersonal empirical description: he considered the observer to be a philosopher of sensibility. Even if Jussieu was starting to move towards a view of observation and description more closely aligned to that of the Royal Society, Leschenault was nevertheless a 'sentimental empiricist' by attitude and inclination, and was influenced by literary attitudes towards nature and epistolary conventions of the time. The notebooks make clear what the journal repeatedly attests: for Leschenault, the description of natural phenomena was also the record of a sensibility.

⁷¹ Leschenault, botanical notebooks, Paris, Muséum National d'Histoire Naturelle, Fonds Phanérogamie, book 1, fol. 8r: '*Piquetia ex dominio Piquet medico in Cabillonanri urbe. Pignus amicitia. Save cor meum, spatium transilit et inter amicos jucunde reponit.*' The notebooks have been transcribed by Michel Jangoux, Viviane Desmet and Claude Lefebvre, The Baudin Legacy, www.sydney.edu.au/arts/research/baudin, consulted 31 January 2015.