THE AGE OF WONDER

How *the* Romantic Generation Discovered *the* Beauty *and* Terror *of* Science

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Two things fill my mind with ever new and increasing wonder and awe, the more often and persistently I reflect upon them: the starry heaven above me and the moral law within me...I see them in front of me and unite them immediately with the consciousness of my own existence.

IMMANUEL KANT, *Critique of Practical Reason* (1788)

≈

He thought about himself, and the whole Earth,
Of Man the wonderful, and of the Stars,
And how the deuce they ever could have birth;
And then he thought of Earthquakes, and of Wars,
How many miles the Moon might have in girth,
Of Air-balloons, and of the many bars
To perfect Knowledge of the boundless Skies;
And then he thought of Donna Julia's eyes.

BYRON, *Don Juan* (1819), Canto 1, stanza 92

≈

Those to whom the harmonious doors
Of Science have unbarred celestial stores…

WILLIAM WORDSWORTH, 'Lines Additional to an Evening Walk' (1794)

≈

Nothing is so fatal to the progress of the human mind as to suppose our views of science are ultimate; that there are no mysteries in nature; that our triumphs are complete; and that there are no new worlds to conquer.

HUMPHRY DAVY, lecture (1810)

≈

I shall attack Chemistry, like a Shark.

SAMUEL TAYLOR COLERIDGE, letter (1800)

≈

…Then felt I like some watcher of the skies
When a new planet swims into his ken;
Or like stout Cortez when with wond'ring eyes
He stared at the Pacific…

JOHN KEATS, ms of sonnet (1816)

≈

To the natural philosopher there is no natural object unimportant or trifling… a soap bubble… an apple… a pebble… He walks in the midst of wonders.

JOHN HERSCHEL, *A Preliminary Discourse on the Study of Natural Philosophy* (1830)

≈

Yes, there is a march of Science, but who shall beat the drums of its retreat?

CHARLES LAMB, shortly before his death (1834)

Prologue

1

In my first chemistry class, at the age of fourteen, I successfully *precipitated* a single crystal of mineral salts. This elementary experiment was done by heating a solution of copper sulphate (I think) over a Bunsen burner, and leaving it to cool overnight. The next morning there it lay at the bottom of my carefully labelled test tube: a single beautiful crystal, the size of a flattened Fox's Glacier Mint, a miniature ziggurat with a faint blue opalescence, propped up against the inside of the glass (too big to lie flat), monumental and mysterious to my eyes. No one else's test tube held anything but a few feeble grains. I was triumphant, my scientific future assured.

But it turned out that the chemistry master did not believe me. The crystal was too big to be true. He said (not at all unkindly) that I had obviously faked it, and slipped a piece of coloured glass into the test tube instead. It was quite a good joke. I implored him, 'Oh, test it, sir; *just test it!*' But he refused, and moved on to other matters. In that moment of helpless disappointment I think I first glimpsed exactly what real science should be. To add to it, years later I learned the motto of the Royal Society: *Nullius in Verba* – 'Nothing upon Another's Word'. I have never forgotten this incident, and have often related it to scientific friends. They nod sympathetically, though they tend to add that I did not (as a matter of chemical fact) *precipitate* a crystal at all – what I did was to *seed* one, a rather different process. No doubt this is so. But the eventual consequence, after many years of cooling, has certainly been to precipitate this book.

2

The Age of Wonder is a relay race of scientific stories, and they link together to explore a larger historical narrative. This is my account of the second scientific revolution, which swept through Britain at the end of the eighteenth century, and produced a new vision which has rightly been called Romantic science.[1]

Romanticism as a cultural force is generally regarded as intensely hostile to science, its ideal of subjectivity eternally opposed to that of scientific objectivity. But I do not believe this was always the case, or that the terms are so mutually exclusive. The notion of *wonder* seems to be something that once united them, and can still do so. In effect there is Romantic science in the same sense that there is Romantic poetry, and often for the same enduring reasons.

The first scientific revolution, of the seventeenth century, is familiarly associated with the names of Newton, Hooke, Locke and Descartes, and the almost simultaneous foundations of the Royal Society in London and the Académie des Sciences in Paris. Its existence has long been accepted, and the biographies of its leading figures are well known.♣ But this second revolution was something different. The first person who referred to a 'second scientific revolution' was probably the poet Coleridge in his *Philosophical Lectures* of 1819.[2] It was inspired primarily by a sudden series of breakthroughs in the fields of astronomy and chemistry. It was a movement that grew out of eighteenth-century Enlightenment rationalism, but largely transformed it, by bringing a new imaginative intensity and excitement to scientific work. It was driven by a common ideal of intense, even reckless, personal commitment to discovery.

It was also a movement of transition. It flourished for a relatively brief time, perhaps two generations, but produced long-lasting consequences – raising hopes and questions – that are still with us today. Romantic science can be dated roughly, and certainly symbolically, between two celebrated voyages of exploration. These were Captain James Cook's first round-the-world expedition aboard the *Endeavour*, begun in 1768, and Charles Darwin's voyage to the Galapagos islands aboard the *Beagle*, begun in 1831. This is the time I have called the *Age of Wonder*, and with any luck we have not yet quite outgrown it.

The idea of the exploratory voyage, often lonely and perilous, is in one form or another a central and defining metaphor of Romantic science. That is how William Wordsworth brilliantly transformed the great

♣ The fine survey by Lisa Jardine, *Ingenious Pursuits: Building the Scientific Revolution* (1999), gives a vivid picture of the leading figures in the seventeenth-century scientific revolution across Europe, and includes a significant introductory essay on the emerging role of science in modern society. See also my bibliography, 'The Bigger Picture', page 485.

Enlightenment image of Sir Isaac Newton into a Romantic one. While a university student in the 1780s Wordsworth had often contemplated the full-size marble statue of Newton, with his severely close-cropped hair, that still dominates the stone-flagged entrance hall to the chapel of Trinity College, Cambridge. As Wordsworth originally put it, he could see, a few yards from his bedroom window, over the brick wall of St John's College,

> The Antechapel, where the Statue stood
> Of Newton, with his Prism and silent Face.

Sometime after 1805, Wordsworth animated this static figure, so monumentally fixed in his assured religious setting. Newton became a haunted and restless Romantic traveller amidst the stars:

> And from my pillow, looking forth by light
> Of moon or favouring stars, I could behold
> The Antechapel where the Statue stood
> Of Newton, with his prism and his silent face,
> The marble index of a Mind for ever
> Voyaging through strange seas of Thought, alone.[3]

Around such a vision Romantic science created, or crystallised, several other crucial conceptions – or misconceptions – which are still with us. First, the dazzling idea of the solitary scientific 'genius', thirsting and reckless for knowledge, *for its own sake and perhaps at any cost*. This neo-Faustian idea, celebrated by many of the imaginative writers of the period, including Goethe and Mary Shelley, is certainly one of the great, ambiguous creations of Romantic science which we have all inherited. Closely connected with this is the idea of the 'Eureka moment', the intuitive inspired instant of invention or discovery, for which no amount of preparation or preliminary analysis can really prepare. Originally the cry of the Greek philosopher Archimedes, this became the 'fire from heaven' of Romanticism, the other true mark of scientific genius, which also allied it very closely to poetic inspiration and creativity. Romantic science would seek to identify such moments of singular, almost mystical vision in its own history. One of its first and most influential examples was to become the story of the solitary, brooding Newton in his orchard, seeing an apple fall and 'suddenly' having his vision of universal gravitation.

This story was never told by Newton at the time, but only began to emerge in the mid-eighteenth century, in a series of memoirs and reminiscences.♣

The notion of an infinite, mysterious Nature, waiting to be discovered or seduced into revealing all her secrets, was widely held. Scientific instruments played an increasingly important role in this process of revelation, allowing man not merely to extend his senses passively – using the telescope, the microscope, the barometer – but to intervene actively, using the voltaic battery, the electrical generator, the scalpel or the air pump. Even the Montgolfier balloon could be seen as an instrument of discovery, or indeed of seduction.

There was, too, a subtle reaction against the idea of a purely mechanistic universe, the mathematical world of Newtonian physics, the hard material world of objects and impacts. These doubts, expressed especially in Germany, favoured a softer 'dynamic' science of invisible powers and mysterious energies, of fluidity and transformations, of growth and organic change. This is one of the reasons that the study of electricity (and chemistry in general) became the signature science of the period; though astronomy itself, once the exemplary science of the Enlightenment, would also be changed by Romantic cosmology.

The ideal of a pure, 'disinterested' science, independent of political ideology and even religious doctrine, also began slowly to emerge. The emphasis on a secular, humanist (even atheist) body of knowledge, dedicated to the 'benefit of all mankind', was particularly strong in Revolutionary France. This would soon involve Romantic science in new kinds of controversy: for instance, whether it could be an instrument of the state, in the case of inventing weapons of war. Or a handmaiden of the Church, supporting the widely held view of 'Natural theology', in which science reveals evidence of a divine Creation or intelligent design.

♣ The apple fell in his orchard at Woolthorpe, Lincolnshire, where Newton, aged twenty-five, had retired from Cambridge during the Plague of 1665. Various versions of the story began to appear after his death in 1727. It appears in Stukeley's unpublished Memoir of Newton, originally written in 1727, but not given to the Royal Society in manuscript until 1752; in unpublished notes for a biography by his nephew John Conduit; and for the first time in print in Voltaire's *Letters on the English Nation* (1734). Part of the power of the story was that it replaced the sacred Biblical account of the Fall from Innocence in Genesis (Eve and the apple) with a secular parable of the Ascent to Knowledge. See Patricia Fara, *Newton: The Making of Genius* (2005); and for a broad visionary perspective, Jacob Bronowski's scientific classic *The Ascent of Man* (1973).

With these went the new notion of a popular science, a people's science. The scientific revolution of the late seventeenth century had promulgated an essentially private, elitist, specialist form of knowledge. Its *lingua franca* was Latin, and its common currency mathematics. Its audience was a small (if international) circle of scholars and *savants*. Romantic science, on the other hand, had a new commitment to explain, to educate, to communicate to a general public.

This became the first great age of the public scientific lecture, the laboratory demonstration and the introductory textbook, often written by women. It was the age when science began to be taught to children, and the 'experimental method' became the basis of a new, secular philosophy of life, in which the infinite wonders of Creation (whether divine or not) were increasingly valued for their own sake. It was a science that, for the first time, generated sustained public debates, such as the great Regency controversy over 'Vitalism': whether there was such a thing as a life force or principle, or whether men and women (or animals) had souls.

Finally, it was the age which challenged the elite monopoly of the Royal Society, and saw the foundation of scores of new scientific institutions, mechanics institutes and 'philosophical' societies, most notably the Royal Institution in Albemarle Street in 1799, the Geological Society in 1807, the Astronomical Society in 1820, and the British Association for the Advancement of Science in 1831.

Much of this transition from Enlightenment to Romantic science is expressed in the paintings of Joseph Wright of Derby. Closely attached to the Lunar Society, and the friend of Erasmus Darwin and Joseph Priestley, Wright became a dramatic painter of experimental and laboratory scenes which reinterpreted late-eighteenth-century Enlightenment science as a series of mysterious, romantic moments of revelation and vision. The calm, glowing light of reason is surrounded by the intense, psychological chiaroscuro associated with Georges de la Tour. This is most evident in the famous series of scientific demonstration scenes painted at the height of his career: *The Orrery* (1766, Derby City Museum and the frontispiece of this book), *The Air Pump* (1767, National Gallery, London) and *The Alchemist* (1768, Derby City Museum). But these memorable paintings also ask whether Romantic science contained terror as well as wonder: if discovery and invention brought new dread as well as new hope into the world. We have certainly inherited this dilemma.

The Age of Wonder aims to raise and reflect upon such questions. Yet in the end the book remains a narrative, a piece of biographical story-telling. It tries to capture something of the inner life of science, its impact on the heart as well as on the mind. In the broadest sense it aims to present scientific passion, so much of which is summed up in that child-like, but infinitely complex word, *wonder*. Plato argued that the notion of 'wonder' was central to all philosophical thought: 'In Wonder all Philosophy began: in Wonder it ends...But the first Wonder is the Offspring of Ignorance; the last is the Parent of Adoration.'[4]

Wonder, in other words, goes through various stages, evolving both with age and with knowledge, but retaining an irreducible fire and spontaneity. This seems to be the implication of Wordsworth's famous lyric of 1802, which was inspired not by Newton's prism, but by Nature's:

> My heart leaps up when I behold
> A rainbow in the sky;
> So was it when my life began;
> So is it now I am a man;
> So be it when I shall grow old,
> Or let me die!...[5]

This book is centred on two scientific lives, those of the astronomer William Herschel and the chemist Humphry Davy. Their discoveries dominate the period, yet they offer two almost diametrically opposed versions of the Romantic 'scientist', a term not coined until 1833, after they were both dead. It also gives an account of their assistants and protégés, who eventually became much more than that, and handed on the flame to the very different world of professional Victorian science. But it draws in many other lives, and it is interrupted by many episodes of scientific endeavour and high adventure so characteristic of the Romantic spirit: ballooning, exploring, soul-hunting. These were all part of the great journey.♣

♣ A brief guide to the many figures who jostle into this book, some familiar but others obscure or unexpected, appears in my Cast List, page 471.

It is also held together by, as a kind of chorus figure or guide, a scientific Virgil. It is no coincidence that he began his career a young and naïve scientific traveller, an adventurer and secret journal-keeper. However, he ended it as the longest-serving, most experienced and most domineering President of the Royal Society: the botanist, diplomat and *éminence grise* Sir Joseph Banks. As a young man Banks sailed with Captain Cook round the world, setting out in 1768 on that perilous three-year voyage into the unknown. This voyage may count as one of the earliest distinctive exploits of Romantic science, not least because it involved a long stay in a beautiful but ambiguous version of Paradise – Otaheite, or the South Pacific island of Tahiti.

1

Joseph Banks in Paradise

1

On 13 April 1769, young Joseph Banks, official botanist to HM Bark *Endeavour*, first clapped eyes on the island of Tahiti, 17 degrees South, 149 degrees West. He had been told that this was the location of Paradise: a wonderful idea, although he did not quite believe it.

Banks was twenty-six years old, tall and well-built, with an appealing bramble of dark curls. By temperament he was cheerful, confident and adventurous: a true child of the Enlightenment. Yet he had thoughtful eyes and, at moments, a certain brooding intensity: a premonition of a quite different sensibility, the dreaming inwardness of Romanticism. He did not like to give way to it. So he kept good company with his shipmates, and had carefully maintained his physical fitness throughout the first eight months of the voyage. He regarded himself – 'thank god' – as in as good mental and physical trim as a man could be. When occasionally depressed, he did vigorous jumping 'rope exercises' in his cabin, once nearly breaking his leg while skipping.[1]

He was capable of working patiently for hours on end in the extremely cramped conditions on board. The quarterdeck cabin, which he shared with his friend Dr Daniel Solander, was approximately eight feet by ten. He had adopted a strict daily routine of botanical drawing, electrical experiments, animal dissections, deck-walking, bird-shooting (when available) and journal-writing. He constantly fished specimens from the sea, shot or netted wild birds, and observed meteorological phenomena, such as the beautiful 'lunar rainbows'. When his gums had begun bleeding ominously with the onset of scurvy, he had calmly treated himself with a specially pre-prepared syrup ('Dr Hume's mixture') of concentrated lemon juice, taking precisely six ounces a day.[2] Within a week he was cured.

Just occasionally young Banks's scientific enthusiasm turned to explosive impatience. When rudely prevented from carrying out any botanical field trips by the Spanish Consul at Rio de Janeiro, and confined for three weeks to the sweltering ship in the harbour at Rio, he wrote colourfully to a friend at the Royal Society: 'You have heard of Tantalus in hell, you have heard of the French man laying swaddled in linen between two of his Mistresses both naked using every possible means to excite desire. But you have never heard of a tantalized wretch who has born his situation with less patience than I have done mine. I have cursed, swore, raved, stamped.'[3] Banks did however unofficially slip over the side at night to collect wild seeds and plants, a hoard which included the exotic purple bougainvillea.

Once among the Polynesian isles, Banks spent hours at the topgallant masthead, his large form crouched awkwardly in the crow's nest, looking for landfall beneath the heavy tropical cloudbase. At night the crew would hear distant surf roaring through the dark. Now at last he gazed out at the fabled blue lagoon, the black volcanic sand, and the intriguing palm trees (Linnaeus's Arecaceae). Above the beach the precipitous hills, dense with dark-green foliage and gleaming with white streams, rose sharply to 7,000 feet. On the naval chart Banks noted that the place was marked, prosaically enough, 'Port Royal Bay, King George the Third's Island'. 'As soon as the anchors were well down the boats were hoisted out and we all went ashore where we were met by some hundreds of the inhabitants whose faces at least gave evident signs that we were not unwelcome guests, tho they at first hardly dare approach us. After a little time they became very familiar. The first who aproachd us came creeping almost on his hands and knees and gave us a green bough the token of peace.'

Taking the hint, all the British shore party pulled down green boughs from the surrounding palm trees and carried them along the beach, waving them like ceremonial parasols. Eventually they were shown an idyllic spot close by a stream, where it was indicated that they could set up camp. The green boughs were thrown down in a great pile on the sand, 'and thus peace was concluded'. Here the British settlement known as Fort Venus was to be established: 'We then walkd into the woods followd by the whole train to whom we gave beads and small presents. In this manner we walked for 4 or 5 miles under groves of Cocoa nut and Bread fruit trees loaded with a profusion of fruit and giving the most

gratefull shade I have ever experienced. Under these were the habitations of the people most of them without walls. In short the scene we saw was the truest picture of an Arcadia of which we were going to be Kings that the imagination can form.'

As the men walked back, feeling dangerously like royalty, the Tahitian girls draped them with flowers, offered 'all kind of civilities' and gestured invitingly towards the coconut mats spread in the shade. Banks felt, reluctantly, that since islanders' houses were 'entirely without walls' it was not quite the moment to 'put their politeness to every test'. He would not have failed to have done so 'had circumstances been more favourable'.[4]

2

Tahiti lies roughly east–west just below the 17th parallel, one of the largest of what are now the Society Islands, roughly halfway between Peru and Australia. It is shaped not unlike a figure of eight, some 120 miles ('40 leagues') in circumference. Most of its foreshores are easily accessible, a series of broad, curving bays with black volcanic sands or pinkish-white coral beaches, fringed by coconut palms and breadfruit trees. But a few hundred yards inland, the ground rises sharply into an entirely different topography. The steep, densely wooded volcanic hills lead upwards to a remote and hostile landscape of deep gullies, sheer cliffs and perilous ledges.

Contrary to legend, the *Endeavour*, commanded by Lieutenant James Cook, was not the first European ship to make landfall in Tahiti. Spanish expeditions, under Quiroz or Torres, had probably touched there in the late sixteenth century, and claimed it for Spain.[5] A previous English expedition, under Captain Wallis of the *Dolphin*, had definitely landed there in 1767, when it was described as 'romantic', and claimed for England. A French expedition under Louis-Antoine de Bougainville had anchored there the following year, and claimed it for France.

The French had racily christened Tahiti 'La Nouvelle Cythère', the New Island of Love. Banks's opposite number, the French botanist Philibert Commerson (who named the bougainvillea after his captain), had published a sensational letter in the *Mercure de France* describing Tahiti as a sexual 'Utopia'. It proved that Jean-Jacques Rousseau was right about

the existence of the Noble Savage. But then, the French had only spent nine days on the island.♣

Cook was more sceptical, and had every member of his crew (including the officers) examined for venereal infections four weeks before arriving, by their surgeon Jonathan Monkhouse. He issued a series of Landing Instructions, which stated that the first rule of conduct ashore was civilised behaviour: 'To Endeavour by every fair means to cultivate a Friendship with the Natives and to treat them with all Imaginable Humanity.'[6] It was no coincidence that he enshrined the ship's own name in this instruction.

Joseph Banks had his own views on Paradise. He gave a whimsical account of his first night ashore in his *Endeavour Journal*. He dined deliciously on dressed fish and breadfruit, next to a Tahitian queen, who 'did me the honour with very little invitation to squat down on the mats close by me'. However, the queen was 'ugly enough in conscience'. Banks then noticed a very pretty girl, 'with a fire in her eyes' and white hibiscus in her hair, lingering in the 'common crowd' at the door. He encouraged her to come and sit on his other side, studiously ignored the queen for the rest of the evening, and 'loaded' the Polynesian beauty with bead necklaces and every compliment he could manage. 'How this would have ended is hard to say,' he observed later. In fact the amorous party broke up abruptly when it was discovered that his friend Solander had had a snuff-box picked from his pocket, and a fellow officer had lost 'a pair of opera glasses'. It is not explained why he had brought opera glasses ashore in the first place.

♣ De Bougainville's account of his ship anchoring at Tahiti for the first time in April 1768 became one of the most celebrated passages in all French romantic travel-writing. 'I have to admit that it was nigh impossible to keep 400 young Frenchmen at work, sailors who had not seen a woman for six months, in view of what followed. In spite of all our precautions, a young Tahitian girl slipped aboard and placed herself on the quarterdeck immediately above one of the big hatchways, which was fully open to allow air in to the sailors sweating at the capstan below. The young girl casually let slip the only piece of cloth which covered her, and appeared to the eyes of all the crew exactly as naked Venus appeared to the Phrygian shepherd. Truly, she had the celestial form of the goddess of Love. More and more sailors and soldiers crowded to the foot of the hatchway, and no capstan was ever wound with such alacrity as on this occasion. Only naval discipline succeeded in keeping these bewitched young fellows from rioting; and indeed we officers had some little difficulty in restraining ourselves.' Bougainville, *Voyage autour du Monde* (1771, Chapter 8, 'Mouillage à Tahiti').

This thieving proved to be completely customary in Tahiti, and led to many painful misunderstandings on both sides. The first occurred the following day, when a Tahitian quite openly made off with a marine's musket, and was immediately shot dead by a punctilious guard. Banks quickly grasped that some quite different notion of property must be involved, and noted grimly: 'We retird to the ship not well pleasd with the days expedition, guilty no doubt in some measure of the death of a man who the most severe laws of equity would not have condemnd to so severe a punishment. No canoes about the ship this morning, indeed we could not expect any as it is probable that the news of our behaviour yesterday was now known every where, a circumstance which will doubtless not increase the confidence of our friends the Indians.' Nonetheless, to Banks's relief and evident surprise, good relations were restored within twenty-four hours.

The *Endeavour* expedition remained for three months on Tahiti. Its main object was to observe a Transit of Venus across the face of the sun. (Cook stated that this was the reason their settlement was named Fort Venus, though his junior officers gave a different explanation.) This was due on the morning of 3 June 1769, and there would be no other transit for the next hundred years (not until 1874). It was a unique chance to establish the solar parallax, and hence the distance of the sun from the earth. This calculation depended on observing the exact timing at which the silhouette of Venus first entered, and then exited from, the sun's disc.

Banks was not part of the astronomical team, but when the expedition's quadrant was stolen one night shortly before the transit was due, he reacted with characteristic energy and courage. He knew that without this large and exquisitely calibrated brass instrument, used to measure precise astronomical angles, the entire observation would be rendered valueless. Not waiting for Cook or his marine guards, Banks roused the expedition's official astronomer, William Green, and set off immediately on foot in pursuit of the thief. In the dizzy heat, Banks followed the trail far up into the hills, accompanied only by a reluctant Green, one unarmed midshipman and a Tahitian interpreter. They penetrated seven miles inland through the Tahitian jungle, further than any European had been before: 'The weather was excessive hot, the Thermometer before we left the tents up at 91 made our journey very tiresome. Sometimes we walk'd sometimes we ran when we imagind (which we sometimes did) that the chase was just before us till we arrivd at the top of a hill about

4 miles from the tents. From this place [the interpreter] Tubourai shew'd us a point about 3 miles off and made us understand that we were not to expect the instrument till we got there. We now considerd our situation. No arms among us but a pair of pocket pistols which I always carried; going at least 7 miles from our fort where the Indians might not be quite so submissive as at home; going also to take from them a prize for which they had ventured their lives.'[7]

Banks decided to send back the midshipman with a brief message to Cook that armed reinforcements would be welcome. Meanwhile he and Green would press on alone, 'telling him at the same time that it was impossible we could return till dark night'.

Before dusk, Banks ran the thief to ground in an unknown and potentially hostile village. A crowd quickly gathered round them, 'rudely' jostling them. Following a Tahitian custom he had already learned, Banks quickly drew out a ring on the grass, and surrounded by 'some hundreds' of faces, sat quietly down in the centre. Here, instead of threatening or blustering, he began to explain and negotiate. For some time nothing transpired. Then, piece by piece, starting with its heavy wooden deal case, the quadrant was solemnly returned. 'Mr Green began to overlook the Instrument to see if any part or parts were wanting … The stand was not there but that we were informd had been left behind by the thief and we should have it on our return … Nothing else was wanting but what could easily be repaired, so we pack'd all up in grass as well as we could and proceeded homewards.'

By the time armed marines came up, sweating and jittery, about two miles down the track, Banks had completed the transaction and made several new friends. Everyone returned peacefully to Fort Venus on the shore. For this exploit, all conducted with the greatest calm and good humour, Banks earned the profound gratitude of Cook, who noted that 'Mr Banks is always very alert upon all occasions wherein the Natives are concerned.'[8] Banks concluded mildly in his journal: 'All were, you may imagine, not a little pleased at the event of our excursion.'[9]

Banks and Cook were a seemingly ill-matched pair. They were divided by background, education, class and manners. Yet they formed a curiously effective team. Cook's cool and formal manners towards the Tahitians were balanced by Banks's natural openness and enthusiasm, which easily won friends. With their help he would gather a mass of plant and animal specimens, and make what was in effect an early anthropological study

of Tahitian customs. His journal entries cover everything from clothes (or lack of them) and cookery to dancing, tattooing, sexual practices, fishing methods, wood-carving, and religious beliefs. His accounts of a dog being roasted, or a young woman having her buttocks tattooed, are frank and unforgettable. He attended Tahitian ceremonial events, slept in their huts, ate their food, recorded their customs and learned their language. He was pioneering a new kind of science. As he wrote in his journal: 'I found them to be a people so free from deceit that I trusted myself among them almost as freely as I could do in my own countrey, sleeping continually in their houses in the woods with not so much as a single companion.'[10]

3

Educated in the traditional classics at Harrow, Eton and Christ Church, Oxford, young Joseph Banks had discovered science and the natural world at the age of fourteen. Towards the end of his life he told a sort of 'conversion' story about this to his friend the surgeon Sir Everard Home. It was later enshrined by the French naturalist Georges Cuvier in his obituary speech or *Éloge* to the Institut de France. Emerging late one summer afternoon from a schoolboy swim in the Thames at Eton, the teenage Banks found himself alone on the river, all his schoolfriends gone. Walking back through the green lanes, solitary and preoccupied, he suddenly saw the mass of wildflowers along the hedgerows vividly illuminated in the slanting, golden evening light. Their beauty and strangeness came to him like a revelation. 'After some reflection, he said to himself, it is surely more natural that I should be taught to know all the productions of Nature, in preference to Greek and Latin; but the latter is my father's command and it is my duty to obey him … He began immediately to teach himself Botany.'

Despite the stilted form of this recollection (it is in Home's words and dates from fifty years after the event), it seems that to the young Banks botany implied a kind of Romantic rebellion against his father, as well as against the standard school curriculum of classics. Even more important, it brought him into contact with a race of people who would normally have been quite invisible to a privileged Eton schoolboy such as he. These were the wise women of the country lanes and hedgerows, the gypsy herbalists who collected 'simples' or medicinal plants 'to supply the Druggist and Apothecaries shops' of Windsor and Slough. They were a

strange but knowledgeable tribe, whom he soon learned to treat with respect. More than that, he paid them sixpence for every 'material piece of information' they supplied.

Banks also told Everard Home that it was his mother – not his father – who handed over her lovingly worn copy of Gerard's *Herbal*, kept 'in her dressing room', with wonderful engravings that entranced him. It is thus that he is shown in a family portrait (possibly by Zoffany): an attractively long-haired and long-legged teenager, alert and faintly insolent, confidently posed in a studded leather chair with a portfolio of botanical engravings spread before him. Just under his left elbow, extraordinarily prophetic, is a large geographer's globe in its mahogany cradle, with a rhumb-line of sunlight curving down towards the equator.

From then on Banks saw his destiny as a naturalist, and began avidly collecting rare plants, wildflowers, herbs, shells, stones, animals, insects, fish and fossils. His conversion story reveals other elements of his life and character: self-confidence, wealth, surprising sensitivity, unconventional directness, and an attraction to women. At university he made himself a disciple of the great Swedish naturalist Carl Linnaeus, the leading Enlightenment botanist of Europe. Linnaeus had redefined the taxonomy of plants by identifying them according to their reproductive organs, re-cataloguing them in Latin according to genus, species and family, and collecting an unmatched array of specimens in his gardens at Uppsala.

Finding that there was no Linnaean lecturer in botany at Oxford, Banks reacted in a characteristic way. He rode to Cambridge, begged an interview with the Professor of Botany there, John Martyn, and simply asked to be recommended the best young botanist available. He came back triumphantly with a gifted young Jewish botanist, Israel Lyons, who had agreed to teach the subject to Banks and a group of like-minded undergraduates at Oxford. Banks paid Lyons a good salary out of his own pocket. Later he recommended him to an Admiralty expedition, and he remained his friend and patron for life. Lyons was Banks's first scientific protégé. From the start Banks displayed the commanding air, as well as the charm, of a wealthy man. This trait was given free rein when his father died in 1761. At the age of eighteen he was now sole heir to large estates in Lincolnshire and Yorkshire (they included over 200 farms) which would bring him £6,000 per annum (eventually rising to over £30,000), an enormous income for the period.

The family money made Banks a complete gentleman of leisure, a potentially fatal development, and he moved with his beloved mother and his only sister, Sophia, to a large house in Chelsea, near the Physic Garden. The conventional thing would have been for him to embark, like most of his friends, on the Grand Tour of Europe. Instead, the twenty-two-year-old Banks bought himself a berth on HMS *Niger*, and embarked on a strenuous seven-month botanical tour to the bleak shores of Labrador and Newfoundland. The Professor of Botany at Edinburgh wrote to him with some astonishment that it was 'rumoured that you was going to the country of the Eskimaux Indians to gratify your taste for Natural Knowledge'.

Banks demonstrated his energy and commitment on this expedition, earning the approval of all the naval officers, including his friend Captain Constantine John Phipps, and a certain Lieutenant James Cook, who was in charge of chart-making. He wrote witty, faintly scurrilous letters to his sister Sophia, and also kept the first of his great journals, most notable for their racy style, appalling spelling and non-existent punctuation. On his return in November 1766, with a vast quantity of plant specimens (and some caoutchouc from Portugal), Banks was elected a Fellow of the Royal Society, still aged only twenty-three. He began what was to become his famous herbarium, scientific library and collection of prints and drawings. His rapidly expanding circle of scientific friends included the rakish Lord Sandwich, future head of the Admiralty, and the quiet, portly and dedicated Daniel Solander, a young Swedish botanist, trained under Linnaeus at Uppsala, who managed the Natural History section of the British Museum.

Two years later, Banks heard of the round-the-world expedition in HM Bark *Endeavour*. The ship was in fact a specially converted coastal 'cat' from Whitby, broad-beamed, shallow-draughted and immensely strong, capable of being beached for repairs, and of carrying large quantities of stores and livestock below decks (and on them). But she was little more than a hundred feet from stem to stern, and had extremely restricted quarters. She was to be commanded by Lieutenant James Cook, forty years old, lean and reserved, the tough and experienced mariner from the little port of Staithes in Yorkshire who had made his name charting the Newfoundland coast.

The expedition was organised by the Admiralty, but also partly financed by the Royal Society, which supplied £4,000 towards astronomical

observations. It had four main objectives: first, the observing of the Transit of Venus on Tahiti; second, charting and exploring the Polynesian islands west of Cape Horn; third, exploring the landmasses known to lie between the 30th and 40th parallels – New Zealand (possibly the tip of a continent) and Van Diemen's Land (Tasmania), possibly part of Australia; and fourth, collecting botanical and zoological specimens from anywhere in the southern hemisphere. It also had a medical aim, to reduce the fatal outbreaks of shipboard scurvy by the use of sauerkraut and citrus fruits.

The Royal Society had already appointed as the expedition's official astronomer William Green, assistant to the Astronomer Royal, Nevil Maskelyne. Banks immediately proposed himself as its official botanist. He would finance his own eight-man natural history 'suite', including two artists, a scientific secretary, Herman Spöring, two black servants from the Yorkshire estate, his friend Dr Solander and – characteristically – a pair of greyhounds. For these, and a mass of equipment, Banks laid out as much as £10,000, nearly two years' income. For him it was to be a voyage in search of pure knowledge, and he laid in specialist equipment which created a considerable stir. A colleague reported admiringly, and with perhaps a touch of envy, to Linnaeus in Uppsala: 'No people ever went to sea better fitted out for the purpose of Natural History; nor more elegantly. They have got a fine library of Natural History; they have all sorts of machines for catching and preserving insects; all kinds of nets, trawls, drags and hooks for coral fishing; they have even a curious contrivance of a telescope by which, put into water, you can see the bottom at a great depth.' He concluded reassuringly to Linnaeus: 'All this is owing to you and your writings.'[11]

But there was, of course, an element of imperial competition. Cook had sealed Admiralty instructions to look out, after leaving Tahiti, for a possible 'great Southern continent' lying between latitude 30 and 40 degrees South. This was much further south than those parts of Australia's eastern seaboard which were already known through the Dutch navigators. It was believed that New Zealand might form the northern tip to this continent, and that it might contain huge natural resources. If this continent existed, it had to be claimed and mapped (with a view to possible colonisation) before the French did so. The Admiralty seems to have been unaware of Antarctica.

The imperial instructions were not really so secret. Both Banks and Solander knew about them before departure, and even Linnaeus was

informed.[12] Moreover, neither Banks nor Cook really believed in the mysterious southern continent. Banks made a long, sceptical journal entry as they crossed the Pacific in March 1769, concluding: 'It is however some pleasure to be able to disprove that which does not exist but in the opinions of Theoretical writers, of which sort most are who have wrote any thing about these seas without having themselves been in them. They have generaly supposd that every foot of sea which they beleivd no ship had passd over to be land, tho they had little or nothing to support that opinion but vague reports ... ' Nevertheless, he was fully aware of how little was known about the Pacific islands in general, and of the perils of circumnavigation, especially between Tahiti and Indonesia. It had nearly destroyed Bougainville's entire crew the year before.

Among the many friends Banks was leaving behind was Solander's colleague the botanist and horticulturalist James Lee, who took an intense professional interest in the Pacific voyage. Lee owned the remarkable Vineyard Nurseries at the village of Hammersmith on the Thames. He was the author of a best-selling plant manual, *An Introduction to Botany extracted from the works of Dr Linnaeus* (1760), which ran into several editions, and he advised Banks on plant-collecting. Lee also trained up young naturalists at the nurseries. Among his assistants was an eighteen-year-old Scottish Quaker, Sydney Parkinson, a quiet, observant young man, whom Banks decided to employ as his second botanical artist aboard the *Endeavour*. It was a good choice, but with tragic consequences.

Another young person in Lee's charge was twenty-year-old Harriet Blosset, to whom he was legal guardian. Lee was teaching her to study plants, and she would eagerly have signed up for the expedition herself. But of course no women were officially allowed on board His Majesty's vessels, although the French botanist Philibert Commerson had smuggled his mistress aboard Bougainville's ship, disguised as a cabin boy. It was rumoured at the nurseries that Harriet was 'desperately in love with Mr Banks', and there was a good deal of gossip about them immediately before the expedition's departure.[13] A fellow botanist, Robert Thornton, extravagantly catalogued Harriet as a young lady who 'possessed extraordinary beauty, and every accomplishment, with a fortune of ten thousand pounds. Mr Banks had often seen her, when visiting the rare plants of Lee's, and thought her the fairest among the flowers.'[14]

In fact Harriet was one of three sisters who lived with their widowed mother in Holborn. Banks does seem to have been genuinely fond of her,

and subsequent events suggest there was some kind of understanding between them. Her guardian James Lee looked upon it as an unofficial engagement, which would be announced if Banks should return alive from the Pacific. There was also some joke about Harriet knitting a set of 'worked' waistcoats for Banks while he was away, patterned with wild-flowers – perhaps one for each season he was absent.[15]

Yet Banks was certainly cautious about marriage at this stage in his career, remarking drily to a friend that though he loved experiments, matrimony was 'an experiment ... with uncertain consequences', and rarely brought lifelong happiness. The eve of his great voyage was certainly not the moment to try it.[16] In a rare introspective entry Banks would reflect in his journal that he would probably never see Europe again, and that there were only two people in the world who would truly miss him. 'Today for the first time we dined in Africa, and took our leave of Europe for heaven alone knows how long, perhaps for Ever; that thought demands a sigh as a tribute due to the memory of freinds left behind and they have it; but two cannot be spared, t'would give more pain to the sigher, than pleasure to those sighd for. Tis Enough that they are rememberd, they would not wish to be too much thought of by one so long to be seperated from them and left alone to the Mercy of winds and waves.'[17]

If these two were his mother and his sister Sophia, then he did not wish to sigh unduly for Harriet Blosset. A certain bluffness was in order. When asked why he did not settle for the security of the eighteenth-century Grand Tour, the object of which as Dr Johnson said was to visit the classical civilisations along the shores of the Mediterranean, he replied briskly: 'Every blockhead does that; my Grand Tour shall be one round the whole Globe.'[18]

Banks spent his last night before going aboard at the opera. Then he dined in company with Harriet Blosset at her mother's house, accompanied by a Swiss geologist, Horace de Saussure, who assumed from their behaviour that they were 'betrothed'. Saussure described Harriet as very pretty and attentive, but 'a prudent coquette', and Banks as quite reconciled to their imminent parting, and drinking rather too much champagne.[19]

When the naturalist Gilbert White, snug in his Hampshire village, heard of Banks's departure on the high seas, he wrote thoughtfully to their mutual friend Thomas Pennant: 'When I reflect on the youth and

affluence of this enterprizing young gentleman I am filled with wonder to see how conspicuously the contempt of dangers, and the love of excelling in his favourite studies, stands forth in his character ... If he survives, with what delight we shall peruse his Journals, his Fauna, his Flora! If he falls by the way, I shall revere his fortitude, and contempt of pleasures and indulgences: but shall always regret him.'[20]

4

Through the brilliance of Cook's navigation, and the skill of his crew-management, the *Endeavour* arrived at Tahiti with over six weeks in which to prepare for its main task, the transit observations. Previous expeditions had often been decimated by this stage, but Cook had lost only four men, and none to disease. The crew's diet included a serving of cabbage sauerkraut 'fresh every morning [as] at Covent Garden market', and Banks had shot seabirds wherever possible for fresh meat, including several large albatross with nine-foot wingspans.

The first death was the result of an accident with an anchor chain in Madeira. The next two occurred on land, and involved Banks. A field expedition he was leading had been overtaken by a snowstorm on Tierra del Fuego. It was a grim and confused story, which revealed something of Banks's qualities in a crisis. The party of twelve men (including Green, Solander and several sailors) had first run into trouble when one of Banks's young artists, Alexander Buchan, suffered an epileptic fit. Then a sudden blizzard cut off their retreat to the ship, several hours away down the mountains, and the party became separated in a birch wood as night fell.

Overcome by the biting cold, Banks's two black servants drank a stolen bottle of rum, and lay down in the snow and refused to go on. Meanwhile Solander, always rather stout and unfit, simply collapsed. Disintegration and disaster threatened the entire expedition. As darkness came on and the temperature plummeted, Banks tried to hold them together. First he regrouped the scattered men further down the mountainside with Green, made a fire and organised a brushwood 'wigwam', where Buchan was revived. Then Banks went back through the sub-zero night, with as many hands as he could muster, to drag the half-conscious Solander down through the birch wood to safety. It was an act which cemented their friendship. Banks also sent hands to save his black servants, but they were

'immoderately drunk', and could not – or would not – be carried back to the camp.

It was now past midnight, and everyone was stunned with cold, but Banks went out again in a last attempt to save them. 'Richmond was upon his legs but not able to walk, the other lay on the ground insensible as stone.' Banks tried to light a fire, but it was doused by falling snow. It was 'absolutely impossible' to bring the two men down. Finally he laid them out on a bed of branches, covered them with brushwood, and left them, hoping they would survive the night, insulated by alcohol. Going back at dawn, he found them both dead.[21]

When the rest of the party finally returned to the *Endeavour*, Cook noted that they all retired to their hammocks except Banks. After making his report and classifying his specimens, he insisted on going out in one of the ship's small boats alone, and spent the rest of the day in the bay, a solitary figure hunched over the stern, fishing with a seine net. Cook had not blamed him for his companions' deaths; but for the first time perhaps, he felt the weight of his responsibilities.

The third death was a suicide in the Pacific. This revealed another side to Banks. He made a long, thoughtful entry over the incident, in which a young able seaman, 'remarkable quiet and industrious', had apparently jumped overboard after being accused of stealing a sealskin tobacco pouch from the captain's cabin. Banks was struck by the melancholy event, remarking thoughtfully that 'it must appear incredible to every body who is not well acquainted with the powerfull effects that shame can work upon young minds'. Cook did not pursue the incident, but it seems clear from Banks's entry that he suspected homosexual bullying by an older member of the crew.[22]

The initial days on Tahiti were obviously exciting, but curiously tense. There was the unfortunate shooting in the first week, and the scare over the quadrant in the third. Young Alexander Buchan was taken ill again, and died from what appeared to be a repeat of the epileptic fit in Tierra del Fuego. Banks wrote in his journal: 'Dr Solander Mr Sporing Mr Parkinson and some of the officers of the ship attended his funeral. I sincerely regret him as an ingenious and good young man, but his Loss to me is irretrievable, my airy dreams of entertaining my freinds in England with the scenes that I am to see here are vanishd.' Banks's comments seem curiously harsh, and suggest his instinctive sense of entitlement. 'No account of the figures and dresses of men can be satisfactory

unless illustrated with figures: had providence spared him a month longer what an advantage would it have been to my undertaking. But I must submit.'[23]

This note would be repeated elsewhere in his journal. Yet the expedition's other artist, the eighteen-year-old Sydney Parkinson, had no doubts about his employer's humanity. He had witnessed how Banks had nursed Buchan in the Tierra del Fuego débâcle, and wrote a long entry in his own journal reflecting on Banks's response to the unnecessary shooting of the Tahitian over the stolen musket. 'When Mr Banks heard of the affair, he was highly displeased, saying, "If we quarrel with these Indians, we should not agree with Angels." And he did all he could to accommodate the difference, going across the river, and through the mediation of an old man, prevailed upon many of the natives to come over to us, bearing plaintain trees, which is a signal of peace among them; and clapping their hands to their breasts, cried "Tyau!", which signifies friendship. They sat down by us; sent for coa nuts; and we drank milk with them.'[24]

With the security of the entire expedition in his hands, Cook was naturally cautious. He decided that a permanent armed encampment, Fort Venus, should be built on the beach to protect the expedition ashore and assert its authority. Banks says the Tahitians approved of this, and helped with the construction. Drawings by Parkinson, though the fort's situation among the palm trees is intended to look idyllic, show a square earthen stockade surmounted by a wooden palisade with naval swivel cannons mounted along the top. The fort was fifty yards wide by thirty yards deep, commanding a stretch of river on the inland side. In front along the shore was a trading area, where boats and canoes were drawn up, but all stores and arms were kept inside under guard, except for barrels of water by the stream. There were wooden gates which were closed at dusk, with armed sentries.

Within the perimeter, Cook established an official reception area, with a flagstaff flying a large Union Jack. There was a big rectangular marquee for gatherings and feasts, surrounded by an encampment of smaller supply tents and sleeping quarters, together with a bakery, a forge and an observatory. Banks had brought his own bell tent, only fifteen feet in diameter, but obviously the most well-equipped and comfortable. It soon became a popular destination with visiting Tahitians, and there was great rivalry for invitations to dine and sleep there. He noted in his journal: 'Our little fortification is now compleat, it consists of high breastworks

at each end, the front palisades and the rear guarded by the river on the bank of which are placd full Water cask[s]. At every angle is mounted a swivel and two carraige guns pointed the two ways by which the Indians might attack us out of the woods. Our sentrys are also as well releivd as they could be in the most regular fortification.'[25]

This security was regarded as important for good relations, and the fort may have been as much designed to keep the sailors in, as the Tahitians out. Cook enforced a basic naval discipline, which included having one able seaman flogged on the quarterdeck for threatening a Tahitian woman with an axe.[26] Naturally there was a night curfew, but it was not very strictly observed, especially by the officers.

The constant theft of goods, especially of anything made of metal, regularly disrupted relations between the two communities. It was theft, too, that most clearly demonstrated the cruel gulf between the two civilisations. To the Europeans theft was a violation of legal ownership, an assault on private property and wealth. To the Tahitians it was a skilful affirmation of communal resources, an attempt to balance their self-evident poverty against overwhelming European superfluity. There was no source of metal anywhere on the island. The Tahitians' hunting knives were made out of wood, their fish hooks out of mother-of-pearl, their cooking pots out of clay. The Europeans clanked and glittered with metal.

As Cook himself observed, the *Endeavour* was an enormous treasure trove of metal goods: from iron nails, hammers and carpenters' tools to the most puzzling of watches, telescopes and scientific instruments. To the Tahitians it was wholly justifiable to redistribute such items. Banks, who had to keep a watchful eye on his scientific equipment, noticeably his dissection knives and his two solar microscopes, noted: 'I do not know by what accident I have so long omitted to mention how much these people are given to theiving. I will make up for my neglect however today by saying that great and small Chiefs and common men all are firmly of opinion that if they can once get possession of any thing it immediately becomes their own.'[27] ♣

♣ A very large ethical and philosophical issue about the nature of justice, property and ownership in society evidently lurked beneath these fleeting reflections of Banks and Cook. Over the next thirty years it would be addressed in various ways by Jean-Jacques Rousseau, Adam Smith, William Godwin and Thomas Paine. Beyond that lay the whole question of imperialism and colonialism, that great, tangled Victorian inheritance, looming like a dark stormcloud on the distant horizon. For the time being the bluff innocence

Ruminating on these larger ethical questions did not allow Banks to ignore simple practical problems, like the ubiquitous flies: 'The flies have been so troublesome ever since we have been ashore that we can scarce get any business done for them; they eat the painters colours off the paper as fast as they can be laid on, and if a fish is to be drawn there is more trouble in keeping them off it than in the drawing itself.'[28] The men tried many expedients: fly swats, flytraps made of molasses, and even mosquito nets draped over Parkinson while he worked.

Much time was spent in bargaining for sexual favours. The basic currency was any kind of usable metal object: there was no need for gold or silver or trinkets. Among the able seamen the initial going rate was one ship's nail for one ordinary fuck, but hyper-inflation soon set in. The Tahitians well understood a market economy. There was a run on anything metal that could be smuggled off the ship – cutlery, cleats, handles, cooking utensils, spare tools, but especially nails. It was said that the *Endeavour*'s carpenter soon operated an illegal monopoly on metal goods, and nails were leaving the ship by the sackful.

Later in June there was a crisis when one of the *Endeavour*'s crew stole a hundredweight bag of nails, and refused to reveal its whereabouts even after a flogging: 'One of the theives was detected but only 7 nails were found upon him out of 100 Wht and he bore his punishment without impeaching any of his accomplices. This loss is of a very serious nature as these nails if circulated by the people among the Indians will much lessen the value of Iron, our staple commodity.'[29]

Cook disapproved of sexual bartering, and made attempts to regulate the trade in love-making – 'quite unsupported', he later drily observed, by any of his officers. He remained philosophical, observing, not without humour, that there was a cautionary tale told about Captain Wallis's ship the *Dolphin*: when leaving Polynesian waters two years previously, so many nails had been surreptitiously prised out of her timbers that she almost split apart in the next Pacific storm she encountered. It was only later that the full, disastrous medical consequences of this spontaneous sexual trade became apparent.

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of this first expedition is well caught by Banks's naval biographer, Patrick O'Brian: 'In any case the thefts were not all on one side: [Captain] Wallis had taken possession of the entire island [of Tahiti] and its dependencies, which brings to mind the remark about the relative guilt of the man who steals a goose from off a common and the other who steals the common from under the goose.' Patrick O'Brian, *Joseph Banks: A Life* (1987), p.95.

Yet Cook was already aware of the terrible risk and burden of spreading venereal disease, and wrote a long entry in his journal for 6 June 1769 reflecting on them. Certainly he had taken every precaution that his own crew were free from sexual infection when they arrived. They had been examined by Mr Monkhouse, the *Endeavour*'s surgeon, and they had in effect been in shipboard quarantine for eight months. But the Tahitian 'Women were so very liberal with their favours' that venereal disease had soon spread itself 'to the greatest part of the Ship's Company'. The Tahitians themselves called it 'the British disease', and Cook thought they were probably correct, though he wondered if it was already endemic, brought either by the French or by the Spanish. 'However this is little satisfaction to them who must suffer by it in a very great degree and may in time spread itself over all the Islands of the South Seas, to the eternal reproach of those who first brought it among them.'[30] ♣

Some crew members had moral scruples from the start. Young Sydney Parkinson noted disapprovingly in his journal: 'Most of our ship's company procured temporary wives amongst the Natives, with whom they occasionally cohabited; an indulgence which even many reputed virtuous Europeans allow themselves, in uncivilised parts of the world, with impunity. As if a change of place altered the moral turpitude of fornication: and what is a sin in Europe, is only a simple innocent

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♣ It was soon accepted that the Europeans in general were responsible. A satirical poem dedicated to Banks in 1777 had a bitterly sarcastic footnote referring to the transmission of 'the Neapolitan fever' to Tahiti, 'where from the promiscuous intercourse of the Natives, it will probably very soon annihilate them all, and in the most dreadful manner, for the honour of Christian humanity': 'An Historic Epistle from Omai to the Queen of Tahiti' (1777). In addition there is nature's revenge on marauding European crews, as described in Coleridge's ballad *The Ancient Mariner*. It is often forgotten that this poem describes the death of an entire ship's complement of 200 men (bar the Mariner) after an encounter with a terrifying and diseased woman, 'Life-in-Death':

> Her lips were red, her looks were free,
> Her locks were yellow as gold:
> Her skin was as white as leprosy,
> The Nightmare Life-in-Death was she,
> Who thicks man's blood with cold.
> (*The Ancient Mariner*, lines 190–4)

The full catastrophe of venereal disease, which devastated the Pacific populations over the next two generations, has been described by Alan Moorehead in *The Fatal Impact* (1966).

gratification in America; which is to suppose that the obligation of chastity is local, and restricted only to particular parts of the globe.'[31]

Banks appeared to have no such scruples. He made a point of leaving the camp most nights and, as he put it, 'sleeping alone in the woods'. He told himself, perhaps with the easiness of birth and privilege, that his intentions were as much botanical as amorous, and that no moral code was seriously infringed. After all, it was all *research*. Yet it is difficult to see him as a simple predator. He was clearly attractive to Tahitian women – robust, generous, good humoured – and it is striking how quickly he gained a footing (if that is the term) in Tahitian society generally.

He reached an important and lasting understanding with the Tahitian queen, Oborea. This included the pretty girl 'with fire in her eyes', who conveniently turned out to be one of the queen's personal servants, Otheothea. But it was much more than a sexual agreement. Almost uniquely, Banks was welcomed into many hidden aspects of Tahitian life, including dining, dressing and religious rituals. It also brought him his most vital contact, with one of the Tahitian 'priests' or wise men, Tupia, who taught him the language and many of the island customs.

Characteristically, Banks was virtually the only member of the *Endeavour* who bothered to learn more than a very few words of Tahitian. His journal contains a basic vocabulary. The words fall into four main sections, which perhaps suggest his particular areas of interest: first, plants and animals ('breadfruit, dolphin, coconut, parroquet, shark'); then intimate parts of the human body ('breasts, nails, shoulders, buttocks, nipples'); then sky phenomena ('sun, moon, stars, comet, cloud'); and finally qualities ('good, bad, bitter, sweet, hungry'). There are also some verbs, including those for stealing, understanding, eating, and being angry or tired. But the list cannot be very complete, since there are no words for love, laughter, music or beauty – and it would be difficult to talk Tahitian without any of these.

Banks's skill with language gave him a new role as the chief trading officer or 'marketing man' for the *Endeavour*. He established himself in a canoe drawn up on the shore outside Fort Venus, and every morning would negotiate for food and supplies. He was acutely aware of the shifting trading rates, noting on 11 May: 'Cocoa nuts were brought down so plentifully this morn that by ½ past 6 I had bought 350. This made it necessary to drop the price of them least so many being brought at once we should exhaust the country and want hereafter. Not withstanding I had

before night bought more than a thousand at the rates of 6 for an amber coulourd bead, 10 for a white one, and 20 for a fortypenny nail.'

Trading also brought him into regular contact with Tahitians of every class, and helped him establish a broad base of good friendships, while Cook and the other officers remained more aloof. His journal shows him constantly enlarging his Tahitian social circle, referring to people by their names, many of them in terms of trust and affection. When this trust was broken or shaken, Banks was often mortified. He frequently blamed himself, rather than the Tahitians, for misunderstandings or false accusations of theft.

He learned the local name for the island, which he transliterated into English: 'We have now got the Indian name of the Island, *Otahite*, so therefore for the future I shall call it.' His spelling was simply based on the pronunciation 'O Tahiti'. He also found that the Tahitians had in turn transliterated their visitors' English names, but after their own fashion. 'As for our own names the Indians find so much difficulty in pronouncing them that we are forcd to indulge them in calling us what they please.' The results were rather odd, and Banks suspected that they were partially amusing nicknames. Captain Cook was 'Toote'; Dr Solander was 'Torano'; the chief mate Mr Molineux was 'Boba' (Banks guessed from his Christian name, 'Robert'); and Banks himself was 'Tapáne', which appeared to mean a drum. Whereas the English had difficulty in recognising more than a handful of Tahitians by name, Banks observed that the Tahitians were much quicker, and soon had names for 'almost every man in the ship'.[32]

Banks's new role expanded to that of civilian diplomat and social secretary. Not being an official part of Cook's naval command gave him a certain flexibility between ship and shore. He helped to arrange many of the informal dinners at Fort Venus, as well as the official visits to the ship. He was also able to partake in Tahitian ceremonies not strictly approved of by Cook. As a result, from May 1769 onwards, Banks's journal entries steadily change their character. They are still full of exquisite botanical and zoological details, but they become more and more anthropological. People begin to replace plants. The daily journal entries begin to cover an astonishing range of phenomena: tattooing, nose-flute-playing, naked wrestling, roasting dogs, surfing.

The young Linnaean collector, with his detached interest in cataloguing, dissection and taxonomy, was being transformed by his Tahitian

experience. The Enlightenment botanist, the aristocratic collector and classifier, was steadily being drawn in to share another ethnic culture and its customs. His *Endeavour Journal* would become fuller for Tahiti than for any other part of the Pacific. Eventually it would expand into a long report, couched in anthropological terms, 'On the Manner and Customs of the South Sea Islands'. It would be the most detailed monograph he ever wrote.[33] Banks was becoming an ethnologist, a human investigator, more and more sympathetically involved with another community. The Tahitians are no longer 'savages', but his 'friends'. He was trying to understand Paradise, even if he did not quite believe in it.

5

The occasion of the Transit of Venus, on 3 June 1769, provided a good opportunity for Banks's new approach. In late May, Cook had set up three astronomical observation points to insure against the possible interference of localised cloud cover. Banks accompanied the furthest group of observers to the outlying island of Moorea. While recording the transit was one of the main objectives of the entire expedition, it was one which the Tahitians could not be expected to understand. Yet Banks's journal entry for 3 June 1769 shows the consideration with which he treated the islanders during this crucial piece of scientific research.

Banks had set up the instruments at a camp above the shoreline by 8 a.m., and had also provided 'a large quantity of provisions' for trade and diplomatic gifts. Leaving the telescopes, he waited down by the beach. Two large canoes appeared, carrying the king of the island, Tarróa, and his sister Nuna. Banks was standing in the shade of a tree, and immediately went down to them: 'I went out and met them and brought them very formally into a circle I had made, into which I had before sufferd none of the natives to come. Standing is not the fashion among these people. I must provide them a seat, which I did by unwrapping a turban of Indian cloth which I wore instead of a hat, and spreading it upon the ground. Upon which we all sat down and the king's present was brought Consisting of a hog, a dog and a quantity of Bread fruit Cocoa nuts &c. I immediately sent a canoe to the Observatory to fetch my present, an adze a shirt and some beads with which his majesty seemd well satisfied.'

This was a customary exchange of gifts. But Banks was determined to explain to the king what his men were doing. 'After the first Internal

contact [of Venus with the sun's disc] was over I went to my Companions at the Observatory carrying with me Tarroa, Nuna and some of their cheif atendants. To them we shewd the planet upon the sun and made them understand that we came on purpose to see it. After this they went back and myself with them.'

Yet the nonchalant end of this journal entry shows that Banks was also perfectly prepared to take advantage of his privileged situation: 'At sunset I came off having purchasd another hog from the King. Soon after my arrival at the tent 3 handsome Girls came off in a canoe to see us. They had been at the tent in the morning with Tarroa. They chatted with us very freely and with very little persuasion agreed to send away their carriage and sleep in [the] tent. A proof of confidence which I have not before met with upon so short an acquaintance.'[34]

The next day Banks added mischievously: 'We prepared ourselves to depart, in spite of the intreaties of our fair companions who persuaded us much to stay.' But who was seducing whom? Who was exploiting whom? Many of Banks's most striking observations on Tahiti record behaviour which seems difficult to evaluate or interpret. Once in late April, one of his closest friends among the Tahitian women, Terapo, appeared at the gate of Fort Venus in great distress. Banks carefully recorded what followed: 'Terapo was observd to be among the women on the outside of the gate, I went out to her and brought her in, tears stood in her eyes which the moment she enterd the tent began to flow plentifully. I began to enquire the cause; she instead of answering me took from under her garment a sharks tooth and struck it into her head with great force 6 or 7 times. a profusion of Blood followd these strokes and alarmd me not a little. For two or 3 minutes she bled freely more than a pint in quantity, during that time she talkd loud in a most melancholy tone. I was not a little movd at so singular a spectacle and holding her in my arms did not cease to enquire what might be the cause of so strange an action.'

Terapo consistently refused to explain, though Banks's gesture of taking her in his arms suggests the possibility of some kind of emotional upset between them. There were several other Tahitians in the tent at the time – yet 'all talked and laughed as if nothing melancholy was going forward'. This only deepened the mystery. Terapo's recovery was no less abrupt and inexplicable: 'What surpriz'd me most of all was that as soon as the bleeding ceas'd she lookd up smiling and immediately began to

collect peices of cloth which during her bleeding she had thrown down to catch the blood. These she carried away out of the tents and threw into the sea, carefully dispersing them abroad as if desirous that no one should be reminded of her action by the sight of them. She then went into the river and after washing her whole body returnd to the tents as lively and chearfull as any one in them.'[35]

Banks later discovered that this dramatic way of expressing grief was universal among the Tahitian women, and he saw many who had permanent 'grief scars' on their heads. He learned something about such things from queen Oborea's little family circle. This group – consisting of the queen, her twenty-year-old lover Obadee, her servant Otheothea (Banks's lover) and several close male friends – seems to have adopted Banks, and looked after his welfare. They frequently all came to sleep in his tent, when feasting and love-making seems to have taken place easily and indiscriminately. Sometimes this could lead to comic-opera complications, as Banks would smilingly hint in his journal.

> 21 May. Sunday, Divine service performd, at which was present Oborea, Otheothea, Obadee, &c. all behav'd very decently. After dinner Obadee, who had been for some time absent, returnd to the fort. Oborea desired he might not be let in, his countenance was however so melancholy that we could not but admit him. He looked most piteously at Oborea, she most disdainfully at him. She seems to us to act in the character of a Ninon d'Enclos who, satiated with her lover, resolves to change him at all events. The more so as I am offered, if I please, to supply his place! But I am at present otherwise engag'd; indeed was I free as air, her Majesties person is not the most desireable.

Other mishaps ensued towards the end of the month. Banks, Cook and Solander had decided on an expedition to explore the western end of the bay, and to bargain for some wild pigs rumoured to be held by the local chieftain, Dootah. Banks was followed solicitously up the coast by queen Oborea and her entourage in their large and comfortable outrigger canoes. When the expedition was benighted in chief Dootah's village (no accommodation being offered), Banks agreed to separate from the others and sleep in the queen's well-appointed canoe, which had a cabin constructed between the floats.

Further pieces of cloth were then laid out in front of Banks, and the woman stepped closer and repeated her slow, smiling, naked gyrations. No awkwardness seems to have been felt on either side. 'She then once more displayd her naked beauties and immediately marchd up to me, a man following her and doubling up the cloth as he came forwards which she immediately made me understand was intended as a present for me. I took her by the hand and led her to the tents acompanied by another woman her friend. To both of them I made presents but could not prevail upon them to stay more than an hour.'

This is clearly a seduction scene, and the unnamed Tahitian man is bartering the woman. Yet there is no gloating in Banks's entry; nor is it clear whether he took advantage of this frank proposal. Cook also witnessed this scene, and remarked that the young woman acted 'with as much Innocency as one could possibly conceive'.[38]

By mid-June Banks was increasingly prepared to abandon European inhibitions, including his clothes. He noted frequently, 'I lay in the woods last night as I very often did,' by which one can understand he was probably with Otheothea. On 10 June his journal records how he stripped off, had his body covered with charcoal and white wood ash, and danced ceremonially with a witch doctor (*Heiva*). He was joined by two naked women and a boy, and together they danced through the length of the village, past the gate of Fort Venus, and along the shore.

It must have been an extraordinary sight, the expedition's chief botanist whirling past the marine guards in the sunlight. But this Tahitian ceremony was not at all what it might have appeared to uninstructed European eyes. It was not an erotic rite, but a dance of ritual mourning. Banks and the young women were taking the part of ancestral ghosts (*Ninevehs*). 'Tubourai was the Heiva, the three others and myself were the Nineveh. He put on his dress, most Fantastical tho not unbecoming … I was next prepard by stripping off my European cloths and putting me on a small strip of cloth round my waist, the only garment I was allowd to have, but I had no pretensions to be ashamd of my nakedness for neither of the women were a bit more coverd than myself. They then began to smut me and themselves with charcoal and water, the Indian boy was compleatly black, the women and myself as low as our shoulders. We then set out. Tubourai began by praying twice, once near the Corps again near his own house … To the fort then we went to the surprize of our freinds and affright of the Indians who were there, for they every where

fly before the Heiva like sheep before a wolf.' The dancing continued along the shore, and went on for the rest of the afternoon, 'After which we repaird home, the Heiva undressd and we went into the river and scrubbd one another till it was dark before the blacking would come off.'[39]

After eight weeks it became clear that many other officers were not integrating so well into the Tahitian way of life. One of them committed an elementary error by foolishly violating a religious taboo: 'Mr Monkhouse our surgeon met to day with an insult from an Indian, the first that has been met with by any of us. He was pulling a flower from a tree which grew on a burying ground and consequently was I suppose sacred, when an Indian came behind him and struck him; he seiz'd hold of him and attempted to beat him, but was prevented by two more who coming up seizd hold of his hair and rescued their companion after which they all ran away.'[40]

Even Captain Cook managed to create an unnecessary crisis when it was discovered that a metal fire-rake had been stolen from the fort. Determined to set an example, he impounded a score of native canoes. When the rake was swiftly returned, Cook then demanded that all other implements stolen from the camp in the last month should also be restored before he would return the canoes. It was quickly clear to Banks that Cook had here overplayed his hand with the Tahitians. The situation grew more complicated when it was learned that the canoes actually belonged to another group of islanders, who were bringing much-needed food to their relatives. They had no previous connection with the British, and were obviously not responsible for any of the thefts.

The aggrieved Tahitians appealed directly to Banks, rather than to Cook, over this blatant injustice. 'Great application was made to me in my return that some of these might be released.' For the first time Banks appeared openly critical of Cook in his journal: 'I confess had I taken a step so violent I would have seizd either the persons of the people who had stolen from us, most of whoom we either knew or shrewdly suspected, or their goods at least instead of those of people who are intirely unconcernd in the affair and have not probably interest enough with their superiors (to whoom all valuable things are carried) to procure the restoration demanded.'[41]

For several days all trading ceased, and the fish in the sequestered canoes began to rot, filling the fort with an ominous smell. Then one of the duty officers compounded their difficulties by committing another

needless offence. Taking a party of sailors out to collect ballast stone for the *Endeavour*, he promptly began 'pulling down' a Tahitian burying ground. Once again the Tahitian appeal was made directly to Banks: 'To this the Indians objected much and [a] messenger came to the tents saying that they would not suffer it. I went with the 2nd Lieutenant to the place.' Banks, in his diplomatic role, eventually managed to soothe both parties, had the burying ground restored, and found a nearby riverbed where the sailors 'gatherd stones very Easily without a possibility of offending anybody'.[42]

The issue of the impounded canoes remained, however, and suggested hostile attitudes on both sides: 'The fish in the Canoes stink most immoderately so as in some winds to render our situation in the tents rather disagreable … The market has been totaly stoppd ever since the boats were seizd, nothing being offerd to sale but a few apples; our freinds however are liberal in presents so that we make a shift to live without expending our bread.'[43]

Queen Oborea and Banks's flame Otheothea reappeared at the fort, though initially Banks thought it wiser for them to sleep outside in their canoes, and they were 'rather out of humour'.[44] The crisis was only gradually defused, as Cook allowed the canoes to be taken back three or four at a time, in return for small peace offerings. One unexpected development was that Oborea's ex-husband, known as Oamo, put in an appearance to plead for the release of the boats. To everyone's surprise, Oamo behaved very politely towards his ex-wife, and he made the most favourable impression on Banks. He showed himself to be a 'very sensible man by the shrewd questions he asks about England its manners and customs &c.'[45] But the general issue of theft and restitution was never really resolved, and relations with the Tahitians were less relaxed in the last month of the expedition's stay. Chief Dootah completely withdrew from the Europeans, claiming he had been frightened by Banks shooting for wild duck.

Food remained a source of mutual interest, and one remarkable culinary event featured a dog, which the priest Tupia killed, dressed and roasted, while Banks carefully took down the recipe. Most of the sailors were repelled, but Banks declared the results to be delicious. 'A most excellent dish he made for us who were not much prejudicd against any species of food. I cannot however promise that an European dog would eat as well, as these scarce in their lives touch animal food, Cocoa nut kernel, Bread fruit, yams &c, being what their masters can best afford to

give them and what indeed from custom I suppose they preferr to any kind of food.'

Banks was also more at odds than previously with his naval companions, and there was some kind of quarrel with the insensitive surgeon Monkhouse. Banks tactfully omitted this from his journal, but young Sydney Parkinson recorded a confrontation between the two, and thought it arose over Monkhouse propositioning Otheothea. Several of Oborea's Tahitian girls had arrived at Banks's tent 'very earnest in getting themselves husbands'. They behaved 'very agreeable until bedtime, and determined to lie in Mr Banks's tent, which they accordingly did, till the Surgeon having some words with one of them ... he insisted she should not sleep there, and thrust her out'. Otheothea was then heard crying for some time in the tent. Parkinson noted dramatically: 'Mr Monkhouse and Mr Banks came to an *eclaircisement* some time after; had very high words and I expected they would have decided it by a duel, which, however, they prudently avoided.' Oborea and her retinue then left in their canoes, and would not return to the camp. 'But Mr Banks went and staid with them all night.'[46]

It was probably no coincidence that Cook now decided that he would take his botanist off on a separate expedition. This was planned as a circumnavigation of the entire island in the *Endeavour*'s small sailing boat. Its official naval objective was to chart all possible harbours, and discover any signs of previous European landings – notably French or (as it was supposed) Spanish. For Banks, however, it was a glorious scientific field expedition, and a tantalising extension of his new anthropological investigations.

Starting at Matavi Bay in the north of the island, the circumnavigation took six days. They set out with a small crew and a handful of marines at 3 a.m. on 26 June, heading eastwards. There was considerable uncertainty about their reception once they passed beyond the territory of Matavi Bay, where Oborea and Dootah had influence. One of their guides said that 'people not subject to Dootah' would kill them. Accordingly they adopted a cautious mode of advance. Banks and Cook travelled mostly on foot along the shoreline, while the pinnace, its marines armed with loaded muskets, was rowed just offshore, keeping pace and overseeing their progress. A number of native canoes followed them.

'Banks as usual explored, botanized, conversed,' noted Cook with a smile.[47] Indeed he was soon plunging inland and out of sight, claiming

to be in search of specimens, waving a large butterfly net as his preferred weapon of defence. Banks thought nothing of foraging by himself ashore, once disappearing at dusk to hunt for provisions. He shot a duck and two curlews, then pressed on deeper inland. 'I went into the woods, it was quite dark so that neither people nor victuals could I find except one house where I was furnishd with fire, a breadfruit and a half, and a few *ahees* [nuts].' That night he slept under the awning of a native canoe.

Some discoveries were reassuring. In one village they found an English goose and a turkey cock which had been left behind by the *Dolphin*'s crew two years previously. 'Both of them immensely fat and as tame as possible, following the Indians every where who seemd immensely fond of them.' Other sights were less so. In a longhouse in this neighbourhood Banks spotted a rather ominous wall decoration. Proudly mounted on a semi-circular board at the end of the hut were a collection of human bones. Banks carefully inspected them – they were all under-jaw bones – no less than fifteen in all: 'They appeard quite fresh, not one at all damagd even by the loss of a Tooth.' These were evidently war trophies, and even perhaps signs of cannibalism. Banks enquired boldly, but could get no reply. 'I askd many questions about them but the people would not attend at all to me and either did not or would not understand either words or signs upon that subject.'[48] Later he learned they had been 'carried away as trophies and are usd by the Indians here in exactly the same manner as the North Americans do scalps'.[49]

Some receptions were welcoming, but deceptive. 'Many Canoes came off to meet us and in them some very handsome women who by their behaviour seemd to be sent out to entice us to come ashore, which we most readily did.' They were received in a very friendly manner by Wiverou, who was chief of the district. A splendid feast was prepared, accommodation offered, and Banks confidently paid court to the women, 'hoping to get a snug lodging by that means, as I had often done'. This is a revealing admission, and as it turned out it was wholly unjustified. As the evening drew on, and the women found Banks more importuning, 'they dropped off one by one'. He ruefully remarked that at last he found himself in the position of being 'jilted 5 or 6 times, and obliged to seek out for a lodging myself'. He slept alone in a hut, naked as was now his custom, except for a piece of Tahitian cloth thrown over his waist. For once he implies that he felt himself to be the outcast, and this rejection evidently gave him pause for thought.

Banks became more and more restless as this operation proceeded. 'I was setting in the adjacent house with Tomio for an hour, all which time it lasted and was not finishd when I went away, tho very near. This was one side only of her buttocks for the other had been done some time before. The arches upon the loins upon which they value themselves much were not yet done, the doing of which they told caused more pain than what I had seen.'

Finally he could stand it no more, and went back alone to Fort Venus. He was clearly both disturbed and fascinated by the whole procedure, though he gives little away about his deeper feelings – whether he was repulsed or shocked, or even sexually excited. He later wrote: 'For this Custom they give no reason, but that they were taught it by their forefathers … So essential is it esteemed to Beauty, and so disgraceful is the want of it esteemed, that every one submits to it.'[51]

On 3 July Banks made one last expedition into the interior, this time accompanied only by the surgeon Monkhouse. His choice of companion seems to have been deliberate. They pursued a river line up into the mountains, pressing on as far as they could go, painfully clambering up the riverbed, sweating and stumbling, searching for plants and minerals. On the way Banks concluded rightly that Tahiti must be volcanic in origin, 'a volcano which now no longer burns'; which also explained the fact that the Tahitian god was known as 'the Father of Earthquakes'.

Twelve miles inland, further than any previous expedition had ever penetrated, they were brought to an abrupt halt by an enormous and beautiful waterfall, surrounded by 'truly dreadful' cliffs more than a hundred feet high. Beneath it lay 'a pool so deep that the Indians said we could not go beyond it'. Here, in this enchanted but faintly menacing place, the secret heart of the Tahitian island, it seems the two men bathed and talked together, until European rivalries were happily forgotten.[52]

6

After a stay of three months, the British expedition prepared to leave in the second week of July 1769. Banks spent a whole day sowing South American fruit seeds for the Tahitians to harvest after they were gone: lemons, limes, watermelons, oranges. While he loaded his final

specimens of Tahitian plants and animals aboard, he considered the possibility of taking a human representative of Paradise back to England. The matter had been raised with Tupia, the wise priest, who proposed that he himself should make the perilous journey together with his young son: 'This morn Tupia came on board, he had renewd his resolves of going with us to England, a circumstance which gives me much satisfaction. He is certainly a most proper man, well born, cheif Tahowa or priest of this Island, consequently skilld in the mysteries of their religion. But what makes him more than any thing else desireable is his experience in the navigation of these people and knowledge of the Islands in these seas. He has told us the names of above 70, the most of which he has himself been at.'[53]

Although Tupia was evidently enthusiastic to make the journey, Captain Cook would not underwrite the decision. He did not feel that the Tahitian could be signed on as an official member of the expedition, and he thought that once he was in England the Admiralty and the Crown would 'in all human probability' refuse to support him financially. Banks had no such hesitations, and resolved to be responsible for both Tupia's welfare and his upkeep, saying he was taking on Tupia as his friend and his guest. Cook agreed, and would find Tupia's help as the expedition's South Seas navigator and Polynesian translator invaluable.

Banks added a comment that seems extraordinarily revealing. He suddenly thinks of outdoing his fashionable country-house friends back in Yorkshire with their exotic pets. 'I do not know why I may not keep [Tupia] as a curiosity, as well as some of my neighbours do lions and tygers, at a larger expence than he will probably ever put me to.' The idea that his friend and adviser could have been considered, even for a moment, as a 'curiosity', or a wild animal specimen, comes as a shock. It shows that Banks, for all his sympathy and humanity, could easily revert to his role as Linnaean collector and wealthy European landowner on a jaunt among the natives. However one explains it, the remark hangs uneasily in the air, never quite dissipated, never quite forgotten: the snake in the garden.

Nonetheless, Banks closed this entry on a more typically generous note: 'The amusement I shall have in [Tupia's] future conversation, and the benefit he will be of to this ship, as well as what he may be if another should be sent into these seas, will I think fully repay me.'[54]

There was a last-minute drama when, as Fort Venus was being dismantled, two of the marines slipped away into the woods, having said they had beautiful Tahitian wives, were content to resign His Majesty's service, and intended to stay. Cook sent out a tracking party, but also took native hostages, which caused a good deal of ill-feeling. Once again it was Banks who defused a potentially ugly situation, by agreeing to spend the last night onshore with his Tahitian friends, until the marines should return. 'At day break a large number of people gatherd about the fort many of them with weapons; we were intirely without defences so I made the best I could of it by going out among them. They wer[e] very civil and shewd much fear as they have done of me upon all occasions, probably because I never shewd the least of them, but have upon all our quarrels gone immediately into the thickest of them. They told me that our people would soon return.'

The marines did return, to everyone's huge relief, at eight o'clock that morning, and Banks watched carefully through his telescope as they were hauled aboard the *Endeavour* while the hostages were released in exchange. Once he saw they were all 'safe and sound' he discharged his own Tahitian 'prisoners' from his tent, 'making each such a present as we though[t] would please them with which some were well content'.[55] Though he does not mention it, this may also have been his last chance to spend a night with Otheothea.

The *Endeavour* finally hoisted anchor early on the morning of 13 July 1769. 'After a stay of 3 months we left our beloved Islanders with much regret,' reported Banks, with careful understatement.[56] The whole of Matavi Bay was full of Tahitian canoes. Oborea and Otheothea came aboard briefly to say tearful farewells. Banks and Tupia then climbed the rigging and stood together in the crow's nest, waving. Sydney Parkinson wrote: 'On our leaving the shore the people in the canoes set up their woeful cry – *Awai! Awai!* – and the young women wept very much. Some of the canoes came up to the side of the ship, while she was under sail, and brought us many cocoas.'[57]

7

Banks had gained a complicated impression of Paradise. As the *Endeavour* sailed westwards towards New Zealand throughout August 1769, with brief stops at other Polynesian islands (seventeen in all), he sat

down in his sweltering cabin to put his reflections in some kind of order. The result was his long anthropological essay 'On the Manners and Customs of the South Sea Islands', perhaps the most original paper he ever wrote.

Tahiti was indeed a kind of Paradise: astonishingly beautiful, its people open and generous, and its way of life languid and voluptuous. But there were many darker elements: strong, even oppressive social hierarchies; endemic thieving; a strange religion haunted by ghosts and superstitions; infanticide; and warlike propensities just below the surface. Nonetheless, Banks's essay is full of his glowing memories, which would later stand him in good stead on the bleakest moments of the journey home: 'No country can boast such delightfull walks as this, the whole plains where the people live are coverd with groves of Breadfruit and cocoa nut trees without underwood; these are intersected in all directions by the paths which go from one house to the other, so the whole countrey is a shade than which nothing can be more gratefull in a climate where the sun has so powerfull an influence.'[58]

The essay is packed with technical information: Tahitian methods of cooking, boat-building, house-construction, tool-making, fishing, dancing, drum-making, navigation, weather-predicting, ceremonial dramas, tattooing (again). Banks also writes tenderly of shared meals, enchanting dresses and languid afternoons. His remarks on the innocence of Tahitian ornaments are characteristic: 'Ornaments they have very few, they are very fond of earings but wear them only in one ear. When we came they had them of their own, made of Shell, stone, berries, red pease, and some small pearls which they wore 3 tied together; but our beads very quickly supplyd their place; they also are very fond of flowers, especialy of the Cape Jasmine of which they have great plenty planted near their houses; these they stick into the holes of their ears, and into their hair, if they have enough of them which is but seldom. The men wear feathers often the tails of tropick birds stuck upright in their hair.'

There is a long passage on the beautiful cleanliness of the Tahitian body, both male and female. All Tahitians wash themselves at least three times a day in the rivers, making their skin smooth and glowing. Their teeth are dazzling white, and they remove all body hair. Banks even grew accustomed to the strange, unforgettable smell of their hair oil: 'This is made of Cocoa nut oil in which some sweet woods or flowers are infusd; the oil is most commonly very rancid and consequently the wearers of it

smell most disagreably, at first we found it so but very little use reconcild me at least very compleatly to it. These people are free from all smells of mortality and surely rancid as their oil is it must be preferrd to the odoriferous perfume of toes and armpits so frequent in Europe.'

The Tahitians' simplicity and innocence (the question of theft aside) came out in innumerable ways, as for example in their attitude to alcohol: 'Drink they have none but water and cocoa nut Juice, nor do they seem to have any method of Intoxication among them. Some there were who drank pretty freely of our liquors and in a few instances became very drunk but seemd far from pleasd with their intoxication, the individuals afterwards shunning a repitition of it instead of greedily desiring it as most Indians are said to do.'[59]

The idea of sexual innocence proved more complicated for a European to accept: 'All privacy is banishd even from those actions which the decency of Europaeans keep most secret: this no doubt is the reason why both sexes express the most indecent ideas in conversation without the least emotion; in this their language is very copious and they delight in such conversation beyond any other. Chastity indeed is but little valued especialy among the midling people; if a wife is found guilty of a breach of it her only punishment is a beating from her husband. Notwithstanding this some of the Eares or cheifs are I beleive perfectly virtuous.'

What later came to be regarded as the most scandalous of all Tahitian customs, the young women's seductive courtship dance, or '*timorodee*', Banks describes with calm detachment and a certain amused appreciation: 'Besides this they dance, especially the young girls whenever they can collect 8 or 10 together, singing most indecent words using most indecent actions and setting their mouths askew in a most extrordinary manner, in the practise of which they are brought up from their earlyest childhood. In doing this they keep time to a surprizing nicety, I might almost say as true as any dancers I have seen in Europe, tho their time is certainly much more simple. This excercise is however left off as soon as they arrive at Years of maturity. For as soon as ever they have formd a connection with a man they are expected to leave of Dancing Timorodee – as it is called.'[60]

The only Tahitian practice that Banks found totally alien and repulsive was that of infanticide, which was used with regularity and without compunction as a form of birth control by couples who were not yet ready to support children. Banks could scarcely believe this, until he questioned

struck. They put into Batavia on the Malay peninsula (now Jakarta, the capital of Indonesia), where the whole crew were progressively overcome by a lethal combination of malarial fever and dysentery. Between November 1770 and March 1771, when they reached the Cape of Good Hope, the *Endeavour* lost thirty-seven of its men, nearly half the original crew. At one point Cook was only able to muster fourteen seamen on deck. Banks's personal team was reduced from eight to four. The expedition's astronomer Green died; the scientific secretary Spöring died; Tupia and his little son Tayeto died; Monkhouse the surgeon died; Thompson the ship's cook died; Satterley the ship's carpenter died; Molineux the ship's master died; Hicks the first lieutenant died; and Banks's faithful artist, young Sydney Parkinson, died. Solander would have died too, but for Banks's unstinting nursing care.[64]

Banks himself suffered for weeks from amoebic dysentery, sometimes 'so weak as scarcely to be able to crawl downstairs', and experienced 'the pains of the Damned almost'. These deaths had a devastating effect on his memories of the expedition. Finally, within sight of England, his surviving greyhound bitch, Lady, universally loved among the crew, was heard to howl out in the night. The next morning she was found flung across a chair in the cabin, still guarding Banks's writing table, but dead.

By the time they reached London on 13 July 1771, Banks felt little exuberance. He was shattered and disorientated. The bucolic memories of Tahiti were more than two years old, and instead he was haunted by the recent horrible deaths of so many friends and shipmates. Solander was still very weak, and not out of danger. Banks's family were not in town to greet and congratulate him, but 'dispersed almost to the extremities of the Kingdom' for the summer. He wrote to his friend Thomas Pennant FRS immediately on arrival: 'A few short lines must suffice … Mr Buchan, Mr Parkinson and Mr Sporing are all dead, as is our Astronomer, seven officers, and about a third part of the ship's crew of diseases contracted in the East Indies – not in the South Seas, where health seems to have her chief residence. Our Collections will I hope satisfy you … I must see [my family] before I begin to arrange or meddle with anything … *Grass* I must have in the mean time. Salt provisions and Sea air have been to me like too much hardmeat to a horse. In a few days shall be able to write more understandably. Now I am Mad, Mad, Mad. My poor brain whirls round with innumerable sensations.'[65]

His safe return was greeted tenderly by his sister Sophia at Revesby in Lincolnshire. From the bottom of her heart she thanked the 'Merciful god who has daily preserved my Dear Brother from the perils, and very great ones, of the Sea!' Her sudden outburst of piety suggests how vividly she realised the dangers that her beloved brother had consistently played down, but barely survived. On his behalf she fondly (and unavailingly) promised that he would mend his ways and his Christian faith. She could pledge that he was well-intentioned, and was one of those who 'according to their Faith, use their best Endeavours, far as in their power they can, to do the Will of the Supreme Being'.[66] Sophia may well have had reason to worry about Banks's state of mind. He spent a fortnight recovering on the family estate in Lincolnshire, but spoke little about his experiences, even to Sophia. He walked, ate, shot and slept; then ate and slept again.

On his return to London he made no attempt to get in touch with Harriet Blosset, though James Lee and Harriet's mother clearly assumed that an engagement would be announced. It was obvious now that, whatever else, his experiences had left Banks utterly unfit for a quiet, regular, married life. Some evidence for this comes indirectly from a gossiping friend of Thomas Pennant's. Even if not entirely accurate, it seems to reflect something of Banks's disturbed state of mind. 'Upon his arrival in England [Banks] took no sort of notice of Miss Blosset for the first week or nearly so … On this Miss Blosset set out for London and wrote him a letter desiring an interview of explanation. To this Mr Banks answered by a letter of 2 or 3 sheets, professing love etc but that he found he was of too volatile a temper to marry.' They did have at least one painful meeting, when Harriet is reported to have wept and 'swooned'.[67]

Further gossip was being reported by the novelist Fanny Burney and Lady Mary Coke in August. The story of the waistcoats provided much amusement. 'Mr Morris was excessively drole according to custom; and said he hoped Mr Banks, who since his return has desired Miss Blosset will excuse his marrying her, will pay her for the materials of all the worked waistcoats she made for him during the time he was sailing round the world.'[68]

There was some talk of broken promises and scandal. One wit suggested that Banks should be 'immediately placed in the Stocks … for this injury'.[69] A friend of James Lee's, Dr Robert Thornton, later claimed that Banks had given Harriet an engagement ring before he set out, and had made 'many solemn vows' which he now callously reneged on.

In Thornton's view it was the alluring women of Tahiti, with their free sexual practices, who had corrupted Banks's feelings and destroyed his morals. 'Some people are ill-natured enough to say that, vitiated in his taste by seeing the elegant women of Otaheite, who must indeed have *something very peculiar in their natures* to captivate such a man, upon his return, Mr Banks came indeed to see the young lady and the plants; but she found her lover now preferred a flower, *or even a butterfly*, to her superior charms.' For Harriet the three-year wait ended in 'a most mortifying disappointment'.[70]

But perhaps it was more a relief. The kindly Solander, who knew and liked Harriet and her mother, and had of course witnessed Banks's anthropological behaviour in Tahiti, gently intervened and advised both parties not to proceed.[71] Banks privately offered Harriet's guardian James Lee a 'substantial' sum of money, which was accepted as a form of dowry for her future. The amount was rumoured to be £5,000 (half the sum he had previously laid out on the expedition), which suggests that Banks was not in the least callous, but felt more than ordinary guilt; though he could well afford to be generous. Harriet Blosset soon after made a happy marriage with a virtuous and botanical clergyman, Dr Dessalis, and was 'blessed by a numerous and lovely family'.[72]

Rumours about Banks's behaviour with Tahitian girls continued to spread in London for a number of months. Whether it was really this that determined him to break off with Miss Blosset (or she with him) is not clear. Satirical poems, fictional 'letters' and amusing cartoons certainly began to circulate, in which Banks's subtropical butterfly net and microscope were put to suggestive use. In one cartoon he was shown chasing a beautiful butterfly labelled 'Miss Bl … '.

Whatever the truth of these stories, it is clear that Banks was a changed man on his return to England, and it took him several years to settle back into conventional modes of behaviour. But sudden fame may have been even more unsettling than his unresolved affair with Harriet Blosset. On his return to London, Banks found to his immense surprise that the expedition was being greeted as a national triumph. Alongside Captain Cook, he and Solander were being treated as celebrities.

On 10 August they were summoned to meet the King at Windsor. For Banks the formal interview turned into a long ramble round Windsor Great Park, the first of many. Royal interest in the botanical possibilities of Kew Gardens promised great things. Moreover a real friendship

quickly formed between George III, aged thirty-three, and Banks, aged twenty-eight. Both men owned large landed estates, were fascinated by agriculture and science, and were embarked on public careers, young and full of hope.

Banks and Solander next spent a debriefing weekend with the First Lord of the Admiralty, Lord Sandwich, at his country retreat. Then they were formally congratulated and repeatedly dined by the Royal Society. In November they were awarded honorary doctorates by the University of Oxford. Linnaeus wrote in Banks's praise: 'I cannot sufficiently admire Mr Banks who has exposed himself to so many dangers and has bestowed more money in the services of Natural History than any other man. Surely none but an Englishman would have the spirit to do what he has done.'[73]

The newspapers and monthlies – the *Westminster Journal*, the *Gentleman's Magazine*, *Bingley's Journal* – printed articles on their adventures, and dinner invitations started to pour in. Though Captain Cook was praised, Banks and Solander had rapidly become the scientific lions. They had brought back over a thousand new plant specimens, over five hundred animal skins and skeletons, and innumerable native artefacts. They had brought back new worlds: Australia, New Zealand, but above all the South Pacific.

London society was agog. Lady Mary Coke wrote in her diary: 'The most talked of at present are Messers Banks and Solander. I saw them at Court, and afterwards at Lady Hertford's but did not hear them give any account of their voyage round the world which I am told is very *amusing*.'[74] Dr Johnson gravely discussed 'culling simples' with Banks, and offered to write a Latin motto for the ship's goat. He thought a 'happier pen' than his might even write an epic poem on the expedition. Shortly afterwards Banks was elected to Johnson's exclusive Club.[75] Boswell, biographer's pen in hand, had a 'great curiosity' to see the 'famous Mr Banks'. He described him as 'a genteel young man, very black, and of an agreeable countenance, easy and communicative, without any affectation or appearance of assuming'.[76]

Sir Joshua Reynolds painted a dashing portrait of Banks in his study, his dark hair suitably wild and unpowdered, his fur-lined jacket flung open, his waistcoat unbuttoned, a loose pile of papers from his journal under one hand, and a large globe at his elbow. The rousing inscription was from Horace: *Cras Ingens Iterabimus Aequor* – Tomorrow We'll Sail the Vasty Deep Once More.

Everyone was awaiting an official written account of the great voyage. From the time of Hakluyt such travelogues had been immensely popular, and this one was impatiently anticipated. But one of the terms of the *Endeavour* expedition was that all journals and diaries would be surrendered at the end of the voyage, and submitted to an official historian. The journals of Cook and Banks, the papers and botanical notes of Solander, the precious drawings of Buchan and Parkinson, were accordingly all handed over to a professional author, who was to prepare a three-volume account for the sum of £600.

The man chosen was fifty-six-year-old Dr John Hawkesworth, a literary scholar and professional journalist. He was evidently considered a safe pair of hands, having written a number of short biographies and successfully collaborated with Dr Johnson on two periodicals, the *Rambler* and the *Adventurer*. The misleading title of the latter, which had nothing to do with exploration, may have reinforced his apparent credentials. The subject was a gift, and the material was magnificent, if sometimes a little risqué. All that was required were accuracy, objectivity and the ability to assemble a vivid narrative. After nearly two years' labour, Hawkesworth achieved none of these.

Hawkesworth's *Account of Voyages Undertaken ... for Making Discoveries in the Southern Hemisphere and Performed by ... Captain Cook ...* was published in three volumes in 1773. It was prolix, abstract, and much given to philosophical digression. Its author was easily shocked, and quick to moralise. He had no scientific or naval experience to draw on, and his views on foreign customs and native morality were prejudiced and illiberal. While digressing on the 'Noble Savage', Hawkesworth easily struck a lurid and provocative note. He wrote with delicious outrage of Tahitian dances and sexual practices. The girls danced the *timorodee* with 'motions and gestures beyond imagination wanton ... a scale of dissolute sensuality wholly unknown to every other nation ... and which no imagination could possibly conceive'.[77]

A second account of the expedition, *Journal of a Voyage on His Majesty's Ship, the Endeavour ...*, also published in 1773, was based on Sydney Parkinson's journal as edited by his brother Stanfield. There had been a quarrel with Hawkesworth over the copyright of these papers, and Banks had also struggled to retrieve Parkinson's botanical illustrations from Stanfield Parkinson. Banks felt, not unreasonably, that he had paid

chemist and radical Joseph Priestley, the painter Johann Zoffany, and the brilliant young London physician Dr James Lind (later to be Shelley's extracurricular science teacher at Eton).

Cook was quite prepared to acquiesce to all Banks's scientific requirements, and had the great cabin in his new ship, the *Resolution*, redesigned to meet them, with higher ceilings, folding work tables and fitted cabinets. His own tiny captain's cabin was moved to the rear of the *Resolution*'s quarterdeck. But the Admiralty regarded Banks's demands as unacceptably imperious, and, without warning, withdrew its authorisation. Humiliatingly, all Banks's equipment was offloaded and dumped on the quayside at Sheerness. On 20 June he received a sharp but stately letter of rebuke from his powerful friend Lord Sandwich: 'Your public spirit in undertaking so dangerous a voyage, your inattention to any expense, ... and your extensive knowledge as a naturalist, make it lamented that you are no longer one of the crew of the Resolution. But it may not be improper to set you right in one particular which you possibly may have misunderstood, and that is that you suppose the ships to have been fitted out for your use, which I own I by no means apprehend to be the case.'[80]

The Admiralty had, in effect, rejected the notion of underwriting another purely scientific voyage, for what Sandwich called 'improvements in natural knowledge'. From now on Cook's voyages were to take on more practical and empire-building objectives (though they would include testing the rival chronometers of John Harrison and John Arnold).

Lord Sandwich made it clear that Banks would have to pursue his science on his own: 'Upon the whole I hope that for the advantage of the curious part of Mankind, your zeal for distant voyages will not yet cease, I heartily wish you success in all your undertakings, but I would advise you in order to ensure success to fit out a ship yourself; that, and only that, can give you the absolute command of the whole Expedition.'[81]

So Banks commissioned his own brig, the *Sir Lawrence*, went to the Hebrides and inspected Fingal's Cave, and then sailed on to Iceland, where he made many friends, admired the geysers and volcanoes, collected lava specimens, but made few original discoveries. Back in London he continued to work with Solander on his *Endeavour Journal*, and set out his extraordinary collection of specimens at a temporary apartment in New Burlington Street. These began to attract learned visitors. The Keeper of the Ashmolean Museum in Oxford, William

Sheffield, wrote a long, astonished description of Banks's scientific treasures to Gilbert White in Hampshire.

Contrary to expectation, these were far more than just botanical specimens. They formed in effect a complete museum of Pacific culture, combining natural history with ethnology and human artefacts in a quite new way. They were housed in three enormous, overflowing rooms, each with its own theme. The first, the 'Armoury', belonged symbolically to the human male, dedicated to weapons, utensils and sailing equipment from all over the South Seas. The second was more female in theme, a huge domestic collection of clothes, headdresses, cloaks, woven cloths, ornaments and jewellery, together with 1,300 new species of plant 'never seen or heard of before in Europe'. The third room was dedicated simply to Nature in all her diversity. It contained 'an almost numberless collection of animals; quadrupeds, birds, fish, amphibia, reptiles, insects and vermes, preserved in spirits, most of them new and nondescript [unclassified] ... Add to these the choicest collection of drawings in Natural History that perhaps enriched any cabinet, public or private: 987 plants drawn and coloured by Parkinson; and 1300 or 1400 more drawn with each of them a flower, a leaf, and a portion of stalk, coloured by the same hand; besides a number of other drawings of animals, birds, fish etc ... '

The Oxford Keeper was struck by the beauty and diversity of the whole amazing collection, a glimpse into an entirely new and wonderful world. Banks had found a new role as its guardian and its promoter. 'Indeed most of these tropical islands, if we can credit our friend's description of them, are *terrestrial paradises*.'[82]

Banks's early hero Carl Linnaeus had turned collecting and displaying into something approaching a European art form. At Uppsala he planted a clock garden or 'botanical sundial', marking each hour by clumps of plants that opened only at one particular time of day (according to the strength of the sun). The time could thus be 'read' by the rotating patches of open petals, and even by the release of flower perfumes (such as tobacco plants in the early evening). However, Linnaeus's genius for taxonomy and display disguised the fact that his natural history was essentially static.♣

♣ Carl Linnaeus (1707–78) emphatically rejected evolution. His 'systematics' revealed no connecting law of growth or change, as would the transformational notion explored by several later botanists until Gregor Mendel (1822–84), patiently studying generation after generation of garden peas, gave rigour to the science of genetics. Coleridge pointed to this

Banks was now welcomed into the scientific societies in London: the Royal Society, the Society of Antiquaries, the Society of Dilettanti. He was summoned more frequently to advise the King at Kew, where from 1773 he was gratified to find himself acting as unofficial director. After the débâcle over Harriet Blosset, he began living with a young woman called Sarah Wells, and set her up in an apartment in Chapel Street, on the other side of St James's Park. Here he would meet Solander and his other friends, give noisy dinner parties and have plenty of talk of science and adventure. This *ménage* seemed an extension of his Tahitian liberties, and certainly there was no prospect of conventional betrothal or marriage. Solander refers simply to 'Mrs Wells's' charm, good nature, and delicious supplies of 'Game & Fish'.[83]

Indeed, the *Town and Country Magazine* for September 1773 claimed that 'Mr B the Circumnavigator' had an illegitimate child, but perhaps this was more confused botanical satire, as the mother was named as 'Miss B—N living in *Orchard* Street'. Nonetheless, one of Banks's close friends, the zoologist Johann Fabricius, wrote to him in November sending compliments to Sarah Wells and adding: 'What had she brought you? … A boy or a girl?'[84] If there was a child, Banks did not allow it to affect his free social arrangements. Sarah became known and much liked by many visiting men of science, the Swedish naturalist Johann Alströmer referring to her intelligent conversation and fondly recalling a memorable '*Soupé* at his *Maitresse*, Mistress Wells's', with Banks and Solander on riotous good form.[85]

Tahiti pursued Banks in other ways. In summer 1774 one of Cook's fleet commanders, Captain Furneaux of HMS *Adventure*, returned with a first visitor to England from the South Seas. He was entered in the ship's muster books as 'Tetuby Homey', from Huahine in the Society Islands, '22 years, Able Seaman'. This news immediately reminded Banks of all his hopes for Tupia and his son, which had been so tragically destroyed

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difference between an organising taxonomy and a dynamic scientific principle or law in essays in *The Friend* (1819). The psychology of collecting, ordering and naming specimens could also be seen as a form of mental colonising and empire-building. 'Taxonomy, after all, is a form of imperialism. During the nineteenth century, when British naval surveys were flooding London with specimens to be classified, inserting them in their proper niches in the Linnaean hierarchy, had undeniable political overtones. Take a bird or a lizard or a flower from Patagonia or the South Seas, perhaps one that had had a local name for centuries, rechristen it with a Latin binomial, and presto! It had become a tiny British colony.' Anne Fadiman, 'Collecting Nature', in *At Large and at Small* (2007), p.19.

in Batavia in 1770. Banks and Solander hurried down to Portsmouth to greet 'Homey' in July.

There, confined to the captain's cabin, they found a tall and strikingly handsome Tahitian man, who was soon to become known in England as 'Mai' or 'Omai'. He announced that he hoped to make his fortune, and fully intended to return to Tahiti as a rich and experienced traveller, having survived the expected savagery of the English.[86] Omai turned out to be quick-witted, charming and astute. His exotic good looks, with large, soulful eyes, were much admired in English society, especially among the more racy of the aristocratic ladies.

Banks treated Omai partly as an honoured guest, and partly as an exotic specimen. The ambiguity of the attitudes displayed in his Tahitian journal was now put to the test. Banks fitted Omai up with European clothes, a brown velvet jacket, white waistcoat and grey silk breeches. He took him to dine with the Royal Society, with the Society of Philosophers (ten times), and carefully introduced him at a number of society *soirées*. Omai's bow, executed with the aplomb of a dancer, became celebrated. He quickly won all hearts, and was eventually presented by Banks to King George III at Kew. The introduction became legendary, when Omai executed a superb version of his bow, and then sprang forward to grasp the royal hand, and grinning broadly, cried out, 'How do King Tosh!'[87]

From then on he was lionised almost continually for a year. Thanks to Banks he met a host of celebrities, among them Lord Sandwich, Dr Johnson, Fanny Burney and the poet Anna Seward, who wrote a poem about him. He learned to ride, shoot, conduct flirtations, and play excellent chess – Dr Johnson never stopped teasing his friend, the learned antiquarian Giuseppe Baretti, that Omai had once checkmated him. Omai also made excellent jokes about current English fashions. Fanny Burney records his delighted and unrestrained 'Ha! Ha! Ha!' on seeing the Duchess of Devonshire's high-piled hairstyle.

Conscious of European diseases, Banks had Omai undergo Jenner's new technique of inoculation with cowpox vaccine, against the lethal smallpox. He also caused something of a scandal by absolutely refusing to teach Omai to read, or to have him instructed in any form of Christian religion. Their most happy time together came in the summer of 1775, when Banks took Omai with several friends on a field expedition to Whitby and Scarborough. They travelled up in leisurely fashion,

comfortably installed in Banks's large, lumbering coach, stopping off to eat at remote country inns and botanise in the summer fields.

An imposing portrait of Omai, standing formally alongside Banks and Solander, was painted by William Parry, and displayed at the Royal Academy in 1777.[88] It again demonstrates the ambiguity of the relationship between patron and protégé. Banks points dramatically towards Omai, who stands gazing out at the viewer, wrapped in the dazzling white robes of Tahitian ceremonial dress, almost Roman in his stately demeanour. His naked feet and tattooed hands are clearly shown. Though there is an extraordinarily calm, almost aristocratic, beauty about his presence, it is not clear if he is Banks's companion or his trophy. Other portraits were painted by Sir Joshua Reynolds, who also executed an exquisite pencil drawing of Omai's head, emphasising his magnificent mane of dark hair, his large, tender eyes and finely formed mouth. Another more prosaic solo portrait was especially commissioned for John Hunter's anthropological collection, later housed at the Royal College of Surgeons.[89]

In 1777 Cook departed on his third Pacific voyage, taking Omai with him. He left behind his record of his second expedition, *A Voyage Towards the South Pole and Round the World*. The text was accompanied by extensive illustrations, including pictures of Omai, numerous botanical studies of rare plants, and sketches of the naked Tahitian dances witnessed by Banks and Parkinson. The drawings of Omai were later used by the anatomist William Lawrence in his *Lectures on the Natural History of Man* (1819).

Cook's sober book caught the public's imagination. The poet William Cowper, tucked away in his Buckinghamshire vicarage at Olney, and permanently trembling on the brink of disabling depression, found extraordinary relief and delight in imagining the great voyage southwards. To explain his sensations, Cowper invented the idea of the 'armchair traveller': 'My imagination is so captivated upon these occasions, that I seem to partake with the navigators, in all the dangers they encountered. I lose my anchor; my main-sail is rent into shreds; I kill a shark, and by signs converse with a Patagonian, and all this without moving from my fireside.'[90]

In his long, reflective poem *The Task*, Cowper accompanied Cook and Banks in his imagination. He transformed Banks, rather suitably, into an adventurous bee, busily foraging for pollen.

controversial account of Cook's violent death, and Omai's strange, alienated return to Tahiti. Both in their own ways were premonitions of the colonial tragedy that was eventually to follow.

Tahiti was rapidly turning into a legend, and a somewhat tarnished one at that. When a hugely expensive pantomime entitled *Omai, or a Trip Round the World* was successfully staged at Drury Lane in 1785, the island had started its long decline into a source of popular entertainment. The extravagant sets and titillating costumes, all designed by Loutherbourg, foreshadowed a world of grass-skirt cliché that would eventually lead to Hollywood. Shrewdly capitalising on this new-found fashion, Madame Charlotte Hayes staged in London a notorious nude 'Tahitian Review', in which 'a dozen beautiful Nymphs ... performed the celebrated rites of Venus, as practised at Tahiti'. It was said that wealthy clients could then 'anthropologically' sample the native girls (who were all of course London cockneys).

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Meanwhile Banks established a kind of permanent scientific salon at a new house at 32 Soho Square, where his adoring sister Sophia was brought in to act as his housekeeper. The unofficial *ménage* with Sarah Wells across the park in Chapel Street continued, but perhaps under increasing sisterly protests. Her brother, Sophia felt, should begin to settle, conform to convention and become 'enlightened with the Bright Sunshine of the Gospel'.[96] Indeed, Banks never embarked on any other expedition after his voyage to Iceland in 1772. Instead he continued to develop his enormous archive of scientific papers, drawings and specimens, with the help of Solander, now his official archivist and librarian. Yet still Banks published nothing. The daring young botanist and explorer was slowly turning into a landlocked collector and administrator.

In November 1778 Banks was elected President of the Royal Society at the remarkably early age of thirty-five. Then, quite suddenly it would seem, he decided to marry, and began to pay court to a twenty-one-year-old heiress, Dorothea Hugessen, the cheery daughter of a wealthy landowner from Kent, worth (as Jane Austen would say) £14,000 a year. They married the following March at St Andrew's, Holborn, and Banks settled down to a position at the heart of the British scientific establishment for the next forty-one years. Dorothea became a much-loved companion,

and proved herself a wonderful hostess at Soho Square. Surprisingly she would have no children, but she formed a close alliance with her sister-in-law Sophia. Together the two women succeeded in managing the more chaotic side of Banks's social life with great success.

This required a final parting with Sarah Wells, which was tactfully and generously managed. Solander again proved himself an avuncular go-between. He later remarked that 'Banks and Mrs Wells parted on very good terms. – She had sense enough to find he acted right, and of course she behaved very well. All her old friends visit her as formerly.' There was no mention of a child, or of any regrets that Banks may have felt. Instead, Solander added that Banks had now spruced himself up for the weekly Royal Society meetings at Crane Court, off Fleet Street, appearing in 'Full Dressed Velvet or Silk coat etc'. He would 'properly fill the President's chair'.[97]

For his presidency, Banks took as his heraldic crest the figure of a lizard. He explained his choice as follows: 'I have taken the Lizard, an Animal said to be endowed by Nature with an instinctive love of Mankind, as my Device, & have caused it to be engraved on my Seal, as a perpetual Remembrance that a man is never so well employed, as when he is labouring for the advantage of the Public; without the Expectation, the Hope or even a Wish to derive advantage of any kind from the result of his Exertions.'[98]

Yet he settled into the presidential chair uneasily. It was typical of him that, on his election, he wrote as follows to Sir William Hamilton in Naples. 'That I envy you your situation within two miles of an erupting Volcano, you will easily guess. I read your Letters with that kind of Fidgetty Anxiety which continuously upbraids for not being in a similar situation. I envy you, I pity myself, I blame myself & then begin to tumble over my Dried Plants in hopes to put such wishes out of my head. Which now I am tied by the leg to an Arm Chair, I must with diligence suppress.'[99]

In November 1780 he oversaw the historic move of the Royal Society's offices from its obscure lodgings in Crane Court to its grand new premises in the recently completed Somerset House on The Strand, in a suitably commanding position overlooking the Thames. It was now recognised as a palace of science, to and from which travellers would come and go to the ends of the earth.[100]

In 1781 Banks was knighted for his energetic scientific work as Director of the royal gardens at Kew. Over the next decade he transformed the rambling and disorganised estate along the Thames into a scientific

repository and botanical haven that far outstretched anything achieved by Linnaeus. He established more than 50,000 trees and shrubs at Kew, and introduced a vast number of new and exotic species that are now regarded as native: among them magnolias, fuchsias, monkey-puzzle trees, and the evergreen sequoia.[101] He had notable successes with rare and difficult species such as the Venus fly-trap. The poet Coleridge among others refers to him as a reliable source of new exotic and experimental drugs such as Indian hemp, 'Bang' and cannabis.[102]

Yet the world of the South Pacific was drifting steadily away from Banks. His great companion and fellow voyager, the amiable, easy-going and ever-faithful Solander, was struck down by a heart attack, and died in the guest room at Soho Square in June 1782. Banks was inconsolable, and felt this loss more than any other he had experienced: it seemed to him the loss also of his own youth. He wrote tight-lipped to a mutual friend, John Lloyd: 'To write about the loss of poor Solander would be to renew both our feelings for little purpose; suffice it to say then that few men, however Exalted their pursuits, were ever more feelingly missed either in the paths of Science or of Friendship.'[103]

A little later he wrote more confidentially to Johann Alströmer, who had once shared their carefree dinners with Sarah Wells, and who was now elected President of the Swedish Academy of Sciences. 'His loss is irreplaceable. Even if I were to meet such a learned and noble man as he was, my old heart could no longer receive the impression which twenty years ago it took as effortlessly as wax, one which will not dissolve until my heart does … I can never think of it without feeling such acute pain as makes a man shudder.'[104]

There were now fewer and fewer survivors from the original voyage to Paradise; Banks felt like the 'last of the Otaheites'. Perhaps also it was Solander's death which fatally delayed any further work on Banks's great *Endeavour* travel book. In 1785 he still wrote hopefully, seeing it as a kind of memorial to his friend: 'Solander's name will appear next to mine on the title page because everything has been brought together through our common industry. There is hardly a single clause written in it, while he lived, in which he did not have a part … it can be completed in two months if only the engraver can be brought to put the finishing touches to it.'[105] But nothing appeared.

Banks suffered his first serious and disabling attack of gout in the summer of 1787, when he was still only forty-four. He received a

sympathetic letter from the King, but neither realised how grave the affliction would become. By his fifties he was almost literally tied to his presidential chair, as he had feared and prophesied. Incapacitated by agonising swellings in his legs, the once tireless and athletic young explorer had to be pushed about his London house in a wheelchair.

His body may have been chairbound, but his spirit was increasingly airborne. In fact Banks's personal enthusiasm as the universal scientific patron largely shaped and directed the adventurous character of Romantic science, which now flowered and flourished like one of his most exotic specimens. He revealed himself as a talent-spotter of genius, encouraging expeditions to Australia, Africa, China and South America; supporting projects as diverse as telescope-building, ballooning, merino sheep-farming and weather forecasting; helping to found museums of botany, anthropology, comparative anatomy; and above all maintaining through a huge network of correspondence and personal meetings the idea of science as a truly shared and international endeavour, even in a time of war, and even in relentless (if well-mannered) competition with the French.♣

He now looked back proudly at his own voyage as something historic and exemplary, to be emulated by the next generation: 'I may flatter myself that being the first man of scientific education who undertook a voyage of discovery, and that voyage of discovery being the first that turned out satisfactorily in this enlightened age, I was in some measure the first who gave that turn to such voyages.'[106]

The great French naturalist Georges Cuvier agreed, later describing the *Endeavour* voyage as forming 'an epoch in the history of science. Natural history contracted an alliance with astronomy and exploration, and began to extend its researches over an ever-widening sphere … Everything seemed to realise the romantic wonders of the Odyssey … Banks displayed his astonishing energy: fatigue did not

♣ It has been conservatively calculated that Banks's correspondence ran to over 50,000 items, though these are still widely scattered in archives in Britain, America, Australia and New Zealand. See the Joseph Banks Archive Project on the Internet. There have been various recent selected editions of his correspondence. These include *The Selected Letters of Joseph Banks* (2000) and the superb new edition *The Scientific Correspondence of Sir Joseph Banks, 1765–1820*, in six volumes (2007), both edited by Neil Chambers.

depress him, nor danger deter him ... and not simply by *seeing*, but by actively *observing*, he showed his true scientific character ... Banks was always in the advance.'[107]

Banks wrote provokingly to a young man hesitating to embark on a perilous scientific expedition to the feverish shores of Java: 'I have no doubt [your family] wish to force you to adopt Sardinapalus's advice to his citizens to "Eat, drink & propagate" ... Let me hear from you how you feel inclined to prefer Ease and indulgence to Hardship and activity. I was about 23 when I began my Perigrinations; you are somewhat older, but you may be assured that if I had listened to a multitude of voices that were raised up to dissuade me from my Enterprise, I should have now been a Quiet country gentleman.'

Banks's house in the south-west corner of Soho Square soon became known as the operations centre of scientific research in Britain. It was widely recognised as such throughout Europe – especially in France, Germany and Scandinavia. His correspondence reached round the world, from Paris to New York to Moscow to Sydney. He had the ear of George III (until the King went mad). His library and herbarium were open to all; his daily ten o'clock planning breakfasts at Soho Square were famous; his house parties at his new country estate at Spring Grove in Surrey, purchased especially for the purpose, were often like international conferences.

He received visitors from all over the world, and was the patron of numerous private projects. He advised on the settlement of Australia, was made a Privy Councillor in 1797, and served on the Board of Longitude. After some early disagreements, he became the close friend of the Astronomer Royal, Nevil Maskelyne. Later he was elected President of the Africa Association (which eventually became the Royal Geographical Society), and one of the founding Vice-Presidents of the Royal Institution. He began to exercise a dominant influence over the public development of British science and exploration, encouraging royal patronage, finding funds for research projects and expeditions, and skilfully boosting their national prestige. In effect Banks became Britain's first Minister for Science.

Yet Joseph Banks never finally published his long-dreamed-of *Endeavour Voyage*, or any full account of his time in Paradise. Despite the death of his great friend Solander there is no real explanation for this failure, though perhaps it was a deliberate refusal. His journal exists in


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