Benjamin Franklin

Thierry de Montbrial

In November, Éditions des Syrtes publishes Il Est Nécessaire d'Espérer pour Entreprendre [An Undertaking Requires Hope] *by our friend Thierry de Montbrial. The first part of the essay is devoted to individuals who have personified the relation between thought and action. Part two takes a long-term view of France and the construction of Europe. For the author, the two overriding priorities are clearly structural reforms, so that France can adapt to globalisation, and the revival of Europe. Part Three offers some more general reflections on the direction of history and the future of the human phenomenon. In advance of publication, we bring you the chapter on Benjamin Franklin, "that inspired polymath, the American embodiment of the Enlightenment, who also played a key role in his years in Paris, on the eve of the French Revolution", whose three-hundredth birthday we are currently celebrating.* [Commentaire]

Paris, December 1776

Benjamin Franklin was born in Boston on 17 January 1706. Seventy years later, in December 1776, he landed in France with a mandate from the Continental Congress (the only governing body common to the thirteen colonies between 1774 and 1788) to obtain the support of that country. He arrived just six months after the American Declaration of Independence, which he had helped Jefferson to frame in a more concise manner. A fantastic reputation preceded him: he was, according to Turgot, or perhaps to d'Alembert, the man who had "snatched fire from the heavens and the sceptre from tyrants" (*Eripuit coelo fulmen, sceptrumque tyrannis*). Franklin had visited Paris on two previous occasions (1767 and 1769), and had met *savants* and been elected to the the Académie Royale des Sciences and the Académie Royale de Médecine. At that time, *savants*, or scientists, as we now call them, were participating in the Enlightenment, or at least were thought to be. Physics, then known as 'natural philosophy', was an amusing distraction for high society. Indeed, it lent itself to spectacular experiments, notably in the field of electrostatics, which was then creating great excitement. For the *Encyclopédistes*, it announced above all the progress of civilisation. Wreathed in glory after being the first to offer a successful explanation for the powerful electrical phenomena at work in the earth's atmosphere, and especially for having used them to create something of immense practical value, Franklin was regarded as humanity's benefactor. We also know that he came from a large family of modest means, that he made his fortune in printing and publishing – particularly with a famous almanac – and that he played a decisive role in endowing Philadelphia with most of its public institutions. Philadelphia, capital of Pennsylvania, the colony founded in 1682 by William Penn for the Quaker community, had only 30,000 inhabitants when Benjamin, aged 17, embarked on his adventures. He probably preferred to forget the first constitutional plan he had drafted in 1754 (the second was drawn up shortly before his arrival in France). That year he had written: "I should hope too, that by such a union, the people of Great Britain and the people of the Colonies would lear to consider themselves not as belonging to different communities with different interests, but to one community with one interest, which I imagine would contribute to strengthen the whole, and greatly lessen the danger of future separations." The earlier, abortive plan for a union had been conceived to drive the French from the Ohio Valley, the link between Canada and Louisiana. But the colonial battles ended with the Treaty of Paris (1763) and by France abandoning its ambitions in that part of the world. Thirteen years had passed since the signing

of the Treaty, and circumstances had changed.

We know, of course, that the inventor of the lightning conductor spent two extended periods in Great Britain, apart from the shorter visit at the age of 18, when he had run away from home. For five years (1757-1762), he served as an agent for the Pennsylvania Assembly, which had entrusted him with the task of finding a solution to the conflicts between the population and the colony's owners. Then, for over eleven years (1764-1775), Franklin was the official ambassador not only of Pennsylvania, but of Massachusetts, New Jersey and Georgia as well. His mandate gradually expanded to take in the much larger question of the Crown's right to tax its overseas subjects, the spark which would ignite the powder-keg. It was during this second sojourn that our hero, a long-standing admirer of Great Britain and its empire, finally espoused the cause of independence.[1] The circumstances had indeed changed.

All the conditions were therefore in place to ensure that the man who would henceforth embody both the Enlightenment spirit and aversion for the British was welcomed by Parisian high society with exceptional, if not unique, respect. Thanks also to his remarkable tact, his simplicity (he dressed modestly, scorning wig, perfume and lace), and his charm, Benjamin Franklin would be idolised by the great families, the Choiseuls, Montmorencys, Broglies and La Rochefoucaulds. Given the neglect he had suffered at the hands of the British aristocracy, he doubtless appreciated the attention. The elderly gentleman's popularity among the ladies, now a matter of legend, set Puritan tongues wagging. At that time, as is still the case today, a grand ambassador had to create an impression in the higher social strata of the host country. The degree to which Boston's child prodigy achieved this aim remains unsurpassed. An expert in the political exploitation of fashionable society, Franklin had a more general mastery of the art of communication, which he had advanced considerably during his career as a publisher in Philadelphia. The printing press he installed in the Hôtel de Valentinois, his residence in Passy, has often been depicted as a distraction. In reality, he used it as a formidable propaganda tool. However, with regard to power, the situation was more complicated. He inspired intense loathing in Louis XVI, who once presented the Countess de Polignac with a Sèvres chamber pot decorated with a portrait of the *cher Docteur*. The king probably sensed that, besides the independence of the colonies and the subsequent weakening of British power, the image of a New World projected by the *cher Docteur* prefigured the end of Old World absolutism. His foreign minister, the Count de Vergennes, had clearly stated his support for the insurgent colonies in 1775. But a gulf existed between discreet, indirect assistance (in the manner of Beaumarchais), and an open, substantial commitment to the American cause on the part of the monarchy. To be sure, Vergennes and Franklin, the two central characters in this play, were complicit. But the former could say nothing without the consent of the monarch. The reluctance mentioned above was compounded by the disastrous state of French finances. Franklin's task was even more delicate as the support he enjoyed at home was far from solid. He had to contend with colleagues, notably John Adams and John Jay, who were highly suspicious of him and of France. Such situations are not uncommon in diplomacy. During negotiations, it often happens that difficulties arise at least as much from one's own camp as from the other.

The treaties of 1778 and 1783

I shall do no more than recall succinctly some of the main facts concerning the birth of the United States, which owes much to the ritual of Franco-American relations to which the man whose tercentenary we are currently celebrating contributed. On 17 October 1777, an English army advancing from Canada capitulated at Saratoga. This success favoured the cause of

independence and encouraged the rebels. Nothing is more magnetic than a victory. Franklin felt that the time was right not only to conclude a treaty of friendship and trade with France, as Congress had requested, but also to seal a genuine alliance. France would renounce all territorial claims in America and support the United States in its quest for total independence, both parties promising not to sign a separate peace with Britain. Thanks to Franklin's persistence, both treaties were signed on 6 February 1778. He dressed symbolically for the occasion, wearing the same frayed suit in which he had appeared before the Privy Council five years earlier, a humiliating episode which had marked his final sojourn in London. However, matters would not be settled for another five years, during which distinguished figures such as Rochambeau and Suffren, declared their support for the American cause. French aid for this period amounted to the considerable sum of 47, 500,000 livres, much of it obtained through the talents of our hero, who never hesitated to practice a subtle form of blackmail in order to achieve his ends. In that respect, he was simply showing how accomplished a diplomat he was. Whereas Congress accused the French government of meanness, Franklin, following an incident between one of his colleagues and Vergennes, wrote: "It is my intention, as long as I am here, to procure every advantage for my country by undertaking to plead at court; and I hope to stop my fellow citizens from saying anything that could have an adverse effect and spread the idea, which is already circulating here, that we are seeking an argument in the aim of a reconciliation with England." It is worth mentioning that the debts contracted by the United States were only very partially reimbursed, as would be those contracted by France in the darkest moments of its history.[2]

Nevertheless, England eventually acknowledged that it could not win. Peace treaties were signed in Paris and Versailles in early September 1783, after ten months of difficult negotiations during which the American commitment to avoid a separate peace was subject to intense pressure. Franklin's presence proved to be essential.

The *sage de Passy*, as they were beginning to call him, remained in France for another twenty months. "When he left Passy," said his colleague Jefferson, "it seemed as if the village had lost its patriarch. On taking leave of the court, which he did by letter, the King offered him to be handsomely complimented, and furnished him with a litter and mules of his own, the only kind of conveyance his [Franklin's] state of health could bear." Franklin was unfortunately subject to violent attacks of gout and renal colic at this point in his life. In a letter to his great friend Mme Brillon, he said that he was leaving the world he loved most. "I am not sure I shall be happy in America, but I must go back. It seems to me that things are badly arranged in this low world, when I see that beings so suited to being happy together are obliged to part."[3]. This was doubtless more than polite formality. Franklin – a past master of the art of 'networking', as we now call it – had not simply succeeded in building a network of contacts to support his diplomatic activities in Paris. His success also rested on his participation in the art of living as it was practiced by French fashionable society in the late eighteenth century. An active Freemason, he helped initiate Voltaire in 1778 and even became the 'Venerable Master' of his lodge, succeeding the astronomer Lalande. Appointed by the French government to the Commission charged with investigating mesmerism, he played a role in condemning the practice. This anecdote and many others explain why Franklin's name, apart from its grand political connotations, remains solidly attached to France. It is hard to imagine Paris without the street in Passy which has borne his name since 1791, the street he inhabited as the New World dawned.

The scientist

Let us leave aside the political animal, the diplomat and statesman, for the time being, and turn to the scientist. In one sense, of course, they are all connected. Franklin's celebrity did much to facilitate his work as a public individual. History offers other examples of famous scientists who exploited the aura attached to their reputations as *savants* in order to play a role in public life. In more recent times, the political positions adopted by Albert Einstein received wide publicity, although the architect of the theory of relativity declined the invitation to become president of the new state of Israel. More recently still, the dissidence of Andrei Sakharov contributed to the decline of the Soviet Union's 'soft power', to use Joseph Nye's famous term, the power conferred by prestige. That decline accelerated the fall of the USSR. In such examples, men of science exercise their critical judgement by aligning themselves with civil society. But if they align themselves with governments, that is to say with the organisation which every human society tends to create to act in the name of collective interests, I know of few cases where a man of science – and acknowledged as such – has exerted as much influence as Benjamin Franklin. Without doubt, the qualities required to excel in both activities, scientific discovery and the government of men, are broadly antithetical. The 'Franklin phenomenon' is therefore unique, and we may find an explanation for it shortly, in the form of the curiosity that characterised him. Let us simply note at this juncture that in science Franklin never scaled the conceptual peaks, while his political career – organiser, parliamentarian and diplomat – did not lead to a high executive post, unlike Washington and Jefferson his younger colleagues and co-founders of the United States. And in the business world, it is extremely rare that an inventor is also a good 'manager'. Counter-examples are more numerous, however: Franklin himself was one. In our own time, Bill Gates immediately comes to mind.

In order to appreciate Benjamin Franklin's contribution to science, we need to consider the state of 'natural philosophy' in the first half of the eighteenth century. The scientific revolution – in short, the emergence of quantitative physics – was spectacular. Theoretical knowledge of optics had increased considerably in the course of the previous century, notably through the work of Descartes, Fermat and Huygens, while in the domain of gas the laws of compressibility had been discovered by men such as Boyle and Mariotte. Until Einstein, no scholar would equal the glory of Isaac Newton, author in 1687 of the *Philosophiæ Naturalis Principia Mathematica*, known more familiarly as the *Principia*. In this monumental work, recently republished in English in a new translation and accompanied by a readers' guide,[4] the giant of physics expounded the three fundamental laws of motion as well as the law of universal gravitation, according to which all the bodies of the universe attract each other with forces directly proportional to the product of their masses divided by the square of the distance between them. This extraordinary theoretical achievement paved the way for the rational explanation of a multitude of natural phenomena, beginning with the movement of the planets. But when Franklin was a youth, common phenomena such as heat and electricity were still poorly understood. The nature of heat was still largely a mystery. Most physicists, including our hero, considered it a weightless fluid called 'caloric'. The discoveries of Julius Mayer and James Prescott Joule – the mechanical equivalent of heat and the function and principle of the conservation of energy – would not occur until the middle of the following century. These theories provided the impetus for macroscopic thermodynamics, which would later be linked with atomic theory and established on the solid basis of statistical mechanics. In the eighteenth century, therefore, scholars had made no progress the matter of heat.

Electricity

Things were to move more quickly in the domain of electricity, which had been known since

Antiquity through the observation of very simple phenomena such as friction and discharges of static. In the early years of the scientific revolution, it was also regarded as a sort of fluid, *effluvium* in Latin. At the beginning of the eighteenth century, it was thought that two types of electricity existed: 'vitreous' and 'resinous'. Jean-Antoine Nollet (1700-1770), tutor to the royal family and a professor at the University of Paris, had studied the work of Charles-François Du Fay, superintendent of the royal Jardin des Plantes, and advanced a theory postulating the existence of not one, but two fluids[5]. Franklin, a fundamentally curious man, began to take an interest in electricity in 1743, on the occasion of a visit to Boston. He asked a friend in London, Peter Collinson, to send material so that he could conduct his own experiments. Franklin described these tests in a series of letters. It should be noted that at the time, experimentation was a pastime for *philosophes*, men of ideas, rather than a serious occupation. The letters were collected by Collinson and published in London in 1751 as *Experiments and Observations on Electricity, made at Philadelphia in America*. Twenty-five years later, the book had already gone through ten editions and had been translated into Italian, German and French. It contributed to its author's fame and secured his election to the Royal Society in London and the Académie des Sciences in Paris, an institution founded in1666.

Without going into detail, I will focus on two points arising from the famous letters.[6] The first is the affirmation of the existence of a single fluid composed of "extremely subtle particles". A body possessing an excess of this fluid is 'positively' charged. Similarly, a body is 'negatively' charged when there is a lack of fluid. For Franklin, electricity was neither created nor destroyed, but simply transferred. He postulated that it repelled itself, but was attracted to the substratum of 'common matter'. To explain known phenomena in qualitative terms, he lacked the link provided in 1759 by Franz Ulrich Theodosius Aepinus, director of the astronomical observatory at Saint Petersburg. Aepinus completed Franklin's theory by assuming that in the absence of a compensating quantity of electricity, ordinary matter would repel itself. Anyone with a slight knowledge of physics will recognise how close this is to the modern, electronic, version of electricity; it has that purely formal particularity derived from Franklin – we still consider the elementary charge as 'negative'; we would surely consider it as 'positive' if we went back to zero! Even so, with hindsight the two fluids theory defended by Du Fay and Nollet is just as good as the theory proposed by Franklin, a value judgment that may be confirmed by the fact that we now accept the existence of the positron, which has the same mass as an electron but a positive charge. In other words, Franklin's contribution, although enlightening and useful, was in no way decisive. Such situations are not uncommon in the history of science; the glory attached to a name is always the result of a complex social phenomenon. I should add as a matter of interest that it was necessary to await the experiments conducted by the army engineer Charles de Coulomb between 1784 and 1789, and those of the Italian Volta, before arriving at a truly decisive quantitative formulation of the laws of attraction and repulsion of electrical charges, the real point of departure for modern electromagnetism. In turn, these works would lead in 1864 to the famous equations, the triumphant synthesis of electromagnetism and optics, of James Clerk Maxwell, who was without doubt the greatest physicist between Newton and Einstein. Incidentally, we should remember that until the discovery of subatomic phenomena at the end of the nineteenth century, only two of the four fundamental natural forces were known: gravitation and electromagnetic interaction.

The lightning conductor

The second point concerning the Collinson letters relates to atmospheric electricity[7]. In effect,

Franklin's fame was due less to his theoretical and experimental work than to the invention of the lightening conductor, a consequence of the view that lightning was nothing but a tremendously powerful electric spark. In the second letter, he describes "the wonderful effect of points both in drawing off and throwing off the electrical fire". In the fourth letter and in part of the fifth (dated 29 July 1750), he develops the analogy between thunder and mechanically-produced electricity. The idea was in the air, as we might say. All historians of science agree on this point. The advantage our hero possessed in this domain was his insistence on a proper experiment to verify the hypothesis. The project was described in a supplement to the fifth letter. It was a matter of placing a kind of sentry box on a high tower, with an insulating stool in the middle, from which emerged a pointed steel spike rising thirty feet into the air. In fact, the Frenchmen Dalibard and Delor had been the first to conduct such an experiment, in May 1752. Unaware of their work, Franklin confirmed his hypothesis the following month by using an 'electric kite'. This arrangement consisted of a large piece of silk stretched over crossed sticks, with a metal tip linked to a hempen string as a conductor, to the end of which was attached a key, insulated from the hand by a silk ribbon. Only assisted by his son, he launched the kite as storm clouds passed overhead, and was delighted to draw sparks from the key. This famous experiment has become a stereotypical image engraved on the collective mind. The hypothesis was confirmed by many other experiments, from which Franklin concluded that the dangerous effects of lightning could be diverted by placing an iron spike on the top of a building and connecting it to the ground. In a thirteenth letter written in September 1753, he explained in detail why such rods protected against the effects of lightning. Thunder, he wrote, only exploded when conducting bodies received electricity more quickly than they could transmit it, that is to say when they were separated or divided, when they were too small or poor conductors. Consequently, non-interrupted metal rods of sufficient thickness would either prevent the explosion entirely, or cause it to occur between the point and the clouds; it would conduct the lightning along the rod. The utility of the lightning conductor appealed to the practical American mind, and it was put to use immediately. It also spread rapidly in Europe, although Nollet's jealousy delayed its acceptance in France.

The glory and the moment

We could enter into a protracted debate over the real importance of Franklin's works, and the question of their originality in relation to the events of the time. Once again, this is not in itself unusual. Even today, some attribute the paternity of the special theory of relativity to the Dutchman Hendrich Anton Lorentz, or to the Frenchman Henri Poincaré. In fact, of Einstein's four great discoveries (the special theory of relativity, the explanation of the Brownian movement, the photoelectric effect and the general theory of relativity), only the fourth was a radical departure in terms of contemporary thinking. In science as in other fields, fame derives from a combination of factors; it cannot be fully explained without recourse to psychology and sociology. Einstein's fame cannot be explained by the apparently simple formula E = mc2, or even by the other infinitely more esoteric equations that came later. A great man's temperament, background, political battles – and even his physical appearance – chime with the sensibilities of his time. In every period of history, the names of many eminent scientists and thinkers remain largely unknown to the general public, and indeed to the more cultivated element. Cases such as that of Louis Pasteur or Albert Einstein are extremely rare. For every Werner Heisenberg, whose 'indeterminacy principle' caught the imagination of many who were complete strangers to mathematics, or Kurt Gödel, whose 'incompleteness theorems' were discussed at fashionable dinner parties, how many geniuses such as Richard Feynman (1918-1988) remain largely unknown? Yet I have deliberately mentioned one of the twentieth

century's greatest theorists, whose name is familiar to most physics students at least, for he was also a distinguished professor and the author of a work that is still read and respected. I doubt whether Franklin would have become famous had he not lived through the founding moment of the United States, when the emergence of the New World called for idols. Even today, a figure as distinguished as the American Nobel laureate Steven Weinberg feels obliged to present the contributions of his illustrious predecessor in an excessively flattering light.[8]

The inventor

In the final analysis, I believe a just appreciation of Benjamin Franklin cannot be arrived at unless we attempt to understand his personality, the extraordinary richness of which has been captured so well by Edmund Morgan, among others.[9] A man will not achieve so much in so many different fields during his lifetime if he lacks willpower, courage and exceptional self-discipline. These qualities, which Benjamin Franklin cultivated from a very early age, have their reverse side. Thus our hero probably did not conform to the American ideal of a father and husband; his biographers, moreover are rather discreet on the matter of his private life. The fact remains that, he was supremely gifted, and his genuine flair for business was quick to emerge. In later life, as a diplomat, he had to overcome many obstacles; it would be naïve to retain the image of the smiling, good-natured old sage who achieved his ends because everybody bowed to him respectfully. He was a sage, but a pugnacious one. His primary quality was his curiosity. At almost every moment in his life, Franklin grasped every possible opportunity to question nature: he could not drink a cup of tea without wondering why the leaves formed one particular configuration rather than another, or why a drop of oil remained compact on a piece of glass, yet spread until it formed a very thin, iridescent film on the surface of water. Our knowledge of the Gulf Stream has been enriched by the curiosity he displayed on his transatlantic crossings. Fascinated by the movements of water, he was also intrigued by those of the air and atmosphere, and formulated original hypotheses concerning meteorological phenomena. Franklin was a born observer and experimenter, much more than he was a theorist. At the risk of resorting to a commonplace but ambiguous distinction, I would venture to suggest that his mind was much more concrete than abstract; he was more of a pragmatist than an intellectual; system-building and ideology were alien to him. His gaze was remarkably perceptive, and his hearing attuned to the sounds around him. In this respect, some physicists are very like artists – painters, sculptors or writers. Indeed, he also applied his powers of observation to the understanding of human beings, as well as to objective phenomena. One of the keys to Franklin's success was certainly his understanding of other people, which was founded on a genuine interest in communicating with them ("I think I like company," he said), the kind of interest which clearly distinguishes men of action from 'pure' intellectuals who concern themselves more with the theory of humanity than with the human being. Being a good judge of men and something of a chameleon, he was therefore a good diplomat: whatever the situation, he would seek a good compromise rather than try to impose his preferences. People liked Franklin because he liked them.

Franklin was also a fine craftsman and could use his hands to cobble together, create or design appliances. Thus his interest in the circulation of air resulted in the 'Franklin Stove', which greatly improved domestic heating. He also invented bifocal glasses. The term 'inventor', in its most popular sense, suits him remarkably well. Rather like Leonardo da Vinci, he set the agenda for future technologies – means of improving navigation, for example. I will not attempt to list and comment upon all his inventions. It is important to emphasise above all the enormous – and compassionate – curiosity about nature and humanity

that he evinced throughout his life, although by the 1750s he had forsaken scientific experiments for public service. I use the term public service not in its current French sense (which relates to the activities of the state), but in its much older English sense – also deeply rooted in a concept of taxation – which refers to the public interest, the responsibility for which is borne not by the organs of government, but essentially by citizens themselves and the associations they create.

We are touching upon an essential element of Benjamin Franklin's personality. He made his fortune at an early age, but money was never his primary goal. He was interested in science, but considered it above all an "amusing philosophy", a poor second to active public service. He always refused to patent inventions like the lightning conductor, which would have earned him a colossal income. All his enterprises were motivated primarily by the desire to be of direct assistance to his fellow men. When in 1748, at the age of forty-two, he decided to retire from business and devote himself to public life, his mother criticised his decision. We still have a letter he sent her two years later, in which he wrote that when he died, "I would rather have it said, 'he led a useful life', than, 'he died rich.'" *Poor Richard's Almanack,* which he published every year from 1733 to 1758, is full of aphorisms and remarks on the question of money. Poor Richard notes that "Content and Riches seldom meet together". We would say: "money can't buy happiness". Franklin was struck by "the general foible of mankind … the pursuit of wealth to no end". The almanac also asks: "If your wealth belongs to you, why do you not take it to the next world? … the use of money is all the advantage there is in having money." In a letter to a friend, Franklin noted: "What we have above what we can use is not properly ours, tho' we possess it". There is much food for thought here. It was also in 1750 that he clearly expressed the idea that devotion to public service is more important than devotion to science. But he did not think of himself as a superior being. He also observed, with a somewhat ingenuous lucidity, that he was not insensitive to praise, and that those who claimed to be so were hypocrites. In truth, he was a master of the art of self-promotion![10]

The thirteen virtues

It is apparent, therefore, that Benjamin Franklin had very clear ideas about his mission on this earth. However, he had distanced himself from the Church when still a child. Predestination had as little meaning as original sin for a man who intended to think for himself. Certain remarks are typical of him: "It may be that some acts are bad because the Bible has forbidden them, or good because the Bible commands them, yet it is probable that these acts were forbidden either because they were bad for us, or commanded because they were advantageous to us." Here is another: "Sin is not hurtful because it is forbidden, it is forbidden because it is hurtful. Nor is a duty beneficial because it is commanded, but it is commanded because it is beneficial." And another: "Morality or virtue is the end, faith only a means to obtain that end. And if the end be obtained, it is no matter by what means." >From a religious perspective, Franklin was therefore a free-thinker and deist who would certainly have agreed with Voltaire's dictum: "the world embarrasses me, and I cannot dream that this watch exists and has no watchmaker." His activities as a Freemason reflect this philosophy. Tolerance came easily to an observer and admirer of nature's ways. Moreover, he detested public quarrels, and was a better conversationalist than an orator. All these qualities contributed to the whole. His open-minded approach to religious issues certainly facilitated his acceptance by the upper echelons of French society, which denied admittance to some very powerful American Puritans.

To arrive at a better understanding of Franklin, we should turn to the thirteen virtues listed in

the second part of his autobiography, a list he actually used to inspire the conduct of his own life. They are:

Temperance: Eat not to dullness and drink not to elevation.
Silence: Speak not but what may benefit others or yourself; avoid trifling conversations.
Order: Let all your things have their places; let each part of your business have its time.
Resolution: Resolve to perform what you ought; perform without fail what you resolve.
Frugality: Make no expense but to do good to others or yourself: i.e. waste nothing.
Industry: Lose no time; be always employed in something useful; cut off all unnecessary actions.
Sincerity: Use no hurtful deceit; think innocently and justly; and, if you speak, speak accordingly.
Justice: Wrong none, by doing injuries or omitting the benefits that are your duty.
Moderation: Avoid extremes; forebear resenting injuries so much as you think they deserve.
Cleanliness: Tolerate no uncleanness in body, clothes or habitation.
Tranquillity: Be not disturbed at trifles, or at accidents common or unavoidable.
Chastity: Rarely use venery but for health or offspring; never to dullness, weakness or the injury of your own or another's peace or reputation.
Humility: Imitate Jesus and Socrates.

Edmund Morgan notes that at least nine of these 'virtues' – temperance, silence, order, resolution, frugality, industry, moderation, cleanliness and tranquillity – are not directly linked to morality. The remaining four – sincerity, justice, chastity and humility – are indeed directly concerned with our relations with others, but it is clear that Franklin's concept of chastity does not coincide with the usual demands of morality. What is immediately apparent in this list is the absence of any direct reference to charity whereas, according to Morgan and other biographers, charity was Franklin's guiding principle. We know that for Christians, charity is generally regarded as the supreme demand, without which faith loses its meaning. Its most eloquent expression is found in the sublime thirteenth chapter of Paul's First Epistle to the Corinthians: of the three theological virtues – faith, hope and charity – the greatest is charity. However, we should note that Franklin's list indicates the presence, at least in implicit form, of the four cardinal virtues: courage is there (if only through resolution); justice and temperance (at least concerning eating and drinking) receive explicit mention; and prudence may be the corollary of moderation. Seeking to clarify his surprising findings, Morgan advances the following explanation: Christians, he says, claim to rank charity above all the other virtues, but alas rarely practice it. Moreover, they are no better in this respect than people of other faiths. Consequently, Franklin, in keeping with his attitude to religion as a whole, strove to practice charity in his life while avoiding making a display of it. I am inclined to accept this interpretation; today, just as in the past, it is sadly obvious to all that there is no clear correlation between the practice of charity and that of religion. On this point, Franklin certainly has disciples who are unaware of it. The ever-modest inventor of the lightning conductor simply claimed to be useful, a criterion explicitly present in his sixth virtue (industry, application to the task) and implicit in many of the others. As for the nine virtues that Morgan considers at best indirectly linked to morality, we could object that like all rules – including, of course, those of monastic orders – they may be interpreted as stepping stones towards the achievement of higher virtues such as charity.

With the Founding Fathers

This was the man who so impressed Paris at the dawn of the New World and the twilight of

the *Ancien Régime*. The old man took leave of France and his admirers, and returned to spend his remaining days among his countrymen. He devoted the last five years of his life to work, as he had in the past. But not without bitterness. His popularity was at its zenith, but he came under attack for having spent so much time in a monarchist and Catholic country. The rebels had played down the effects of the alliance with France, which had been concluded more through necessity than through inclination. Adams and Jay, their stars rising fast, had spread malicious gossip concerning his morals and the company he kept in a country they depicted as frivolous and corrupt. The clichés favoured by staunch Puritans were strengthened by the behaviour of François de Moustier, the new French minister, a widower who had wasted no time in establishing his sister-in-law as his concubine, and had brought her to the United States. Benjamin Franklin did not belong to the country's governing elite. His very modest origins, his tastes, his relations, and the treachery of his natural son, who had remained loyal to the British, all contributed to the gulf between the autodidact and the northern aristocrats and southern planters who were about to assume power. However, we should not paint too grim a picture. The ailing octogenarian was elected to the Second Continental Congress on his return to America. For three years, he served as governor of his state, an honorary post. He was one of the eight Pennsylvania delegates at the Philadelphia Convention held in May 1787 to draft a constitution; Washington was the presiding officer and Franklin regularly attended the sessions. The deliberations were secret, but Madison's diary provides us with valuable information. Although Franklin played a minor role, he made useful interventions in several of the major debates. He favoured a single legislative chamber, as in Pennsylvania, but was won over to bicameralism and suggested that the Senate should represent states, and the House of Representatives the people. He supported the creation of an executive office, but envisaged a limited body. As a moderate federalist, he was against granting the president the power of veto and an unlimited mandate. In the final analysis, the United States Constitution did not correspond to his ideal – which was closer to the Pennsylvania Constitution – but he knew the value of compromise and supported its ratification, making a significant contribution through his immense prestige. On 17 September 1787, the Convention signed the final document. Franklin was too weak to address the gathering, but distributed a printed speech which began: "I agree to this Constitution, with all its flaws" and ended with these words: "Thus I consent, Sir, to this Constitution, because I expect no better, and because I am not sure that it is not the best." Franklin was a signatory to the four documents which helped to create the United States: the 1776 Declaration of Independence (written by Jefferson, but polished by Franklin); the 1778 treaty with France and the 1783 treaty with England (for which he had been one of the main negotiators), and finally the 1787 Constitution (which he influenced only marginally, while contributing to its ratification).

In the last years of his life the great man, who had long pondered the matter, adopted a position against slavery. When in London, he had argued enthusiastically for the instruction of the Negroes, and in France had had long conversations with Condorcet, author in 1777 of *Réflexions sur l'esclavage des Nègres*. In 1787, he assumed the presidency of the Quaker-supported Pennsylvania Abolition Society. However, he renounced the plan to present an anti-slavery petition to the Convention, fearing the reaction of the southern slave states. Ever the pragmatist, he knew there was a time for everything, and that the time for abolition had not yet arrived.[11]

The sage whom two worlds claimed as their own

Benjamin Franklin died on 17 April 1790, but the news took almost two months to reach revolutionary Paris. His reputation, immense as it was during his own lifetime, reached even

greater and enduring heights in France after his death, a destiny that none of his countrymen would ever approach. Between 1815 and 1850, Paris and the provinces were swept by a veritable 'Franklin mania', both elitist and popular. Auguste Comte went so far as to speak of him as a modern Socrates. In 1906, the bicentenary of his birth, a statue was erected in the Place du Trocadéro. The monument is engraved with the words of Mirabeau: "The genius who enfranchised America and poured upon Europe torrents of light! The sage whom two worlds claimed as their own."

Should I conclude by indulging in grandiloquence, and use the life, real or mythical, of Franklin to sing the praises of Franco-American relations? I have practiced and studied these relations for too long, over thirty years, to succumb to the temptation. I have devoted too much effort to uncovering the personality we celebrate today to stoop to such a level; it would be contrary to his temperament and, if you will permit me to add, to mine. Franco-American relations have always been difficult, sometimes very difficult, but no one has ever denied their basis in mutual admiration, attraction and, very often, charm. As with every other aspect of human affairs, such a basis can only endure if it is nurtured by a steady stream of men and women who personify its substance. At the beginning of the twenty-first century, America and France still need each other. The laws of international politics are harsh; Franklin knew this better than anyone. But the element of sympathy is there to be cultivated. He knew that too, and he practiced it. And there is also wisdom, so universally necessary and yet so rare, and so literally vital in moments of madness. Benjamin Franklin was indeed the 'Sage whom two worlds claimed as their own'. Where is his like today?

Thierry de Montbrial

1. The Benjamin Franklin of the 1760s could be considered a British imperialist. His Americanisation was therefore preceded by a sincere Anglicisation. See Gordon S. Wood, *The Americanization of Benjamin Franklin*, New York, Penguin Books, 2004.
2. See Part Two, chapter 2.
3. The original text was written in rather loose French. Benjamin Franklin learned the language 'as he went along', and did not study it systematically.
4. Isaac Newton, *The Principia*, A New Translation by I. Bernard Cohen and Anne Whitman, preceded by *A Guide to Newton's Principia* by I. Bernard Cohen, University of California Press, 1999.
5. Nollet's most notable work was *Leçons de physique expérimentale*, which went through many editions and gives a good idea of the state of knowledge during his lifetime. See also John L. Heilbron's entry on Nollet in *Dictionary of Scientific Biography*, vol. 10, p. 145-198.
6. See I. Bernard Cohen's entry on Benjamin Franklin in *Dictionary of Scientific Biography*, vol. 5, p. 129-139.
7. For what follows, I have borrowed from *L'Histoire de la physique* by Johann Christian Poggendorff, published in 1883 and republished by Jacques Gabay in 1993, p. 522 ff.
8. Steven Weinberg, *The Discovery of Subatomic Particles*, revised ed., Cambridge University Press, 2003.
9. Edmund S. Morgan, *Benjamin Franklin*, Yale University Press, 2002. See also Gordon S. Wood, *The Americanization…*, op. cit; J. A. Leo Lemay, *The Life of Benjamin Franklin: Journalist 1706-1730*, vol. 1, et J. A. Leo Lemay, *The Life of Benjamin Franklin: Printer and Publisher, 1730-1747*, vol. 2, 2005. Claude Fohlen's overview, *Benjamin Franklin, l'Américain des lumières*, Paris, Payot, 2000, is also of interest
10. "But Franklin never chose to present himself as one of those heroes who are turned into marble statues, and his vanities were obvious. He was a past master of the art of self-promotion, he ceaselessly looked for chances to appear in newspapers, particularly the ones he published himself,

and he was partly the inventor of the celebrity he enjoyed in his own lifetime." Christopher Collier and James Lincoln Collier, *Decision in Philadelphia*, New York, Ballantine Books, 1986, p. 107.

11. Benjamin Franklin's position on abolition should be approached with caution. According to Christopher Collier and James Lincoln Collier, "If he was hostile to the importing of Blacks, it was for the simple reason that he feared they would 'darken' the 'superior beings', particularly the 'lovely White and Red'. This was the northern attitude par excellence: Slavery was undoubtedly immoral and reprehensible; but whether freemen or slaves, Africans were not welcome, and the ultimate aim of most northerners was to purge society completely of their presence." (op.cit, p.188).

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Traducteurs :

Anglais : Roger Leverdier
Arabe : Mostafa Maher
Chinois : Yan Suwei
Espagnol : Erika Gil Lozada
Russe : Ekaterina Belavina