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MARC-ANTOINE JULLIEN ('JULLIEN DE PARIS')

(1775–1848)

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From loss of faith in politics to a mystical faith in education?

If ever there was a man whose life-story illuminated his work in the field of education, it was Marc-Antoine Jullien.[2] His voluminous correspondence gives a fascinating insight into his character, his keen interests, the trials and doubts he experienced, and the concessions or even compromises he made. His life embodies a collective destiny that transcends it and gives it meaning.

Marc-Antoine Jullien (known as 'Jullien de Paris') was born in 1775 into a family belonging to the educated middle class. He was first brought up in the country by his mother according to 'the principles of strict Rousseauism', then in Paris by his father, Marc-Antoine Jullien Senior ('Jullien de la Drôme'), who was an associate of such people as Mably, Turgot and Condorcet and who became Deputy for the Drôme during the Convention.

While Marc-Antoine was a pupil at the Collège de Navarre, his world-view was shaped by a mingling of the various intellectual currents of the Enlightenment-philosophies firmly convinced of human perfectibility, the inner voice of conscience and the demands of reason, the encyclopaedists' faith in uninterrupted progress and in the virtues of science, and a political philosophy nourished by the ideas of Rousseau, Mably, Condorcet and the study of the authors of Antiquity. This mixture of new ideas and classical instruction at the Collège provided him at an early age with models for the interpretation of his social experience and models for action:

> Public education caused the seeds of all the republican ideas to germinate within the monarchy. Our schools became little States in which neither rank nor wealth conferred superiority, in which independence and equality were the highest good and in which the pupils, transported constantly towards an imaginary homeland, as outsiders in their own land, studying the eloquence of Demosthenes and Cicero or the love of freedom of Thrasybulus and Brutus [...][3]

In these years just before the Revolution, Jullien developed, together with a sense of 'the general interest' and of a meritocratic justice, a deep aversion to the system of absolute monarchy. On the evening of 14 July 1789, he was to be found distributing to passers-by sheets of paper on which he had written: 'It is not enough to have toppled the Bastille, we must topple the Throne!' He was then 14 years old. In the summer of 1791, when he took the Jacobins' oath—'Live free or die'—he was 16. The following year he came out publicly on the side of Robespierre: 'The interest, the salvation of the people, that must be the first and only basis for the decisions of the people's representatives'.[4] In 1793, as commissioner to the armed forces, in the Pyrenees, officially delegated by the Committee of Public Safety, he was given virtually discretionary powers in various towns of France by Robespierre. In 1794, he was appointed Secretary of the Comité d'Instruction publique, which was responsible for drawing up plans for 'public instruction' or 'national

education' but, as he was sent to Bordeaux by Robespierre, he took no part in this work, though he was certainly kept informed about it.

Arrested after the ninth of Thermidor, Jullien was imprisoned for fifteen months. He spent this time rethinking his political ideas: although he continued to denounce the division of society into 'classes of citizens' (which explains the sympathy with which he later regarded Pestalozzi's institute, where the children of the poor as well as of the rich were taught), he realized that it was important to save the Republic by uniting all republicans and putting a stop to the Revolution, 'an unending struggle, a battle to the death between patricians and plebeians, between the rich and the poor'. It was necessary to do what the revolutionaries had failed to do: to forge an alliance with the people and 'improve the lot of the poor, but by means that are reasonable and feasible'.[5] The nature of the means for changing society and the extent of those changes needed to be reconsidered. In publishing Saint-Just's education plan in *L'Orateur plébéien* [The plebeian speaker], Jullien showed where his new interests lay: the education of 'the new man' was emerging as the key to social change.

With accusing fingers pointing at him from all sides, despairing both for his own political future and that of the Revolution, Jullien in 1796 obtained from Bonaparte a post in the Army of Italy. However, after falling out of favour and being rehabilitated several times, he was finally relegated to the supply services for having, among other things, protested against the outlawing of the surviving adherents of Jacobinism and the doctrines of Baboeuf.

From 1801 to 1819, he devoted all his energy to matters of education, writing several works on the subject, including his *Essai général d'éducation physique, morale et intellectuelle* [General essay on physical, moral and intellectual education] published in 1808.[6] In 1810 he was given leave to study Pestalozzi's institute at Yverdon. It was a revelation to him: he settled down with his wife and children to spend three months there and returned for several further stays in 1811 and 1812; he took abundant notes and conducted a regular correspondence with Pestalozzi, to whom he entrusted the education of his children.

It was at this time that the idea of a 'science of education' came to him. After two years in prison and another stay at the institute, he turned his attention to spreading the ideas of Pestalozzi and Fellenberg in France and published in the *Journal d'éducation* [Educational journal], which he had helped to found, a series of 'letters' on the educational methods of Pestalozzi and, in 1817, the work on comparative education that made him famous.[7] Between 1817 and 1818, however, weary of the feuding within the institute and powerless to prevent a bankruptcy that he had tried in vain to avert by setting up a governing board for financial matters, Jullien broke with Pestalozzi, who for his part suspected him of betrayal. His publications on education were reduced to a few articles in the *Revue encyclopédique* [Encyclopaedic Review], which he founded in 1819. From then on he turned his attention to the development of the sciences.

As a result of these sidesteps and shifts of interest, his oeuvre creates a curious impression. It is understandable that, once the ardour of the revolutionary years had worn off, Jullien should have been tempted to shy away from politics, but why did he put so much energy into his 'science of education' scheme and especially into the study and dissemination of Pestalozzi's methods? The answer becomes clearer when we look into the development of his political views and personal commitments. Throughout his life, the guiding principle of his political philosophy was the general interest and that of his revolutionary activity was denunciation of the private interests of the rich and the patricians. Such reference to a political principle demands that one should, as Rousseau remarked, 'consult one's reason before listening to one's inclinations'. Jullien, consulting his inclinations before listening to the voice of his reason, turned reason into a kind of mystique of the people on the march, a mystical conception of the Revolution. As a Jacobin, he had placed all his trust in the general will and in the mythologized forces—the people, the nation, Robespierre the Incorruptible—that were supposed to express it, but soon realized that the voice of the people was in danger of being obfuscated, by an 'idol' in the person of Robespierre,[8] and that the will of the

people was neither as clear nor as unwavering as he had thought. In his writings, the category of the 'general interest' was gradually emptied of its psychological content and of any personal commitment, thus becoming an abstraction; it lost its power to denounce injustices and serve to legitimize the 'benefits of the social order', including the Napoleonic order.

De jure equality and the formal freedoms were all that remained in this worldview of political disenchantment. Jullien now moved towards a pragmatic conception of social change, seeking in the rationalization of education the greatest possible effectiveness and the means of perfecting the individual and hence society:

> In the long run, education alone is capable of exercising a decisive and radical influence on the regeneration of man, the improvement of societies, true civilization and the prosperity of States. Each generation, if entrusted to teachers worthy of their mission, should be the more perfect continuation of the generation it replaces. Thus would the human race advance with firm and confident step along the broad avenue of progress where the body social, wisely and strongly constituted, would no longer be a prey to the grievous upheavals, periodic crises and fearful disasters that all too often lead to backsliding.[9]

Thus, the spell of politics was broken and Jullien came, for a while, to a mystical faith in education.

The 'science' of education: between empiricism and formalism

Marc-Antoine Jullien was the first person in France to attempt to construct a 'science of education' along the lines of the 'positive' sciences. The use of this term, borrowed from Destutt de Tracy,[10] marks a change, from 1812 onwards, in his ideas of education. His earlier texts spoke of the 'science whose purpose is to develop and perfect the physical, moral and intellectual faculties of man' or of the 'science of happiness and virtue'. The word 'science' was at that point taken in its etymological sense, the idea that education could be the subject of rational, i.e. essentially philosophical, inquiry having been firmly established since the Enlightenment. His *Essai général d'éducation* of 1808 fits completely into this framework, putting itself forward as a theory of human nature applied to the indeterminate field of educational practices, whence a plan for physical, intellectual and moral education may be deduced. On the other hand, the *Esprit de la méthode d'éducation de Pestalozzi* [Essence of Pestalozzi's educational method] (1812) explicitly maps out plans for a 'science of education' understood as a 'positive science'.

Jullien's meeting with Pestalozzi and his contact with the new educational practice thus resulted in an attempt to construct a rational framework for the day-to-day realities of education which was further developed, five years later, in his *Esquisse et vues préliminaires d'un ouvrage sur l'éducation comparée* [Outline and preliminary views of a work on comparative education] (1817). To the best of my knowledge, these two works constitute the first attempt to separate an empirical field of observation into its constituent parts, to devise techniques of inquiry and to use formal models of analysis. Their attempt to explain how schools function is something so original as to deserve a closer look.

AT YVERDON

The Yverdon institute was one of those exceptional schools that, precisely because of their ambivalent status, have never failed to attract the interest of educationists. It was the indissoluble combination of an empirical reality and an ideal made flesh, at once a school for boys and girls and a training college for teachers, that both set the standard of education and came up to it, a version of Rabelais' Abbey of Thélème that avoided being Utopian by having a real existence in time and place. In the Pestalozzi school, Jullien believed he saw the realization of his hopes: an education respectful of the free development of individuals, and a promise of 'regeneration' for human beings.

But instead of being satisfied with the sort of cursory glance that long sufficed as a credo for so many educationists ('we have seen the ideal school and it works'), he decided to take this renowned 'method' seriously and to examine it from close quarters.

Like an 'accomplished spy', as Niederer remarked, he amassed thirty-three exercise books of notes, miscellaneous information, observations and conversations with Pestalozzi, Niederer and other teachers.[11] The *Esprit de la mèthode* has usually been interpreted by commentators as an account, distorted to a greater or lesser extent by Niederer and by Jullien himself, of the educational ideas and achievements of Pestalozzi; but the difference between what we know about the way the institute actually functioned and the way it is depicted in this work is in fact much more revealing of Jullien's own *esprit de la mèthode*. In order to set up schools in France and bring in the new methods of teaching and education, Jullien had not only to give a precise description of the 'method' but also to demonstrate its exemplary nature, to dissociate the particular experiments, carried out at Yverdon from that singular figure who presided over it, and to give a rational explanation of these practices so as to win over their detractors and disseminate them widely.[12]

In a foreword to his study, Jullien drew upon the 'intimate analogy' between the military art and the art of teaching. In his view, 'the science of administration' could provide models or 'general principles' useful to the 'science of education', since 'the positive and practical ideas relating to method and analysis are an essential part of the knowledge needed by a good administrator'. At the same time, the two 'spheres' of administration and education offer similarities since the former deals with 'assemblages of human beings considered in turn as individuals and in the mass' while the latter concerns 'a number of children are brought together to form a family and a miniature society'. But how is this miniature society to be described and analysed?

Jullien describes it firstly, as Pestalozzi himself had done, in terms of the household, placing emphasis on the close, affectionate and trusting relationships between the members of this 'big family', on their integration into their milieu, on the study of the natural environment and on the pleasures of togetherness. 'The method in itself', he writes:

> requires all relations between the teacher and his pupils to be tender and affectionate, like those between a mother and her children. [...] It is only after long consideration, and after lengthy observation of this institute, that I dare to propose it as being the least imperfect outline so far put into effect of a practical plan for education that, by the way it is organized and directs the inner life of the pupils, is such as to combine and produce the loving affections, gentle virtues and innocent pleasures of family and home life, as well as the masculine, powerful and energetic virtues of public life.[13]

In so doing, he tones down considerably the most striking feature of the Yverdon community—attachment to the one and only, irreplaceable Father-Pestalozzi himself—and he says nothing about the means by which this Father tried to unite his 'children', more than by fatherly love or even by religion: unifying love, revealed truth, faith in nature and faith in the divinity incarnate in the heart of man. However, he also describes the 'home' in another way, as an organization that isolates and systematically combines components such as pupils, teachers, 'branches of knowledge', and the means and goals of education. He sets out to show in detail how, in each 'sphere' of education, each action of the teacher is adjusted to each 'faculty' of the children. The *Esprit de la mèthode* thus implies a dual concept of social relationships: on the one hand a line of thought concerned with the interactions between individuals and taking the family as its model, i.e. an interpretation of the experiential world still close to its endogenous sense; and on the other, a line of thought focused on mechanisms and on action through contact, based on a physico-technical model. This double projection of the original close-knit community, on to the domestic community and on to the actual organization, enabled him to draw a rational picture of the institute's daily life and sketch a model that could be transposed to other places and applied under the authority of other teachers.

In his efforts to explain Pestalozzian practices, Jullien proceeded to a systematic categorization of the 'real subjects of observation'.[14] He began by 'listing all the things [he] wanted

to discuss with the various people connected with the institute so as to get to know all its aspects'; he worked out a corresponding order for these discussions but did not start his inquiries—he states—until 'after having lived as it were in the family of the institute, as one of its members'.[15] The book itself, rather discursive in form, clearly follows two opposite approaches. The first approach moves from the realm of the empirical to a higher plane of generalization: 'the active life' provides 'real subjects of observation and useful meditation', and the institute is taken as a spontaneous experiential given, as an entity with the opaqueness, complexity and obviousness of the real, a place where people live, act, walk about and learn. Jullien paid meticulous attention to all the details of daily life, sometimes describing what he saw like a disciple of Rousseau—the Rousseau of the *Rêveries* rather than of *Emile*:

> Happy age! Happy sex! Considered in this haven! Life is gentle and pure; all the sentiments are brought together and merged in the family spirit. There is no hint of nor desire for other sources of happiness than the simple, straightforward pleasures that nature itself and the school's organization provide for the young pupils who develop, grow in strength and in knowledge, and profit fully from everything their life may offer. Such is the effect produced on the observer by the institute for girls.[16]

These sympathetic observations are then considered from 'five general standpoints' which reflect the manner in which the institute is organized, i.e. as an establishment for 'education', 'girls', 'teacher-training', 'experimental work' and 'special industrial training'. But Jullien also follows a quite different approach to the arrangement of his material, which moves back down from a deductive outline of conceptions to empirical observations. At times he lists what he regards as the major principles of Pestalozzi's method, such as the free and harmonious development of the faculties, natural aptitudes and individuality of each pupil, the fundamental importance of intuition, or the gradations between, and linkage of, all aspects of education. At other times, calling upon a 'knowledge of human nature', he considers education from the respective standpoints of the physical, intellectual and moral faculties. To this extent, his science of education is anti-empirical. To be more precise, it is a kind of analytical formalism: the principles and general theory of human nature draw attention to certain 'objects' and organize them into 'series of objects', while a formal system is used to decompose the modes of instruction employed in the institute. One can understand why Pestalozzi criticized Jullien for not having seen the method as an organic whole or grasped its spirit: his actual experience of it was set in a framework of abstractions.

COMPARATIVE EDUCATION

The *Esquisse d'un ouvrage sur l'éducation comparée*, published in 1817, has always fascinated its readers by its wide scope and apparent modernity: its aim was nothing less than to compare educational establishments throughout Europe, to set up a 'Special Commission on Education' and an 'Educational Institute', and to found an 'Educational Newsletter'. It was thanks to Jullien that the science of education became comparative. Once again the approach was an original one. At this time several study missions were sent to foreign countries: in 1815, for example, Cuvier visited Holland while Jomard and Jean-Baptiste Say visited the school of Bell and Lancaster in England; all three, like Jullien and Ampère, were members of the 'Société pour l'amélioration de l'enseignement' and of the governing board of the *Journal d'éducation*, whose aim was to 'make known the best schools' These studies, empirical in approach and implicitly comparative, were intended to identify aspects of the organization of education that could usefully be imported into France.

Carrying over into education his interest in the philosophy of science and the comparative method (whose heuristic role he probably discovered through his dealings with Cuvier), Jullien proposed 'to advance the science of education' by using the method successfully employed in comparative anatomy to compare schools. His ambition was:

to build up, for this science, as has been done for other branches of knowledge, collections of facts and observations arranged in analytical tables so that they can be correlated and compared with a view to deducing therefrom firm principles and specific rules so that education may become virtually a positive science instead of being left to the whims of the narrow-minded, blinkered people in charge of it or diverted from the strait and narrow path by the prejudices of blind routine or by the spirit of system and innovation.[17]

Like the natural sciences and following their model, the science of education should establish the laws that govern the observed characteristics of education. With the comparative approach, Jullien thought that he had at last found his own method, not deductive principles of reasoning or formal rules but an instrument for the analysis of observed facts and a procedure for investigation; but he still needed a tool to draw up a 'comparative table of the main educational establishments existing in Europe', of the organization of education and teaching of the 'objects embraced by the course of studies as a whole', and of 'the methods used to form and instruct young people, the gradual improvements that have been attempted and the degree of success achieved'.[18]

This tool was provided by the long, standardized questionnaire of 266 questions, part of which was published in the *Journal d'éducation* in 1816 and 1817. The text was preceded by a notice giving the address to which replies could be sent. By this means, Jullien hoped to collect a great many observations which could then be compared by means of 'the common measure to be used for correlating them'; he also hoped to recruit more investigators and set up a working group to centralize and analyse the replies:

The methods and analytical tables employed in the sciences are perfectly analogous to the tools used in the mechanical arts. Their purpose is to make up for the weakness of human beings, to provide leverage, to supplement the strength we are given by nature; they tend to even out, so to speak, disparities in intelligence, raising a mediocre intelligence to a higher level, just as firearms, as it were, even out disparities in physical strength.[19]

His vision of a science of education was thus broader in scope than anything known up to that time and for long afterwards. But, even more important, Jullien was looking for practical benefits—it would finally be possible to judge 'which are the branches that offer improvements that can be transposed from one country to another'[20] so as to remedy the 'inherent deficiencies of the systems and methods of education and instruction'.

Before extending his inquiry to the whole of Europe, Jullien suggested that a trial be carried out in Switzerland, which he saw as a microcosm that exactly mirrored the European macrocosm: 'Because of the great variety of climates, languages, religions, political organizations and governments in the twenty-two cantons of the Helvetic Confederation, an infinite variety of educational establishments and systems, reproducing every possible known form is to be found there'.[21] Once again, he displayed a sure sense of the specific, rendered more acute by a heightened attention to differences and variations. He expected the survey to produce quantitative and qualitative information on all aspects of schools. As the nature of the questions shows, he wanted to know about administrative arrangements in the schools, about the staff and pupils who attended them, their number, their age, their training, process of appointment, reputation and trustworthiness; about relations within the school and outside the school, etc.; he wanted to know about the types of instruction in use, the forms of education and the relations between public education and education in the home.

Without going into details about the questionnaire, regarded by Jullien as a first draft in need of validation, it is possible to hazard a few remarks about its preparation. Jullien stated that, in the first place, it stemmed from the 'possible divisions and subdivisions of the subject of our research, which are to serve as our basis'—i.e. from a straightforward breakdown into the natural categories of the persons concerned and the nature of the establishments: 'primary and common education' (first series of 120 questions), 'secondary and classical education' (second series of 146 questions), 'higher and scientific education', 'teacher education', 'education for women' and

'legislative aspects of education and its relations with social institutions' (these four series were never published).

As was the case with his work plan for examining the Yverdon institute, however, the questionnaire was also based on certain assumptions: Jullien considered education 'from three points of view', '1: its subject, Man; 2: its goal, Happiness, 3: its instrument, Time'.[22] The first two points of view were each subdivided into 'three elements' (body, heart, mind; health, morality, instruction) which provided the framework for the survey. The third point of view gave rise to 'three major series of questions for three kinds of public school': for Jullien making profitable use of time meant the proper management of the three periods of 'childhood, adolescence and youth, which form, so to speak, the domain of education, considered on its three levels—elementary and primary, secondary and classical, higher and scientific—or a special level related to a specific occupation'.[23] These latter series, however, were still defined in terms of natural categories, as were the next two series (types of schools existing at the time): the rational justification for this was provided by the recourse to 'periods', i.e. temporal categories.

It would thus be a mistake to distinguish too sharply between the soundly based comparativism of Jullien and the ad hoc comparativism of his contemporaries: his approach was still essentially empirical and his purpose normative. It would be just as unwise to see it as too closely related to the comparativism of the naturalists. Comparative anatomy, a science of resemblances and dissimilarities, studies variations of neophology, structure and function in living creatures; it is, as Cuvier emphasized, a 'tool' with which a secret organization and hidden functions may be brought to light: underlying the variations in form are laws of organization that may be deduced from the permanence of the functions. In Jullien's case, however, the analogy with anatomy is not entirely consistent: educational institutions and establishments are to be studied in the same way as organisms are studied, yet they are not considered as organizations. Jullien does not construct the object of study corresponding to his comparative method. The nature of the entities to be compared is in fact left vague: are they schools or groups of schools and on what scale, are they geographical, ethnic, political or administrative entities? Moreover, although it invokes comparative anatomy as a model, Jullien's methodological comparativism is not a form of functionalism, replacing as it does the concept of function by that of value. All educational thought doubtless tends towards the axiological; in the *Esquisse*, however, it is the criterion of value and not that of function which is used to assess and compare institutions and different modes of instruction and their effects. The criterion of value itself lacks precision: is it the social utility of an education that stimulates the establishment of interpersonal relations and the sense of duty, the economic effectiveness of education (particularly 'special' education), the happiness made possible by a particular form of education, or of all these at once, as the content of the questionnaire would suggest?

This endeavour fizzled out; the questionnaire remained unfinished and it is not known how many replies were received nor whether they were ever processed. It was probably impossible for a single person to process so much data without proper procedures and in the absence of the scientific and administrative facilities Jullien needed. By dint of close epistemological scrutiny it would no doubt be easy to hunt out the weaknesses of the 'science of education', the immaturity of the investigation procedures and the ambiguities regarding the objects of study, but the wealth of anthropological information they contain makes the study of the Yverdon institute and the *Esquisse* important works that have been unjustly neglected.

The contradictions inherent in the 'science of education'

Why was Jullien's work not completed? Were his ideas the half-formed intuitions of a dilettante, was he discouraged by the failure of Pestalozzi's institute, or were his plans disrupted by events? Perhaps, to judge from what we know at present it would be preferable to look for the reasons in

the shaky construction of his 'science of education', which is indeed a curious piece arranged for several voices, that of the *honnête homme* confident of the progress of reason, that of the former revolutionary interested in social and political change, that of the administrator concerned with efficiency and rationality, that of the amateur scientist and that of the traveller curious to observe the minutiae of school life. This 'science of practical utility', which calls upon both the categories of ordinary experience and those of highly formal systems, is not only torn between a concern for specifics and the requirement of universality or between anthropological realities and lofty generalizations, dichotomies such as we find in the study on Pestalozzi's institute and in the *Esquisse*, but also hesitates between disparate formal schemata and cannot make up its mind between 'knowledge, will and action'.[24] These tensions, exacerbated during the Yverdon period, were never resolved.

In Jullien's earlier work, where the question of a positive science of educational facts has not yet been raised, we find him selecting and refining one of the formal schemata on which he was subsequently to base the categorization of educational phenomena and the collection of information. His plan of 1801, for the purpose of 'establishing schools of military theory and practice in various *départements*' in order to reform the State, is organized around two conceptions of education. The first still harks back to the political philosophy which underpinned Saint-Just's plan for education: each school should constitute a society in miniature, founded upon love of work, responsibility and 'principles of equity'; it should prepare its members for life in society and mould future citizens by instructing pupils in 'the rights and duties of the citizen'. The second conception of education corresponds to a logic of economic and military efficiency: each school should 'form robust soldiers and skilful and industrious men', and should be 'based on a productive industry' that provides for its subsistence. Jullien's imaginary edifice thus combined a civic model of political philosophy with a model of technical rationality. At the time, he had a political and immediately practical aim in sight, which he soon had to abandon, that of setting up schools of a new type.

Between 1806 and 1808, he fell back on scientific and technical rationality to prepare his 'general plan of education'. It was in this spirit that he arranged the courses of instruction to be given in schools: he drew up curricula in such a way as to follow, year by year, the order of development of the subjects in the history of science (beginning with mathematics, natural history and physics and finishing with the social sciences), established a hierarchy of subjects of study, from the most elementary to the most complex, and geared instruction to the development of the children.[25] This attention to the rational organization of education-related phenomena also marked, as we have seen, his later studies. Between 1812 and 1816, Jullien went on to expand and consolidate his project in the style of the positive sciences: not content to define the 'science of education' by analogy with comparative anatomy, he gave it a place in his taxonomy of the sciences, situating it, like Bacon, Diderot, d'Alembert and Ampère before him and long before Cournot, among the 'practical or applied sciences'.

He did not, however, limit himself to scientific and technical rationality but continued to glean from philosophy suitable ideas for giving a formal structure to his 'science of education', categorizing the phenomena to be observed and organizing his plans of investigation, just as educationists, scholars and academics were doing at the end of the nineteenth and beginning of the twentieth century. The reason why, despite the schemes for a 'science of education' that were put forward from time to time in France during this period, philosophies of education continued to have such an impact was because they were still considered to be the epitome of rationality. It was also because the distinctive feature of philosophical rationality is that it elaborates 'long chains of reasons', as Descartes put it, that have a strong ordering and generalizing power: unlike scientific chains of reasons, they are not tied to specific objects and so can easily be transposed from one field to another. Thus the philosophic mode of reasoning gave conviction, coherence, generality and the promise of universality to reflections on education.

Jullien's ways of systematizing, however, represent tentative assemblages of disparate schemata. This is obvious from a close look at his conception of education and the child, a synchretic attempt to reconcile heterogeneous elements. It is, to start with, a doctrine that sees human nature and human faculties as a trilogy of body, mind and heart (a conception, that, incidentally, shaped almost all educational thinking from the seventeenth to the beginning of the twentieth century), but it is also a doctrine, inherited from Rousseau's second *Discours*, of the perfectibility and hence educability of human nature. But what does Jullien mean by perfectibility? Depending on whether it means, as he says, 'developing' and 'fortifying' 'the physical, moral and intellectual faculties of man' or, as he also says 'moulding', 'modifying' or 'constructing' those faculties, the nature of the enterprise will differ. In the first case, the educator nurtures, supports and tends the seed with which each person is naturally endowed: the child is seen as a potential adult. In the second case, the educator transforms and shapes, even aspiring to a 'second creation of human nature':[26] here the child is regarded as being shapeless or misshapen until it is educated.

Even after his visits to Yverdon, Jullien continued, in both the *Esprit de la méthode* and the *Esquisse*, trying to reconcile the Rousseauist belief in the free development of natural faculties with an instrumental conception of education. It is easy to imagine the contradictory educational implications of these paradigms, which entail both actions to shape the child and an appeal to the child's reason and conscience ('negative education' as it was called at the time). It is also easy to imagine the difficulties thus created for the 'science of education'. To reconcile these opposites, Jullien had to assume the dual nature of the individual, with one part made up of innate aptitudes capable of development and another part resulting from the transforming action of educators.

One of the questions, for example, asks 'Is attention paid in teaching to these two essential factors: 1. that which appertains to the natural development and particular aptitudes of the individual; 2. that which relates to modifications that may be effected in him through the outside influences to which he is subjected?'[27] But simply to state as a guiding principle that 'All things are connected' or to express the same idea as an imperative—'Education must be a single whole'—was not enough to reunite that which opposing dogmas had put asunder. It was, moreover, this very philosophy of childhood and human nature that Pestalozzi criticized in Jullien's theorizing.

This tension between heterogeneous models was compounded by another tension, for Jullien had a higher ambition for his science than a mere 'science of education', even if it were a *scienza nova*: that of a 'science of education' reaching towards a telos, the endless perfecting of the individual, society and humanity. For proof of this, one need only take another look at his conception of human perfectibility, a conception that, as we know, was widely shared at the turn of the eighteenth and nineteenth centuries. It is a supremely optimistic definition of human nature, which comes down to the idea that the nature of man is not to possess a nature, that man's true nature is to be what he becomes: 'the individual, like the species, tends essentially towards perfection';[28] the same is true for society, since individual development and history pass through the same stages of childhood, adolescence and maturity. The goal and justification of education, science and politics was to bring the new society and the new man into being.

The 'science of education' is thus vested with its first mission, the social and political mission of planning activities by means of rigorously organized curricula, introducing elementary instruction useful for 'practical life', forming the adults of tomorrow, and contributing to the establishment of a 'good system of education', i.e. a system that not only 'reforms morals' and 'roots out abuses' but also prepares individuals to respond to the requirements of economic progress and trains them for the 'destiny' to which they are called from birth. Hence, Jullien began his *Essai général d'éducation* by stating that it was addressed to 'the children of those families most influential by virtue of their wealth, esteem in which they are held, and their rank in society', because 'it is through them that civilization must begin or improve, and that enlightenment must make its appearance in the nation and spread to the other classes'[29]. This was his way of attenuating the contradiction between the ideal of equality and the desire to select the best.

But Jullien was not seeking to adapt each individual to his or her social destiny; he ascribed another mission to education and 'science', that of achieving human happiness. Though he subscribed to only a moderate form of eudomonism and did not regard happiness as the ultimate purpose of human life since, for him, the human soul reached out towards a 'higher goal', eternal life, his aim was nevertheless to move mountains. At the same time, he laid down the ultimate purpose of education. He was, thus re-expressing, in this mystique of education, the revolutionary spell cast on him in his younger days, but re-expressing it in a quite different form, emptied of all revolutionary content: from the *Essai général d'éducation* onwards, the social aims he assigned to education bore only a distant relation to his former aspirations to create a new man and regenerate society.

The 'science of education' thus combines in an unprecedented way the demands of a would-be-scientific, philosophical rationalization, the demands of a rational approach to educational practices (adjustment of the means used with a view to improving education), and a highly significant final goal: in short, action called for knowledge and will. The science of education was primarily normative, and its descriptive, deductive and explanatory functions were secondary.

'A quite forgotten French pedagogue [...]'

The work of Marc-Antoine Jullien is so full of original ideas that it is hardly surprising its few readers should have been struck by the prophetic nature of certain selected passages, but Jullien is a curiosity among 'precursors'.

When in 1883 a course on the science of education was officially introduced at the Sorbonne, no one seems to have remembered that he was the first person in France to have attempted to construct such a 'science'. Some Third Republic educators did, however, occasionally mention his work in the course of public statements or formal events. Ferdinand Buisson, for example, did so at the inauguration of the 'Institut normal pédagogique' in Paris in 1878, and again in the inaugural lecture of his course on the science of education at the Sorbonne in 1896, in which he referred to a 'quite forgotten French pedagogue' but quoted only Jullien's assertion that 'a love of human beings is the most important condition for their education'.[30] The Director of the Musée pédagogique, in an article published on the occasion of the Universal Exhibition of 1889, observed that Jullien 'as early as 1817 called for the creation of a teacher-training college'.[31] On these very public occasions, at a time when France's defeat at Sedan was fresh in everyone's memory, the work of Jullien proved the native Frenchness of the 'science of education' and educational institutions. Indeed, this kind of piecemeal exhumation of Jullien's remains on some special occasion or in connection with some special research continues to be a feature of educational studies in France. Some have called him the heretical disciple of Pestalozzi, others the precursor of new teaching methods, and yet others the 'father of comparative education' and forebear of the IBE (which commemorated the centenary of his death in 1948 and republished in 1992 his *Esquisse d'un ouvrage sur l'éducation comparée*), while others again credit him with inventing the term 'science of education'.[32]

Despite their foundation-laying character, Jullien's works were read and commented upon by very few people. An article in the *Dictionnaire de pédagogie* [Dictionary of education] (edited by Buisson) describes the broad outlines of a 'largely forgotten' oeuvre and his ideas for a 'science of education', and reminds readers that some of Jullien's writings were to be found at the Musée pédagogique.[33] The appointment of Jullien's grandson, Edouard Lockroy, as Minister of Public Instruction in 1888 and 1889 probably had something to do with this rediscovery of the forgotten oeuvre, but no one thought of examining the path he had taken more closely or of following it themselves.

He has been regarded as a precursor but always in a curious way. In most references to the person whom Canguilhem defined as 'a thinker and researcher who is said to have covered in bygone days part of the road more recently completed by someone else', the underlying intention is to recount the 'legend', but as Canguilhem also remarked in a celebrated study, 'before we join end to end two journeys along a road, we should first make sure it is the same road'[34]. Education specialists, engrossed by the educational thinking of their own times and their efforts to legitimize it, have never taken this epistemological precaution. Pedro Rosselló's book, *Forerunners of the IBE*, provides a remarkable example of this unjustified approach when it contrives to link the proposals and questionnaire in the *Esquisse* with the achievements of the international body established in 1925, claiming that the questions 'show how closely the IBE followed Jullien's programme of research, without having heard of it!'[35] The idea of a programme carried out without having been heard of is an astounding one, and the reader is in fact more likely to be impressed by Rosselló's assiduous attempt to present Jullien as having foreshadowed the IBE programme; but it has at least to be allowed that he had read Jullien.

As for the other specialists in education, they have never done more than dip into the texts in which they have claimed to discern the origins of their 'science' As for the 'part of the road' travelled by Jullien long ago, they have explored only a few short stretches, just enough to lend plausibility to a vague idea of paternity of filiation—it is easier to accept the argument that the issues of today were already issues in the past if one refers solely to fragments taken out of their historical context. Belief in a *scientia perennis*, a belief that underlies the exhuming of 'precursors', is at odds with a desire to recount the history of a discipline, and testifies to a recurrent vision of the past that never pays any attention to the conditions under which ideas take shape. It is also just as much at odds with any claim to breaking new ground, which is why the science or sciences of education, though blithely claiming legitimacy by referring back to the mythical epoch of their 'founding father', have, paradoxically, never ceased to cultivate the idea of a new beginning: the holding up of the 'forerunner' for veneration is the epiphany not of their past but of their present.

Nevertheless, in spite of its immaturity, Jullien's science of education is a landmark, by virtue of its attempt to give order to the minor details of daily life, to reduce their complexity, and to transcend their singularity by applying, in the field of education, interpretative models, and also by virtue of its intuitive grasp of the richness and infinite complexity of the world of 'education'. Its main interest lies in this sense of a daily reality which was for so long lacking among French educationists.

Notes

1. Jacqueline Gautherin (France). Senior lecturer in educational sciences at the University of Nantes; author of a doctoral thesis *La formation d'une discipline universitaire: la science do l'éducation*(1881–1914): *essai d'histoire sociale*[The origins of a university disciplien:Educational science (1881–1914): an essay in social history] and of several articles on secullar education. She is also the co-author of studies on the sociology of educaition and of educational guidance.
2. On the life of M-A. Jullien, see H. Goetz, *Marc-Antoine Jullien de Paris (1775–1848)*, Paris, I.N.P. 1962; V. Daline, M.-A. Jullien après le 9 Thermidor [M.-A. Jullien after the ninth of Thermidor], in: *Annales historiques de la Révolution française* [Historical annals of the French Revolution], April–June 1964, April–June 1965, July–September 1966; and the biographical novel by P. Gascar, *A l'ombre de Robespierre* [In the shadow of Robespierre], Paris, Gallimard, 1979.
3. Several foreign authors have studied his work. Apart from H. Goetz, see C. Pancera, *La Diffusione del Pensiero Educativo di Pestalozzi in Italia (l'opera di Marc-Antoine Jullien)* [The spread of Pestalozzi's educational ideas in Italy (the Work of Marc-Antoine Jullien)], Facoltà di Magistero dell'Universtà di Ferrara, 1977; P. Rosselló, *M.-A. Jullien de Paris : Père de la pédagogie comparée et précurseur du BIE.* [M.-A. Jullien de Paris: father of comparative education and forerunner of the IBE], Geneva, Port Noir, 1943; *La pédagogie comparée. Un précurseur : M-A. Jullien de Paris* [Comparative education. A

Forerunner: M.-A. Jullien de Paris], Paris, S.E.V.P.E.N., n.d.; *Forerunners of the International Bureau of Education*, Geneva, IBE, 1943, Chapter 2.

4. Cited by P. Gascar, op. cit., p. 32.
5. M.-A. Jullien, *Discours d'un jeune citoyen patriote sur les mesures à prendre dans les circonstances actuelles* [Speech by a Young Patriotic Citizen on the Measures to Be Taken in the Present Situation], 22 January 1792, year IV. In: *Pièces diverses annotées de sa main* [Various Texts Annotated by Him], Historical Library of the City of Paris.
6. Letter of 13 Vendémiaire, year IV (5 October 1795), cited by V. Daline, op. cit. (1964), p. 164.
7. M.-A. Jullien, *Appel aux véritables amis de la patrie, de la liberté et de la paix, ou Tableau des principaux résultats de l'Administration des Consuls et des ressources actuelles de la République française* [Call to the true friends of the country of liberty and peace or table of the main outcomes of the administration of consuls and the present resources of the French republic], Paris, Léger, 1801. *Analyse succinte d'un plan général d'éducation qui n'a pas encore été imprimé, contenant un Essai ou une Méthode particulière de régler le bon emploi de tous ses instants, premier et unique moyen d'être heureux* [Concise analysis of a general plan of education not yet printed, containing an essay or a particular method of regulating the sound use of each moment, the first and only way of being happy], 1806. *Essai sur une méthode qui a pour objet de bien régler l'emploi du temps, premier moyen d'être heureux : à l'usage des jeunes gens de l'âge de 16 à 15 ans : extrait d'un travail plus général, plus étendu, sur l'éducation* [Essay on a method designed to regulate the use of time, the first way of being happy: designed for young people aged 15 to 16 years: extracted from a more general, longer work on education], Paris, F. Didot, 1808. *Essai général d'éducation physique, morale et intellectuelle : suivi d'un plan d'éducation pratique pour l'enfance, l'adolescence et la jeunesse ou Recherche sur les principes et les bases de l'éducation à donner aux enfants des premières familles d'un Etat, pour accélérer la marche de la nation vers la civilisation et la prospérité* [General essay on physical, moral and intellectual education: followed by a plan of practical education for childhood, adolescence and youth or research on the principles and foundations of education intended for children of the leading families in the state to accelerate the nation's progress towards civilization and prosperity], Paris, F. Didot, 1808. *Esprit de l'Institut d'éducation d'Yverdun [sic], en Suisse, organisé et dirigé par M. Pestalozzi* [Essence of the educational institute at Yverdun in Switzerland, organized and directed by Mr. Pestalozzi], Milan, Imprimerie Royale, 1812. *Esprit de la méthode d'éducation de M. Pestalozzi, suivie et pratiquée dans l'Institut d'Yverdun [sic] en Suisse* [Essence of Mr. Pestalozzi's educational method, as applied and practised in the Yverdun Institute in Switzerland], Milan, Imprimerie Royale, 2 v., 1812; republished in 1842.
8. M.-A. Jullien, 'Lettres de M-A. Jullien sur la Méthode d'éducation de M. Pestalozzi' [Letters by M.-A. Jullien on Mr Pestalozzi's educational method], in *Journal d'éducation*, Paris, L. Colas, June 1816, October 1816, July 1817. *Précis sur les Instituts d'éducation de M. de Fallenberg, établis à Hofwil, auprès de Berne* [Summary of the educational institutes of Mr. de Fallenberg, established at Hofwil, near Berne], Paris, L. Colas, 1817. *Esquisse et vues préliminaires d'un ouvrage sur l'éducation comparée entrepris d'abord pour les vingt-deux cantons de la Suisse et pour quelques parties de l'Allemagne et de l'Italie, et qui doit comprendre sucessivement, d'après le même plan, tous les états d'Europe ; et séries de questions sur l'éducation destinées à fournir les matériaux de tables comparatives d'observations, à l'usage des hommes qui, voulant se rendre compte de la situation actuelle de l'éducation et de l'instruction publique dans les différents pays d'Europe, seront disposés à concourir au travail d'ensemble dont on expose ici le plan et le but* [Outline and Preliminary Views for a Work on Comparative Education Initially Undertaken for the Twenty-Two Swiss Cantons and for Some Parts of Germany and Italy, that Can Be Subsequently Carried Out in the Same Way for All European States; and a Series of Questions on Education Intended to Provide Material for Comparative Observation Tables for the Use of People Who, Desirous of Understanding the Present Situation of Education and Public Instruction in Different European Countries, Are Willing to Contribute to a Joint Work, the Plan and Objective of Which Are Presented Here], Paris, L. Colas, 1817.
9. *M.-A. Jullien, Membre de la Commission exécutive de l'Instruction publique, à ses Frères et Amis de la Société populaire de La Rochelle* [M.-A. Jullien: Member of the Executive Commission on Public Instruction to his Brothers and Friends of the People's Society of La Rochelle], 15 Thermidor, year II, Historical Library of the City of Paris.
10. Cited by Goetz, op. cit., p. 159.
11. Cf. Nanine Charbonnel, *Pour une critique de la raison éducative* [A critique of educational logic], Berne, Peter Lang, 1988.
12. Unfortunately we have found no trace of these materials in the French and Swiss archives and libraries.
13. J. Gautherin, 'Désingularisation d'une expérience éducative : une traduction (trahison?) de l'expérience pestalozzienne' [Desingularization of an Educational Experience: a Translation (Betrayal?) of Pestalozzi's

Experience] in: D. Hameline; J. Helmchen; J. Oelkers. (eds.). *L'Education nouvelle et les enjeux de son histoire* [New Education and the Significance of Its History], Berne, Peter Lang, to be published in 1994.

14. M-A. Jullien, *L'Esprit* ..., op. cit., p. 127, 131.
15. Ibid. p. XIII.
16. Ibid. p. 10
17. Ibid. p. 324–25.
18. Ibid. p. 13 and 14.
19. Ibid. p. 5 and 6.
20. Ibid. p. 13 and 14.
21. Ibid. p. 9.
22. Ibid. p. 15.
23. Ibid. p. 20–21.
24. Ibid.
25. Ibid. p. 6.
26. M.-A. Jullien, *Analyse succinte* [...], op. cit. This text foreshadows the *Essai sur l'emploi du temps* [Essay on the use of time] and the *Essai généra [...]* of 1808.
27. M.-A. Jullien, cited by H. Goetz, op. cit., p. 60.
28. M.-A. Jullien, *Esquisse* ..., op. cit., p. 51.
29. M.-A. Jullien, *Essai sur l'emploi du temps*, op. cit., p. 158.
30. M.-A. Jullien, *Essai d'éducation*, op. cit., p. 26 and 28.
31. F. Buisson, 'Leçon d'ouverture' [Opening Lesson], in: *Revue pédagogique*, No. 12, December 1896, p. 584.
32. A. Beurier, 'Le Musée pédagogique et la bibliothèque centrale de l'enseignement primaire' [The educational museum and the central library of primary education], in: Ministère de l'Instruction publique, *Recueil des monographies pédagogiques publiées à l'occasion de l'Exposition universelle de 1889* [Collection of educational monographs published at the time of the universal exhibition of 1889], p. 8.
33. See in particular P.P. Pompée, *Etudes sur la vie et les travaux pédagogiques de Pestalozzi* [Study on the life and educational works of Pestalozzi], Paris, 1878; A. Daguet, *Le Père Girard et son temps* [Father Girard and His Time], Paris, 1896; A. Ferrière, *L'Ecole active* [The active school], Neuchâtel, Paris, Delachaux et Niestlé, 1947, p. 88. 120 and 206; F. Gaillard, 'M-A. Jullien'',in: *Cahiers pédagogiques pour l'enseignement du second degré* [Educational dossiers for secondary level teaching], sixth year, no. 3, December 1950; P. Juif and F. Dovero, *Guide de l'étudiant en sciences pédagogiques* [Guide for the Student of the Educational Sciences], Paris, P.U.F. 1972; G. Avanzini in: *Introduction aux sciences de l'éducation* [Introduction to the educational sciences], Paris, Privat, 1976.
34. F. Buisson, *Dictionnaire de pédagogie et d'instruction primaire* [Dictionary of education and primary teaching], Paris, Hachette, 1911, vol. 1, p. 918–20.
35. G. Canguilhem, *Etudes d'histoire et de philosophie des sciences* [Studies of the history and philosophy of science], 3rd ed., Paris, Vrin, 1975, p. 21.
36. P. Rosselló, *Forerunners of the IBE*, op. cit., p. 19.