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# JEAN-OVIDE DECROLY

(1871–1932)

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## An unforeseen career

Nothing in Jean-Ovide Decroly's early life would have led to a forecast of a career in education. Coming from a strict provincial background in the small Belgian town of Renaix, he had to face the demands of his parents, who were obsessed with the academic success of the most gifted of their children. His turbulent spirit led him to detest the two boarding schools that imposed a classical Greek and Latin education, remote indeed from his passion for drawing, dancing, music and, above all, natural science. He appreciated all the more his years at the medical faculty of the University of Gent, where he was a student assistant before turning to the highly experimental discipline of pathological anatomy.

The young biologist was soon to discover the medicine of the mind. As the brilliant winner of the University's Competition and of the award of the Travelling Scholarship Foundation, he spent the 1896–97 academic year at the University of Berlin and the Salpêtrière Hospital in Paris where he met avant-garde specialists in mental illness and turned towards neuropsychiatry, and then to psychology—just as Freud had done in the same places twenty years earlier. But Decroly steadfastly affirmed that biological and mental phenomena, the 'biological and mental foundations' of all behaviour, were correlated. In 1898, Decroly moved to Brussels with his young wife, Agnès Guisset. At the University of Gent he again took up his research on mental illness and on the pathological anatomy of the brain. The clinic in the hospital setting was of more interest to him than were the patients. He also began working at the Brussels Polyclinic as an assistant in the neurology department and, shortly afterwards, was put in charge of the section for 'abnormal and speech-defective children'. This experience was both painful and decisive. Faced with the poverty of the cities, Decroly discovered the human, social and educational abandonment that his little patients suffered from. The working-class state schools almost always condemned them to failure and to the fringes of society. It was remote indeed from the preventive education that became his steadfast ideology. 'I contend that [these state schools] have a harmful influence, and an unquestionable anti-social effect; not only do they fail to prepare us for life, but they also turn many of us into life's derelicts, the underclass, or at least they do nothing to prevent us from entering into that class—which amounts to the same thing' (1904*b*). School could nevertheless be 'perhaps the most powerful means of preventing idleness, poverty and crime, [. . .] not as it is organized at present, since it is itself to a large extent the direct or indirect cause of these ills, but as it ought to be organized and as it is already organized in some fortunate places where they have understood the evil that it does and the good that it can do' (1904*b*).

If Decroly ascribes a preventive role to schools as a priority, it is primarily to supplement the parents' educational function: 'in the life of our contemporary society, the role of the school becomes more important as the parents' role has become more difficult and as adaptation to life has become more complicated' (*Anthologie de textes extraits de manuscrits inédits . . .*). In the all-too-frequent cases where the family situation is clearly harmful, the medical and educational protection of the children is obviously preferable to 'hospices, asylums, reformatories or prisons . . .

These are pernicious bandages that infect the wounds instead of curing them' (1904*b*). He therefore joined in the fight for compulsory schooling (which was not attained in Belgium until 1914, and did not become fully effective until 1920); but he tied this goal to an obligation on the schools' part to prepare each child effectively for life as a person, a worker and a citizen.

Modern education was not going to change solely to fulfil this social function. The evolution of technology and knowledge encouraged the emergence of new intellectual approaches, and it was vital to adapt education to the requirements of modern science. Like his contemporary, Léon Brunschwig, Decroly denounced the monopoly position of classical 'humanities' focused on mankind, based on literature and imbued with a Cartesian rationalism limited to its philosophical content. Teaching would have to be opened out to knowledge of matter ('nature') gained over a period of three centuries. Technical and scientific training would be based on the observation of concrete facts, the use of the experimental method which allows analysis of the facts, introducing the students to technologies which make it possible for human effort to transform nature, and providing access to sciences which ensure that experiments can be quantified and extrapolated. The classical humanities themselves would be integrated with the human sciences, thereby affording new perspectives on human phenomena. This modernizing of educational content would finally adapt schooling to the evolution of contemporary culture, starting from the realities of the child's own surroundings.

It would therefore be necessary to destroy the very foundations of the traditional schools, their methods, their curricula and their grading systems, and replace them by entirely different approaches. Like many others before and after him, Decroly could have limited himself to a Platonic denunciation of the flaws of education, but as a man of action he sought to ensure the immediate future of working-class state education. Decroly would adopt radically new practices on the basis of facts.

## Laboratory schools

An unexpected decision was to change Decroly's life entirely, as well as that of his family. The Paediatric Society had asked him to become the head physician of a small clinic that it was thinking of establishing in order to observe and treat children who were called 'abnormal'. Decroly was familiar with Wundt's experimental psychology laboratory in Berlin, Schuyten's laboratory in Antwerp and the work of Binet and Simon in France, but he distrusted the artificial conditions of examinations by outside consultants. He accepted the offer, but on condition that he could take these 'awkward' children to live in his own family's home. They would be raised there with the children that he himself hoped to have (he would later have three children of his own). Decroly expected thereby to increase the richness of his psychological observations, which were clearly dependent on the children's surroundings.

The 'Institute of Special Education—Psychological Laboratory of Dr Decroly' opened in 1901. Decroly was to stay there for the rest of his life—31 years—first in the city centre and, after 1910, in a small country property in the Brussels suburbs, called the 'Vossegat' ('The Foxhole'). The laboratory was immediately transformed into a laboratory school. No matter how 'awkward' they were, the little boarding students lived a normal life in a normal atmosphere. At the Institute they received the care that their conditions demanded, but also, and most importantly, the maximum of education that they could deal with. In observing their lives, Decroly modified the definition of 'mental irregularity'. All the children at the Institute proved to be capable of achieving sufficient progress for Decroly to affirm, as Claude Bernard had previously, that they were educable in the same way as normal children, at nearly the same rates and attainment levels.

He would soon have the opportunity to demonstrate this contention. In 1907, some parents who had followed Decroly's work asked him to take their normal children, seven boys and girls of all ages, in a second school which became the renowned 'Ermitage'. It was situated initially in the heart of the city, and transferred in 1927 to a rural, wooded neighbourhood in an inner suburb of

Brussels. From then on, without ever abandoning its original status as an experimental school, the Ermitage developed steadily from kindergarten to the end of secondary school.

The same methods would be employed thereafter at the Institute and the Ermitage, with the students periodically moving around. They were in effect two experimental schools in which methods of changing the entire educational system were systematically tested. But the stir created by Decroly's research had, over a period of several years, aroused the ire of conservative circles. The application of the same educational methods in special and regular education went against conventional ideas. Deliberately integrated coeducation was disturbing (it preceded by thirty years Belgium's initial and very timid effort at coeducation). Finally, Decroly was accused of transforming his students (and his own children) into guinea pigs. However, this little world of his shone with its own fervour.

Furthermore, his two schools did not lead Decroly to forget his principal goal: the general introduction of the new methods into the entire educational system. In 1902, the city of Brussels would be the first to adopt his methodology in its regular classes. A collaborator at the Institute of Sociology, professor at the Faculty of Advanced Studies, at the teacher-training colleges and at the Free University of Brussels, Decroly also was to be found everywhere that suffering children needed him. He founded, co-founded or was a driving force behind the Orphans' Home, the Vocational Guidance Office, the Brabant Farm School, the Fund for the Gifted of the working-class schools and the Medical Inspection Service for Juvenile Delinquents. The responsibilities that he assumed and allotted to educators went far beyond the classroom walls. In *Médico-pédagogie* (1904*a*) he contemplated the concerted action of physicians, psychologists, teachers and social workers, all taking part in an effective system of psychological–medical–social-educational orientation.

These multiple activities were accompanied by a very rich scientific output. Decroly's bibliography, as sole author or with various co-authors, includes more than 400 titles. If we count, in addition to these functions, his many trips to England, Spain, the United States and Latin America, we can understand that his students, friends and collaborators remember him as an incredibly active man, but prematurely overcome by fatigue. He died in 1932 at the age of 61, on a pathway in the Institute's garden, near to the little 'awkward' children whom he had never left.

Few works give such a compelling image of the link between theory and practice. His concepts always stemmed from realities, for which Decroly had 'a deep, healthy and vigorous respect' (*Actes du Congrès Decroly*). His theorizing, always provisional and calling for new experimentation, is marked by the greatest prudence. None the less, there emerge from his psychological works four essential elements for understanding the way children's minds work, and therefore for education. These were the psychogenetic methods, the function of globalization, interest and expression.

## The studies of psychogenesis

In choosing to observe children's spontaneous reactions without any preconceived psychometric apparatus, Decroly imposed difficult observational constraints. Even though it was he who introduced into Belgium the Binet–Simon testing method, then at the forefront of the young science of child psychology, he always refused to let it play a determining role: 'The test is one form, and not the only form, of testing a person. It does not obviate the need for observation, it supplements observation and is supplemented by it; it is illuminated by observation and, in many cases, must defer to it. Examination by test is the psychographic minimum . . . useful as a first approximation' (manuscript note, undated). Too limited, anonymous, often administered collectively, carried out in artificial conditions, tests, sample surveys and psychological consultation provide only partial information. Decroly always preferred long-term individual biographies, following step by step the 'psychogenetic' evolution, first conducted by Darwin ('Biographical Sketch of an Infant', 1877).

He began his 'Études de psychogenèse' by observing his oldest daughter, whose cradle, as one of Decroly's collaborators, Julia Degand, discovered in amazement 'was covered with balls of all colours, a bell and a little doll, all of which could swing back and forth, [because the father] wanted to observe how his baby's sensations developed'. She herself was assigned the systematic observation of the couple's second daughter, from her birth (in 1905) up to the age of 6. Decroly had developed a triple technique of observation: a detailed daily journal, numerous photographs and films, the oldest of them dating from 1906, and being doubtless the first psychological films (shortly before those of Gesell). Decroly's filming (which included some fifty titles) was a response to a necessity of the experimental method, since it ensured the reproducibility of observations or experiments by eliminating 'the personal equation of the observer'.

This continuous and long-term observation of a single child in its own natural setting gave due respect to growth and brought out the different components of the total personality, but it required numerous cross-checks. Decroly's 'Études de psychogenèse' were carried out over twenty-five years from 'little S . . .' to Nanette, the adopted child who comforted the last three years of his life. The studies analysed the evolution of notions of colour, quantity, time, age, the origin of life, values, competition and drawing. One remarkable chapter is devoted to questions asked by children up to the age of 6.

The great difficulty of psychogenesis lies in passing from the particular to the general, from the singular to the norm. Decroly therefore systematically compared his observations with those of Stern, Dearborn, Preyer, Shinn, Baldwin and others. Their convergence allowed the establishment of the constant factors in development. But individualized observation also demonstrated the specific nature of each personality, which presents itself as an indivisible whole, inescapably linking body and mind ('psycho-somatic'), the sensory and the perceptual, the affective and the intellectual. 'It is the totality of the individual who at once perceives, thinks and acts' (1927).

The complexity of the life of the mind increasingly turned Decroly towards differential psychology. 'The combinations of mental effects are really so numerous that there are very few clearly defined types and a multitude of intermediate types' (1922). This observation puts an end to the notion of averages and thus of the average child, the 'statistical' child, which governs the educational establishment. Similarly, it means that psychological and technical vocational guidance testing cannot make use of any simple rules of thumb.

## The function of globalization

Psychogenesis has demonstrated a fact that is particularly important for early learning—the child is neither a short adult nor a blank sheet of paper. Children are, quite simply, 'different'. Decroly conducted many studies of the development of mental functions from before birth to the age of 15 or 16. These studies, too long to describe here, essentially bring out the notion of synergy between individuals and their surroundings, the innate and the acquired, phylogeny and ontogeny. Children are born with an 'immense reserve of nervous equipment', whose structures alone are hereditary while their stimulation by the child's surroundings ensures their functioning. Activity is therefore the key to growth, and education can either lead this activity in a favourable direction or hold it back or direct it perversely.

Through ignorance of the way children's minds work, the adult often misunderstands the powerful 'epistemophilic' energy that children manifest through play, experimentation and imitation. They also misunderstand the strength of the first representations that children make spontaneously for themselves in response to contact with the outside world. They are really global, not subject to analysis, and they meld into a single unit the properties of the object and the reactions of the children themselves. In a drawing or a story, for example, these 'wholes' are demonstrated either in undifferentiated groups or on the basis of a single dominant element that calls forth an indivisible whole.

These global outlines are functional; i.e. they serve the children's personal activity. They satisfy the children's need to identify data from the environment (their own bodies, their mothers), to appropriate them and to master them (play, opposition), to produce them (drawing, building), to transform them (dream, fantasy) and to summon them up mentally. The more the surroundings stimulate activity, the more these representations develop the children's motor, sensory, perceptual, affective, intellectual and expressive capacities, endowing them with intimate experiences which will be the basis of all their future learning. Globalization dominates thought until the age of 6 or 7. Children progressively attempt to discover the relevant elements that will determine their access to analytic thought.

Finally, to clarify a terminological point, Decroly explicitly preferred the term 'globalization' to 'schematization', 'syncretism' or 'Gestalt'. It alone expresses the massive density of the phenomenon, in which analysis is introduced very partially at first, and with more and more precision after the age of 7 or 8. The result is that to begin instruction on the basis of successively acquiring isolated bits of information necessarily runs into a vacuum when dealing with a thought process that functions in a different manner.

## Interest

The analysis of this apparently simple notion considerably broadens the field of psychological investigation, well beyond the domains of intelligence and reasoning studied by classical psychology. In *Séméiologie psychologique de l'affectivité et particulièrement de l'affectivité enfantine*, which he published with G. Vermeylen in 1920, Decroly undertook the study of 'tendencies' (a term that is close to 'drives'), from rudimentary tropisms (food, reproduction, protection, defence) to developed manifestations of sensibility. Even the reactions of an amoeba demonstrate the existence of a 'self' that responds to the onslaught of its environment by sensory-motor reactions and assures the survival of each individual by the satisfaction of its needs. These instinctive drives are evidence not only of an 'effort' at identity in relation to the environment, but also of an effort of adaptation. In *Quelques notions sur l'évolution affective chez l'enfant* (1927), Decroly, like many of his contemporaries, reflected on the nature of intelligence. He tended to assimilate to 'a higher instinct' which 'associates its activity to that of instincts and can thereby modify their spontaneous manifestations to such a degree that they are transformed to the point of losing their original appearance. What has been termed sublimation or the intellectualization of instincts is in fact only the

result of that action.' Such sublimation generates 'higher sentiments' and, in man, attains the level of emotions and moral, aesthetic and sentimental values. The association of tendencies and cognition transcends both intelligence and affectivity. It stems from thought that is a powerful mix of logic and contradiction, science and creation, reproduction and invention.

It is important therefore to combine the classic quantitative and statistical intelligence tests with projective personality tests of a qualitative nature. Examination cannot be reduced to the measurement of intelligence quotients alone nor, furthermore, can it overlook the cultural factors that instil 'habits' or 'acquired instincts' in every environment. In 1922, Decroly therefore designed a *Questionnaire Relating to Children's Affective Reactions in the Environment Where They Habitually Live.*

A child's numerous observable tendencies define his personality, stemming initially from a natural egocentrism which creates a single fused object from his own being and the world around him. Extremely dependent on those around him for the satisfaction of his various needs, he is often in a state of want, which he expresses by the violent affirmation of his ego, but also of his pleasure when he obtains satisfaction. His growth ensures him progressive autonomy. If he is hungry or frightened, he seeks nourishment or flight. This adaptive behaviour suppresses the temporary disequilibrium created by the state of need, but the excitation that he aroused has put his nervous system under stress and creates a state 'of attention or pre-attention', which leads progressively to astonishment and then to reflection. The energy directed at suppressing the need is transformed into interest. 'We will call *interest* the internal sign, common to all the needs and feelings that a person has (*desire* being the conscious form of this phenomenon), while *curiosity* is the external sign, particularly apparent to an outside observer, an external sign which can be either conscious or unconscious.'

A pedagogy of interest therefore potentiates children's basic motivations better than a pedagogy of reproduction, while it also frees their creativity. But tendencies also play a fundamental role in relations with other people and explain the sociological make-up of the groups of children, their characterological roles and their relations with adults. Overvaluation of intelligence to the detriment of the affective compromises the harmonious development of the child's personality. In a deliberately rounded education, it is essential that the organization of educational time should take account of this.

## Expression

It has long been known that the variety of levels of language in different milieux is a major obstacle to achieving a unified education. Unfortunately for the children of the working class, small farmers and foreigners, educational standards are a strict reflection of the customs of the petty or middle bourgeois classes, for which the use of the established code confers a degree of sociocultural prestige. Decroly's contacts with 'children with speech problems' very soon oriented him first towards sociolinguistic and then to psycholinguistic research, which led him to argue against the imperialism of language in educational programmes. 'Decroly's great merit was to have demonstrated the unity of source among all methods of expression,' wrote Henri Wallon (*Actes du Congrès Décroly*). He very soon advanced an extremely broad definition of language, considered as a system of signs 'at once physical, physiological and mental, . . . individual and social', as expressed by Ferdinand de Saussure. To avoid any misunderstanding, Decroly even replaced the term 'language', too often limited to spoken words, by 'expression', which includes the individual's exteriorization on the one hand, and on the other hand the interior formulation by which everyone takes in any outside contributions.

Expression mobilizes the body (gesture, movement, mimicry, dance), the hand (experimentation, drawing, building), the spoken word (calling out, singing, talking), the written word (reading, writing, codes) and art (painting, music, poetry, theatre). The distribution in daily life of these different modes of expression proves the importance and the value of non-verbal

manifestations, which are generally overlooked or even sacrificed by schools and by most tests, which call upon articulated language or conventional codes:

> The aptitudes that most impress people in gifted children are often precocity of speech, the tendency to read early and alone and to compose tales and stories. Of course, these things augur well for adaptation to academic work and are in line with the results of the usual tests, which is to be expected since their standardization was established taking account of children's progress in school. But this is erroneous, confusing intelligence and language. This error comes to us from Greek philosophy and has served as the basis for nominalism. (*Anthologie de textes extraits de manuscrits inédits . . .*)

Certainly words are a useful tool; however, every culture that so limits itself inevitably sinks into verbalism and reanalysis of texts. It is the *savoir-faire* of a skilled people that ensures the evolution of technology. In such fields, intelligent activity implies processes that are independent of words and are freely attributed to practical knowledge. In his vocational guidance service, Decroly devoted several very detailed monographs to the specific qualities required in order to be a carpenter, bookbinder, draughtsman, etc., but, of most importance, he also developed three completely original tests, 'puzzle boxes' of increasing difficulty, whose silent manipulation demonstrated the existence of non-verbal reasoning. These tests were aimed at avoiding errors in the guidance of gifted young people, held back by their own weakness in expression or that of their environment. They proved the existence of complex deductive and inductive reasoning, based on 'perception, intuition, observation, memory, imagination, comparison, analysis, abstraction, generalization and synthesis' (ibid.). These 'Decroly boxes' were used in Belgian career guidance centres until 1950, and were then given up because the individual examinations took up a great deal of time and because the standardization had to be revised.

'Practical non-verbal auto-intelligence' plays a continuous part in the activities of daily life and in 'problem-solving' in many work activities. It combines operational thinking with such valuable qualities as dexterity, co-ordination of movement and rational exploitation of physical resources. Technical skill brings into play an inventiveness that 'provides the appropriate solution'.

Decroly's concept of expression is important for its social and educational consequences. The traditional school, like an upside-down pyramid, favours from the start a very special type of child—the little future intellectual, whose verbal qualities it develops to excess. On the other hand, it devalues concrete expression by considering manual work, gymnastics, drawing and play as subordinate and of negligible importance. It thus reproduces social prejudices that look down on 'low-class work'. Decroly warned against the danger of compulsory education that would discredit technical and vocational training and even social and artistic education. The overvaluing of 'white-collar' status carries with it the danger of leading to serious disequilibrium in economic life if the choice of manual work becomes the penalty for failure in school.

Recognition of the great value of practical expression makes it a necessity, on the contrary, to develop to the full in all children the education of their bodies, senses and manual skills, in contact with things and not just books, in the turbulence of a living environment and not just in the deadly silence of the classroom. Ease in all forms of expression promotes lifelong personal equilibrium for the scholar as well as the practical worker.

## From psychology to education

The links between 'pure' and applied science are often unclear. They imply, tacitly or not, a hierarchical relation in which each of the two disciplines claims dominance over the other. Was Decroly a victim of this conflict? Jean Château opportunely states in *La psychologie de l'enfant en langue française* (Toulouse, Privat, 1979) that 'Wallon remarked, from 1948 on, about the contrast between the fame of Decroly's educational work and the relative neglect that has befallen his psychological work. To be overshadowed by oneself is not given to everyone. It seems that Decroly the educator has eclipsed Decroly the psychologist.'

The interaction of theory and practice has its dangers for theory, especially if practice is applied to objects in flux. In the reality of education, actors, situations and goals are continuously undergoing modification. In imposing on himself the faithful translation of psychological observation into educational action, Decroly exposed his research to the immediate concrete application of its results. He committed himself thereby to a pragmatism that exercises a considerable effect in the human sciences to this day. Jean Château points out that Decroly even made the effort of translating *How We Think* by John Dewey, who, like Decroly, put speculative reflection to the decisive test of action.

The concern for adapting any educational action to the mentality of every child at every age accounts for the exceptional imagination shown in matters of method by Decroly, whose boldness made him beyond doubt the most fertile innovator and practitioner in the entire history of education. He never hesitated to abolish completely anything that offended against the natural evolution of thought, nor to explore totally new avenues. He said:

> Those who seek to limit the mental work of primary school to acquiring techniques and to the systematic study of grammatical rules and arithmetical theory, on the pretext that they went through this same regime themselves with no harm and then became knowledgeable specialists in certain fields, are the unconscious executioners of children's intelligence and prove that they are totally ignorant of laws that are more important than those of grammar and arithmetic, namely the rules of child psychology which, in fact, dominate the others. Furthermore, none of their arguments can prevail against the patent facts which can be seen every day if you make population the effort to observe what goes on in primary school, namely the failure, the virtually absolute fiasco of formal procedures for more than 75 per cent of the school population (1929*b*).

On the contrary, one has to find the best ways of reducing the malaise and suffering of the children who are worst off, of ensuring their progress, of leading them towards the maximum autonomy that they are capable of. Decroly sought new approaches wherever children displayed the tragic spectacle of abandonment, poverty and exploitation: 'No downgraded children, no backward children' (1904*b*). The pressing nature of the teacher's duties made it necessary to apply the experimental approach, following the methods tested in science.

## An evolutionary approach to teaching

However, experimentation in education gave rise to heated controversies at the beginning of the century. Although work in the field sometimes suggested original solutions, such as mutual teaching or educational co-operation, teachers generally limited themselves to applying the official directives that the growing power of the state inevitably depersonalized. Furthermore, the curricula and textbooks laid down qualification standards suitable for the recruitment of administrative officers in the civil service, from clerks to the top graduates of the élite universities. Competitions and examinations sorted the candidates out. The sole aim of these methods was to prepare people more effectively for the tests. They could not be other than normative.

On the other hand, active education assigned the school the far more complex task of ensuring the personal development of all children, based on the contribution of the new sciences. These methods could no longer emanate from an authority, even one that was well informed and kindly. Decroly put them forward now as hypotheses and submitted them to experimentation, as he explained in 1907 in *La pédagogie évolutionniste*:

> Do you really think, they say, that you can test the value of a method in the same way as you might test the strength of steel, the sugar content of beet or the action of a drug on rabbits! It is impossible. Certainly children are not experimental objects, but meanwhile, they are exposed to inexperience . . . What is there to prevent the establishment of pedagogical—or pedotechnical—laboratories? Children will not suffer any more than they do now from the absolutely irrational regime that they are subjected to. (1907*a*)

These 'pedagogical laboratories' would operate in the schools themselves, and not in university

institutes remote from the life of the schools. In this way, the experimental classes would more directly shake up the immobilism of the schools, 'kept on the fringes by insufficiently tested programmes with methods that have not been subject to any serious criticism'. Any tendency towards dogmatism must be exposed:

> Froebel and Pestalozzi have said this; Herbart and Comenius have said that; but arguments based on authority are no longer sufficient in science, not even in veterinary science; they can no longer suffice in education, which should also claim to be a science. And they cannot suffice precisely because the views of Froebel and Pestalozzi are the opposite of those of Herbart and Comenius, because arguments based on authority are contradictory, while those that are gained through rigorous and mathematical observation must be in agreement.

The universities would be responsible for providing the fundamental contributions offered by the basic sciences—biology, psychology, sociology—all of which nurture 'pedology', or the science of children according to the definition advanced by Chrisman; applied science, 'pedotechnology' (a neologism of Decroly's) would carry out experimentation in the laboratory classes. Methods that proved to be successful should be integrated into a homogeneous and coherent educational concept, or 'method', before being applied in the regular classrooms, while those techniques that actual usage showed to be invalid should be regularly sent back to the researcher.

This clarification of vocabulary demonstrates the importance that Decroly attached to educational techniques. 'What has been called the Decroly method does not really possess the usual characteristics of a method . . . it protects itself from becoming rigid and perfect . . . (Elsinore Congress, 1929).

Such a flexible concept demonstrates that even if evolution and current events lead, in the interests of the children, to the introduction of variable elements, education can also rely on many constants. This applies to the most powerful unifying concept in Decroly's approach to education, that of 'life'.

## The role of the school in life

This key word covers such a broad expanse that it would be dangerous to reduce it to the slogan of unknown source, 'For Life, Through Life', which is often used to define Decrolian education. We must take the polysemy literally.

In an initial sense, the life of a man or a woman is the share of happiness and self-realization that is in store for every individual or, on the contrary, his or her existential distress. By 1904, Decroly had already gained enough experience to be able to denounce the lack of concern of an education system that destroyed the future of many of those who were entrusted to it. 'Schools not only prepare only a very few of their children for life, but for many children they even constitute an obstacle to their normal development, making them lose precious time.'

The first objective that must be assigned to the schools is to ensure that every individual has opportunities for success in the life that awaits them—a person's own life as man or woman, father or mother, citizen and worker. Schools have progressively reduced individual opportunities for advancement. 'A system that classifies people at the age of 20 according to the certificates they have obtained . . . becomes dangerous, because it drives all young people to the pursuit of useless diplomas and distorts ideas on the role of education . . . The strongest succeed despite everything, but so many are destroyed there or are warped for their entire lives.'

In a second sense, it must be remembered that the child is a living creature, in the biological sense of the term; he has a body, senses, physical and affective needs. Before becoming a thinker leaning over his book and his pencil, he is a being, in the fullness of his growth, whose motor development requires intense practical activity. Decroly, writing with the verve that lent him indignation, accused the educational establishment: 'Schools impose silence and immobility on people who must learn to act and express themselves; after physical sluggishness, they achieve mental torpor' (1909). The reason is that education has been put in the hands of adults whose very specialized training has given them sedentary habits that they confuse with favourable conditions for

educational development. ‘We are too intellectual, too contemplative . . . We forget that there was a time when mental work was not so easy for us . . . and we had to go though a series of stages to adapt ourselves to purely cerebral work.’ Movement is the external form of action, which is the key to technological and cultural skills. Spontaneously, children ‘love movement, but still do not know that they are acting; nature has provided them with the possibility of acting before the brain is capable of intervening to control this activity’. The role of education thereby appears particularly clear. ‘We must always endeavour to intersperse control by the brain between external excitation and action, but action should continually accompany mental work as a control and stimulus.’

The reason is that education does not see that ‘even discipline has everything to gain in permitting the child’s energies to be expended during classes’. It believes it must reward ‘the good students [who] have brains like the stomachs of those who, it is said, can digest everything, even rocks’, because they combine ‘facil ity of expression, good verbal memory, and the approved dose of apathy and docility . . . The rest rebel—they are the undisciplined ones, whose lack of discipline may really be simply a sign of superior intellectual health; but most of them just tag along far behind.’

This call for indiscipline leads to a higher discipline. Life finds its fullest definition in the functional synergy of all of a being’s activities. Children will become aware of the total and simultaneous development of their entire being. They will explore the reactions of their bodies and senses, and sort out later the affective and intellectual factors that define their personality. Children will learn ‘how they are made, how their organs function and what they are used for; how they eat, breathe, sleep, work, play; how their senses act and how they serve them; how their members move, particularly their hands, and what services they provide them; why they are hungry, thirsty or sleepy, why they are frightened or angry’ (1921).

In a third and almost ecological sense, life is constructed by dealings with the environment. A clear-cut motor and sensory education ensures informally the exploration of the close surroundings in which the children’s life takes place (their home, the neighbourhood, the school, etc.). It progressively opens up space for them (nature, city, factory, market, offices, museums, institutions, etc.). It hardens them by physical education, manual work, and handling workmen’s tools (hammer, saw, plane, spade, and rake). Why then have schools chosen the ‘bureaucrat’s table’ to deck children out with ‘a civil servant’s culture’, in which ‘general culture is diminished everywhere in favour of intellectual culture alone?’

The death-provoking atmosphere of the traditional school must vanish. The lines of benches, the rostrum, the rows, the blackboard, the schoolyard are not suited to discharges and exchanges of energy. ‘I saw, little by little, that the classroom is a last resort, and that the natural environment, as constituted by a farm, fields, meadows, animals to raise, plants to harvest, represented the real intuitive material capable of awakening and stimulating the forces hidden within the child’ (1921). The child and the teacher would from then on work on first-hand data, collected in real-life situations or from ‘real’ books. Decroly abolished the pallid imitations of the real offered by stuffed animals, anthologies, herbariums, manuals, and also did away with the arrogant architecture of schools which shuts children up in its fenced-in monastic universe, in its high walls with inaccessible windows, its covered playgrounds and its yards. The school, its doors wide open, would collect materials for observation, bringing them in from outside; the workshop-classroom would replace the auditorium.

However, Decroly did not propose having the children live in a pastoral setting. Society is composed of several interdependent milieux, and one of the goals of education is to prevent their compartmentalization. The first educational experience is most fully achieved in nature, which awakens the child’s curiosity by its enormous variety; it’s seasonal rhythms and its poetry too. The little country child is much better off in this respect than the city child, who is overprotected or underprotected, and who can hardly understand the complex mechanisms or the institutions that surround him. Nature undergoes more visibly the transformations that man imposes on it. This immense effort of appropriation reveals itself in farms, craftsmen’s workshops and markets. At the same time, the destruction of essential equilibria will lead the child, a willing predator, to reflect about his own exuberance! He will then come on to industry, in its technical, economic and human aspects;

public life in the various administrative, legal and political agencies; and culture, in museums, monuments, entertainments and libraries. If education could, in addition, organize the participation of young people in various adult occupations, 'the number of classroom hours devoted to teaching, strictly speaking, could be much reduced' (1929*a*).

This education in life brings out a fourth meaning of the word that Decroly was particularly attached to: membership of the chain of living things. This education, associating the stages of growth to more and more complex environments, from nature to big modern cities, plunges children into the flow of life and into the very evolution of their species. Decroly saw a great educational advantage in satisfying children's successive attraction, first for gathering and hunting, then for handicrafts, mechanical activities and construction, etc., then for experimentation, and finally for institutional games (courts, business, etc.) and creative activities (poetry, stories, graphic arts, etc.). Although Decroly never really believed in the theory of recapitulation (supported by G. Stanley Hall), he advanced an educational process in which ontogeny in abbreviated form recapitulated phylogeny. It showed great interest in respecting the characteristics of children's play at different ages and in bringing them into teaching activities, introducing them to the phases of civilization that preceded them.

He thus came to one final meaning of the word life, arising from the political and social role that everyone can either submit to passively or take on voluntarily: 'the best adapted are those among whom mutual aid is the best organized' (*Anthologie de textes extraits de manuscrits inédits* . . .). In other words the struggle for life imposes solidarity.

> We live in society, our weakness necessitates it, and our diverse needs, which are a consequence of civilization, require it also. Are we aware enough of this law, do we understand sufficiently what we must be for our fellow men, do we sufficiently perceive the fact that our lives and those of others are closely and constantly intertwined? (1904*b*).

Educating a citizen, such a long and difficult process, evolves from egocentrism to individualism, and then to collective discipline. One of the best justifications for schooling is to ensure a community life that 'planes down egoistic tendencies . . .; we learn more about living than about reading'. This learning of social life is a matter of the children's initiatives. Their order will not stem from an order imposed on them, nor their freedom from a freedom bestowed on them. They will need time to adapt to otherness and to the community; taking effective charge of responsibilities will give rise only slowly to co-operation. Everyone must have his or her own experiences of joint and individual management. Paradoxically, autonomy does not spring from non-directivity, but from the consciousness of the rights and obligations of an active member of society. School so conceived is a political microcosm, undergoing problems, crises and conflicts that are overcome, as successfully as possible, through the active co-operation of all the partners.

The attribution of individual and collective responsibilities is a matter of practical ethics for which a substantial place should be reserved in the timetable. It should be based on the election of different delegates, the rotation of responsibilities, the rendering of accounts, etc. Real powers for the management of the school should be devolved to students. The political option that this education of the citizen implies is clear: 'Democratic government must be considered as the most appropriate form of state for encouraging evolution and adaptation to progress' (*Anthologie de textes extraits de manuscrits inédits* . . .). This, therefore, is what governs the life of a Decrolian community.

## From play to work

Decroly was not content to 'affirm the superiority of education over instruction [like those] who, disdaining the elementary techniques of human knowledge, the keys to all the educational programmes required by our state of civilization, concern themselves above all with creating a person, but are not afraid to leave him illiterate' (1929*b*). In the final analysis, education is based on the act of learning, even, and most importantly, if it is a question of learning to live, as the child well knows: they go to the pool to swim, to the school to know more.

Several months of daily battles to demonstrate that 'awkward' children could be educated soon convinced the little team at the Institute (three women teachers) of the ineffectiveness of even the most modern methods in reading, writing and arithmetic. They would have to give up the eternal illusion that besets innovators: an atmosphere of confidence and affection is not enough to ensure learning automatically. The children remembered nothing, even with the incentive of special sentences written in chocolate.

But they did play, and of course their play was observed with scientific earnestness. Certainly, like all children, they handled dolls, played games of skill and group games, but above all, they invented. The Institute's gardens and sheds were a favourable terrain for countless activities—making paths, concealing hiding places, digging out tadpole ponds and building huts. Despite their clumsiness, the children displayed energy, perseverance and will that credit nothing to adult help.

Affective psychology identifies in children's imitation and play factors essential for maturation, that Decroly included among the 'anticipatory instincts', preparatory to an initial form of intellectualization. 'What must be emphasized in regard to play is its role as preparation for serious activities; it makes the transition between instinctive activity, in the restricted sense, and work . . . in occupations whose goals are increasingly conscious, increasingly remote and indirect . . . [Between play and work] there is a continuous range of activities, going from the most agreeable to the least' (1927). When they asked for rabbits, they entered quite naturally into the workings of the first of Decroly's 'educational games". They were helped to discover by observation the best location, to plan, measure out and build a hutch, to read up on the breeds that could be raised and their feeding and protection, to write to wood merchants, veterinarians and breeders. An interest more powerful than chocolate had brought about a concentration that encouraged them to learn the first rudiments.

'Educational play' stemmed from these considerations (1914); from blind man's buff to little

shops, from puzzles to logical games, this exercise was illuminated by the charm and the pleasure that children derived from play activities. With enthusiastic help from the children, Decroly and his team built dozens of games out of wood or cardboard, with simplicity infused with poetry. The sets of games were carefully graded and 'related to the development of sensory perceptions, attention and motor aptitudes—visual, visual motor and auditory motor acuity, etc.—and to introducing arithmetic, perceiving time, reading, grammar and understanding language'. These first psychological–educational games were marketed and their success is well known.

## Projects and work plans

Deferred interest is, therefore, the very foundation of the desire to learn. It gives the child power to accept the difficulty that will result in satisfaction. Unfortunately, 'schoolwork as now organized does not meet this condition and is more like forced labour, as Claparède has pointed out, that is, an occupation that offers nothing of interest either in itself or in the goals that it pursues' (1927). Teaching has long been satisfied with curricula and textbooks, which were sufficient for the training of some few well-read people. In the nineteenth century, teaching methods were added on, and these followed each other at a faster and faster pace in the twentieth century. Divided into years and different branches of instruction, weighed down by the acceleration of knowledge, the subject matter became more and more encyclopedic. Schools tied themselves into knots in the vain attempt to provide all knowledge.

Active methods have had their supporters for centuries, without ever being able to solve the dilemma between being full of knowledge (supposedly learned), or being well balanced (supposedly effective). However, a choice is necessary, and Decroly did not hesitate:

> I can say that teachers are themselves simply subject to the same faulty regime which they apply, often despite themselves, and from which they are the first to suffer . . . Sincerely, I say that if our system is mediocre and even bad, it is not the teachers' fault—it is all the fault of the curriculum. And I am not even hostile to the authors of these curricula, because they were the unconscious and therefore excusable agents of an inescapable force: tradition, which came down to them with the weight of three hundred, and even of two thousand years. (1904*b*)

He therefore liberated the little team at the Institute, and later at the Ermitage, from the fear of subject matter, timetables, deadlines and textbooks. 'What is necessary is the active participation of the students in their own education' (1929). From then on, they would freely choose what subjects to study. Adults would only show them practically useful, technical operations, according to their stages of development. Curriculum planning was thus transferred to the children themselves. Each one of them suggested the subjects he wanted to deal with and all the proposals were negotiated by the whole group, which then put together a group project (work plan), for a shorter or longer term (from a few days for the youngest children to one year for the oldest ones). A large double entry chart gave the implementation schedule. The subjects to be dealt with were entered on the abscissa, and the methods of carrying out the tasks, on the ordinate (research, excursions, talks, team tasks, etc.). The necessary introductory training was also included there, as well as the exercises vital for acquiring and stabilizing this knowledge. Freedom of choice was a stimulant to schoolwork. Even if they were difficult, learning and exercises took their meaning from their immediate utilization. They were conceived as indispensable tools in the search for solutions; used repeatedly, they progressively enriched the mental tool-kit.

Contrary to common belief, the students' interests in fact confirmed the essential points of the official curricula. The children, immersed in the same culture as the authors of the programmes, lived in the same setting, posed the same problems and sought the same information. But the work plans did not have to be subordinate to an order that was remote from the students' immediate preoccupations, nor to a division into study categories that denied the interdisciplinary complexity of most issues. Furthermore, the study was synchronous with the interest or the current event that led to it.

The relationship with the teacher was also profoundly modified—there was no longer a *deus ex machina*, no longer a keeper of the keys disclosing day-by-day topics from a subject that he alone had mastered. The active verb 'prepare' replaced the passive 'review'. Not only did the students acquire a mental tool-kit of ideas and techniques, but they also had access to more practical tools. They used the same information as the teachers, and added their own, which was always personal and capable of enriching the dialogue. The considered use of different sources was more important than a definitive assimilation of a specified topic. It favoured an open and critical conception of knowledge that would last far beyond the school years.

This conception of work is both more demanding and more fun for the adult. He sees his knowledge develop at the pace of scientific development itself, and he often exchanges his rostrum for the approach of the researcher, as part of a team that is all the more unified because the subjects advanced by the students often require, in both primary and secondary schools, the collaboration of different specialists. The teacher must know equally well how to identify an odd-looking pebble and how to arrange a visit to an ultramodern factory or make a dynamometer—and above all, he must be able to show the children that there is no such thing as omniscience!

## From interest to centre of interest

The collective work plan nevertheless poses the particularly difficult problem of socialization of interests: 'If, like Jean-Jacques Rousseau, there were only one Émile to be in charge of, it would be rather interesting to follow how curiosity developed in the child's mind as each element made its appearance' (*Anthologie de textes extraits de manuscrits inédits*. . .). But complete individualization is impossible: 'as soon as a number of children are brought together, the problem of each one's individual interest becomes difficult to resolve if one of them wants to write while others prefer to take a walk, do gymnastics or saw a piece of wood!' The technique of the collective work plan responds in part to this question, since it is based on negotiation and the search for consensus, but the basic question of its coherence still remains.

> Then I asked myself . . . what was important for a child, for all the children of Belgium, Europe and the whole world to have to know. Then I asked myself what kind of knowledge is most interesting to a child . . . Well! I became aware that the most important thing that children should know is, first of all, themselves. . . . Everything moves towards the child, everything radiates out from him . . . In this way I take into account the essential affective element, the child's interest, which is, by far, the best lever. (1921)

The stimuli next come from the close environment and it is about this environment that new questions are asked. They are 'raised by phenomena that occur and objects that appear' (1921). In this way, children perceive the links between themselves and the objects that populate their natural environment (animals, plants, and minerals), and their social environment (family, school, town, and society). The comparison quickly allows them to identify the vital needs whose pressures they, too, have to face when they feel hunger, cold, fear or the desire to act. The discovery of the world, which each child starts afresh, is organized in accordance with the universal constants of food, shelter, struggle and activity. These 'pivotal ideas' are all the more inescapable because they match up with the great constraints of biological survival, both at the scale of the humblest animal and at that of the proudest cities.

These needs, biological, psychological and social, expand progressively from the specific events that the child experiences to the general laws of life. If the individual ensures his survival by food, protection, defence and work, the species does it by reproduction, adaptation, selection and innate or acquired behaviour. In the case of the human species, work has also given rise to cultural accumulation thanks to the growing mastery of nature, the making of tools (including language), and aptitude for creative innovation.

This information soon forms such a large body of knowledge that the collection of data is no longer occasional. The 'pivotal idea' or 'centre of interest' leads to the creation of short- or long-

term projects (rearing animals, planting, hikes, etc.). From the ages of 8 or 9 to 14 or 15, work on each 'pivotal idea' is spread over the whole year, ensuring the gradual acquisition of knowledge. From this stage on the subjects lend themselves to treatment by 'associated ideas'. Any subject presents scientific, economic, geographic, historical, literary and legal aspects that require the introduction of techniques and ideas taken from different branches of knowledge, without ever losing sight of their linkages with each other.

Decroly's teaching method attains a unity that is really phenomenological, leading children to discover the laws that underlie appearances. Even after the age of 15 when the children have reached the stage of adult thought, they retain the habit of linking particular choices that they have decided upon to the larger wholes that give them their full meaning.

## From globalization to co-ordination

The globalism inherent in children's thought translates into education in this natural interaction of all aspects of a subject. In primary school, a single teacher can very easily ensure this co-ordination; in secondary school, the different specialist teachers must of necessity ensure it by dialogue and interdisciplinary approaches. Even the traditional names of the courses are dispensed with.

With the youngest children, the globalization of teaching follows quite naturally from life itself, without ever imposing on them so-called preschool activities. The child gives his whole self to his play, to his 'responsibilities' in the classroom, to field trips, to gardening, harvesting or gathering. No screen is interposed between him and the actual density of the objects or phenomena: 'one finds oneself not in the presence of a simple object, but of an already extremely dense whole, whose limits cannot be defined in isolation, because, in the child's perceptions, they are inevitably associated with that whole' (1929*a*).

The first intellectual processes are doubly integrated with 'the globalization function' by the fact that things are global and by the globalism that dominates the child's mental processes:

> His own being is there, wholly, each time that he receives a perceptual sensation from his ego, whether he is hungry or thirsty, tired or hurting, frightened or angry, seeking to play or go outside, jumping, eating, bathing, or going to bed, his whole being is there, not disconnected, in its entirety. The lessons he receives from himself are not serial, following preconceived rational stages. Nevertheless, he finds his way in this apparent disorder and comes to understand himself. His consciousness gradually builds itself. Countless ideas have penetrated the child's consciousness . . . with no prior conscious analysis, without deliberate disassociation. (1929*b*)

However, adults substitute, as placidly as can be, their arbitrary order for this chaos: 'They go from the parts to the whole, from the simple to the compound or the complex, a step which is, moreover, often assimilated to that of passing from the concrete to the abstract and from the particular to the general.' So, in adults' logic, surface is simpler than volume, a letter than a sentence, the point than the 'round'.

In contrast, what Decroly expected of education was that it would be able to graft the new acquisitions of learning on to personal experiences that were often very rich.

> A child, when he enters school, has developed senses. . . . A child has an observing mind; one only has to keep it alive. A child associates, abstracts, generalizes; one just has to give him the opportunity to associate with higher order elements, to let him abstract and generalize on broader and more numerous data. A child acts, creates, imagines, expresses himself; one just has to give him the materials and the opportunities and he continues to develop his active tendencies. (*Anthologie de textes extraits de manuscrits inédits . . .*)

*Observation*, *association*, *concrete expression*, *abstract expression*: these sum up the whole of the global method, in its full extent, that an unfortunately restrictive usage has limited to learning how to read and write. If Decroly took global representation as a point of departure, it was in order progressively to train children to develop more and more differentiated faculties. Examination of a 'surprise' in nursery school is a perfect illustration of this process. One of the children puts forward

an object hidden in a bag for the group seated in a circle to examine. Each child feels it, sniffs it, feels its weight, presses it and tries to describe the sensations he feels. This 'provoked' attention replaces the mechanical recording of information by active observation, transforming impression into perception, concept and language.

Concrete expression, conscious or not, immediately accompanies the effort of observation. Pleasure or repulsion, fear or desire is translated into movements or mimicry. Talking also takes place, and the adult introduces in a natural manner any new words that are necessary. Through experimentation, the object is submitted to hypotheses followed by systematic exploration of them. They measure it, weigh it, and judge its volume. The phase of concrete expression ends with drawings or other representations of any kind, and the abstract expression phase ends with the oral (never written!) acquisition of a very scientific vocabulary (edible, exotic, infusion, instrument, etc.).

But observation and expression do not operate in the present moment alone. The child spontaneously associates the present object with memories of earlier experiences or with anticipatory hypotheses. The activity of association comes into play here. It arises specifically from true abstraction, an operation carried out by the child himself, too often confused with abstraction in the scholarly sense of the term, which consists of using, advisedly, ready-made formal entities. Abstracting is something entirely different; children do it as soon as they distinguish the significant characteristics of a specific object that make it possible to describe it. They develop a logic for themselves, intuitive at first, which will progressively tend to become more rationalized without limiting itself, however, to formal models. The stage of symbols, words and ideas is reached by conscious analytical work on the practical data provided by observation and set by expression, which thus transforms perceptions into representations. From then on, concepts can be used to establish connections, relationships and systematizations.

In moving in this way from specimens to types, from the particular to the general, from element to structure and from the unitary to the serial, the child reproduces exactly the approach of experimental science. On the other hand, premature formalisms and operative displays of pure intelligence inevitably reproduce the old scholastic models. In limiting itself to cognitively oriented goals, education mutilates more than just invention, affectivity and creativity. It removes from intelligence itself the essential support of matter. Thought feeds on the interplay of the concrete and the abstract, each of them equally vital to the understanding of the real by giving it 'the opportunity to be as faithful to the truth as possible' (ibid.).

Decroly's methodology is thus a priori neither deductive nor inductive: it is intuitive and constructivist, leading each child to mobilize his personal internal resources in order to develop his own knowledge. He himself produces the tools that suit him best and that he will use all his life. In the classroom or at school, each group makes its own educational materials, using the resources of many workshops (workbenches, greenhouses, plots of land, animals, print shops, kitchens, laboratories, libraries, etc.). Child-workman, child-artisan, child-author, he is the master of his drawings, his notebook, his collections, his documents and his works. He acquires thereby an autonomy that will serve him throughout his education. The education he has received never favoured competitiveness or spectacular performance, but it did encourage self-education. Its advantages are modest but sure: an inclination for and a sense of research, responsibility in personal work, an early grasp of individual note-taking, ability to handle sketches and diagrams and the ability to find and make use of documentation. Continuous assessment obviously replaces examinations. It is based on a detailed appraisal of each child's effort and progress, without numerical grading, averages or ranking. Regular reports replace report cards. They describe the physical, social and intellectual development of each child. Thanks to the detailed comments about his activities, each child learns to know his strengths and weaknesses, and to focus on the fields that most fully develop his skills, desires and fields of choice. Although it may be intense, the effort demanded of him never exceeds his capacities. The direction that it gives to his life will gain from his clear-sightedness and from the confidence that he has acquired in his own abilities.

## Reversal of priorities

The logic of this global educational project inevitably leads to the reversal of the traditional order of subjects: 'We give a preponderant place in the timetable to activities that focus on culture in depth; that naturally leaves us less time for surface learning. . . . In today's schools, most of the time is devoted to studying reading, spelling and writing!' (1921).

Decroly thus made the school starting dates more flexible. Why did schooling have to begin on the fateful date of 1 September and at the official age of 5, 6 or 7 (depending on the country), without even taking account of a child's real age, since a child born on 1 January might be paired with another born on 31 December of the same year?

Furthermore, the difficulties inherent in learning these strictly formal techniques prevent children from understanding their usefulness, for a longer or shorter time, at the very moment when they should be acquiring a love for school. Finally, they condemn too many children to failure, particularly if they are not skilled in language. 'They are brought together in order to teach them, whether they like it or not, what, precisely? Hieroglyphics that we call numbers and other hieroglyphics that we call letters, that they have to handle hour after hour, whose shapes or sounds they must recognize and reproduce, without seeing any aim, any use, or, most important, any enjoyment in this work' (1904*b*).

Conversely, if there is 'a simple and genuine natural environment, in a lively setting . . . the observation of natural phenomena, animals, plants and various human activities affords an inexhaustible source [of data] that, even while the observations are being made, give rise to problems, the search for the way things work, and finding answers in mental or written form' (1932*b*).

The teacher thus has the task of rationally introducing, at the appropriate time, the techniques and ideas that are necessary for dealing with the matters that arise out of the children's spontaneous curiosity. Decroly called these tool-subjects (the sacrosanct trilogy reading/writing/arithmetic!) 'secondary', because he limited them to their specific function of instruments of knowledge, but they were not on that account negligible. He attached too much importance to tools to underestimate their usefulness. But he profoundly modified the traditional way in which these subjects were learned, so that children would become interested in mastering them once they had come to understand fully the services that arithmetic, reading and writing could render them.

## Measurement

The abundance of information collected on the ground, whether casually or not, very soon leads to *measurement*, a term that Decroly defines as 'the act of measuring', by which the child gets to the stage of quantifying phenomena.

> When first teaching arithmetic, an effort must be made to take advantage all the time of the role of comparison, that is, to stress the relationships between new objects that are present, and familiar, known objects, and to encourage the child to note the identity, resemblance or difference, and to do it in an ever more precise way. Comparison is then closely linked with exercises on continuous and discontinuous quantities, which lead on to numerical operations. But the goal, which must not be lost from sight, is not the acquisition of an operational process, an objective that is secondary though useful, but the developing of logical judgement assisted by measurement methods that permit more accurate results to be achieved. (1922)

To encourage these transitions from qualitative impressions to quantitative measurement, Decroly uses familiar terms linked to perceptions: 'a lot, a little, less, too much, enough, as much as, several, some, etc.' By successive approximations, children learn to verify, more and more successfully, portions of space and time. They stop their random enumeration using counting rhymes and start using numbers to express precise content. They arrive at a measurement of space by using natural

standards such as handspans, wingspans, people's heights or strides, agreed upon by the group. Following the first countings, which are simply enumerative, there come more complex operations, so that it is necessary to have recourse to different units of measure, for example three steps plus a stride. The properties of space are clarified by games, e.g. classification by length, width, increasing or decreasing angles; geometric figures are obtained by making diagrams of natural objects. Assessment of volumes and weights proceeds from experimentation; countless possibilities keep emerging, supported by the making of elementary measuring instruments.

The transition to conventional units of measurement again begins through comparison, as discovered at the market, the farm or the bakery; but they retain the habit, as craftsmen do, of using their bodies for rapid measurement.

The transition to operations comes from communal life. It is always necessary to be 'adding', 'subtracting', 'sharing' or 'distributing'. These operations remain mental as long as possible because too rapid an access to written arithmetic uselessly multiplies algorithms, and leads to forgetting the fundamental unity of each type of arithmetic (for example, division and fractions).

Measurement of time requires the same prudent and progressive familiarization with abstraction. It begins with calendars on which the group notes, day by day, the meteorological data and the successive daily, monthly and seasonal activities (at school and at home). The first measurements are based on the length of time experienced, without reference to the system of hours, and conventional measurements are introduced afterwards. The time perspective takes on even more depth as children are trained to distinguish between 'before', 'after', 'during', 'a long time', 'sometimes', etc., and to immerse themselves in the past of their family and their region.

Finally, practical mathematics activities are also based on values, whose general introduction is based on the refinement of comparative terms such as 'good', 'better', 'worse', 'the worst', 'big', 'medium', 'lower', 'higher', etc., which necessarily follow quite naturally in the phase of association of ideas. Awareness of costs arises out of the management of daily affairs, such as preparing an excursion, figuring out the cost of a picnic, comparing goods in a store, building, gardening and composing a school diary.

To the extent that mathematics is a universal tool more and more necessary for the basic approach to any science or technology, the pragmatism of this practical initiation will infuse all the education that follows, in which the solution of real problems will remain predominant, even if very abstract techniques and ideas require a detour via logic and symbolism that is far from any practical reality.

## Reading/writing

Decroly is often referred to (improperly!) as the inventor of the so-called 'global' method of reading and writing. It would be more correct to see him as the promoter of the 'functional method', but that still would not do justice to his radicalism in daring to subordinate graphic learning to sensory, motor, physical, scientific and artistic education. 'Learning to read . . . does not tell anyone what should be read, what books are useful and what are not, what books are beneficial and what are harmful' (J. E. Segers, *La psychologie de l'enfant normal et anormal d'après le Dr O. Decroly).*

Decroly therefore turned academic priorities upside down. Activities of observation, association and concrete expression largely dominated the timetable and were expressed much more in speech than in writing. The children spoke naturally, spontaneously and freely. The richness, colour and verve of familiar speech were a much more necessary educational achievement than a pedantic and often awkward purism.

The learning of reading and writing was carried out only with texts that were directly related to immediate practical experience, and always accompanied by figurative supporting material (drawings, models, various objects). The first reading 'books' were the exercise books, the texts that they printed, the notice boards that they put up or the messages that circulated in the group.

The 'ideo-visual' process of reading and writing, long tested by Decroly and his colleagues,

and often referred to as ‘global’ because it is necessarily based on sentences that are complete and have a clear meaning, comes under the heading of ‘intelligent reading’, which subordinates the written word to the idea and the code to information. It is based on silent reading and deliberately avoids spelling words out. Questions are asked about the meaning to check that texts have been understood and to stress the function assumed by each word. The graphic elements are examined right from the start, once again bringing observation and association into play. In using increasingly precise criteria, the children, rather than identifying sounds, identify the limits of each word, then of syllables, and then of graphemes. As soon as they have understood the functioning of the system, they are capable of reading or writing anything, by decomposing or recombining the graphic elements. For some children, a few weeks are enough, while others take much longer (a year and a half, two years or sometimes even more). Misunderstanding of the individual rhythms of maturing tragically comprises the educational future of children who only require time to arrive. There are many other activities, more substantial and more favourable for developing understanding, even for early readers. In fact, the majority master the rules of spelling and syntax quite easily (at any age!), thanks to auto-corrective reflexes, encouraged by constant use of the tools. Reference to dictionaries and grammars is made systematic from childhood on, and is allowed at any time, even and most of all during essay examinations, tests of textual analysis and even of spelling!

Although the ideo-visual process is based on silent reading, it does not at all inhibit the rereading aloud of passages that are already understood, with the expressive musical and theatrical tones of recitation. The exchanges of messages, conversation and the consultation of texts of topical interest also require use of speech. The search for documentation very soon introduces books, newspapers and correspondence, as soon as the child knows how to read. Deference to individual literary sensibilities maintains freedom of choice in reading matter and in individual compositions. Their variety enriches textual analysis and promotes ever more subtle reflection, imagination and sensitivity. Literary education is not limited to a single national heritage. Broadly comparative, it is open to ideas and literary works from the whole world.

School is first of all a centre of communication where a very considerable amount of dialogue takes place. From the very first days of the Ermitage, all the students took part regularly in collective dramatic productions, in displaying posters on the walls and in different kinds of meetings. The ‘School Newspaper’, established in 1909 by a group of children with no adult help, composed by them in their own print-shop, is a particularly good illustration of this social role. These activities, as aids for information or recreation, were not deliberately devised as educational and were not corrected as academic subjects would be except as was necessary for understanding.

## In-depth culture

It follows from the logic of Decroly’s plan that persistent difficulties should never compromise anyone’s academic future. The children overcome weaknesses at the cost of increased vigilance, sometimes even to the point of perfectionism, but thanks also to the abundant work they produce. They are above all rewarded by reinforcement of their positive qualities in other fields, thanks to a method of weighting that systematically rejects so-called exclusionary grading and does not accord preferential status to any subjects.

From the ages of 3 to 18, Decroly’s system obviously diversifies continuously. Globalization and then the interdisciplinary method in no way prevent increasing specialization in other subjects, according to the directions that are chosen. However, the natural rhythm of building up knowledge is never sacrificed to the impossible concern for exhaustiveness that characterizes traditional curricula. Furthermore, learning does not stop at 18, 20 or 25 years of age. All teaching, from primary to higher education, is putting in place stones to which further knowledge can be tied throughout the whole of a person’s life.

The role of comparison is broadened here to include the ability to transfer and extrapolate. In a leisurely and complete treatment of all aspects of a subject, the child creates a ‘tool-box’ for

himself. He will take from it what is needed to deal with new questions. Day after day, prospectuses, postcards and articles enrich his personal documentation. He knows where to find reference books, newspapers and magazines and useful addresses. He has all the more confidence in his own abilities for invention, discovery and personal work because there was no adult opposite him, gratified at having infused knowledge into the child. Because it is open to contemporary life, the school is given more to research than to the transmission of knowledge, and to the construction of science than to doctrine.

Decroly's era was particularly fertile in innovation in all fields. It was clear by then that all knowledge advances from the known only to integrate the unknown. A worthwhile culture had to be modern, but its very modernity cast a new light on the past 'by preparing [the child] to understand the great laws of life and nature, and putting within his reach the scientific and technical riches accumulated by preceding generations' (1921). In distinguishing between 'surface learning' and 'culture in depth', Decroly not only made technique subordinate to content but he also conceived of teaching as an 'introduction to the intellectual and moral heritage of humanity, which is like a summary of man's experience and can truly serve as a means of attaining general culture' (1921).

## Conclusion

Education still has a long way to go in order to deal with the emergencies that can hardly be said to differ much from those that Decroly faced—educational failure, children who suffer, a bookish culture, social condescension and the obsession with productivity. Has education stopped any of these occurring or being maintained? It is true that Decroly directly inspired many schools in South America, Florida, Spain, Paris and, of course, Belgium. Thousands of educators have visited and still visit the Ermitage, which also receives many trainees. The movement for the emancipation of school has not ceased. Freinet, Illich and Freire have taken over from Dewey, Montessori and Decroly. 'But introducing innovations in education and into the curriculum is no easy job! The mechanism that has been developed slowly over the centuries is complex and does not lend itself readily to major reconstruction. Most of those who live with and from the system thus consider it better not to meddle with it. In any case, they are not badly off inside it and do not notice the cracks that portend its forthcoming decline and collapse' (*Anthologie de textes extraits de manuscrits inédits . . .*).

By a sad paradox, the failure of his work, so bold yet so simple, is that it still seems to be ahead of its time!

### Note

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The dates in parentheses in the text refer to various books or articles chosen among the 400 titles in Decroly's bibliography. They are cited below in chronological order, whether Decroly was the sole author or one of the co-authors.


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### Summary bibliography

A great number of studies, in various languages, have been devoted to Decroly's work. We limit the list to the following

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A complete bibliography of works by and about Decroly can be obtained from the Centre d'études decrolyennes, 15 avenue Montana, B1180, Brussels (Belgium).