

5 Revisiting young Jean Piaget in Neuchâtel among his partners in learning¹

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Science cannot impose its premisses to value judgments. The premisses of value judgments arise from a direct awareness and cannot be demonstrated. If I start from the following assumption: 'I want to live and what helps me living is good for me,' this value judgment is immediate and cannot be countered by any man or science.

(Piaget, 1923, p. 65)

Science states, whereas faith values, and in the end, this evaluation always depends on a personal decision.

(*ibid.*, p. 80)

with Renouvier ... are we going to keep hoping for an alliance between the religious search and the cult of classical logic, both rational and experimental?
(Piaget, 1921a, p. 410)

Piaget, right from the beginning of his long career, makes a clear distinction between what pertains to reasoning and logic and what results from another order of phenomena, which he names (together with his interlocutors?) 'value judgments'. These are considered to be the immediate and direct results of an *ethical* attitude towards life and reality. In this acceptance, 'value judgments' do not concern so much aesthetics (these had no central part in Piaget's interests) but primarily basic philosophical, moral, social, political and religious stands. They reflect the dignity of life and of the person and, as such, are important guide marks for the meaning of individual and collective action.

What were the premisses of young Piaget's value judgments? This contribution will try to examine the implications of this question and to show that by taking into account some aspects of the socio-cultural and historical context, it is possible to illuminate the meaning Piaget gave to his system by theorising the first stands he took. Hopefully this approach will spotlight dimensions of his psychology that often remain implicit in contemporary debates, and thus create a critical distance encouraging the same boldness that was shown by this elder researcher in facing the great issues of his time.

In the first part of this paper, the approach will be explained: an account of the socio-historical context during Piaget's years in Neuchâtel through

conceptual tools mainly borrowed from the contemporary psychological study of socio-cognitive processes. After this epistemic introduction, there will be an attempt to identify *who* were young Piaget's partners in learning. The second part will deal with the *stands taken* by him as an adolescent and later as a young researcher, in his quest for meaning, as well as their *significations in their context*. His premisses are not necessarily shared by the coming generations. But the reader might be incited to re-open the debate and to add to it the acquisitions made by contemporary psychology in other cultural areas.

FOREWORD: THE NATURE OF THE PRESENT APPROACH

What were, then, the premisses of young Piaget's value judgements? This question could be asked and examined according to the programme designed by Piaget himself, in his attempt to found a psychology of moral values. In order to submit him to his own method, one should therefore start from his premisses as if they were given data, and then proceed to 'check them against the experience from which [these value judgements] arose, [by first verifying] that the individual has indeed remained consistent' (Piaget 1923, pp. 55 and 64).

But this is not the purpose of the present contribution: firstly, Piaget prized so much thought consistency, elevating it indeed to the status of a *value* – and a capital one! – that he can most probably be trusted in that respect. According to young Piaget's conception of cognitive psychology, the greater part of the thinking subject's processes aim at explaining the conservation of his/her premisses and the consistency of his/her thought. In other words, there is little ground to believe that Piaget might have changed his mind about the premisses of his own value judgements. Therefore the aim here is not to submit him to a genetic approach in order to see whether his premisses have evolved during his life time. The working hypothesis (not demonstrated here, because this would need separate research) will be that Piaget was 'conserving' in this field.

So, what is the purpose in looking for the origin of Piaget's premisses? It is precisely to emphasise that from the beginning, before caring for consistency, young Piaget did actually take stands (which shall later become *premisses*) on a certain number of issues, affectively and socially involved in a milieu that encouraged debate, but that he was also marked by practices and tensions, and structured by institutions (family, school and university, churches, political parties, youth clubs, scientific societies, etc.) providing a framework for ideological discourses and for modalities of interpersonal relations, and by psychological and concrete conditions that made some projects feasible and stood in the way of others.

Thus, the focus of interest here is not so much the study of social influence *per se* on Piaget (a theme dealt with by others, in particular by Ducret, 1984, and Vidal, 1994), nor this young man's theorisation of his

relations to his milieu (which remained very rudimentary, as will be evident below), as the observation (unfortunately *post hoc*!) of the social interactions in which he was actively involved. In this light, Jean appears to be concerned about the meaning of life, in a social setting that is also aware of the meaning of youth education for society (Reymond, 1931).³

This paper does not take an individualistic psychological approach, trying to explore the sole interior dynamics of the subject through a nice case study, nor a socially deterministic approach, according to which Piaget would be the 'product' of social factors influencing a predisposition for scientific creativity. It tries to contextualise the development of young Piaget's cognitive activity.

Thus, Piaget's youth will be considered from a contemporary vantage point, marked by the re-reading of Vygotsky and influenced by the contextual approach of speech acts and thought (Bruner, 1990; Rogoff, 1990) and by the observation of social interactions (Perret-Clermont, 1980; Perret-Clermont and Nicolet, 1988; Pontecorvo, 1993). At a time when psychologists speak of 'situated cognition' (Resnick, Levine and Teasley, 1991) and insist upon the importance of 'communities of practices' (Lave and Wenger 1991), the endeavour will be to observe Piaget's thought at its origin, in its historical context and in a 'multi-voiced' world.

And of course, during the Neuchâtel years (1896–1929) considered here, Jean Piaget, as a child, pupil, adolescent, student, young researcher and young professor, will not appear as solitary or abandoned to himself among inanimate objects in his epistemic quest! On the contrary, as he says himself in his autobiographical writings, he was in continuous interaction with his peers (Juvet, for instance) and his elders (Godel, Reymond, Bovet, his own father of course, and still others). These persons 'scaffold' him in trials to take an active role in 'real' scientific activities of that period and within very lively debates. He was given this opportunity at an early age that might provoke the envy of young people who, at the end of the twentieth century, are confined for many years in the role of 'peripheral participants'.

It is important to rediscover the circumstances, the people and institutions that formed the social and cultural landscape in which Piaget constructed his model. This should contribute to an understanding of the value priorities underlying Piaget's theory and the meaning given by him to his scientific commitment, and by way of consequence, to define its reach. Piaget's intellectual activity is no abstract, timeless reality, but it is historically situated. By putting Piaget's theory of psychological development in perspective, this awareness should allow us to examine critically its present relevance.

Obviously, in some manner, this purpose is too ambitious for current means. Many pieces of information, needed to really grasp the context in which Piaget grew up, are still lacking. Nevertheless, the hope underlying this paper is that its boldness (after all, Piaget himself taught us to tackle

big topics boldly!) might incite other researchers to follow interesting paths leading to a reflection on the psychological activity, not only of the child, but also of those who would describe it (Gillieron, 1985). The reader will have understood that the intent here is not to produce a biographical study of Piaget, or a historical reconstruction of his interests. It is rather to attempt to re-discover some of his programmatic declarations and theses, considering them *as a practical, contextualised activity of someone trying to assert himself among the questions and requirements of his social and cultural setting*. In this perspective, Jean Piaget's reflections can be seen in part as *answers*⁴ to his milieu, i.e. to his masters and to the people he met, including the child who called him a 'rigolo' (a joker, a comic – cf. Piaget, 1972).

Many years later, when he re-examined his life-course, Piaget (1965, p. 22) declared:

I was strongly struck, after the First World War... by the repercussions that the social and political instability, which dominated Europe at that time, had on the movement of ideas, and this led me naturally to doubt the objective and universal validity of philosophical declarations made in those circumstances. In my small country, so quiet and relatively sheltered from outside events, many symptoms showed this dependence of ideas on social unrest.

Obviously, one of Piaget's aims was to stress the importance of what he often called the autonomy of thought, i.e. its *freedom*. The purpose is not to deny here the liberties taken by Piaget, but to show on the contrary that they represent significant answers amidst the expectancies and constrictions of the milieu he came from.

YOUNG PIAGET'S PARTNERS IN LEARNING

On the day in which Piaget was born, the town and canton of Neuchâtel were getting ready to commemorate feverishly the 50th anniversary of the proclamation of the republican regime, a recent consequence, like so many other such regimes in Europe, of the great revolutionary 1848 upheavals... Thus, it was in this naturally peaceful environment, still agitated however by the aftermath of a rich and recently perturbed history, in this little city forced by events to exchange overnight its status as a capital of a principality for the less glorious one of the mere main town of a confederate canton, in this place enriched by an intense past and passionately interested in scientific research, in this canton where the quest for technical progress always rivalled with the ability in traditional crafts, in short, in this city of Neuchâtel, both humane and humanitarian, that Jean Piaget was born.

(Jelmini, 1996, pp. 27, 37)

Who were Jean Piaget's partners in learning? This section will present first those of his restricted family circle, then the ones he met at his primary and secondary schools, at the University, but also in his extra-curricular activities and in the Church.

Jean Piaget was born in 1896 in Neuchâtel, the main town of a very small territory on the border between the Swiss Confederation and France. This region had become the twenty-first Swiss canton in 1815 although it remained a property of the Prussian king, then a democratic republic and fully fledged canton in 1848. But the Neuchâtelois had to wait until the Paris Treaty in 1857 to be free from all feudal bonds and foreign allegiances. This event sharpened the internal division that had appeared in 1848, and incited many local families to expatriate, as did Piaget's grand-parents, who settled in Yverdon (Jelmini, 1996).

The town of Yverdon is in canton Vaud, roughly 40 km away from Neuchâtel. There, Frédéric Piaget 'directed a watch-making factory exporting its products as far as America, under the trademark "Piaget et Allison"' (de Tribolet, 1996, p. 39). Their son Arthur, born in 1865, grew up in Yverdon until he went to Lausanne and then to Paris for his studies. He came back in order to submit his PhD thesis at the Faculté des Lettres (Faculty of Arts) of the University of Geneva. Already in 1895, he began to teach at the Académie of Neuchâtel (of which he became *recteur*, i.e. vice-chancellor, when it became a university).

Thus Piaget was born in an area forming a small political entity which was very aware of its past, or at least of its myths, and combined the virtues of the watch-making craft, of foreign trade and of local cultural and economic development (Liengme, 1994). At least in that respect, Piaget seems to have truly assimilated the spirit of his birthplace. Many years later, in his acceptance address for the Erasmus Prize, he declared (1972, p. 27):

I am happy to see that the distinction offered me is placed under the sign of Europe and comes from a country of modest size, like mine, because I strongly believe in the essential part played by small European countries in contemporary culture. There, as far as I can see, researchers in all fields enjoy a freedom of spirit and an informality more difficult to achieve in bigger countries where national traditions, and above all, fashions and 'schools', sometimes weigh rather more heavily.⁵

Who were Jean Piaget's partners in learning in this local context? His family, of course, but also his school-fellows, his teachers and the members of many associations and societies, which were extremely lively in Neuchâtel at that time, and where Piaget played an active part. He certainly remembered this when he theorised the function of peers in the structuring and sociability of thought. But in spite of the Piagetian model's insistence on the function of peers, the figures of some important elders who have marked the path of his entrance in the scientific, philosophical and political debates of his time are worth exploring.

Family

Jean Piaget does not say much about his parents. Yet the important part played by his father, Arthur Piaget, in the Neuchâtel intelligentsia has been evidenced (de Tribolet, 1996). He was a professor of literature and, as a historian, he refused all compromises in his quest for objective facts. He took many initiatives, for instance by reorganising the cantonal archives and editing the local historical journal. He had come to the limelight by brilliantly demonstrating the spuriousness of the *Chronique des chanoines* (Chronicle of the Canons), a document to which the local historians of that period attributed a great importance in the construction of a Neuchâtois identity strengthening Swiss patriotic feelings in the citizens of the canton. The polemic provoked by the exposure of the Chronicle, which gave a direct blow to the intellectual conformism of some Neuchâtois, profoundly hurt Arthur Piaget, 'who considered the idea of leaving the city for other places that might prove more hospitable and more congenial to his independent mind' (ibid., p. 44). This exile project was abandoned by Arthur Piaget, but his son Jean, living near him for at least twenty years, was able to witness the *psychological pressure exercised by social institutions* when a free mind demonstrates something that goes against the grain of received ideas.

Thus Jean Piaget's father was active, committed, rigorous in his thinking, and he took on important public responsibilities. He was a figure of authority. His son praised his qualities in later years (cf. Ducret, 1984; Vidal, 1994) and tried to emulate him (Piaget, 1976, p. 2). But there are *no traces of co-operation* between father and son, in the sense of joint activities aimed at the realisation of a concrete project. It can be surmised that their exchanges were mainly intellectual, which is indeed the meaning that Piaget was to give later to the word 'co-operation' in his theory.

Jean Piaget's mother, too, was a striking personality. She unfortunately left him painful memories, because of her nervous fragility (Piaget, 1976, p. 2):

My mother was very intelligent, energetic and, at bottom, really good-hearted; but her somewhat neurotic temperament made our family life rather difficult. As a direct consequence of this situation, I gave up childish games at an early age in favour of serious work, partly because I wanted to imitate my father, but also because this work provided me with a kind of sanctuary.

She was an ardent believer and belonged to the Independent Church, one of the fractions created by the schism that split Protestantism in Neuchâtel towards the end of the nineteenth century, gathering those who were 'convinced that from then on, their Church could not remain true to its Master and to its mission, and who wished to remain independent from the state' (Thomann, 1996, p. 112).

Jean Piaget had two younger sisters, Madeleine and Marthe, and a step-sister, Henriette. He rarely mentions this feminine familial setting whose members do not belong, apparently, to the peers who significantly influenced the intellectual life of this budding scientist, who identified with his father.

Piaget mentions several times his godfather, Samuel Cornut, a well-known man of letters in French-speaking Switzerland, but he only seems to have appeared, at a crucial moment of Piaget's adolescence, in the context of philosophical queries.

Studies

Among his school-fellows, Piaget remembered his friend Gustave Juvet, who was already at the same school when they were ten (Schaller-Jeanerret, 1966) and remained his companion through secondary and university studies. They also shared many extra-curricular activities. Their relation continued in particular within the Société philosophique (Reymond, 1931). As Schaller-Jeanerret demonstrates, many former school-fellows of Piaget's had impressive scientific careers, inside or outside university. But there are few traces of significant social interaction *at school* between these pupils. Apparently, this socialisation happened outside school.

His relation with the professors is a different matter: Piaget often mentions the influence of some teachers who knew how to encourage him, such as Arnold Reymond 'who followed my juvenile attempts with admirable patience and sympathy' (Piaget, 1965, p. 14).

Extra-curricular activities

Outside school, some elders strongly influenced the intellectual activity of Piaget during his pre-adolescence: 'I started with biology, because I had the good fortune, when I was very young, to be initiated by an old naturalist to a rather special branch of zoology, malacology, or in plain words, the science of snails and similar animals' (Piaget, 1972, p. 27). The old naturalist was Paul Godet, curator of the Museum of Natural History, who gave Jean (between the age of eleven and fifteen) the opportunity to participate fully and regularly in zoological research. Thanks to this training, he soon started publishing in this field. In this instance, Jean Piaget participated in 'joint actions' situated in a well-defined scientific field. The affective relationship with this 'old' specialist was such that it soon enabled this young neophyte to abandon the status of an apprentice (of 'legitimate peripheral participant', to quote Lave's coinage) and to become a full fledged researcher.

Another elder contributed to create socio-cognitive conditions that were particularly stimulating for Jean as an adolescent: I am thinking of Pierre

Bovet, who was professor of philosophy, psychology and pedagogy at the University of Neuchâtel, but at a time when Piaget was too young to attend his lectures. Therefore it was not as a professor that Pierre Bovet influenced our future thinker, but more directly still – if I may say so – through the concrete conditions of a co-operation (in the full meaning of the word) between peers and of intellectual confrontation made available to Jean Piaget and to his friend Gustave Juvet (among dozens of other boys) at the Club 'Amici Naturae' (Friends of Nature), founded by Bovet and, among others, his friend Carl-Albert Loosli in 1893, when they were themselves adolescents. In the years when Piaget was a very active member of the club, Bovet still regularly encouraged its projects through his presence and advice. Other elders involved in the intellectual and, above all, in the scientific life of the country, also attended some of the meetings and gave acknowledgement and encouragement to these adolescents by supporting their activities and answering their questions with their extraordinary competences. What is striking is that these activities were largely based on *autonomous initiatives taken by the young people themselves* (in this, the club was close to the scouts and to other youth movements created at the turn of the century). Surely, the adults played an important part, but their commitment was rarely direct. They approved, encouraged, offered contributions (mainly intellectual, at times material), but they never directly organised the young members' activity, limiting themselves to monitor its 'setting', as it were (Guinand and Lüscher, 1993).

Church

During Piaget's adolescence, he also met his peers in other venues, for instance at the official church 'where he attended classes of religious instruction and was confirmed in 1912' (Thomann, 1996, p. 112). Piaget reflected on the content of these classes, but they probably reminded him more of the teacher-directed atmosphere of school than of his beloved Club of the Friends of Nature. The vehemence of his essay 'La mission de l'idée' (1916; see Vidal 1994 for a partial translation) suggests that, on that occasion, he was confronted with figures of authority who tried to impose beliefs and dogmas, rather than with real interlocutors in his quasi mystical search for the sense of life.

In this field, one may wonder why neither Piaget nor Zundel, who were both to achieve international fame – the former as an epistemologist, the latter as a theologian – ever mention each other when discussing topics connected with *faith*, although they attended the same school and belonged to the club of the Friends of Nature as young adolescents. Yet Piaget wrote many pages on the relationship between science, philosophy and faith; and Maurice Zundel focused several of his writings on issues he was probably already reflecting on as a young Friend of Nature: 'What drives a scientist towards research? Is the possibility of mastering the world offered by

applied research? Is it the liberation from imposed reality? Is it the thought of an always imperfect truth? Is it the aspiration towards Truth? How should we interpret this perpetual struggle of Jacob fought by the scientist against reality? Is it a delusion, a possession, a contemplation?' (quoted in Donzé, 1980, p. 62). Of course, they were still young. It may also have been a difficult time for religious debates. Jean Piaget was a Protestant, whereas Maurice Zundel was a Catholic.

Years later, Zundel (1976a, p. 3) wrote:⁶

As a child, I lived in a Protestant country, I heard the polemics and the demonstrations of the *ami* who kept disparaging the Catholics. My grandmother, who was a Protestant, never missed an opportunity to attack the Catholic world. On the other hand, local Catholicism was very ritualistic and it offered a facile world where there was no need for personal involvement: to find fulfilment, you just had to know the liturgical formulas by rote. A lot of opposition, a lot of words, very little Gospel: all this did not amount to a religion. We listened to the readings from the Gospel, delivered in the usual monotone, and the meaning escaped me completely. All this could be summarised as a religious practice without the slightest experiencing of God: the ritual formulas were right and true, hence acceptable, but dull. Salvation was reduced to well-chosen set phrases ... a family religion imposed without meeting the slightest resistance.⁷

Later on, as a priest, Maurice Zundel encouraged the Catholic youth movement Jeunesse Ouvrière Chrétienne, he became deeply involved in the quest for a live and cultivated faith, and his preachings were important references and support for a large number of people. But he also often met incomprehension and exclusion on behalf of the clerical institution until 1972, when Paul VI invited him to preach during a retreat at the Vatican (published after his death – Zundel, 1976b), drawing him very late away from this formal marginalisation and giving official recognition to his international fame.

Jean Piaget wrote later (1965, p. 12):

Brought up as a Protestant by a faithful mother, and as the son of an agnostic father, I already felt the conflict between science and religion rather strongly ... Reading Bergson was a revelation ... in a moment of enthusiasm close to ecstasy, I was overwhelmed by the certitude that God was life, in the shape of this *élan vital* or vital force of which my interests in biology allowed me to study a small section. I thus found inner unity by following a kind of immanentism which fulfilled me for many years, though in more and more rational forms ... I had taken a decision: I would dedicate my life to philosophy, and my main purpose would be to reconcile science and religious values.

Piaget is almost militant in this quest for an immanent faith against the idea

of a transcendence beyond the human mind. Piaget's discourses on that topic reflect his polemical attitude against churches, and in particular against Catholicism. He stated clearly his stance towards Church tradition and authority, which he apparently perceived as the social constrictor *par excellence*: 'No other social institution demonstrates better the fundamental kinship between the idea of transcendence and the reality of authority, than the Catholic Church' (Piaget 1930a, p. 35; quoted by Barbey, 1982, p. 309).⁸

For Maurice Zundel, God was not an 'idea', and the encounter with Him was an encounter with alterity and not a constrictor. In these years of his attending the Friends of Nature, Maurice Zundel was having mystical experiences that were decisive for him (Donzé, 1980, p. 21). But could these young people discuss such themes in a secure socio-affective setting, considering the polemical atmosphere of the time and the formal aspect of their religious instruction? It might have been possible at the Friends of Nature's. But it is not certain that, even in that venue, their exchanges went beyond merry adolescent bantering. The *Cahiers des Présences* (attendance register) of this club⁹ contain some allusions to these ironic jokes: for instance, the nickname Thicélin, borrowed from the *Roman de Renart*, was given to Maurice Zundel at the suggestion of Jean Piaget: 'Thicélin, because the raven has an ecclesiastic appearance that fits Zundel perfectly' (15 September 1911). It is worth noticing that Piaget's own nickname was Tardieu (a slug in the same *Roman de Renart*), and that it was sometimes spelt 'Tar-dieu' (slow God or late God). Apparently, Piaget and Zundel were good comrades, perhaps even friendly accomplices, as apparent from the notes they jotted down in these *Cahiers*. Tardieu was chairman and Thicélin secretary.

A few years later, Piaget, as a young man, became committed to the liberal fringe of Protestantism, who believed in the social vocation of Christianity. He met in particular an enthusiastic clergyman, Paul Pettavel (1861–1934), described by Thomann as 'sparkling with activity, loquacious, impish, and above all, a happy Christian... [advocating] the improvement of the workers' social status through a forceful political action conducted without infringing democratic rules' (Thomann, 1996, p. 116). Paul Pettavel had aroused the interest of several young Neuchâtelais. In 1915, Piaget wrote to him, submitting an article he wished to publish in *L'Essor*, a small Protestant review published in Geneva but covering the entire French-speaking part of Switzerland, edited by Pettavel. The latter accepted the article, because he wished to dedicate a space in his paper to the opinions of young people. Soon after that, Piaget joined the editorial board (Thomann, 1996, p. 118). In 1914, he became a member of the Association chrétienne suisse d'étudiants (Swiss Christian association of students), a venue for strong debates to which Piaget contributed personally, in particular during the well-known Sainte-Croix conferences (Piaget 1923). After that, Jean Piaget grew gradually more distant, not only from theology,

but also probably from faith. In this field as well, it was an older person, Paul Pettavel, an 'expert' (as he would be described in contemporary psychological parlance) who encouraged his younger friend to speak out, by initiating him to the social life of his circle and by integrating him in it.

Jean Piaget's relation with his socio-cultural matrix

So far, a few elements connected with Jean's social life have been mentioned, and attempts have been made to emphasise some characteristics of his socio-cognitive interactions in the French-speaking and Protestant area of Europe where he lived at the beginning of the century (Barrelet and Perret-Clermont, 1996). In this personal, intellectual and social context, Jean learned how to take a stand, how to give expression to his ideas and defend them (he also learned how to find a venue, bargain for its rent, stimulate his comrades and recruit collaborators... these competences proved very useful later on!). This is the starting point of what he very soon called 'his system', which will now be examined from four viewpoints: affective relations; relations with authority and opportunities offered by his elders; respective roles of peers and experts; border-crossing.

The expressions of affective feelings are very scarce and understated in Piaget's writings. He mentions clearly his great friendship for his childhood comrade Gustave Juvet; one can feel a certain complicity between him and his master Godei; he expresses his gratitude for the help he received from his professor Arnold Reymond, as well as his profound admiration and respect for his father. He apparently hid away from his mother. His memories of her are often painful and may have fostered both his interest in psychopathology (Piaget, 1976, p. 2) and his desire to stop his didactic analysis when, through the transference, it revealed elements connecting him with this eccentric mother (Appignanesi and Forrester, 1992, quoted by Soyland, 1993).¹⁰ 'I never felt any inclination to proceed further in that particular direction, because I have always preferred to study normal cases and the workings of the intellect, rather than the tricks played by the unconscious,' as he says in his autobiography (Piaget, 1976, p. 2). Thomann (1996) mentions that in 1927, Piaget asked Paul Pettavel to convince his mother that she should be admitted to a psychiatric hospital.

Beyond this troublesome maternal presence, few female figures are mentioned. Virtually nothing is known of Cécile-Marie Berthoud (1848–1931), his teacher at the private school he attended when he was eight years old (Schaller-Jeanerret, 1996). After her, only male teachers are recollected by Piaget. It is true that at that time, boy and girls did not attend the same secondary schools. The Friends of Nature did not have female members until 1987. Nevertheless, there were women students at the university when Piaget attended it but it is very striking to see that most of them were foreigners: from 1911 to 1918 the university registers record

at least 110 women students coming from the vast Russian empire.¹¹ Thus Piaget seems to have lived in an essentially male environment, except for the rather marginal presence of these women.

Pierre Bovet, in his book about the development of religious feeling in the child (1925), gave a good description of these feelings of love and fear, based on the experience of respect for the elders, feelings which, according to him, dominate the growth of the psyche and of faith in the child. Jean Piaget, eighteen years younger than Bovet, reflected in other terms (and in other years) on the problem of the relation to authority. Was it because of the way he related to his father and to the hierarchical society of his home town? Or (perhaps 'and') was it a reaction to the troubled atmosphere of his first years, when the echo of pre-revolutionary activities in Russia was heard in the Neuchâtel town of La Chaux-de-Fonds, together with the forebodings of the First World War? Clearly, Piaget resented the limitations imposed by his milieu and doubted that what he was to call later 'social constrictions' were of any value to him. He often judged negatively the inheritance of his forefathers on various levels: in religion (see his passionate attacks in 'La mission de l'idée', 1916), philosophy (he feared the notion of a transcendence situated outside understanding – *op. cit.* and 1929), and even in science, as can be seen in the foreword to his doctoral thesis in malacology, where he mainly expressed his dissatisfaction with existing research methods (Piaget 1921b, pp. 1–3). In his psychological works, Piaget came back several times to the idea that transmission from one generation to another cannot be the source of understanding, because this transmission is organised by an authority principle that precludes the autonomy of thought (see for instance Piaget, 1960).

Yet the elders who had the status of experts in the milieu of the adolescent Piaget were not all – by far – pompous professors or dogmatic thinkers! On the contrary, they often seemed keen to let younger people have their say. So did Arthur Piaget in the journal he edited, *Le Musée Neuchâtelois* (de Tribolet, 1996), Paul Pettavel in his own publication, Arnold Reymond in the dialogue with his students, and Pierre Bovet, mainly through the Friends of Nature, but also in the activities organised by his family in Grandchamp,¹² as well as Paul Godel in his laboratory at the Museum of Natural History.

In fact, Jean Piaget frequented two kind of circles: venues where peer-relations were privileged (first and foremost the Amici Naturae), and others where he had to learn how to find his place among experts: the Club Jurassien, and later, from 1912 to 1914, the Société Neuchâteloise de Sciences Naturelles, the Société Zoologique Suisse and the Société Helvétique des Sciences Naturelles (Vidal, 1996), in addition to those already mentioned before.

Surely Piaget drew profit from interactions with his peers: but were they really 'peers'? Piaget seems soon to have accepted – with the approval of

his friends, who found him amusing and interesting – the status of official deviant. This is the image given of him in some of the minutes for the meetings of the Friends of Nature, of whom he had soon become chairman.

Piaget rarely describes experiences of debates between equals and apparently never mentioned at that time the results of exchanges with people who were less expert than him. Did his status as an erudite, already during his adolescence, deprive him of such exchanges? This would be worth checking. Actually, his first experience of a cognitive advantage drawn from an asymmetric relation happened apparently during his exchanges with children in Th. Simon's research laboratory in Paris (Piaget, 1972). One may wonder whether the pleasure Piaget drew from these interviews was not due in part to a projection allowing him to reconstruct a situation he had often experienced successfully: that of the brilliant child who knows how to take part in the grown-up's discourse.

During his childhood and youth in Neuchâtel, Piaget evolved in a social space left relatively open by his parents: in between two churches, with parents who held different religious convictions, living in Neuchâtel but in touch with La Chaux-de-Fonds, the other important town of the canton, which tended towards socialism; joining students' societies where theological, philosophical and scientific issues were debated; a student at the Science Faculty but often attending lectures at the Faculty of Arts (Liengme Bessire and Béguélin, 1996) in a university that was small, but international in its recruitment, before he left Neuchâtel to pursue his studies in Zurich (in another language) and then in Paris, from where he was to return to Geneva, where Claparède and Bovet had invited him.

THE SEARCH FOR A CONSTRUCTION OF MEANING: THE STANDS TAKEN BY JEAN PIAGET AND THEIR CONTEXTUAL RELEVANCE

This paper has dealt so far with the attempt to describe the socio-cultural world in which Jean Piaget grew up. This new section will focus on the stands he took and his early participation in his elders' debates. In his quest for meaning, this young man, strongly influenced by his philosophical readings, attempted to elaborate a system based on a certain number of premisses in which he strongly believed, as if they were the foundation, not merely of his thought, but of his very identity. The relation between reason, society, transcendence (or rather, immanence) and action played a crucial part in his reflections. Starting from his interest in natural science, Jean Piaget discovered philosophy and theology and tackled the big issues of his time (God, war, justice, freedom, truth, social order, evolutionary theories, etc.), trying to find an answer in a personal vision of Man.

Piaget's leading ideal: reason and personal thought

Even in the texts Piaget wrote as an adolescent, it appears clearly that he did not conceive the individual as a born disciple. As a young natural scientist specialising in snails, when Piaget became interested in philosophy and discovered this other living species, *homo sapiens*, he was evidently enthralled by the problem of the access to *knowledge*. So much so that he considered it as the main characteristic of Man, his 'essence', as it were (even though he does not actually use this word). At that time, there were lively discussions at the university, but also in the churches, about the evolutionary theories propounded by Darwin, Lamarck and others. His standpoint as a biologist and his focusing on thought as the source of knowledge led him to take a very idiosyncratic approach in the philosophical and theological issues debated then.

His inaugural lecture in 1925, when he became professor of philosophy, history of science and psychology at the University of Neuchâtel, makes his standpoint explicit. In it, he first considers a return to Kant and his notion of *a priori*; then the idea, which according to him is its opposite, 'of a radically contingent spiritual development, such as the one Léon Brunschvicg believes he can perceive in the history of human thought'. Yet Piaget does not seem very convinced by this alternative and he opts for a third possibility: his own method (which he sees as impartial) of genetic analysis in psychology, because he believes he can intuit that 'it is possible, moreover, that such a method imposes the notion of a kind of *ideal that directs reason*,¹³ an ideal both active and unfulfilled' (Piaget, 1925, p. 210).

Earlier on, for instance in an unpublished essay he submitted for a competition, 'Réalisme et nominalisme d'après les sciences de la vie' (1917)¹⁴ Piaget had already treated this *ideal*. His philosophy professor, Arnold Reymond (1917, quoted by Liengme Bessire and Béguelin, 1996, p. 85), who wrote an ample discussion of this essay, regrets

the ambiguous aspect of the definition [Piaget gives] of God, at times presented as a 'mere ideal', at times as a 'reality existing independently from our judgments'. The author hovers all the time between those two value judgments, and we think that this indecision is due to the fact that he has not made a clear enough distinction between the fields of metaphysics and psychology.

Many years later, in his book *Biology and knowledge*, under the heading 'Life and truth', Piaget defined his standpoint with greater precision (1967, pp. 414–15):

If truth is not a copy, then it is an organisation of reality. But who is the organiser? ... The philosophers who wish to promote the notion of absolute have all devolved this function to a transcendental subject, beyond man and, above all, beyond 'nature' so as to situate truth outside

the spatial and temporal contingencies of the physical world, and to make this nature understandable in an atemporal or eternal perspective. ... Before deciding to place the absolute in the clouds, it might be useful to look within things. In that case, if truth is an organisation of reality, we should first try to understand how an organisation is organised, and this is a biological issue. ... Before settling for a transcendental organisation, we should first exhaust the possibilities of immanent organisation. ... [and look for] the secret of rational organisation in the vital organisation, *including what goes beyond it*. The method should therefore be an attempt to understand knowledge through its own construction, and this is not absurd at all, as knowledge is *essentially a construction*.¹⁵

On this level, it is no more a question of an essential and abstract 'reason', but of a kind of 'biological reason' which Piaget attempts to account for in his publications on the self-regulation processes.

Therefore, this evolution towards a more and more 'biologising' explanation of life and thought has not modified his initial fundamental standpoint, or his refusal of a reduction of intellectual processes to phenomena of cultural transmission. For him, thought is first and foremost an *individual* issue which only gradually becomes socialised: 'children aged 4–5 ... are not yet subjected to social and objective thinking habits' (Piaget, 1925, p. 207). But this socialisation will only permit the birth of personal thought if, as Piaget wrote later (1931a, p. 115), the child is 'brought up in a spirit of co-operation between minds, and not forced to respect the word'. Society can transmit opinions and beliefs, but it cannot endow the subject with comprehension *per se*. The latter requires a kind of personal enlightenment, an interior conviction infusing a sense of balance. Its only 'constriction' is intellectual consistency, which can be established with the help of a particular type of social co-operation: a verification by peers outside all hierarchic imposition.

The social element as a constriction

Piaget always rejected intellectual constrictions of any kind. His refusal of an impersonal thought might at times be surprising in its vehemence, for example in the texts he wrote as an adolescent (1916) or as a young professor, when he not only dismissed static dogmas and visions about knowledge, but even the implicit constriction exercised on the child by the language he is being taught (1925, pp. 204–5):

from his first smiles, and above all from his first words, the baby is subjected to a social influence, which is at first very slight, but becomes more and more constricting. At the beginning, it only orients his mind, but in the end, it shapes it, and may even modify it profoundly. In fact, the language he is taught is not only a system of signs. It is mainly a system of implicit judgments and notions. It is a kind of crystallised and

impersonal thought inherited from former generations. An infinitely tyrannical thought which shall heavily influence every state of individual conscience, even the most intimate.

What provoked this refusal of a certain kind of inheritance in Piaget? His elder, professor Arnold Reymond, in his comment on Piaget's competition essay mentioned above, suggests the following interpretation: 'this essay is directly inspired by a contemporary circumstance... the war... raises again the ancient problem of the individual's relations to the social organism he belongs to'¹⁶ (Reymond, 1917, passage quoted in Liengme Bessire and Béguejin, 1966, p. 84). In fact, Piaget belongs to the generation of people who were eighteen when the war broke out in 1914. These young people were the inheritors of, and potential soldiers in, an unbearable situation. Other elements from the socio-historical context contributed to Piaget's mental frame: the Russian Empire, with which the people of Neuchâtel were in touch, in particular through the Russian students at the University and the watch trade, was undergoing at that time the violent repressive actions of the tsarist regime. And locally, the ideological atmosphere of the canton was still marked by the recent refusal of feudal inheritances which Neuchâtel had only got rid of a few decades before. What meaning was to be attributed, in these circumstances, to the *relation between individual and society*?

In his quest for the meaning of life, young Piaget's answer was to assign a mission of salvation to the individual's free thought. In this, he paid allegiance to Protestant ethics, which distrusted social mediations and devolved a great responsibility to the individual who, in the end, must judge according to his sole conscience. Was it in the wake of this religious attitude that Piaget perceived the explanation of his reflections as the fulfilment of a *mission* based on the highest values? He apparently looked for the meaning of life in an enhanced freedom of the mind, in the protection of essential values and in the struggle against ideological enrolment and against war. For him, this commitment is the same as the quest for more social justice.

From his youthful experience, Piaget evidently remembered the importance of peer interactions. According to him, knowledge (including religious knowledge) comes from an intellectual exchange ruled by an ethic of debating (see for instance Piaget, 1923, p. 82). Piaget neglected the inter-generation dimension of the access to knowledge. In this field, he was in contradiction with his Russian contemporary Vygotsky, who based his research paradigm on an actual concomitance between the higher social position of the elder and his expertise (Perret-Clermont, 1995).

In consequence, Piaget's vision of knowing cannot be static. Knowledge is neither preformed in the objects nor in the subject; it undergoes a living development concerning both the historical evolution and the ontogenetic development. The categories of thought are not immutable. They evolve

according to the subject's *experience*, because the latter brings concrete facts and is therefore needed by thought, which does not find its nobility in pure speculation. Piaget, as a biologist, focused on the dynamics of living beings, and tried to observe the processes through which the creative spirit – he had read Bergson – makes the construction of intelligence possible.

Following Piaget's reasoning, one becomes aware that through this focusing on the dynamics of individual intelligence, he also tried to state the autonomy of each person and to speak of his or her possible blossoming within a freedom of thought unhampered by the social context, and above all, by the pressures exercised by elders. But he rarely used the word 'person' to describe the subjects he submitted to his epistemic research interviews.

He took courageous stands, in various fields, against what he perceived as illegitimate social encroachments, in particular by institutions. This *social element*, which Piaget so strongly distrusts, seems to sum up several different things: collective opinion (is this perhaps a reminiscence of Durkheim's 'collective representations'?) based on unchecked utterances; states and churches; and all sources of constricting ideological thought. The social element is also everything not embattled in favour of a social justice that would make room for women (in a country which took a very long time to acknowledge women's right to vote and constitutional equality between men and women, Piaget, like his parents [de Tribolet, 1996] almost anticipated his century!) and for the deprived. Piaget denied the virtue of education when it is an intellectual constriction, instead of awakening the spirit of research and questioning. He condemned former generations who, through the use of their authority, prevented the growth of personal judgement. On the other hand, he pleaded in favour of exchanges between peers, which alone could respect the autonomy of thought and enrich it with the experience of reciprocity and free interpersonal co-ordination.

Considering that Piaget was a young man, barely out of an adolescence he himself describes as a period of 'liberation, through the primacy of exchanges between peers over the obedience owed to adults, and at the same time through this kind of intellectual rebellion of each new generation against the former', as a stage which enables 'the adolescent to eschew, at least within himself, the authority of adults in order to look for the living source of his future activity in relationships with people of his age group' (Piaget, 1931a, pp. 96 and 99) – how come that this former adolescent was the object of magnificent praise from his elder, Arnold Reymond, who saw in him 'the exceptionally brilliant continuator of his elders' (Reymond, 1931, p. 13)? The fair play of his professors who were apparently able to recognise and support the abilities of this younger man, without holding his kicking against him, is worth underlining.¹⁷

Piaget and the debates among his elders

Did Piaget, in the structuration of his own theoretical thought, progress mainly by taking stands that expressed his breaking away from his milieu, as in a game made of cognitive conflicts with his elders; or on the contrary, as Reymond says, did this young thinker shine out in the debates of his elders, and by using their own methods? Did Piaget start by imitating his elders, before he overtook them? The working hypothesis in this section will be that, at first, Piaget gradually appropriated the concepts and the processes of the scientists around him, in Neuchâtel and in French-speaking Switzerland, before he transformed them in his own way.

Through his family relations, history was the first academic topic Jean Piaget became acquainted with. His father, professor of medieval French language and literature, had studied under Gaston Paris at the Collège de France. The time spent in the circles of the new French historical science impressed upon Arthur Piaget 'the constant need to go back to the very sources' and gave him a 'critical mind that never accepted unverified opinions' (de Tribolet 1996, p. 41). In 1929, Arthur Piaget created a seminar of History of Reformation in collaboration with the Faculty of Divinity (ibid.). This historical-critical approach was not universally accepted; people wondered in particular whether it was wise to display all the doubts raised by the historical criticism of documents. Châtelain (1994, p. 138) quotes Alexandre Daguett's remarks in the paedagogic journal *L'Éducateur* (1872, pp. 211–12):

We must not play lightly with this sacred feeling [patriotism]; extreme care must be taken when contemplating the rectification of facts belonging to the historical literature written for the young and for a general readership, because once you destroy the belief of youth and of people at large in some of the traditions they hold most dear, which are for them symbols of freedom, independence, and republican virtues, you also destroy every kind of historical and patriotic faith.

Châtelain observes that in Switzerland 'historians [were] caught in the following dilemma: on the one hand, the objectivity to which methodical historical research aspires, on the other hand the need to convince most citizens of the importance of republican values' (ibid., p. 139). Did Piaget follow the path of critical history traced by his father? According to him, he didn't, and in fact, he never published any purely historical work. Yet one can see that he was deeply interested from the start by the lectures in history of science given by his philosophy professor Arnold Reymond, of whom he was to remember the 'historical-genetic stance' (Piaget, 1931b, p. 20). Moreover, like his father, he developed a critical, scientific mind, looking for facts even if (or particularly if) these facts went against received ideas.

It was probably Arnold Reymond who taught Jean Piaget how to read critically, underlining how much Kant's opinions seemed to him dependent

on a state of science which had undergone great changes in the meantime. Thus Reymond raised the issue of the historical relativity of ideas, and in particular of the debate on the nature of scientific knowledge. Piaget pursued his training in that direction during his stay in Paris. A few years later, when he succeeded Reymond at the University of Neuchâtel, he declared: 'History has shown that mental categories are not fixed or immutable, and contemporary thinkers are so penetrated by this idea that, in a strange reversal of values, mobility appears as ... the defining characteristic of any work conforming with intelligence' (Piaget, 1925, p. 196).

Did Piaget borrow from his elder Pierre Bovet his methods of 'observation and tests through interrogation'¹⁸ (cf. Reymond, 1931, p. 13)? Usually Piaget's method of clinical interviews is considered as his own adaptation of an approach he took from psychiatry (Vinh Bang, 1988, p. 39).

Piaget studied psychological growth in several fields, as did Bovet (1922 and 1925) for the development of religious feeling, and Claparède (1915) in his studies on the evolution of interests and on the role of games for the child. But Piaget made this kind of observation more systematic and he went further than his elders in theorising the very processes of the psychological genesis of knowledge, both on a historical and on an individual level. It is interesting that his historical and genetic relativism provoked, up to a point, the same opposition as his father's historical critical relativism. Piaget remembers how his colleague P. Godet, Professor of Philosophy at the University of Neuchâtel, often told him straight 'that his psycho-genetic viewpoint in epistemology would suit him well if he were to abandon himself to the seduction of intellectual considerations alone, but that these views were dangerous for society, because man needs stable realities and absolute values' (Piaget, 1965, pp. 23–4). Even his close childhood friend and companion of his scientific and philosophical studies, Gustave Juvet, told Piaget that: 'I believe in ontogeny because a permanent Order is needed in intelligence as well as in Society.' Piaget comments: 'In French-speaking Switzerland, a Maurassian [right-wing patriotic] influence spoiled the metaphysics of elite individuals, although they were educated as Protestant democrats' (ibid., p. 24). So, in spite of his peers' reactions, Piaget remained true to his father's uncompromising attitude, which was Protestant, democratic and critical. The genetic approach took a central part in his work, where, for decades, he tried to establish parallels between the history of ideas and of individual intellectual development. Phylogeny and ontogeny: in these two perspectives, the biologist in Piaget reappears.

In fact, from his biological studies, Piaget remembered in particular the important post-Darwinian debate on evolution. The question of the respective role of nature and nurture in the individuals' adaptation to their environment was always present in his mind. Piaget studied malacology for many years. He went on to experiment about the adaptation of molluscs when transferred into another lake,¹⁹ wondering if acquired factors could

be inherited. He studied this same question again, extending its implication, in his examination of adaptation processes on a psychological level.

Pierre Bovet had studied 'the social instinct', endeavouring to understand under which circumstances it could be educated' (Bovet, 1922, for instance). Piaget was not particularly interested in the social instinct (as seen above, he distrusted the 'social element' and he saw reason as its counterpoise), but he did present a model where instincts acted as biological premisses for the development of adaptation processes, which, according to him, later expanded on the level of thought into a process of self-regulation and equilibration. In his perspective, reason does not 'educate' instinct, but supplants it. The social element can only contribute to this development because it is the locus of the learning of how to regulate exchanges between peers.

As one can see, Piaget entered his elders' debates and remembered the issues discussed, but he distanced himself from them, by adapting them according to his own perspective. The stands he was to take on the sources of knowledge and faith were for him an opportunity to theorise his difference.

Finding his own autonomy from his elders and from the concept of transcendence

In the debates on the sources of knowledge and faith, Piaget took a clear position in favour of immanentism which, for him, 'in differentiated societies, gradually supersedes the notion of transcendence... [because] when reciprocity and mutual respect develop, unilateral respect, as well as the source of belief in transcendental gods, become proportionally less important' (Piaget, 1929, p. 149). For Piaget, knowledge is neither a revelation progressively conceded by the Creator to the mind of His creature, nor an adaptation of the creature to the Creation that would enable it to understand the latter. Knowledge finds its source in the evolution and in the very dynamics of thought: 'Thought explains being, but in so far as we thus learn to know it, being explains thought' (ibid., p. 150). Piaget apparently considers 'meaning' and 'understanding' as synonymous. Like his predecessors and contemporaries, Piaget looked for the 'meaning of life' (this was actually the title of Bridel's paper at the already mentioned Sainte-Croix encounter in 1922)²⁰ and, like them, he gave a prominent place to ethics and to individual thought (Reymond, 1931, pp. 14–15):

It is no mystery for anyone that most philosophers from French-speaking Switzerland have started by studying theology and, all in all, these studies are an excellent initiation, *provided one gets away from them*, and provided they are conducted, as is the case in our country, in a spirit of free research and of respectful independence.²¹

But in these debates, Piaget's location of God was apparently idiosyncratic, even though he tried to demonstrate that it was not fully opposed to the one upheld by his interlocutors (1929, pp. 151–2):

The two great ideas of a Creator God and of a God underwriting truth remain important when they are translated into immanentistic speech... No perception, no notion, no judgment is possible within each of us, without implying in these acts a supreme Ideal, a norm both intellectual and moral that illuminates our thought as well as our conscience! If God is not present as the source of intellectual light and love, where is He?... Being limited by given reality on one side, by the laws of thought on the other, we thus dive into Being and Spirit, in the hope of grasping Unity one day. Where does human thought stop, and where does God begin? It is mainly a moral problem: God steps in when we give up our Self, when we renounce intellectual egocentrism as well as practical egoism... Immanentism is also entitled to the spiritual food of the One who said: 'the Kingdom of God is within you.'

A way of thinking departing from action

To summarise, next to elders whose authoritarian influence he feared, and in a social world he perceived as conservative and repressive, young Piaget made a bold quest for meaning. He wanted to see the individual as the source of meaning, which he should reach through a reflexive activity endowed with a kind of divine underwriting for rationality. From this concept, he elaborated a system which, surprisingly, started from the problem of meaning and ended in a *logical and abstract model* of consistency.

Why? Probably Piaget, while taking an active part in these debates, gave such a priority to *thought* that he may not have realised how much this thought fuelled – at least for some of his teachers and for Bovet in particular – concrete and committed *actions*. Piaget's description might lead us to think that these questions were only occasions for debates. Yet the political and educational issues that were at stake for his elders were pregnant with meaning. Their epistemic models had immediate social and pedagogical implications. Thus, for instance, the stands taken by the clergyman Pettavel identified him very precisely on a political and ecclesiastic level, in the middle of vivid tensions. Pierre Bovet certainly did put forward very interesting ideas in the field of psychology and pedagogy, but they only find their full meaning when considered in the long tradition of Grandchamp, not far from Neuchâtel, where his family was actively involved in social institutions²² (Bovet, 1965; Mouchet, 1967; de Rougemont and Bovet, 1992). One should bear in mind here that this same Pierre Bovet did not only reflect on the education of young people, but created and supported the club of the Amici Naturae, where Piaget spent so many important hours. It is true that Piaget, in his system, granted a fundamental role to

action, and presented it as the very base of thought. But from a developmental point of view, he left action at such a primitive stage that he did not even study its adult forms. Therefore, in his psychological research, Piaget actually abandoned the field of action in order to concentrate mainly on the study of *judgement* and of *rational thought*, in an evolution where thought eventually becomes totally detached from action. Piaget explicitly praised this move towards abstraction, without apparently considering the practical consequences of this position. This led him to prefer logic to an understanding of the problem of meaning such as it is psychologically experienced, i.e. in direct touch with individual and collective daily life.

Piaget and his cultural inheritance

At a time when it is fashionable to collate and compare the works of Piaget and Vygotsky, who were both born a hundred years ago, it might be fruitful to recall the specificities of their socio-cultural inheritances and of the historical contexts in which they shaped their positions and thoughts.

As can be seen from the previous pages, Piaget grew up among social influences that were very different from the ones known by his Russian contemporary. He belonged to a political entity within what might be termed a 'confederation of minorities' (and not an empire), which offered few opportunities of identification with the leaders of a nation or of a dominant culture. The Neuchâtelois citizen did not feel the need to 'civilise the world' through his culture – but perhaps through his religious ethic. The transactions he was familiar with were often business transactions.²³ He was not the citizen of a colonialisng country but of a nation of agriculturists, watch-makers, mercenaries, merchants and bankers. Neuchâtel was not a Catholic region which might consider instruction as a commodity to be shared out by a central authority in order to insure the consistency of the social body, but a state of Protestant tradition where the religious atmosphere would underline the dignity of the individual (and not of the Church), who was meant to communicate directly ('democratically', as it were) with God. Personal experience – and in particular, its highest part, religious experience – was seen as unique and personal, as a kind of incommunicable premiss.

Piaget also came from a political, cultural, religious and familial tradition encouraging a critical distance from authority. His lack of interest in social factors influencing development, beyond its roots in his biography and his personal inclinations, was perhaps also caused by the ideological climate in which he lived, where authority was generally perceived as something extraneous, repressive – at best as a protection – and where local institutions had long been forced to negotiate a relative autonomy with foreign powers.

But Piaget went further by expressing an almost egocentric individualism:²⁴ for him the development of personal thought was a fundamental and

universal duty. In his system, this led him to ignore the importance of concrete social and educational solidarities and of relational interdependencies which make psychological growth possible and offer an access to knowledge that is already prepared by the efforts of former generations. This 'egocentrism' of Piaget led him to undervalue the role of elders and of peers.

REOPENING THE DEBATE FROM THE MODEL'S PREMISES

Starting from this (unfortunately partial) 'case study' of the future scientist's thought, many questions can be opened or re-opened. Today's researchers do not necessarily share Piaget's premisses, which do not have to remain implicit. The same holds true, of course, for the implicit premisses of other 'grandfathers' (Vygotsky, for instance) of contemporary psychology.

It is important to examine the present historical and social situations and to ask if the great theories, in particular those propounded by these two elders, may not present useful instruments of thought, but also *distorting lenses*, because of their historically situated choices, whose implications (and at times, inopportunities in today's circumstances) tend to be now neglected out of ignorance. To re-examine these premisses (which often remained implicit *a priori*) instead of dismissing them beforehand as incompatibly different might also be an opportunity to work on the elaboration of new ways of understanding the psychological and social world, as well as the nature of cognition.

More precisely, it might be important to reconsider, taking seriously the prevailing circumstances in the last years of the twentieth century, the transmission of knowledge and its elaboration. Attention should be paid to the new terms in which political and technological mutations set the questions of freedom, identity and inter-generational relationships. Young people faced with great social and ideological upheavals cannot be contented with entering the matrix of former generations. A denial of cultural inheritance would deprive them of landmarks and instruments; they would be left without capitalisation of experience, without memory.

The psychology of the relations between experts and novices would gain from being revisited, taking explicitly into account the relations between elder and younger people, between persons involved in action with different responsibilities and experience. Cultural contexts structure in part the ways in which people act and think. The search for abstraction – outside social relations and outside time – is not necessarily the most adequate norm in all circumstances. The universality of thought might not be where it is usually looked for. In this matter, present researches have stressed other dimensions than the ones tackled by Piaget. The 'case' study of the adolescent Jean Piaget, whose thought was so lively, may be used to illustrate several characteristics of the cognitive activity such as it

can be understood with the theoretical instruments currently available, briefly listed hereafter.

Cognitive activity appears in relational spaces that make it possible, and at the same time, it contributes to their structuration (Hinde, Perret-Clermont and Stevenson-Hinde, 1985; Grossen and Perret-Clermont, 1992). The epistemic quest is not its sole motivation. The learning subject summons and constructs various strategies according to the stakes he perceives in the situations he meets with. Thought does not unfold in a vacuum, without social relations and actions.

Recent researches on learning have also stressed the importance of considering the specificities of the different domains and of distinguishing conceptual learning from procedural learning (Hoyles and Forman, 1995). What were the subjects in which Piaget was educated and to what kind of learning was he confronted as a child? How have these marked his intellectual path? The learner is not only faced with a feeling of logical necessity and with the feed-backs from physical reality, but also with the actions and interpretations of other social agents, in institutional settings that do or do not legitimate some approaches and some memories. Memory and action are organised according to goals that are sometimes contradictory, and to patterns that are more or less consciously taught. The individual's 'micro-history' influences the ways in which he interprets new situations on the basis of the elaborations he has already made of those previously encountered.

This transfer of former psychological experiences does not only concern the cognitive aspects but also, obviously, the emotional and affective dimensions, which are connected for instance to the meaning given by the learner to his adventures, in social fields marked by institutional and ideological traditions, and by familial affective stakes.

The *mediation* between the object of knowledge and learner, since the invention of printing and with the growth of modern means for the communication of information, seems (rightly or wrongly) to have lost its *directness*. It does not present itself anymore through speech, through the face and hands of the elder, of the teacher or of the expert. On the contrary, this mediation more often appears to be *indirect*, coming from a teacher 'transmitting' (and not 'creating') knowledge, or from semiotic instruments relaying speech: books, recordings of images or sounds, computerised data, etc. What are the psychological impacts of these symbolic mediations on the subject's relationship to knowledge? Can they replace the contacts between expert and beginner? This question leads to another one, which concerns Piaget's experience. To what extent did the possibility he had to hear directly the descriptions of the struggles fought by the historian Arthur Piaget, to work at the museum with his old naturalist friend, to meet the ebullient Paul Pettavel, to train in philosophical interrogations with his teacher Reymond or with his godfather Samuel Cornut, and in scientific research with the experts who supported the club of the Friends of Nature

– to what extent did these personal, face-to-face meetings act as levers in Piaget's development? Are they available to secondary and high-school pupils nowadays?

And to come back to the philosophical and theological debate in which Piagetian psychology was born, it is possible to ascertain nowadays – at least among many adolescents in Neuchâtel – that the question of meaning is no longer formulated in the same terms as in the years of Piaget's youth: they are no longer those of *history* (which the adults tend perhaps to omit to mention), nor of the *meaning of the person's relations to his/her Creator*, nor of the intellectual and moral adequacy of the ways in which these relations are conceived.

Perhaps contemporary thought has taken seriously God's image in the human being: man is also a creator, and in his search for understanding, he finds himself urgently faced, not only with the Creation but also with the effects of his own material, relational, ecological, social and intellectual activity. Do elders know how to discuss these issues with young people? Do they care to enable them to do so among themselves? Or are they so profoundly marked by the Second World War, which was even more violent than the First, by the deep splitting of Europe, by the revolutions in their former colonies and by other collective ordeals, that their conflictual relation to the inheritance of the past prevents them, as in Piaget's case, from accepting and transmitting memory?

Will the destruction of ideological iron curtains offer to a less hemiplegic Europe other spaces for action and thought, where it will be possible to discuss these issues? And with other aims than theological, ideological or scientific domination?

NOTES

- 1 Thanks are due to Claude Béguin for the translation of this contribution into English.
- 2 Among which French-speaking Swiss liberal Protestants engaged in vivid debates in the face of the revival of neo-orthodox movements (for further information on this Protestant scene, see Vidal, 1987).
- 3 For instance, the report on the activities of the Société de Philosophie en Suisse Romande (Reymond, 1931, p. 7) asks some questions rising from the research about *Le droit d'éduquer*, elicited by Edouard Claparède: 'What and whom do we have in mind when we educate a child? Do we want to create a given type of society (nation)? But what right has this society to do this? In the name of an ideal? But what are the bases of this ideal, and how can it be justified?'
- 4 Piaget did indeed *practise* thought as an *answer*: he often said to his students in Geneva: 'In order to develop an idea, always choose a couple of scapegoats and act as if you were answering them.' Following this advice, this paper will endeavour to keep track of its 'scapegoats': the first one is Vygotsky, because he pays too little attention to the creative and involved activity of the individual as a person in his model of thought development where the cultural expert appears as the ultimate point of reference, and because he overestimates the necessity of dissymmetry between expert and apprentice in the construction of

- understandings. The second one is Piaget himself, for the scarce attention paid in his model to the affective, relational and cultural processes connected with the development of thought products, including his own.
- 5 This interpretation of social reality by Piaget is rather ironic and probably more revealing of the role played by some identity myths than of the actual situation – bearing in mind the importance of the *school* of psychology created by Piaget himself in this small country.
- 6 We owe this quotation to René Castella, former chaplain of the University of Neuchâtel.
- 7 But even if the inter-confessional relations were stilted and the formulas dull, there were still interpersonal relations. In fact, Zundel adds: 'In my second year [at secondary school], I met a school fellow who was not a Catholic; he approached the Gospel with fresh attention; being intelligent and passionate, he was overwhelmed by the Gospel and by Pascal's *Pensées*. He was the admirable mediator who made me feel that the Gospel was not just a set of speeches and phrases, but a presence I could feel through the manner in which he read the Sermon of the Mount' (Zundel, 1976a, p. 3).
- 8 The author of this paper owes this quotation to Georges Panchaud who, when he was honorary professor at the University of Lausanne and guest professor at the University of Neuchâtel, wished to draw her attention to the theological sources of the Piagetian tenets.
- 9 Thanks are due to Jacques Méry and Luc-Olivier Pochon, mathematicians, a.k.a. Synopie and Bromure, honorary members of the Amici Naturae, for the information about the life and spirit of this still active club. Jacques Méry allowed the author to consult these registers.
- 10 Thanks are due to Irena Sirotkina, who provided the reference of this interesting essay on Sabina Spielrein, who was Piaget's psychoanalyst.
- 11 These young women, who often (but not always) registered at the Séminaire de François Moderne of the Faculty of Arts, were probably attracted to Neuchâtel because the area was famed for its 'good French' (i.e. French almost without dialectal interferences) and by the reputation of many tutors and nannies from the Neuchâtel area who taught in Russia (Maeder, 1993). At that time, Russian female students were actually also numerous in other Swiss universities, because they found there a freedom of speech and of study they lacked in their home towns, which were then agitated by pre-revolutionary events (Neumann 1987). Thanks are due to Rémy Scheurer, professor at the University of Neuchâtel, for these references.
- 12 The Bovet family has been active in Grandchamp (a village a few miles away from Neuchâtel) for several generations. At the time of Pierre Bovet, they were involved for instance in a hospital, a school, a Protestant teachers' training college and in the spiritual retreats which were to inspire the foundation of the Communauté évangélique de Grandchamp, the famous women Protestant congregation.
- 13 The italicised passage is emphasised by the author of this paper.
- 14 See Vidal (1994, p. 86) for a commentary.
- 15 The italicised passages are emphasised by Piaget.
- 16 In the same perspective and in similar circumstances, three decades later, Piaget took on a teaching assignment at the Collège de France in 1942, which he described as 'a time when academics felt the need to express their solidarity against violence, and their allegiance to permanent values' (Piaget, 1947, p. 5).
- 17 Thus, in 1925, in his foreword to his book *Le sentiment religieux et la psychologie de l'enfant*, Pierre Bovet wrote: 'The research on the reasoning of the child, initiated with total independence by Mr Jean Piaget and pursued by him since 1922, precisely at the Jean-Jacques Rousseau Institute, has opened new roads

for our reflections.' Here Bovet carefully stresses the autonomy of the man he has just appointed as director of research in his institute. Why does Bovet take this unusual precaution? Is it the sign of a respectful and laudatory (perhaps even patronising) attitude, or perhaps rather a mark of caution in front of the demanding attitude of this younger man who was to let his collaborators call him 'Patron' (Boss) a few years later, in this same institute?

- 18 Piaget acknowledged several times that he was inspired by Pierre Bovet's results, in particular in his work on moral judgement (Piaget, 1930a, p. 185; Piaget 1932, p. 301 in the 1957 edition). But our question concerns the enquiry methods.

19 Piaget was not alone in his move from the Lake of Neuchâtel to the Lake of Geneva! He actually tried to observe the adaptation processes of Neuchâtel molluscs when immersed in the waters of the Léman: did they transmit to the new generations the new characteristics they had acquired in order to adapt themselves after this delocalisation?

- 20 The conference was held in 1922, leading to publication in 1923.

21 My emphasis.

- 22 See note 12.

23 Did they perhaps leave their mark in the intellectual transactions underlying the Piagetian model? 'You give me your opinion, I give you mine, we shall value both and elaborate an agreement,' in a manner of speaking!

- 24 Obviously, Piaget recognised the importance of the socialisation of thought through interactions between peers. But he always had in mind the subject's own initial thought, and not 'collective inventions' or 'socio-cognitive conflicts' that must be solved. This might be the reason why the Piagetian model remains focused on the Self.

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